Toronto and Region Conservation Authority

Board of Directors Meeting
Agenda

#3/19

March 29, 2019

9:30 A.M.

HEAD OFFICE, 101 EXCHANGE AVENUE, VAUGHAN

Pages

1. ACKNOWLEDGEMENT OF INDIGENOUS TERRITORY

2. MINUTES OF MEETING #2/19, HELD ON FEBRUARY 22, 2019
   Meeting Minutes Link

3. BUSINESS ARISING FROM THE MINUTES

4. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

5. DELEGATIONS

6. PRESENTATIONS

7. CORRESPONDENCE

   7.1 CITY OF TORONTO MOTION 19-MM2.4 - TOMMY THOMPSON PARK SHUTTLE SERVICE — 4

8. SECTION I - ITEMS FOR BOARD OF DIRECTORS ACTION

   8.1 APPOINTMENT OF INFORMATION AND PRIVACY OFFICER — 7

   Approval to appoint the Clerk and Manager, Policy as the Information and Privacy Officer pursuant to the Municipal Freedom of Information and Protection of Privacy Act and to authorize the delegation of powers and duties to same.

10.2 SECTION IV - ONTARIO REGULATION 166/06, AS AMENDED

Receipt of Ontario Regulation 166/06, as amended, for applications which were approved at Executive Committee Meeting #2/19, held on March 1, 2019. (S.11.1, Exec minutes p.10/23)

11. CLOSED SESSION

The Board of Directors shall enter into closed session, pursuant to Section C.4. of the TRCA Board of Directors Administrative By-law, as the subject matter consists of

- C.4.(l) a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of TRCA (being to discuss TRCA's position on the negotiation of the sale of TRCA-owned lands.)

12. NEW BUSINESS

NEXT MEETING OF THE BOARD OF DIRECTORS #4/19, TO BE HELD ON APRIL 26, 2019 AT 9:30 A.M. AT HEAD OFFICE, 101 EXCHANGE AVENUE, VAUGHAN

John MacKenzie, Chief Executive Officer

/af

TORONTO

Ulli S. Watkiss
City Clerk

City Clerk's Office

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In reply please quote:
Ref.: 19-MM2.4

RECEIVED

FEB 19 2019

CEO'S OFFICE
TRCA

February 11, 2019

Mr. John MacKenzie
Chief Executive Officer
Toronto and Region Conservation Authority
101 Exchange Avenue
Vaughan, Vaughan
L4K 5R6

Dear Mr. MacKenzie:

Subject: Member Motion 2.4
Tommy Thompson Park Shuttle Service

City Council on January 30 and 31, 2019, considered this Item, and a copy is attached for your information or appropriate action.

Yours truly,

for City Clerk

M. Toft/sb

Attachment

c. City Manager

TORONTO Decisions

City Council

Member Motions - Meeting 2

MM2.4	ACTION	Adopted		Ward: 14

Tommy Thompson Park Shuttle Service - by Councillor Paula Fletcher, seconded by Councillor Ana Bailão

City Council Decision

City Council on January 30 and 31, 2019, adopted the following:

1. City Council forward to the Chief Financial Officer and Treasurer and the Deputy City Manager, Community and Social Services the request from the Toronto and Region Conservation Authority for $130,000 from the City on an annual basis to operate a public shuttle service in Tommy Thompson Park for consideration as part of the 2019 Budget Process.

Summary

Tommy Thompson Park on the Leslie Street Spit is a gem used by thousands of people from all walks of life and for many purposes: field naturalists; birding; walking; fishing; sailing; and biking. It is a true paradise for active and passive recreation.

In 1989, the Toronto and Region Conservation Authority completed an extensive environmental assessment and planning process which resulted in the creation of the Tommy Thompson Park Master Plan whose main objectives are to:

- preserve significant species;
- protect environmentally significant areas;
- enhance aquatic and terrestrial habitat; and
- enhance public recreational opportunities.

In 1992, the Master Plan was approved with an amendment that the "Master Plan for Tommy Thompson Park include a public transit component to ensure access to the Leslie Street Spit". The 1995 Order in Council approving the Master Plan expanded on this: "The Metropolitan Toronto and Region Conservation Authority or the park operating agency will develop a public consultation process for park users regarding the type and operation of the park transportation service". There was a public shuttle bus service in Tommy Thompson Park but it was cancelled in 2011. The reinstatement of the public shuttle bus in Tommy Thompson Park would be a great service to the public, especially for those with mobility issues as well as the sailing club and the birding community.

As the operator of the Tommy Thompson Park, the Toronto and Region Conservation Authority has requested funds from the City of Toronto to facilitate the reintroduction of a shuttle service, one that meets Accessibility for Ontarians with Disabilities Act regulations, to

improve public accessibility within the park, to enhance public recreational opportunities and to improve safety for the growing number of visitors. In December of 2018, the Toronto and Region Conservation Authority completed a cost estimate for the operation of a shuttle service during hours when Tommy Thompson Park is open to the public. The annual operating cost will total $130,000.00, which includes capital recovery.

Background Information (City Council)

Member Motion MM2.4
(http://www.toronto.ca/legdocs/mmis/2019/mm/bgrd/backgroundfile-123803.pdf)
(January 29, 2019) Fiscal Impact Statement from the Chief Financial Officer and Treasurer
(http://www.toronto.ca/legdocs/mmis/2019/mm/bgrd/backgroundfile-124148.pdf)

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **APPOINTMENT OF INFORMATION AND PRIVACY OFFICER**

KEY ISSUE

Approval to appoint the Clerk and Manager, Policy as the Information and Privacy Officer pursuant to the *Municipal Freedom of Information and Protection of Privacy Act* and to authorize the delegation of powers and duties to same.

RECOMMENDATION

WHEREAS pursuant to subsection 49(1) of the *Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56*, as amended *(the Act)* and Section 14 of the Toronto and Region Conservation Authority (TRCA) Board of Directors Administrative By-law, the Chair of TRCA is designated as head, and a staff member shall be designated by resolution to act as TRCA's Information and Privacy Officer for the purposes of *the Act;*

THEREFORE LET IT BE RESOLVED THAT TRCA's Clerk and Manager, Policy be appointed as TRCA's Information and Privacy Officer;

AND FURTHER THAT the Chair, as head, shall delegate to the Information and Privacy Officer, in writing, all powers and duties of the head under *the Act*;

AND FURTHER THAT TRCA's Chief Financial and Operating Officer be appointed as an alternate Information and Privacy Officer for matters in which the Clerk and Manager, Policy is absent or has a conflict of interest with respect to the exercising of powers and duties;

AND FURTHER THAT RES.#A167/18 be rescinded, effective as of the date of passing of this resolution.

BACKGROUND

The Act outlines the duties of local governments, including municipalities, school boards, police commissions, conservation authorities and other local boards, in respect to access to information rights and the protection of privacy. An institution, legislated under *the Act*, elects or appoints among themselves an individual or a committee to act as head of the institution, tasked with overseeing the administration of the legislation and ensuring compliance with the legislation and regulations.

The responsibilities of the head pursuant to *the Act* are operational in nature and include but are not limited to:

- providing access decisions in response to requests for information;
- adhering to time limits and notification requirements for information requests;
- considering representations from third parties affected by requests;
- determining the method of disclosure of information;
- responding to requests for correction of personal information;
- calculating and collecting fees for information requests;
- where necessary, defending decisions made under *the Act* at an appeal; and
- administering the privacy protection provisions of *the Act*.

Section 14 of TRCA's Administrative By-Law designates the Chair of the Board of Directors to act as head of TRCA, and it provides that the Board shall by resolution designate a staff member to act as TRCA's information and privacy officer for the purposes of *the Act.* Further, subsection 49(1) of *the Act* states that, "a head may delegate in writing a power or duty granted or vested in the head to an officer or officers of the institution."

In the municipal and conservation authority context, responsibility for decisions made under *the Act* and for overseeing the administration of *the Act* within the institution is typically delegated to a Clerk or the senior administrative officer with oversight of the access and privacy program.

In the past, TRCA's Clerk and Senior Manager, Corporate Records was responsible for supervision of the organization's privacy program and was appointed as Information and Privacy Officer. This authority was temporarily assigned to the Chief Financial and Operating Officer at the October 26, 2018 Board of Directors meeting (RES.#A167/18), while the recruitment for the Clerk and Manager, Policy position was underway. The Information and Privacy Officer in turn has delegated certain powers and duties to staff in the Corporate Records and Information Technology Management business units.

RATIONALE

Staff recommend that the Clerk and Manager, Policy be appointed as the Information and Privacy Officer, with all of the powers and duties of the head as identified in *the Act*, and with direct oversight of TRCA's access and privacy program. Once appointed and delegated the powers and duties of the head, the Information and Privacy Officer will delegate to the Corporate Records and Information Technology Management business units in writing such responsibilities as deemed appropriate.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan
This report supports the following strategy set forth in the TRCA 2013-2022 Strategic Plan:
Strategy 7 – Build partnerships and new business models

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Date: March 5, 2019

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Sameer Dhalla, Interim Director, Development and Engineering Services

RE: **BOLTON BERM REMEDIATION STUDY**

KEY ISSUE

In the historic village of Bolton there is a system of flood control infrastructure to protect it from riverine flooding. TRCA recently completed a comprehensive study to assess the hydraulic performance and structural integrity of this system. The study also explored opportunities to enhance the level of flood protection. This report summarizes the results of the assessment taking into account observations from the recent March 15th-16th, 2019 event including proposed next steps and implementation considerations.

RECOMMENDATION

THAT staff be directed to disseminate the study report and all information developed from the Bolton Berm Remediation Study to Engineering staff at the Town of Caledon and Region of Peel;

THAT TRCA immediately undertake general repairs and maintenance to the Bolton flood control infrastructure as recommended in the study report as option 1 at a cost of approximately $75,000;

THAT TRCA immediately initiate the detailed design process for the preferred restoration plan, option 3, at an estimated cost of $150,000;

THAT TRCA, in consultation with the Town of Caledon and Region of Peel initiate planning for the preferred restoration plan including public consultation and budgeting so that implementation can occur in 2020;

AND THAT TRCA make a funding request to the Ministry of Natural Resources and Forestry's Water and Erosion Control Infrastructure program to help fund the preferred restoration plan;

BACKGROUND

The historic village of Bolton, (intersection of King Street and Queen Street), in the Town of Caledon is located within the valley corridor and floodplain of the Humber River. This area has a long history of flooding with 233 structures susceptible to flooding during a Regional Storm event. Due to the flood vulnerability of the community, the historic village of Bolton was designated as a Special Policy Area (SPA) to allow for the continued viability of existing uses and address the significant social and economic hardships to the community that would result from strict adherence to provincial policies concerning development in a floodplain. Flood protection measures were constructed in the 1980's to provide flood protection up to and including the 500-year flood.

These flood protection measures include:

- a diversion channel, parallel to King Street through Humber Lea Road to convey higher flows;
- a box culvert at Humber Lea Road;
- a concrete crib wall installed upstream of King Street on the east bank; and
- earth berms constructed along the south side of the Humber River from the bridge by Old King Road to Queen Street.

These measures helped to minimize impacts to properties from flooding as evidenced by their performance during recent events. While the March 15th event exceed the capacity of the river to convey flows the above infrastructure remained intact during the recent flooding. Additional study to confirm performance is currently underway.

In 2013 the Town of Caledon initiated the "Bolton Special Policy Area Review" with the purpose of:

- reviewing the SPA boundary in light of new floodplain mapping information developed by TRCA;
- undertaking a comprehensive assessment of flood risk within the SPA;
- the preparation of a Planning Justification Report; and,
- the preparation of an Official Plan Amendment, implementing Zoning By-law, and Site Plan Control Provisions.

During the SPA update process, TRCA identified that a comprehensive assessment of the flood infrastructure was needed given the age of the infrastructure and changes in the watershed. At TRCA Authority meeting #2/18, Friday March 23, 2018 (Item 7.3), TRCA received authorization to undertake an assessment of the flood control infrastructure. This assessment, titled "The Bolton Berm Remediation Study", fulfills TRCA's commitment to assess the state of the flood control infrastructure within the Bolton SPA for the Town of Caledon.

The intent of the Bolton Berm Remediation Study was to characterize flood conditions within the SPA, asses the level of service and structural competency of the existing flood infrastructure, and to develop a preliminary restoration strategy for the Bolton flood control berms. Key project deliverables included:

- A 2D hydraulic flood model for the area using the MIKE Flood hydraulic modelling platform;
- the completion of a number of technical assessments including Geotechnical, Structural, and Fluvial Geomorphology;
- An existing Conditions summary report; and
- A Restoration/Remediation study report.

RATIONALE

In April 2016, TRCA retained Valdor Engineering to undertake the Bolton Berm Remediation Study. TRCA's Request for Proposal as well as Valdor's project proposal provided study goals and objectives, a detailed work plan, and schedules. Key components of the study work plan included:

1. the development of a coupled 1 Dimensional and 2 Dimensional (1D-2D) hydraulic model for the study area;
2. geotechnical field investigations and assessment of the stability of the Bolton berms under various conditions and failure modes;
3. structural investigations of a TRCA owned crib wall to quantify its current condition and structural stability;
4. fluvial geomorphic investigation of the flood control channel to quantify the interaction between the flood control channel and the berms; and,
5. a detailed characterization of the flooding within the study area including the identification of flood zones and the mechanisms of flooding to aid in the development of restoration options.

The components of the overall study and assessment results were completed and presented in two summary reports titled:

- Bolton Berm Remediation Study – Existing Conditions Report (Valdor, 2017);
- Bolton Berm Remediation Study, Restoration/Remediation Alternatives Report (Valdor, 2018).

Existing Conditions Report

The existing flood control berms were designed in the 1980's to provide flood protection up to the 500-year flood. The results of the revised hydraulic model determined that the flood control berms fall short of this target. The western-most berm provides flood protection up to the 350-year flood and the eastern berm provides flood protection up to the 100-year flood. Factors contributing to the reduced level of flood protection include lower berm elevations compared to the design elevations due to settling at a number of locations and less sophisticated hydraulic modeling methods used as part of the original design process. Hydraulic modelling also revealed that water circumvents both berms due to flows exceeding channel capacity at the upstream end, causing flows to spill into areas previously thought to be protected by the berms. The Bolton Berm Existing Conditions report recommends that options to rehabilitate and restore the berms to provide 500-year level of flood protection should be investigated for future consideration and implementation.

The Existing Conditions Report also identified a number of minor berm deficiencies based on field and geotechnical investigations. The deficiencies include excessive vegetation, minor deterioration of berm toe protection, a number of blocked/missing flap gates, minor sediment and debris in culverts. Further, the geotechnical stability analysis indicated the berms do not meet current Factor of Safety (FOS) engineering design standards for a number of loading conditions. As such, some structural repairs are required as part of the restoration plan.

The Existing Conditions Report noted that the western berm is lower than design elevations by up to 10 cm and that the eastern berm is lower than design elevations by up to 30 cm. This is primarily a result of a lack of freeboard being incorporated into the original design. Current standards now require applications of freeboard into design.

Restoration/Remediation Alternatives Report

The Bolton Berm Remediation Study, Restoration/Remediation Alternatives Report examined five options to rehabilitate the berms to address all the deficiencies described above and to enhance the level of flood protection provided.

The options including an estimated cost to implement are as follows:

Option 1 – General Maintenance Requirements with Current Level of Flood Protection (100-year Storm) - $75,000;

Option 2 – Rehabilitation Providing Flood Protection up to the 350-year Storm - $401,000;

Option 3(a) – Rehabilitation Providing Flood Protection up to the 500-year Storm - $690,000;

Option 3(b) – Rehabilitation Providing Flood Protection up to the 500-year Storm and meet all FOS requirements - $940,000; and,

Option 4 – Remediation Providing Flood Protection for Greater than the 500-year Storm - $1,150,000.

It is important to note that Option 1 is required at minimum to meet current engineering standards for flood control berms. Options 2-4 will increase the level of flood protection and can only be considered once Option 1 has been implemented. Based on thorough evaluation of the remediation options and feedback from Town of Caledon staff, the preferred approach to restoring flood protection is to implement Option 1 immediately and begin the planning and engineering for Option 3(b) so that implementation can begin in 2020. The cost to undertake the planning and engineering for Option 3(b) is an additional $150,000, bringing the total to $1,090,000, plus an additional $75,000 to implement Option 1.

Proposed phasing for the overall restoration plan project is as follows:

Phase 1 – through 2019 and into 2020 TRCA staff will initiate repairs and replacement of flap gates, repair culvert end treatments and clean culverts where required;

Phase 2 – in 2019 TRCA will initiate and complete the design process to (1) restore and raise the flood berm west of Humber Lea Road and east of Queen Street and (2) restoration activities for the diversion channel. Staff anticipates that the implementation of Phase 2 works will commence in 2020, subject to funding and construction scheduling; and

Phase 3 – the design of Phase 3 will be combined with the design process for the Phase 2 and will include (1) restoring and raising the flood berm and (2) raising the crib wall east of Humber Lea Road. Implementation of Phase 3 is anticipated to commence in 2021 subject to funding and construction scheduling.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan
This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:
Strategy 1 – Green the Toronto region's economy
Strategy 2 – Manage our regional water resources for current and future generations
Strategy 4 – Create complete communities that integrate nature and the built environment

FINANCIAL DETAILS

The total estimated cost to design and implement Option 1 and 3(b) is $1,165,000. Operating accounts 108-01 (Flood Infrastructure Operation, Maintenance and Supervision) and Capital Account 107-03 (Flood Control Infrastructure Maintenance) will be used to undertake the immediate repairs and maintenance as recommended in the report at a cost of approximately $75,000. Peel Capital Account 129-19 (Flood Remedial Works) includes a budget provision to undertake the detailed design and permitting process for Option 3(b) at a cost of $150,000.

The total estimated cost to implement option 3(b) is $940,000. This work is eligible for funding under the Ministry of Natural Resources and Forestry (MNRF) Water and Erosion Control funding program (WECI). Funding for 50% of the restoration program ($470,000) will be pursued through the WECI program and the remaining funds ($470,000) will be allocated in the 2020 and 2021budget under Peel Capital Account 129-19 (Flood Remedial Works).

RESOLUTIONS

TRCA staff will implement the general maintenance works as recommended as part of the Bolton Berm Remediation Study immediately. TRCA staff will continue to work through the detailed design process including meeting with representatives from the Town of Caledon and Region of Peel to disseminate study results, and gather input for the design process. Further, TRCA staff will finalize implementation costs based on the results from the detailed design process and will ensure budget has been allocated in 2020 and 2021 to implement Phases 2 and 3 of the restoration plan.

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Date: March 12, 2019

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **VENDOR OF RECORD ARRANGEMENT FOR EMERGENCY RESPONSE TO SPILLS AND DISPOSAL OF HAZARDOUS WASTE**
RFP No. 10008804

KEY ISSUE

Award of Request for Proposal (RFP) No. 10008804 for a Vendor of Record (VOR) arrangement for emergency response to spills and disposal of hazardous waste.

RECOMMENDATION

WHEREAS Toronto and Region Conservation Authority (TRCA) is engaged in a variety of programs and projects that require a standby spills response contractor to provide on-demand spills cleanup and hazardous waste material disposal services;

AND WHEREAS TRCA solicited proposals through a publicly advertised process and evaluated the proposals based on the criteria outlined in this report;

THEREFORE THE EXECUTIVE COMMITTEE RECOMMENDS THAT TRCA staff be directed to establish a Vendor of Record arrangement with QM LP (dba QM Environmental) and Accuworx Inc. for the supply of emergency spills response and hazardous waste disposal services for a period of two (2) years with an option in TRCA's favor to renew for one (1) further year;

AND THAT if a situation is present, where the vendors of record are not available for a particular project, that staff be allowed to follow the Procurement Policy;

AND FURTHER THAT authorized TRCA officials be directed to take whatever action may be required to implement the contract, including obtaining any necessary approvals and the signing and execution of any documents.

BACKGROUND

TRCA undertakes over $53 million in construction services per year, often near to or within sensitive natural areas, shorelines or sensitive marine environments. In addition to these construction services, TRCA operates several education facilities, parks, campgrounds and conservation areas across over 17,000 ha of land. Together, TRCA's construction and various land management activities pose a low frequency, but potentially very high consequence spills risk.

The Environmental Protection Act requires that the owner or controller of a spilled pollutant take every practicable action to prevent and eliminate negative effects of a spill, including actions to restore the natural environment to its original state. The costs of complying with these requirements can be substantial and in most cases, the sooner action is taken to both contain and subsequently clean a spill, the better the cost of spill response can be controlled.

In order to finance the costs of responding to spills TRCA has purchased various forms of environmental impairment insurance on both project specific and program wide scales. While insurance provides a means to pay for the cleanup and potential liability of a TRCA caused spill, it does not provide an immediate response to spills.

TRCA staff emergency action plans include protocols to responding to various spills scenarios, and while to date TRCA has not caused a spill beyond staff's direct ability to respond, TRCA does regularly work within high consequence environments such as valley and stream corridors, shorelines and marine environments, and in some cases near to utility corridors. These types of environments have the potential of making containment of certain types of spills very difficult, and if quantities are significant, potentially beyond TRCA's response capabilities.

In addition to the exposure of spills risk, TRCA's land management operations are exposed from time to time with the need to handle large quantities of hazardous waste or other environmental contaminants. Some examples of waste that TRCA has had to handle or dispose of in the past included volatile chemicals, designated substances, drug lab waste, biohazardous materials, compressed gas canisters and many others. The handling of certain kinds of hazardous materials can pose a significant environmental as well as health and safety risk to TRCA staff. Where TRCA has had to enlist the services of hazardous waste contractors in the past, the costs have been significant.

TRCA requires emergency spills response and hazardous waste disposal on a VOR basis in order to provide a more robust response plan to both spills risk as well as its existing hazardous waste exposure. By establishing a VOR arrangement for emergency spills response and hazardous waste disposal, vendors are authorized to provide these services for a defined period of time and with fixed pricing. Staff may contact any vendor on the list with the expertise and experience required for their project or program requirements. Vendors will be required to provide all resources required to service the divisional or program needs in accordance with applicable laws, codes, standards, terms and conditions of the VOR agreement. The VOR arrangement will be subject to annual review in order to confirm that the vendors are providing an adequate level of service and to update any applicable insurance, certifications, or policies of the vendors.

RATIONALE

RFP documentation was posted on the public procurement website www.biddingo.com on September 25, 2018 and closed on October 26, 2018. A total of 9 firms downloaded the documents and 3 proposals were received from the following vendors:

- QM LP (dba QM Environmental);
- Accuworx Inc.; and
- Salandria Ltd.

An Evaluation Committee comprised of staff from Property and Risk Management and Restoration Projects reviewed the proposals. The criteria used to evaluate and select the recommended Proponents included the following:

Criteria	Weight
Proponent's Information	10%
Key Personnel	10%
Experience and Qualification	30%
Scope of Services Capabilities	30%
Sub-Total	80%
Pricing	20%
Sub-Total	20%
Total Points	100%

Through the evaluation process it was determined that Accuworx Inc. and QM LP (dba QM Environmental) are first and second highest scoring vendors meeting the qualifications and requirements set out in the RFP. Therefore, staff recommends that contract No. 10008804 be awarded to Accuworx Inc. and QM LP (dba QM Environmental). Proponent's scores and staff analysis of the evaluation results can be provided in an in-camera presentation, upon request.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategic priority set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 7 – Build partnerships and new business models

FINANCIAL DETAILS

TRCA has no major spills response costs on record. A review of the last three years of exposure show that staff had to expend $40,000 to address hazardous waste dumping on TRCA lands. Due to our expansive land holdings, TRCA is exposed to significant uncertainty in potential cleanup and disposal costs.

An increase or decrease in workload will have an impact on the value of this contract. All vendors on the VOR list understand both the potential cost and resource implications associated with changes in workload. The goods and/or services will be provided on an "as required" basis with no minimum hours guaranteed. Vendors may increase hourly rates annually, to a maximum of the preceding year's Ontario's Consumer Price Index as published by Statistics Canada.

Costs associated with major spills are likely to be covered by TRCA's various pollution insurance policies, however the deductibles would be charged to the program responsible for the loss at hand. Hazardous waste cleanup costs and/or deductibles are likewise to be allocated to the responsible business unit for the affected facility. Staff will report to the Board of Directors on any costs incurred by TRCA net of insurance recoveries which exceed CEO authorization limits.

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Date: February 27, 2019

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Nick Saccone, Senior Director, Restoration and Infrastructure

RE: **VENDOR OF RECORD ARRANGEMENT FOR OPERATED HEAVY CONSTRUCTION EQUIPMENT RENTAL**
RFP No. 10020047

KEY ISSUE

Award of Request for Proposal (RFP) No. 10020047 for a Vendor of Record (VOR) arrangement for supply of operated heavy construction and associated specialty equipment from April 1, 2019 to March 31, 2020.

RECOMMENDATION

WHEREAS Toronto and Region Conservation Authority (TRCA) is engaged in a variety of programs/projects that require the utilization of operated heavy and specialty construction equipment;

AND WHEREAS TRCA solicited proposals through a publicly advertised process and evaluated the proposals based on the criteria outlined in this report;

THAT TRCA staff be directed to establish a Vendor of Record arrangement with Sartor Environmental Group Inc., Dynex Construction Ltd., Valefield Contracting Inc., TMI Contracting and Equipment Rental Ltd. and Trisan Construction for the supply of operated heavy construction equipment during the contract period for one (1) year with the option to extend for an additional year;

THAT if a situation is present where the vendors of record are not available for a particular project, that staff be authorized to follow the Procurement Policy;

AND FURTHER THAT authorized TRCA officials be directed to take whatever action may be required to implement the contract, including obtaining any necessary approvals and the signing and execution of any documents.

BACKGROUND

TRCA requires operated heavy construction equipment rental for completing a variety of engineering, habitat restoration, and trail building projects throughout TRCA's jurisdiction. By establishing a VOR arrangement for the rental of operated heavy construction equipment, vendors are authorized to provide these goods and/or services for a defined period of time and with fixed pricing.

In accordance with the contract documents for this VOR arrangement, staff may contact any vendor on the list with the expertise and experience required for their project or program requirements. Furthermore, where the suppliers on the VOR are not available for a particular project within the timelines required for TRCA to meet its deliverables, staff are authorized to procure the required goods and/or services following TRCA's Procurement Policy. Vendors will

be required to provide all resources required to service the divisional or program needs in accordance with applicable laws, codes, standards, terms and conditions of the VOR agreement.

RATIONALE

RFP documentation was posted on the public procurement website www.biddingo.com on February 11, 2019 and closed on Feburary 25, 2019. Two (2) addendums were issued to respond to questions received. A total of twenty (20) firms downloaded the documents and six (6) proposals were received from the following vendors:

- Sartor Environmental Group Inc.;
- Dynex Construction Ltd.;
- Valefield Contracting Inc.;
- TMI Contracting and Equipment Rental Ltd.;
- Trisan Construction; and
- Superior Disposal

An Evaluation Committee comprised of senior staff from the Restoration and Infrastructure Division reviewed the proposals. The criteria used to evaluate and select the recommended Proponents included the following:

Evaluation Criteria	Minimum Score	Maximum Score
Proponent Information and Executive Summary	15	30
Organizational Experience	40	50
Equipment Stock	10	20
Total Points	**65**	**100**

Superior Disposal was disqualified because they failed to provide a technical proposal and therefore received a score of nil, however the five remaining vendors achieved the minimum score required in each of the evaluation categories outlined above, and meet all other qualifications and requirements set out in the RFP. Staff therefore recommends that Contract No.10020047 be awarded to Sartor Environmental Group Inc., Dynex Construction Ltd., Valefield Contracting Inc., TMI Contracting and Equipment Rental Ltd. and Trisan Construction.

Proponents' scores and more information regarding the evaluation process can be provided through an in-camera presentation upon request.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan
This report supports the following strategic priority set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 2 – Manage our regional water resources for current and future generations
The operated heavy construction equipment and specialty equipment procured under this VOR arrangement are used to implement a variety of projects which aim to mitigate flooding and erosion hazards, build waterfront parks as well as restore and enhance aquatic and terrestrial habitat in the Toronto region.

Strategy 7 – Build partnerships and new business models
The operated heavy construction equipment rented under this VOR arrangement are used for assisting our municipal partners with a variety of environmentally sensitive projects.

FINANCIAL DETAILS

Based upon a review of projects scheduled for implementation during the contract period, the anticipated value of the requested goods and/or services under this contract is approximately $5,000,000. An increase or decrease in workload will have an impact on the value of this contract. All vendors on the VOR list understand both the potential cost and resource implications associated with changes in workload. The goods and/or services will be provided on an “as required” basis with no minimum hours guaranteed. Vendors may increase hourly rates annually, to a maximum of the preceding year’s Ontario’s Consumer Price Index as published by Statistics Canada.

Funds for this contract are identified in a variety of capital and cost recoverable project accounts.

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Date: March 1, 2019

Section I – Items for Board of Directors Action

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Michael Tolensky, Chief Financial and Operating Officer

RE: **NEW ADMINISTRATIVE OFFICE BUILDING – PROCUREMENT STRATEGY FOR CONSTRUCTION AND SITE PLAN APPROVAL STATUS**

KEY ISSUE

Update on the proposed procurement strategy, sustainability design specifications for the construction tender and status of the Site Plan approval process of Toronto and Region Conservation Authority's (TRCA) New Administrative Office Building Project.

RECOMMENDATION

THAT the proposed procurement strategy outlining Board of Directors authorizations and tender schedules be approved in principle;

THAT the Long Term Office Accommodation Working Group comprised of Board of Director representatives be dissolved due to the stage of this project and upcoming Board of Director reports on this project;

THAT the project update on the Site Plan approval process and design specifications to be included in the construction tender to ensure the construction of the project meets TRCA's sustainability expectations and City of Toronto requirements be received;

THAT staff provide a report on May 24, 2019 Board of Directors meeting on the 90% construction document estimate, including construction management fixed fees, fixed construction general conditions cost and tender results to date;

AND FURTHER THAT staff report back on the total construction and Construction Management Services costs at the time construction tenders are fully received.

BACKGROUND

The Long Term Office Accommodation Project and the Long Term Office Accommodation Working Group (LTOAWG), was established on May 23, 2008 by Authority Resolution #A126/08, to determine the office accommodation needs of TRCA over the next 30 years and recommend a comprehensive, cost effective solution. Following numerous studies and reports from this working group, on February 27, 2015 Resolution #A23/15 approved 5 Shoreham Drive as the preferred site for the new headquarters and on February 24, 2017, staff reported at Authority Meeting #1/17 that all six of TRCA's participating municipalities, had approved the Project and the allocation of $60,000,000 in new and existing capital funding.

In May 2017, TRCA retained Jones Lang LaSalle Canada (JLL) as its project managers for the Project. In September 2017, TRCA retained the services of an integrated design team, led by ZAS Architects and Bucholz McEvoy Architects, to proceed with the development of the project design, planning and approvals, and construction administration. This was followed by a Request for Qualifications and Proposals which resulted in the selection of Eastern Construction Company Limited to provide pre-construction services throughout the design and procurement stages and

to provide construction management services for the construction of the new facility which includes the issuance of tenders to various construction trades, as approved through Resolution #A216/17 on November 17, 2017.

Throughout the planning and design process the Long Term Office Accommodation Working Group, comprised of Board of Director representatives, and supported by TRCA staff, provided valuable advice and oversight. The Working Group asked questions and provided advice to shape the design and sustainability elements of the new administrative headquarters particularly during earlier phases of the planning and design of the project. As this project is now at an advanced stage and the Board of Directors will be regularly updated and engaged through information and approval reports, staff are of the view that the Long Term Office Accommodation Working Group can be dissolved and have put forward a recommendation to this effect in this report.

As part of the Site Plan approval process, TRCA's design team and municipal planning consultant (SvN) has been coordinating the building design submission and satisfying comments from various City of Toronto departments as required by the Site Plan approval process. Simultaneously while pursuing Site Plan approval, the design team is continuing with detailed design and costing exercises in an integrated design approach involving the construction managers to prepare for the tendering phase.

RATIONALE

Acting as TRCA's Construction Manager, Eastern Construction Company Limited (Eastern) will manage the tendering of all trade contracts. Eastern's contract has two phases as follows:

- Phase 1 Pre-Construction & Tendering: Eastern is currently providing pre-construction services under a Construction Management (CM) contract valued at $180,000, per Resolution #216/17. Pre-construction services will continue for all elements of the Project, until such time as the tendering phase of the construction work packages is 100% complete.

- Phase 2 Construction Management Services During Construction: this phase will be awarded following the tendering of the major trades, and confirmation that the construction budget and overall project budget is within the Board approved budget, and will include the following two components:
    - Fixed Component: Includes Eastern's fixed fees (a fixed percentage mark-up of 1.9% on direct construction costs plus HST) and fixed general conditions under the CM contract. These fees are currently included as estimates in the CM contract, and will require adjustment based on the final approved construction budget and agreed project schedule.
    - Actual Cost Component: this amount is based on the final construction budget, which will be based on the tendered value of the major construction trades after the majority of the tendering is completed.

All trade tendering processes will be conducted by Eastern in compliance with TRCA's procurement policy. As such, Eastern will manage the procurement process which, when necessary, will include a prequalification process and provide recommended prequalified firms for approval by TRCA staff. Eastern will then issue tenders to prequalified trades, close the tenders, conduct tender evaluations, and make recommendations of award to TRCA.

Staff anticipate authorizing Eastern to engage two design assist trades (within the limits of authorized approval) prior to the finalization of the CM budget. These design assist tender packages include the mass timber structure package and the water wall system package, due to the specialized nature of the products, long lead times, and integrated nature of the design components that have to be finalized in order to facilitate completion of the design process.

A report to the Board of Directors at the May 24, 2019 meeting will provide an update on the following:

- 90% construction document estimate
- Construction management fixed fees
- Fixed construction general conditions cost
- Tender results to date

A subsequent report to the Board of Directors is anticipated to be issued on June 21, 2019, prior to the commencement of construction. This report will outline the total construction and Construction Management Services costs based on the outcome of all received tenders.

Site Plan Application Update
SvN Planners is guiding the design team to complete the third and what is expected to be the final site plan submission, to be made the week of March 18, 2019.

The project requires a Minor Variance Application to address three variances identified by the City for the following:

- Reduction of the on-site parking requirement from 172 parking spaces to 44 parking spaces.
- Reduction in the required loading spaces from 3 to 2.
- Reduction of one of the loading spaces from the required 11m x 3.6m to 6m x 3.6m.

The minor variances will be before the Committee of Adjustment on March 28, 2019 with a final outcome to be determined in late April 2019, pending any appeals regarding the minor variances.

Sustainability Goals
The tender documents (drawings and specifications) continue to maintain the high sustainability standards set for the Project. The documents include design features that ensure the Project meets:

- LEED Platinum v4
- WELL Silver
- Toronto Green Standards (TGS) Level 2
- Zero Carbon Ready
- All wood to meet the requirements of Programme for the Endorsement of Forest Certification (PEFC). PEFC wood is equivalent to Forest Stewardship Council (FSC) certification.

According to Focal Engineering's energy modelling report for TGS, the Project at completion will be one of the most energy efficient commercial buildings in North America.

Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan
This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:
Strategy 1 – Green the Toronto region's economy
Strategy 10 – Accelerate innovation

FINANCIAL DETAILS

Although funding available for the project totals $63,538,000, TRCA continues to work towards a budget of $60,000,000, with the $3,538,000 in funding as made available by the Minister of Natural Resources and Forestry to be applied to the cost of construction financing. If the total $60,000,000 in funding is not required from TRCA's partner municipalities, then the amount/term of their obligations will be reduced accordingly. Further to this point, TRCA staff continue to review and apply for provincial, federal and other funding opportunities through various grants and programs and was recently notified that TRCA has been shortlisted for consideration under the NRCan Green Construction through Wood Program grant.

DETAILS OF WORK TO BE DONE

The upcoming key procurement milestone dates are as follows:

- Prequalification of Early Packages Tenders — Mar 18–29
- Tender of Early Packages (mass timber structure/water wall system) — Early Apr
- Prequalification of Major Subtrade Packages — Mar 25–Apr 8
- Issue Tender Documents
    - Stage 1 Tender site works, structural, glazing, mechanical, electrical — Apr 9 – 15
    - Stage 2 Tender all remaining scope — Apr 16 – 29
- Board approval of CM budget and CM contract and Stage 1 Tender Award — May 24, 2019
- Board approval of Stage 2 Tender Award — Jun 21, 2019

Project Phases	*Duration*
Site Plan Approval	Jun, 2018 – Jul, 2019
Building Permit	Feb, 2018 – Oct, 2019
Tender Contract Documents	Apr, 2019 – Jun, 2019
Award Construction Contracts	Apr, 2019 – Jun, 2019
Construction (assumes partial bldg. permits)	Apr, 2019 – Jun, 2021
Occupancy	Mar, 2021 – Jun, 2021

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Date: March 18, 2019
Attachments: 3

Attachment 1: LEED v4 for BD+C: New Construction and Major Renovation
Attachment 2: WELL Building Standard v1 – Silver Certification
Attachment 3: CaGBC – Zero Carbon Building Standard

LEED v4 for BD+C: New Construction and Major Renovation

Project Status Report by Green Reason Inc.
Project Name: TRCA Head Office
January 23, 2019

Target Points	Possible Target Points	Possible Target Points				STATUS	ACTION	ACTION BY
1	**0**	**0**	**Integrative Process**		**1**			
1			Credit	Integrative Process	1	Energy analysis being documented by Transsolar. Water analyses for site water/cistern being completed by S&C. Plumbing portion by Integral.	Green Reason to complete the Integrative Process Worksheet and to follow up with the consultants for further information as needed.	Green Reason
9	**0**	**7**	**Location and Transportation**		**16**			
1			Credit	Sensitive Land Protection	1	New building is on previously developed portion of site.	No action at this time.	n/a
2		3	Credit	Surrounding Density and Diverse Uses	5	Building situated close to Shoreham to provide direct pedestrian access towards plaza at Jane and Shoreham. Confirmed at least 8 uses are within 800 m walking distance from the main entrance.	No action at this time.	n/a
3		2	Credit	Access to Quality Transit	5	3 points based on current bus schedules (August 2018). Next threshold is likely out of reach.	Green Reason to review bus schedule at a later date.	Green Reason
1			Credit	Bicycle Facilities	1	Bike network within 180m. Current design meets requirements in terms of number of bicycle parking spaces and showers, based on finalized building occupants count (473). 24 covered long-term bike parking and 4 showers will be provided. Short-term bike parking is driven by TGS requirements (24 short-term bicycle parking provided)	No action at this time.	n/a
1			Credit	Reduced Parking Footprint	1	40% reduction from Parking Consultants Council baseline met with 113 dedicated parking, min. bylaw is not exceeded; LEED calculation based on 44 parking spaces provided onsite: required 3 carpool spaces (5%) which are indicated on DD drawings.	Ensure site plan shows 3 carpool spaces (that do not overlap with green vehicles)	ZAS
1			Credit	Green Vehicles	1	Based on 44 onsite parking spots, required (5%) 3 green vehicle spots (in preferred location) plus 1 charging stations (2%) (more required by code.) that needs to be separated from green vehicles or carpool parking spaces.	No action at this time.	ZAS
8	**2**	**0**	**Sustainable Sites**		**10**			
Required			Prereq	Construction Activity Pollution Prevention	Required	Requires ESC plan conforming to EPA General Construction Permit 2012 or local code if more stringent.	No action at this time.	n/a
	1		Credit	Site Assessment	1	Documentation on soils, topography, hydrology provided by S&C. Green Reason completing review to confirm compliance.	Green Reason to complete review and follow up with the team as necessary.	Green Reason
2			Credit	Site Development - Protect or Restore Habitat	2	S&C considers it achievable to preserve 40% of greenfield and ensure 30% of rest of site is planted with native/adapted species with restored soil.	S&C to confirm if targets are achievable based on current design.	S&C
1			Credit	Open Space	1	Initial design indicated more than 30% of site as pedestrian-oriented open space, with more than 25% vegetated (non-turf grass).	S&C to confirm if targets are achievable based on current design.	S&C
2	1		Credit	Rainwater Management	3	As part of value engineering, the green roof size was reduced to 30% (minimum required bylaw) but the project was no longer able to manage the stormwater runoff for the 98th percentile of rain (29.5mm). The green roof has then been increased to 60%. However, TMIG estimates that even with the current design, it is unlikely to achieve the third LEED point. The team is currently reviewing other options (increasing the size of the cistern)	TMIG to update analysis and LEED Rainwater Event Calculator and confirm current volume of managed stormwater runoff.	TMIG
2			Credit	Heat Island Reduction	2	Green roof will cover 2/3 of the roof, the remaining roof will be covered with SRI membrane. High SRI unit pavers will be provided for parking, with some shade trees. Parking will not be covered.	S&C to confirm if current landscape design is meeting credit requirements for site areas.	S&C
1			Credit	Light Pollution Reduction	1	MBII indicated the credit is achievable and design will comply.	MBII to provide updates and confirm if design is meeting credit requirements.	MBII

7	2	2	**Water Efficiency**		11				
Required			Prereq	Outdoor Water Use Reduction	Required	Irrigation will only be provided for green roof, with no site irrigation. This should result in more than 30% water reduction in LEED calculation.	- S&C to provide updates on outdoor water use reduction - Integral to provide calculations and volumes for rainwater cistern and above ground rainwater tank for food garden irrigation	- S&C - Integral
Required			Prereq	Indoor Water Use Reduction	Required	Mechanical design brief and discussions to date confirms very low flow plumbing fixtures will be specified.	No action at this time.	n/a
Required			Prereq	Building-Level Water Metering	Required	Water metering will be provided for whole-building water usage.	No action at this time.	n/a
1	1		Credit	Outdoor Water Use Reduction	2	Cistern to be provided for roof irrigation - expected to achieve at least 50% reduction for 1 pt. 2nd pt is typically difficult to achieve. Above ground rainwater tank will provide irrigation for the vegetable garden.	Please refer to prerequisite "Outdoor Water Use Reduction" above.	- S&C - Integral
5	1		Credit	Indoor Water Use Reduction	6	Current design with proposed ultra-low flow fixtures indicates water use reduction of 48.41% (5 points). The team is considering the option of using urinals for further water use reduction, equal or higher than 50% (6 points)	ZAS to confirm if urinals will be installed.	ZAS
1			Credit	Water Metering	1	Integral have confirmed that metering achievable for at least 2 of irrigation, reclaimed water, indoor plumbing fixtures, DHW, etc. Review of 50% CD drawings located only water meter for domestic cold water.	Integral to confirm how design meets the credit requirements	Integral
30	**2**	**1**	**Energy and Atmosphere**		**33**				
Required			Prereq	Fundamental Commissioning and Verification	Required	JLSR have provided a review of the DD report.	Design Team and TRCA to address comments/questions of the DD Review and provide clarification.	ZAS / TRCA / Integral / MBII
Required			Prereq	Minimum Energy Performance	Required	DD stage energy model report confirms prerequisite is achievable.	No action at this time.	n/a
Required			Prereq	Building-Level Energy Metering	Required	MBII indicated this is achievable.	No action at this time.	n/a
Required			Prereq	Fundamental Refrigerant Management	Required	HVAC equipment will not contain CFCs as all new equipment being provided.	No action at this time.	n/a
6			Credit	Enhanced Commissioning	6	Monitoring-based Cx and Building Envelope included in Cx RFP.	Please refer to prerequisite "Fundamental Commissioning and Verification".	Please refer to prerequisite "Fundamental Commissioning and Verification".
18			Credit	Optimize Energy Performance	18	As per Transsolar's DD Report, current design expected to achieve 57% energy cost savings over ASHRAE 90.1-2010 baseline design and achieve all the 18 points of the credit.	Please refer to the Prerequisite "Minimum Energy Performance" above,	Transsolar
1			Credit	Advanced Energy Metering	1	MBII indicated it is achievable to capture all points that represent 10% or more of total annual consumption.	MBII to confirm if target is still achievable and provide updates	MBII
	2		Credit	Demand Response	2	MBII confirmed that systems can be designed for credit but will not be a lot of load to shed.	Green Reason to provide information on available load-shedding programs.	Green Reason
2		1	Credit	Renewable Energy Production	3	Currently targeting 5% based on Net Zero Carbon Building Standard.	No action at this time.	n/a
1			Credit	Enhanced Refrigerant Management	1	Integral confirmed refrigerants will be HFCs which have low ODP and GWP values.	To provide details on selected refrigerants and confirm if design is meeting credit requirements.	Integral
2			Credit	Green Power and Carbon Offsets	2	TRCA have confirmed they will purchase green power and carbon offsets as necessary. TRCA have noted that they have existing agreements with Bullfrog for electricity and natural gas which meets the credit requirements.	No action at this time.	n/a
8	**3**	**2**	**Materials and Resources**		**13**				
Required			Prereq	Storage and Collection of Recyclables	Required	Dedicated storage and recycling for typical recycling streams, plus batteries, mercury-containing lamps and e-waste.	ZAS to indicate locations of collection bins for at least two waste stream (batteries, mercury lamps and e-waste)	ZAS
Required			Prereq	Construction and Demolition Waste Management Plann	Required	Requirement for CWM plan with 5 waste streams.	No action at this time.	n/a
3		2	Credit	Building Life-Cycle Impact Reduction	5	3 pts for Life-cycle assessment, 2 other pts for building reuse are not considered achievable. LCA study not currently included in project scope.	ZAS to coordinate with Green Reason on the next steps to initiate LCA.	ZAS / Green Reason
1	1		Credit	BPDO - Environmental Product Declarations	2	Products not yet specified, but expecting to incorporate at least 20 with EPDs, 2nd point considered low maybe.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
1	1		Credit	BPDO - Sourcing of Raw Materials	2	Products not yet specified, but expecting to incorporate many products with recycled content, regional content, FSC, etc.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
1	1		Credit	BPDO - Material Ingredients	2	Products not yet specified, HPDs and equivalent considered more difficult to achieve than EPDs.	Green Reason to coordinate with Eastern and ZAS to review credit requirements.	Green Reason / Eastern / ZAS / BMCEA
2			Credit	Construction and Demolition Waste Management	2	Divert demolition and construction waste in at least 4 streams and achieve 75% diversion - no visual inspection. The team is considering to re-use the concrete slab of the existing building as landscape element for some of the pathways. This could contribute to the waste diversion calculations as material diverted from landfills.	No action at this time.	n/a

6	**9**	**1**	**Indoor Environmental Quality**		**16**				
Required			Prereq	Minimum Indoor Air Quality Performance	Required	ASHRAE 62.1 2010 required by building code. USGBC CIR 10461 allows no airflow monitor for small systems under 1000 CFM.	No action at this time.	n/a
Required			Prereq	Environmental Tobacco Smoke Control	Required	No smoking near entrances, air intakes and operable windows plus compliant signage.	No action at this time.	n/a
1	1		Credit	Enhanced Indoor Air Quality Strategies	2	Integral/ZAS/BME have confirmed CO2 sensors, entryway systems (grilles), and MERV 13 filters (or equivalent).	No action at this time.	n/a
3			Credit	Low-Emitting Materials	3	Specify adhesives, sealants, paints, coatings, composite wood, flooring, insulation & furniture. Also a WELL precondition.	Green Reason to coordinate with Eastern and ZAS to review credit requirements.	Green Reason / Eastern / ZAS / BMCEA
1			Credit	Construction Indoor Air Quality Management Plan	1	IAQ management plan will be implemented during construction.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
	2		Credit	Indoor Air Quality Assessment	2	Construction schedule will affect achievability. New IAQ testing requirements are more stringent and include more contaminants.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
	1		Credit	Thermal Comfort	1	UFAD system may be argued to provide control but combination radiant heat/cooling with UFAD ventilation may require a CIR to clarify credit requirements are being met. GRI drafted CIR and reviewing documentation.	Green Reason to finalize CIR.	Green Reason
1	1		Credit	Interior Lighting	2	MBII indicates that 1 pt for lighting quality is achievable as well as controllability in lighting design. Furnitures expected to include task lighting at workstations.	MBII to confirm how the current design is meeting the credit requirements for Option 2, Lighting Quality.	MBII
	2	1	Credit	Daylight	3	As per Transsolar's DD report, it may be not be possible to achieve the credit. ASE currently tracking at 36% over the threshold of 10%. Green Reason drafted CIR.	BMCEA to provide more details (photos, drawings, specs.) for proposed Mobile Glare Devices.	BMCEA
	1		Credit	Quality Views	1	Credit conflicts with TGS requirement -Views cannot be claimed for fritted or filmed glass - GRI drafted CIR and currently exploring the pilot credit Bird Collision Deterrence option.	Green Reason to finalize CIR.	Green Reason
	1		Credit	Acoustic Performance	1	Considered challenging as design does not include ceiling, but could be investigated further in tandem with WELL. Preliminary acoustic report to be revised based on current CD set and LEED/WELL requirements (provided by GRI).	ZAS to provide updates.	ZAS

6	**0**	**0**	**Innovation**		**6**			
5			Credit	Innovation	5	Green Reason currently exploring options for Innovation credits. Options under considerations are the Pilot Credit "Bird Collision Deterrence" and Innovation Credits "Green Building Education Program", "WELL Features", "O+M Starter Kit", "Purchasing Lamps", "Occupant Survey".	No action at this time.	n/a
1			Credit	LEED Accredited Professional	1	LEED BD+C APs are involved in project.	No action at this time.	n/a

4	**0**	**0**	**Regional Priority**		**4**			
1			Credit	RP: Rainwater Management (2+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			Credit	RP: Heat Island Reduction (2+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			Credit	RP: Optimize Energy Performance (10+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			Credit	RP: Indoor Water Use Reduction (4+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a

79	**18**	**13**	**TOTALS**	Possible Points: **110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

This scorecard is intended to serve as a benchmarking tool to assess potential LEED v4 performance. It does not confirm a LEED rating nor guarantee credit compliance. This document is the sole property of Green Reason Inc. and is only to be used for the project listed above. This document is not to be used in any other capacity without the expressed consent of Green Reason Inc.

	NAME	DESCRIPTION	STATUS	ACTION	ACTION BY	
AIR	**Feature 01. Air quality standards**					AIR
	Part 1. Standards For Volatile Substances	The following conditions are met: a. Formaldehyde levels less than 27 ppb. b. Total volatile organic compounds less than 500 µg/m³.	IAQ pre-testing to be implemented before performance verification. Formaldehyde and VOC emissions can be prevented/reduced by selecting products and materials as required by Feature 04	No action at this time.	n/a	
	Part 2. Standards For Particulate Matter And Inorganic Gases	The following conditions are met: a. Carbon monoxide less than 9 ppm. b. PM2.5 less than 15 µg/m³. c. PM10 less than 50 µg/m³. d. Ozone less than 51 ppb.	IAQ pre-testing to be implemented before performance verification. CO and O_3 levels should not represent an issue for the project. However, PM levels will mostly depend on the implementation of construction pollution management practices as required by Feature 07.	No action at this time.	n/a	
	Part 3. Radon	The following conditions are met in projects with regularly occupied spaces at or below grade: a. Radon less than 0.148 Bq/L (4 pCi/L) in the lowest occupied level of the project.	IAQ pre-testing not required before performance verification.	No action at this time.	n/a	
	Feature 02. Smoking Ban					
	Part 1. Indoor Smoking Ban	Building policy or local code reflects the following: a. Smoking and the use of e-cigarettes is prohibited inside the project.	Required by law.	No action at this time.	n/a	
	Part 2. Outdoor Smoking Ban	Signage is present to indicate: a. A smoking ban within 7.5 m [25 ft] (or the maximum extent allowable by local codes) of all entrances, operable windows and building air intakes. b. A smoking ban on all decks, patios, balconies, rooftops and other regularly occupied exterior building spaces. c. The hazards of smoking, in all areas beyond 7.5m of the building entrances (if smoking is permitted in this areas). These signs are to be placed along all walkways with a distance of not more than 30 m [100 ft] between signs.	Required signage to be included in signage package. Locations to be coordinated with LEED requirements.	No action at this time.	n/a	
	Feature 03. Ventilation Effectiveness					
	Part 1. Ventilation Design	One of the following requirements is met for all spaces: a. Ventilation rates comply with all requirements set in ASHRAE 62.1-2013 (Ventilation Rate Procedure or IAQ Procedure). b. Projects comply with all requirements set in any procedure in ASHRAE 62.1-2013 (including the Natural Ventilation Procedure) and demonstrate that ambient air quality within 1.6 km [1 mi] of the building is compliant with either the U.S. EPA's NAAQS or passes the Air Quality Standards feature in the WELL Building Standard for at least 95% of all hours in the previous year.	ASHRAE 62.1 2010 required by building code. Initial discussions indicate that Option b will be our compliance pathway.	Integral to confirm if Option b will be pursued and if the current design meets the feature requirements.	Integral	
	Part 2. Demand Controlled Ventilation	For all spaces 46.5 m² [500 ft²] or larger with an actual or expected occupant density greater than 25 people per 93 m² [1,000 ft²], one of the following requirements is met: **a. A demand controlled ventilation system regulates the ventilation rate of outdoor air to keep carbon dioxide levels in the space below 800 ppm (measured at 1.2-1.8 m [4-6 ft] above the floor).** b. Projects that have met the Operable windows feature demonstrate that natural ventilation is sufficient to keep carbon dioxide levels below 800 ppm (measured at 1.2-1.8 m [4-6 ft] above the floor) at maximum intended occupancies.	Option **a** considered achievable.	Integral to confirm design meets the requirement of **Option a**.	Integral	
	Part 3. System Balancing	After the HVAC system is installed, the following requirement is met: a. After substantial completion and prior to occupancy, the HVAC system has (within the last 5 years), or is scheduled to, undergo testing and balancing.	Testing and balancing will be completed after substantial completion and prior to occupancy.	No action at this time.	n/a	

Feature 04. VOC Reduction				
Part 1. Interior Paints And Coatings	The VOC limits of newly applied paints and coatings meet one of the following requirements: a. 100% of installed products meet California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011 for VOC content. b. At minimum 90%, by volume, meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions. c. Applicable national VOC content regulations or conduct testing of VOC content in accordance with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2.	Achievable, overlaps with LEED requirements	Green Reason to coordinate meeting with Eastern and ZAS/BMCEA.	Green Reason / Eastern / ZAS/BMCEA
Part 2. Interior Adhesives And Sealants	The VOC limits of newly applied adhesives and sealants meet one of the following requirements: a. 100% of installed products meet South Coast Air Quality Management District (SCAQMD) Rule 1168 for VOC content. Volatile organic compound (VOC) limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005. b. At minimum 90%, by volume, meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 for VOC emissions. c. Applicable national VOC content regulations or conduct testing of VOC content in accordance with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern and ZAS/BMCEA.	Green Reason / Eastern / ZAS/BMCEA
Part 3. Flooring	The VOC emissions of all newly installed flooring must meet all limits set by the following, as applicable: a. California Department of Public Health (CDPH) Standard Method v1.1-2010.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern and ZAS/BMCEA.	Green Reason / Eastern / ZAS/BMCEA
Part 4. Insulation	The VOC emissions of all newly installed thermal and acoustic insulation inside the waterproofing membrane must meet all limits set by the following, as applicable: a. California Department of Public Health (CDPH) Standard Method v1.1-2010.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern and ZAS/BMCEA.	Green Reason / Eastern / ZAS/BMCEA
Part 5. Furniture And Furnishings	The VOC emissions of at least 95% (by cost) of all newly purchased furniture and furnishings within the project scope must meet all limits set by the following, as applicable: a. ANSI/BIFMA e3-2011 Furniture Sustainability Standard sections 7.6.1 and 7.6.2, tested in accordance with ANSI/BIFMA Standard Method M7.1-2011. b. California Department of Public Health (CDPH) Standard Method v1.1-2010.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern and ZAS/BMCEA.	Green Reason / Eastern / ZAS/BMCEA
Feature 05. Air Filtration				
Part 1. Filter Accommodation	If recirculated air is used, the following requirements are met in ventilation assemblies in the main air ducts for recirculated air: a. Rack space is available and rack location identified for future implementation of **carbon filters or combination particle/carbon filters.** b. The mechanical system is sized to accommodate the additional filters.	Mechanical Eng. indicated that carbon impregnated filters could be considered, but also recommend considering AAP that allows a standalone air purifier in lieu of a section in the decentralized ERV units.	Integral to provide updates on current design and strategies.	Integral
Part 2. Particle Filtration	One of the following requirements is met: a. MERV 13 (or higher) media filters are used in the ventilation system to filter outdoor air. b. Project demonstrates that for 95% of all hours in a calendar year, ambient outdoor PM10 and PM2.5 levels measured within 1.6 km [1 mi] of the building are below the limits set in the WELL Air Quality Standards Feature.	Integral initially proposed GREEN PLEAT 1", 2" & 4" MERV 13 by Aerostar that will be able to fit in the ERV units. Alternatively, the Team is also considering to install MERV 13 filters on top of the water walls.	Integral to provide updates on current design and strategies.	Integral
Part 3. Air Filtration Maintenance	To verify that the filtration system continues to operate as designed, projects must annually provide IWBI with: a. Records of air filtration maintenance, including evidence that filters have been properly maintained as per the manufacturer's recommendations.	Program to be implemented during Operations phase. Requirements have been discussed during the FM meeting	No action at this time.	n/a
Feature 06. Microbe And Mold Control				
Part 1. Cooling Coil Mold Reduction	In buildings that rely on a mechanical system for cooling, one of the following requirements is met: a. Ultraviolet lamps (using a wavelength of 254 nm so as not to generate ozone) are employed on the cooling coils and drain pans of the mechanical system supplies. Irradiance reaching the cooling coil and drain pan, including the plenum corners, is modeled. **b. Building policy states that all cooling coils are inspected on a quarterly basis for mold growth and cleaned if necessary. Dated photos demonstrating adherence are provided to the IWBI on an annual basis.**	Assumption is inspections option will be implemented during operations phase. Requirements have been discussed during the FM meeting	No action at this time.	n/a
Part 2. Mold Inspections	The following are not present: a. Signs of discoloration and mold on ceilings, walls or floors. b. Signs of water damage or pooling.	Pre-inspection to be implemented before performance verification.	No action at this time.	n/a

Feature 07. Construction Pollution Management				
Part 1. Duct Protection	To prevent pollutants from entering the ventilation system, all newly installed ducts are either: a. Sealed and protected from possible contamination during construction. b. Vacuumed out prior to installing registers, grills and diffusers.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern.	Green Reason / Eastern
Part 2. Filter Replacement	To prevent pollutants from entering the air supply post-occupancy, if the ventilation system is operating during construction occurring within one year prior to Performance Verification, the following requirement is met: a. All filters are replaced prior to occupancy.	Achievable, overlaps with LEED requirements	Green Reason to coordinate with Eastern.	Green Reason / Eastern
Part 3. Moisture Absorption Management	To prevent building materials from absorbing water or moisture during construction occurring within one year prior to Performance Verification, the following requirements are met: a. A separate area is designated to store and protect absorptive materials, including but not limited to carpets, acoustical ceiling panels, fabric wall coverings, insulation, upholstery and furnishings.	Not specifically required by LEED, but considered best practice.	Green Reason to coordinate with Eastern.	Green Reason / Eastern
Part 4. Dust Containment And Removal	The following procedures are followed during building construction occurring within one year prior to Performance Verification: a. All active areas of work are isolated from other spaces by sealed doorways or windows or through the use of temporary barriers. b. Walk-off mats are used at entryways to reduce the transfer of dirt and pollutants. c. Saws and other tools use dust guards or collectors to capture generated dust.	Not specifically required by LEED, but considered best practice.	Green Reason to coordinate with Eastern.	Green Reason / Eastern
Feature 08. Healthy Entrance				
Part 1. Entryway Walk-Off Systems	To capture particulates from occupant shoes at all regularly used entrances to the project, one of the following is installed and is maintained on a weekly basis: **a. Permanent entryway system comprised of grilles, grates or slots, which allow for easy cleaning underneath, at least the width of the entrance and 3 m [10 ft] long in the primary direction of travel (sum of indoor and outdoor length).** b. Rollout mats, at least the width of the entrance and 3 m [10 ft] long in the primary direction of travel (sum of indoor and outdoor length). c. Material manufactured as an entryway walk-off system, at least the width of the entrance and 3 m [10 ft] long in the primary direction of travel (sum of indoor and outdoor length).	Main entrance will have 3 m grille. Also discussed other entrances - will have grilles/grates and extend with mats if 3 m is challenging at any location.	ZAS to provide updates on current design and confirm if the requirements of **Option a** are being met	ZAS
Part 2. Entryway Air Seal	One of the following is in place to slow the movement of air from outdoors to indoors within mechanically ventilated main building entrances: **a. Building entry vestibule with two normally-closed doorways.** b. Revolving entrance doors. c. At least 3 normally-shut doors that separate occupied space from the outdoors. For example, a space on the fifth-floor could be separated by the exterior building doors, the first-floor elevator doors and the fifth-floor elevator doors. This option is applicable only for buildings whose entrance lobby is not a regularly occupied space.	Main entrance will have vestibule.	ZAS to provide updates on current design and confirm if the requirements of **Option a** are being met	ZAS
Feature 09. Cleaning Protocol				
Part 1. Cleaning Plan For Occupied Spaces	A cleaning plan is created that includes: a. The Cleaning Equipment and Training section of Table A4 in Appendix C. b. A list of approved product seals with which all cleaning, disinfection and hand hygiene products must comply in accordance with the Cleaning, Disinfection and Hand Hygiene Product section in Table A4 in Appendix C. c. A list of high-touch surfaces and schedule of sanitization or disinfection as specified in the Disinfection and Sanitization section in Table A4 in Appendix C. d. A cleaning schedule that specifies the extent and frequency of cleaning, including the Entryway Maintenance section of Table A4 in Appendix C. e. Dated cleaning logs that are maintained and available to all occupants.	Overlaps with LEED Green Cleaning which is expected to be pursued as an Innovation point. Requirements have been discussed during the FM meeting	No action at this time.	n/a

Feature 10. Pesticide Management				
Part 1. Pesticide Use	Pesticide and herbicide use on outdoor plants is eliminated, or hazards are minimized through one of the following: a. The creation of a pest management plan in place of pesticide/herbicide use, based on Chapter 3 of the San Francisco Environment Code Integrated Pest Management (IPM) program. b. The use of hazard-ranked pesticides based on screening lists described in Table A2 in Appendix C.	Overlaps with LEED Exterior Integrated Pest Management which is expected to be pursued as an Innovation point. Requirements have been discussed during the FM meeting	No action at this time.	n/a
Feature 11. Fundamental Material Safety				
Part 1. Asbestos And Lead Restriction	All newly-installed building materials meet the following materials composition requirements: a. No asbestos. b. Not more than a weighted average of 0.25% lead in wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures, and 0.20% for solder or flux used in plumbing for water intended for human consumption. c. Not more than 100 ppm (by weight) added lead in all other building materials. For door hardware, project teams must document attempt to meet the requirement and demonstrate a petition or a formal request has been filed with manufacturers who were unable to meet their needs.	Asbestos will not be installed as per law.	Design team to confirm lead restriction is not an issue for any materials being specified, including plumbing and door hardware.	ZAS
Part 2. Lead Abatement	For repair, renovation, demolition or painting of projects constructed prior to any applicable laws banning or restricting lead paint.	New building.	n/a	n/a
Part 3. Asbestos Abatement	To reduce hazards in projects constructed prior to any applicable laws banning or restricting asbestos.	New building	n/a	n/a
Part 4. Polychlorinated Biphenyl Abatement	For any projects undergoing current renovation or demolition which were constructed or renovated between 1950 and the institution of any applicable laws banning or restricting PCBs.	New building.	n/a	n/a
Part 5. Mercury Limitation	Mercury-containing equipment and devices are restricted in accordance with the below guidelines: a. Project does not specify or install new mercury containing thermometers, switches and electrical relays. b. Project does not install any lamps not compliant with the low-mercury limits specified in Appendix C, Table A5. Project develops a plan to upgrade any existing non-compliant lamps to low-mercury or mercury-free lamps. c. Illuminated exit signs only use Light-Emitting Diode (LED) or Light-Emitting Capacitor (LEC) lamps. d. No mercury vapor or probe-start metal halide high intensity discharge lamps are in use.	All lamps expected to be LED as per Design Brief. However, lighting layouts and lighting fixtures schedule drawings are not included in the DD drawings set.	MBII to confirm all lamps will be LED and Design team to confirm if any other equipment may have mercury.	MBII / Integral / ZAS / BMCEA
Feature 12. Moisture Management				
Part 1. Exterior Liquid Water Management	A point-by-point narrative describes how liquid water from outside the building is addressed, responding to the nature and intensity of wetting based on the project's site and climate, and includes the following leading concerns: a. Site drainage, including the impact of any site irrigation. b. The local water table. c. Building penetrations (especially windows and plumbing/electrical/mechanical penetrations). d. Porous building materials connected to exterior sources of liquid water.	Civil Eng. confirmed measures will be documented in the SWM and Servicing Design Brief.	TMIG to provide updates and confirm if the current design is meeting precondition requirements.	TMIG
Part 2. Interior Liquid Water Management	A point-by-point narrative describes how liquid water from interior sources is addressed, including these leading concerns: a. Plumbing leaks. b. "Hard-piped" plumbing appliances (appliances such as clothes washers exposed to building water pressure even when not in use). c. Porous building materials connected to interior sources of liquid water. d. New building materials with “built-in” high moisture content or building materials wetted during construction but now on the inside of the building.	All requirements generally considered best practice.	Design team to provide further information and confirm precondition requirements are being met by the current design	ZAS / BMCEA
Part 3. Condensation Management	A point-by-point narrative describes how condensation is addressed, including these leading concerns: a. High interior relative humidity levels, particularly in susceptible areas like bath and laundry rooms and below-grade spaces. b. Air leakage which could wet either exposed interior materials or interstitially “hidden” materials. c. Cooler surfaces, such as basement or slab-on-grade floors, or closets/cabinets on exterior walls. d. Oversized air conditioning units.	All requirements generally considered best practice.	Design team to provide further information and confirm precondition requirements are being met by the current design	ZAS / BMCEA

	Part 4. Material Selection And Protection	A point-by-point narrative describes how moisture-tolerant materials have been selected and/or moisture-sensitive materials (MSP) are being protected, considering these leading concerns: a. Exposed entryways and glazing. b. Porous cladding materials. c. Finished floors in potentially damp or wet rooms such as basements, bathrooms and kitchens. d. Interior sheathing in damp or wet rooms. e. Sealing and storing of absorptive materials during construction.	All requirements generally considered best practice.	Design team to provide further information and confirm precondition requirements are being met for a-d by the current design	ZAS / BMCEA	
WATER	**Feature 30. Fundamental Water Quality**					WATER
	Part 1. Sediment	All water being delivered to the project area except water not designated for human contact meets the following requirements: a. Turbidity of the water sample is less than 1.0 NTU.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Part 2. Microorganisms	All water being delivered to the project area except water not designated for human contact meets the following requirements: a. Total coliforms (including E. coli) are not detected in the sample.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Feature 31. Inorganic Contaminants					
	Part 1. Dissolved Metals	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Lead less than 0.01 mg/L. b. Arsenic less than 0.01 mg/L. c. Antimony less than 0.006 mg/L. d. Mercury less than 0.002 mg/L. e. Nickel less than 0.012 mg/L. f. Copper less than 1.0 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Feature 32. Organic Contaminants					
	Part 1. Organic Pollutants	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Styrene less than 0.0005 mg/L b. Benzene less than 0.001 mg/L c. Ethylbenzene less than 0.3 mg/L. d. Polychlorinated biphenyls less than 0.0005 mg/L. e. Vinyl chloride less than 0.002 mg/L. f. Toluene less than 0.15 mg/L. g. Xylenes (total: m, p and o) less than 0.5 mg/L. h. Tetrachloroethylene less than 0.005 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Feature 33. Agricultural Contaminants					
	Part 1. Herbicides And Pesticides	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Atrazine less than 0.001 mg/L b. Simazine less than 0.002 mg/L c. Glyphosate less than 0.70 mg/L. d. 2,4-Dichlorophenoxyacetic acid less than 0.07 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Part 2. Fertilizers	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Nitrate less than 50 mg/L (10 mg/L as nitrogen).	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Feature 34. Public Water Additives					
	Part 1. Disinfectants	All water being delivered to the project area for human consumption (at least one water dispenser per project) and showers/baths meets the following limits: a. Residual chlorine less than 0.6 mg/L. b. Residual chloramine less than 4 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
	Part 2. Disinfectant By-products	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Total trihalomethanes less than 0.08 mg/L. b. Total haloacetic acids less than 0.06 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	

	Part 3. Fluoride	All water being delivered to the project area for human consumption (at least one water dispenser per project) meets the following limits: a. Fluoride less than 4.0 mg/L.	Toronto generally has excellent water quality. Water quality pre-testing to be implemented during construction so that any necessary corrective action (ex. installing filters) could be implemented before completion.	No action at this time.	n/a	
NOURISHMENT	**Feature 38. Fruits And Vegetables**					NOURISHMENT
	Part 1. Fruit And Vegetable Variety	If foods are sold or provided on a daily basis on the premises by (or under contract with) the project owner, then the selection includes at least one of the following: a. At least 2 varieties of fruits (containing no added sugar) and at least 2 varieties of non-fried vegetables. b. At least 50% of available options are fruits (containing no added sugar) and/or non-fried vegetables.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary.	Green Reason to coordinate with TRCA.	Green Reason / TRCA	
	Part 2. Fruit And Vegetable Promotion	Cafeterias operated or contracted by the project owner, if present, include the following design interventions: a. Salad bar or similar salad-providing section, positioned in a visible and accessible location. b. Fruits and vegetables are visually apparent, either through display or through color photographs on the menu. c. Vegetable dishes are placed at the beginning of the food service line. d. Fruits or fruit dishes are placed in a bowl or in a stand at the checkout location.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary. Signage and action plan to promote fruit and vegetable to be reviewed further.	Green Reason to coordinate with TRCA.	Green Reason / TRCA	
	Feature 39. Processed Foods					
	Part 1. Refined Ingredient Restrictions	All foods, beverages, snacks and meals sold or provided on a daily basis on the premises by (or under contract with) the project owner, including in vending machines, meet the following conditions: a. Beverages do not contain more than 30 g of sugar per container. Bulk containers of 1.9 L (2 quart) or larger are exempt from this requirement. b. At least 50% of beverages have 1 g of sugar or less per 16 mL [1.87 g of sugar or less per 1 oz]. c. No non-beverage food item contains more than 30 g of sugar per serving. d. In at least 50% of food offerings where a grain flour is the primary ingredient by weight, a whole grain must be the primary ingredient.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary. Vending machines to be confirmed.	Green Reason to coordinate with TRCA.	Green Reason / TRCA	
	Part 2. Trans Fat Ban	All foods, beverages, snacks and meals sold or provided on a daily basis on the premises by (or under contract with) the project owner, including in vending machines, do not contain: a. Partially-hydrogenated oil.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary. Vending machines to be confirmed.	Green Reason to coordinate with TRCA.	Green Reason / TRCA	
	Feature 40. Food Allergies					
	Part 1. Food Allergy Labeling	All foods sold or provided on a daily basis on the premises by (or under contract with) the project owner are clearly labeled on packaging, menus, signage, or electronic media to indicate if they contain the following allergens: a. Peanuts. b. Fish. c. Shellfish. d. Soy. e. Milk and dairy products. f. Egg. g. Wheat. h. Tree nuts. i. Gluten.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary. Vending machines to be confirmed.	Green Reason to coordinate with TRCA.	Green Reason / TRCA	
	Feature 41. Hand Washing					
	Part 1. Hand Washing Supplies	The following are provided, at a minimum, at all sink locations: a. Fragrance-free hand soap in accordance with the Cleaning, Disinfection and Hand Hygiene Product section in Table A4 in Appendix C. b. Disposable paper towels (air dryers are not forbidden, but are supplemented).	Requirements have been discussed during the FM meeting	ZAS to confirm if disposable paper towels are part of the design	ZAS	
	Part 2. Contamination Reduction	One of the following is provided, at a minimum, at all sink locations: a. Liquid soap in dispensers with disposable and sealed soap cartridges. b. Bar soap with a soap rack that allows for drainage.	Requirements have been discussed during the FM meeting	ZAS to confirm if dispenser for liquid soap with disposable and sealed soap cartridges are part of the design	ZAS	
	Part 3. Sink Dimensions	Bathroom and kitchen sinks meet the following requirements: a. The sink column of water is at least 25 cm [10 in] in length. b. The handwashing basin is at least 23 cm [9 in] in width and length.	Sinks will be designed accordingly	ZAS / BMCEA / Integral to confirm design meet the requirements.	ZAS / BMCEA / Integral	

Feature 42. Food Contamination					
Part 1. Cold Storage	If raw meat, fish or poultry is prepared or stored on site, cold storage spaces contain the following: a. At least one removable, cleanable drawer or container located at the bottom of the unit, designated and labeled for storing raw meat, fish and poultry. b. A visual display of holding temperatures to ensure accurate representation of storage temperatures.	Kitchen equipment to be relocated/specified to be reviewed for possible challenges. TRCA to coordinate with kitchen operator to confirm requirements implemented. Features requirements included in the Kitchen Design RFP.	Green Reason to coordinate with TRCA.	Green Reason / TRCA
Feature 43. Artificial Ingredients					
Part 1. Artificial Substance Labeling	All foods sold or provided on a daily basis on the premises by (or under contract with) the project owner are clearly labeled on packaging, nearby menus or signage to indicate if they contain the following: a. Artificial colors. b. Artificial flavors. c. Artificial sweeteners. d. Brominated vegetable oils. e. Potassium bromate. f. BHA (Butylated hydroxyanisole). g. BHT (Butylated hydroxytoluene). h. Monosodium glutamate (MSG). i. Hydrolyzed vegetable protein (HVP). j. Sodium nitrate and sodium nitrite. k. Sulfites.	TRCA to coordinate with kitchen operator to ensure requirements are met and service agreement is adjusted if necessary. Vending machines to be confirmed.	Green Reason to coordinate with TRCA.	Green Reason / TRCA
Feature 44. Nutritional Information					
Part 1. Detailed Nutritional Information	For foods and beverages sold or provided on a daily basis on the premises by (or under contract with) the project owner, the following are displayed (per meal or item) on packaging, menus or signage: a. Total calories. b. Macronutrient (total protein, total fat and total carbohydrate) in weight and as a percent of estimated daily requirements (Daily Values). c. Total sugar content.	Cafeteria will be provided within the building	Green Reason to discuss with TRCA how information will be presented - signage, menu, packaging.	Green Reason / TRCA
Feature 45. Food Advertising					
Part 1. Advertising And Environmental Cues	The following requirement is met: a. Advertisements for any food or beverage items that do not conform to the requirements set forth in the Processed Foods Feature are not displayed on the premises.	Signage to be implemented by TRCA.	No action at this time.	n/a
Part 2. Nutritional Messaging	Using prominent displays such as educational posters, brochures or other visual media, designated eating areas or common areas contain a total of at least 3 instances of messaging intended to achieve either or both of the following requirements: a. Encourage the consumption of whole, natural foods and cuisines. b. Discourage the consumption of sugary or processed foods and beverages.	Signage to be implemented by TRCA.	No action at this time.	n/a

LIGHT						LIGHT
	Feature 53. Visual Lighting Design					
	Part 1. Visual Acuity For Focus	The following requirements are met at workstations or desks: a. The ambient lighting system is able to maintain an average light intensity of 215 lux [20 fc] or more, measured on the horizontal plane, 0.76 m [30 inches] above finished floor. The lights may be dimmed in the presence of daylight, but they are able to independently achieve these levels. b. The ambient lighting system is zoned in independently controlled banks no larger than 46.5 m² [500 ft²] or 20% of open floor area of the room (whichever is larger). c. If ambient light is below 300 lux [28 fc], task lights providing 300 to 500 lux [28 to 46 fc] at the work surface are available upon request.	MBII considers this attainable.	MBII to provide updates and confirm if current design meets Precondition requirements.	MBII	
	Part 2. Brightness Management Strategies	Provide a narrative that describes strategies for maintaining luminance balance in spaces, which takes into consideration at least two of the following: a. Maximum brightness contrasts between main rooms and ancillary spaces, such as corridors and stairwells, if present. For example, projects may establish that, while still maintaining lighting variety, a main room cannot exhibit 10 times greater or lesser luminance than an ancillary space. b. Maximum brightness contrasts between task surfaces and immediately adjacent surfaces, including adjacent visual display terminal screens. For example, projects may establish that, while still maintaining lighting variety, a surface cannot exhibit 3 times greater or lesser luminance than an adjacent surface. c. Brightness contrasts between task surfaces and remote, non-adjacent surfaces in the same room. For example, projects may establish that, while still maintaining lighting variety, a surface cannot exhibit 10 times greater or lesser luminance than another remote surface in the same room. d. The way brightness is distributed across ceilings in a given room that maintains lighting variety but avoids both dark spots, or excessively bright, potentially glaring spots. For example, projects may establish that, while still maintaining lighting variety, one part of the ceiling cannot be 10 times greater or lesser luminance than another part of the ceiling in the same room.	MBII considers this attainable	MBII to provide updates and confirm if current design meets Precondition requirements.	MBII	
	Feature 54. Circadian Lighting Design					
	Part 1. Melanopic Light Intensity For Work Areas	Light models or light calculations demonstrate that at least one of the following requirements is met: a. At 75% or more of workstations, at least 200 equivalent melanopic lux is present, measured on the vertical plane facing forward, 1.2 m [4 ft] above finished floor (to simulate the view of the occupant). This light level may incorporate daylight, and is present for at least the hours between 9:00 AM and 1:00 PM for every day of the year. b. For all workstations, electric lights (which may include task lighting) provide maintained illuminance on the vertical plane facing forward (to simulate the view of the occupant) of 150 equivalent melanopic lux or greater. Projects may use the lux recommendations in the required amount in place of 150.	MBII. considers this attainable.	MBII to provide updates and confirm if current design meets the Precondition requirements	MBII	
	Feature 55. Electric Light Glare Control					
	Part 1. Lamp Shielding	The following shielding angles (α = 90 - cut-off angle) must be observed for lamps in regularly occupied spaces with luminance values in the ranges specified: a. No shielding required for less than 20,000 cd/m² (including reflected sources). b. α: 15° for 20,000 to 50,000 cd/m². c. α: 20° for 50,000 to 500,000 cd/m². d. α: 30° for 500,000 cd/m² and above.	MBII considers this attainable.	MBII to provide updates and confirm if current design meets Precondition requirements.	MBII	
	Part 2. Glare Minimization	At workstations, desks, and other seating areas the following requirement is met: a. Luminaires more than 53° above the center of view (degrees above horizontal) have luminances less than 8,000 cd/m².	MBII considers this attainable	MBII to provide updates and confirm if current design meets Precondition requirements.	MBII	
	Feature 56. Solar Glare Control					
	Part 1. View Window Shading	At least one of the following is present for all glazing less than 2.1 m [7 ft] above the floor in regularly occupied spaces: a. Interior window shading or blinds that are controllable by the occupants or set to automatically prevent glare. b. External shading systems that are controllable by the occupants or set to automatically prevent glare. c. Variable opacity glazing, such as electrochromic glass, which can reduce transmissivity by 90% or more.	Glare control to be provided. Consider AAP if alternative (not blinds) glare control devices are being considered.	ZAS/BMCEA to provide updates and confirm if AAP is required.	ZAS / BMCEA	
	Part 2. Daylight Management	At least one of the following is required for all glazing greater than 2.1 m [7 ft] above the floor: a. Interior window shading or blinds that are controllable by the occupants or set to automatically prevent glare. b. External shading systems that are set to automatically prevent glare. c. Interior light shelves to reflect sunlight toward the ceiling. d. A film of micro-mirrors on the window that reflects sunlight toward the ceiling. e. Variable opacity glazing, such as electrochromic glass, which can reduce transmissivity by 90% or more.	Glare control to be provided. Consider AAP if alternative (not blinds) glare control devices are being considered.	ZAS/BMCEA to provide updates and confirm if AAP is required.	ZAS / BMCEA	

FITNESS						FITNESS
	Feature 64. Interior Fitness Circulation					
	Part 1. Stair Accessibility & Promotion	In projects of 2 to 4 floors, at least one common staircase meets the following requirements: a. Stairs are accessible to regular building occupants during all regular business hours. b. Throughout the space, wayfinding signage and point-of-decision prompts are present to encourage stair use (at least one sign per elevator bank).	Feature stairs meet requirement; signage to be implemented by TRCA.	No action at this time.	n/a	
	Part 2. Staircase Design	In projects of 2 to 4 floors, at least one common staircase meets the following requirements: a. Located within 7.5 m [25 ft] of the building's main entrance, main entry check-point (e.g., welcome/reception desk), the edge of its main lobby, or edge of its main welcome area. b. Clearly visible from the building's main entrance, main entry check-point (e.g., welcome/reception desk), the edge of its main lobby, or edge of its main welcome area, or are located visually before any elevators present upon entering from the main entrance. c. Stair width set at a minimum of 1.4 m [56 in] between handrails, or the width allowable by local code.	Feature stairs visible from exhibition/reception space.	No action at this time.	n/a	
	Part 3. Facilitative Aesthetics	In projects of 2 to 4 floors, common stairs, entryways and corridors display elements of aesthetic appeal by incorporating at least 2 of the following throughout the stair: a. Artwork. b. Music. c. Daylighting using windows or skylights of at least 1 m² [10.8 ft²] in size. d. View windows to the outdoors or building interior. e. Light levels of at least 215 lux [20 fc] when the stairs are in use. f. Biophilic elements	Feature stairs currently are daylit with window views. MBII confirmed lighting requirement can be met.	No action at this time.	n/a	
	Feature 65. Activity Incentive Programs					
	Part 1. Activity Incentive Programs	At least two of the following are implemented for all full-time employees: a. Tax-exempt payroll deductions relating to active transportation (e.g., a subsidy to purchase a personal bicycle) or mass transit (includes public transportation) use. Direct subsidy of an equivalent amount. b. Meaningful reimbursements or incentive payments (including non-monetary) offered for every 6-month period that an employee meets a 50-visit minimum to the gym or physical activity program. c. A meaningful subsidy offered at least yearly towards participation or membership costs for fitness activities such as races, group fitness classes, sports teams, fitness centers, training centers, gyms, or studios. Direct subsidies of an equivalent amount are also acceptable. d. A meaningful subsidy offered at least yearly towards the cost of an annual bicycle share membership e. No cost or discounted physical activity opportunities or memberships, in which it can be demonstrated that 30% of occupants have utilized on a regular basis (at least weekly) over the last six months.	Some of the activity inventive programs that are already in place at TRCA might have overlaps with some of the WELL features.	Green Reason to review with TRCA existing activity incentive programs	GRI / TRCA	

COMFORT	**Feature 72. Accessible Design**					COMFORT
	Part 1. Accessibility and Usability	The projects must demonstrate compliance with one of the following: a. Current ADA Standards for Accessible Design or comparable local code or standards. b. ISO 21542:2011 - Building Construction - Accessibility and Usability of the Built Environment.	Design will meet AODA requirements	ZAS / BMCEA to confirm design meet the requirements.	ZAS / BMCEA	
	Feature 73. Ergonomics: Visual And Physical					
	Part 1. Visual Ergonomics	The following requirement is met: a. All computer screens are adjustable in terms of height and distance from the user.	Assumption is that this is standard.	TRCA to confirm if requirements are being met.	TRCA	
	Part 2. Desk Height Flexibility	At least 30% of workstations have the ability to alternate between sitting and standing positions through a combination of the following: a. Adjustable height sit-stand desks. b. Desk-top height adjustment stands. c. Pairs of fixed-height desks of standing and seated heights (which need not be located adjacent to each other).	Workstations expected to be relocated from existing building. Adjustable desk-top stands previously discussed with TRCA in order to ensure compliance with precondition.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA	
	Part 3. Seat Flexibility	Occupant furnishings are adjustable in the following ways: a. Workstation chair height adjustability is compliant with the HFES 100 standard or BIFMA G1 guidelines. b. Workstation seat depth adjustability is compliant with the HFES 100 standard or BIFMA G1 guidelines.	Chairs to be relocated are adjustable - further reviewing for BIFMA compliance.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA	
	Feature 74. Exterior Noise Intrusion					
	Part 1. Sound Pressure Level	Each regularly occupied space meets the following sound pressure level as measured when the space and adjacent spaces are unoccupied, but within 1 hour of normal business hours: a. Average sound pressure level from outside noise intrusion does not exceed 50 dBA.	Design team to ensure glazing acoustics performance is considered a factor. Acoustics pretesting to be implemented prior to performance versification.	No action at this time.	n/a	
	Feature 75. Internally Generated Noise					
	Part 1. Acoustic Planning	An acoustic plan is developed that identifies the following spaces and potential sources of disruption: a. Loud and quiet zones. b. Noisy equipment in the space.	Design team to address how noisy and quiet zones will be defined. Integral advised some mechanical equipment may generate noise.	Preliminary acoustic report to be revised based on current design.	ZAS	
	Part 2. Mechanical Equipment Sound Levels	The mechanical equipment system meets the following requirements once interior build-out is complete in the following spaces: a. Open office spaces and lobbies that are regularly occupied and/or contain workstations: maximum noise criteria (NC) of 40. b. Enclosed offices: maximum noise criteria (NC) of 35. c. Conference rooms and breakout rooms: maximum noise criteria (NC) of 30 (25 recommended).	Integral advised some mechanical equipment may generate noise. NC levels cannot be confirmed at this time.	No action at this time.	n/a	
	Feature 76. Thermal Comfort					
	Part 1. Ventilated Thermal Environment	All spaces in mechanically-ventilated projects (including circulation areas) meet the design, operating and performance criteria: a. ASHRAE Standard 55-2013 Section 5.3, Standard Comfort Zone Compliance.	Transsolar confirmed compliance with ASHRAE 55 for mechanical and natural ventilation	n/a	n/a	
	Part 2. Natural Thermal Adaptation	All spaces in naturally-conditioned projects meet the following criteria: a. ASHRAE Standard 55-2013 Section 5.4, Adaptive Comfort Model.	n/a. For buildings that have only natural ventilation without mechanical cooling.	n/a	n/a	

MIND						MIND
	Feature 84. Health And Wellness Awareness					
	Part 1. Well Building Standard® Guide	Explanatory guides allow occupants to familiarize themselves with and benefit from features that are incorporated into the project, as well as gain a broader understanding of health and wellness factors beyond the built environment. The following is provided: a. A guide (available to all occupants) describing the WELL Building Standard features pursued by the project.	TRCA considering a digital format for the guide	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA	
	Part 2. Health And Wellness Library	A digital and/or physical library of resources is provided that focuses on mental and physical health and meets the following criteria: a. Contains at least one book title or one magazine subscription for every 20 occupants (no more than 20 titles are required). b. Is prominently displayed and readily available to all occupants.	TRCA considers providing a digital library.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA	
	Feature 85. Integrative Design					
	Part 1. Stakeholder Charrette	Project stakeholders, including at a minimum the owner, architects, engineers and facilities management team, meet to: a. Perform a values assessment and alignment exercise within the team to inform any project goals as well as strategies to meet occupant expectations. b. Discuss the needs of the occupants, focusing on wellness. c. Set future meetings to stay focused on the project goals and to engage future stakeholders who join the process after the initial meeting, such as contractors and sub-contractors.	Green Reason conducted two main workshops with the design team and 10-20 members of the client team across various stakeholder groups, to review program and policies and TRCA certification goals. Green Reason has also been having regular bi-weekly design meetings and client meetings both of which include WELL updates/discussions. WELL Coach confirmed that even if this was not formally called as *WELL Stakeholder Charette* , the intent of the workshops and the meeting met the requirement of the stakeholder charette.	No action at this time.	n/a	
	Part 2. Development Plan	A written document detailing the building's health-oriented mission is produced with the consent of all stakeholders, incorporating all of the following: a. Building site selection, taking into account public transportation. b. WELL Concepts of air, water, nourishment, light, fitness, comfort and mind. c. Plans for implementation of the above analyses and decisions. d. Operations and maintenance plans for facility managers and building policy requirements related to wellness.	The content of the document are partially covered under the LEED credit Integrative Design.	Green Reason to prepare draft document for review and input by team members.	Green Reason	
	Part 3. Stakeholder Orientation	Upon construction completion, the designers, owners, managers and facilities staff must: a. Tour the building as a group. b. Discuss how building operations will support adherence to the WELL Building Standard.	To be implemented in post-construction period.	No action at this time.	n/a	
	Feature 86. Part Post-Occupancy Surveys					
	Part 1. Occupant Survey Content	In buildings with 10 or more occupants, the Occupant Indoor Environmental Quality (IEQ) Survey™ from the Center for the Built Environment at UC Berkeley (or approved alternative) is completed by a representative sample of at least 30% of occupants at least once per year unless otherwise noted. The survey covers the following topics of occupant satisfaction: a. Acoustics. b. Thermal comfort, including humidity and air flow, at least twice a year (once during the cooling season and once during the heating season). c. Furnishings. d. Workspace light levels and quality. e. Odors, stuffiness and other air quality concerns. f. Cleanliness and maintenance. g. Layout.	Survey requirement previously discussed with TRCA; content to be developed near construction end.	No action at this time.	n/a	
	Part 2. Information Reporting	Aggregate results from surveys are reported within 30 days to the following groups: a. Building owners and managers. b. Building occupants (upon request). c. The International WELL Building Institute.	To be implemented in post-construction period.	No action at this time.	n/a	
	Feature 87. Beauty And Design I					
	Part 1. Beauty And Mindful Design	The project contains features intended for all of the following: a. Human delight. b. Celebration of culture. c. Celebration of spirit. d. Celebration of place. e. Meaningful integration of public art.	Strategy to be reviewed and finalized with TRCA and design team.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA	
	Feature 88. Biophilia I - Qualitative					
	Part 1. Nature Incorporation	A biophilia plan is developed that includes a description of how the project incorporates nature through the following: a. Environmental elements. b. Lighting. c. Space layout.	Strategy to be reviewed and finalized with TRCA and design team.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA / ZAS	

	Part 2. Pattern Incorporation	A biophilia plan is developed that includes a description of how the project incorporates the following: a. Nature's patterns throughout the design.	Design being informed by the ravine environment.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA / ZAS	
	Part 3. Nature Interaction	A biophilia plan is developed that provides sufficient opportunities for human-nature interactions: a. Within the building. b. Within the project boundary, external to the building.	Water walls and live plants within building; garden and trail for exterior compliance.	Green Reason to review further details with TRCA and Design Team.	Green Reason / TRCA / ZAS	

This scorecard is intended to serve as a benchmarking tool to assess potential WELL v1 performance. It does not confirm a WELL rating nor guarantee features compliance. This document is the sole property of Green Reason Inc. and is only to be used for the project listed above. This document is not to be used in any other capacity without the expressed consent of Green Reason Inc.

CaGBC - Zero Carbon Building Standard
Project Status Report
Project Name: TRCA New Head Office
January 23, 2019

	STATUS	ACTION	ACTION BY
General Information			
Download of annual data for each meter in Portfolio Manager	Transsolar provided preliminary anticipated meter data. Transsolar will provide updated anticipated meter data when final energy model is complete.	No action at this time	n/a
Mechanical, Electrical, Architectural IFC Drawings	Early April 2019 for 100% Contract Documents and Tender issue	No action at this time	n/a
Energy model output files	TS to provide IFC energy model output files which comply with ZCB energy modelling guidelines.	No action at this time	n/a
Narrative including: - Description of the building and its intended use - Description of the building energy systems - Description of any energy imports or exports - Description of the building envelope characteristics	Descriptions exist as part of various modelling reports and design briefs. Need to be consolidated into these categories.	TS to provide required descriptions at IFC stage	TS
Zero Carbon Balance			
Completed ZCB Workbook	ZCB Workbook summarizes project information's, submittals checklists, energy use data and GHG emission	GR to complete ZCB Workbook upon receipt of final data from TS.	GR
Share ENERGY STAR Portfolio Manager with CaGBC account "CaGBC ZCB Program"	Requires anticipated monthly energy use data. TRCA will provide access to ENERGY STAR portfolio manager account for Green Reason	Green Reason to input preliminary meter data anticipated by the energy model.	GR
Narrative including: - Commitment to fulfill ZCB using purchase of offsite renewable energy - Intended supplier(s) - Estimate of the quantity of offsite renewable energy required - Estimates of the expected annual costs - Source of all costs used in the estimates	TRCA have confirmed they will purchase green power and carbon offsets as necessary. TRCA have noted that they have existing agreements with Bullfrog for electricity and natural gas which meets ZCB standard requirements.	No action at this time	n/a
Zero Carbon Transition Plan			
- A narrative explaining why the combustion of fuels is necessary (if applicable) - A narrative describing how building loads have been reduced - A narrative describing the mechanical HVAC strategy and how components of the system may be adapted to accommodate non-combustion based technologies. - Drawings that show provisions for future upgrades - A financial comparison of the current system and a non-combustion based alternative	Not applicable as the project does not rely on onsite combustion of fuels.	n/a	n/a
TEDI			
Modelled TEDI performance of the building	Modelled TEDI performance is meeting the requirements	No action at this time	n/a

Narratives	Narratives to explain: - how TEDI has been reduced through the use of passive design measures - how TEDI has been calculated	TS to provide narratives at IFC for design submission.	TS
Testing results and supporting calculations for any alternative air leakage testing values used other than the default in the modelling guidelines	Air leakage testing requirements to be included in IFT documents.	No action at this time	JLSR

Peak Demand			
Modelled Peak Demand	Modelled peak demand is part of required submittals but there is no performance threshold requirement to meet.	TS to provide modelled peak demand when final energy model is ready.	TS

Embodied Carbon (LCA)			
Embodied carbon report that includes: - LCA software used - Elements in the building that are included in the calculation - Service life of the building - List of life cycle phases included - Total Global Warming Potential for the building (in kg CO2eq)	Whole building LCA is also required for the LEED credit Building Life-Cycle Impact Reduction	ZAS to coordinate with Green Reason on the next steps to initiate LCA.	GR/ZAS
Brief commentary on any challenges meeting this requirement, as well as any measures taken to reduce embodied carbon	Optional	No action at this time	n/a

This report is intended to serve as a benchmarking tool to assess potential Zero Carbon Building Standard performance. This document is the sole property of Green Reason Inc. and is only to be used for the project listed above. This document is not to be used in any other capacity without the expressed consent of Green Reason Inc.

Section III – Items for the Information of the Board

TO: Chair and Members of the Board of Directors
Meeting #3/19, Friday, March 29, 2019

FROM: Laurie Nelson, Interim Director, Policy Planning

RE: **TRCA COMMENTS TO ENVIRONMENTAL REGISTRY OF ONTARIO (ERO) 10th Year Review of Ontario's Endangered Species Act (ERO #013-4143)**

KEY ISSUE

Toronto and Region Conservation Authority's comments on the Government of Ontario's proposed amendments to the *Endangered Species Act*, 2007 and associated proposed implementing framework and regulations.

RECOMMENDATION

WHEREAS the Province of Ontario posted the proposed amendments to the Endangered Species Act for public comment on the Environmental Registry of Ontario (ERO);

AND WHEREAS the ERO imposed a March 4, 2019 deadline for submission of comments to the Province;

THEREFORE, LET IT BE RESOLVED THAT the Toronto and Region Conservation Authority (TRCA) staff report and final comments on the Ontario government's proposed amendments to the Endangered Species Act, 2007, be received;

AND FURTHER THAT municipal partners and Conservation Ontario be so advised.

BACKGROUND

On January 18, 2019, the Ontario government launched a review of the Endangered Species Act (ESA), 2007, to improve protections for species at risk, consider modern and innovative approaches to achieve positive outcomes for species at risk, and to look for ways to streamline approvals and provide clarity to support economic development. The review was open for a 45-day commenting period, which closed March 4, 2019. The discussion paper circulated for review focused on four core themes:

1. Landscape Approaches;
2. Listing Process and Protections for Species at Risk;
3. Species Recovery Policies and Habitat Regulations; and
4. Authorization Processes.

RATIONALE

TRCA supports its municipal partners in implementing the natural heritage policies of the Provincial Policy Statement and protects and restores wildlife habitat through its mandate under the *Conservation Authorities Act*. Where endangered species are affected by development, provincial staff at the Ministry of Natural Resources and Forestry (MNRF) undertake a concurrent review of planning proposals in accordance with the Act.

As outlined in TRCA's submission to the Province, through research, science and expertise, TRCA has developed a number of tools and strategies that can be used to inform and support the implementation of the Endangered Species Act (ESA). Comprehensive, creative and collaborative approaches early in the planning process, including the use of such tools would facilitate better decision making, positive outcomes, greater certainty for all stakeholders, and streamlining opportunities. With TRCA's roles and experience in mind, staff submitted responses to the discussion paper questions organized under the four focus areas outlined above. Below is a summary of the key messages from staff's responses. The full submission is enclosed in Attachment 1.

- A more streamlined, up-front approach to managing species at risk (SAR) on large projects would avoid delays and increase certainty, since currently feedback is deferred to detailed design or the end of a planning process, causing uncertainty and delay for large scale planning exercises.

- Science being developed at TRCA on landscape connectivity, aquatic systems and road ecology could be used to inform ESA implementation. Capacity also exists at TRCA to input science into ESA-related decisions, as well as provide a feedback loop where gaps in science could be identified and filled through experience gained in the application of the ESA.

- TRCA's Integrated Restoration Prioritization framework is a landscape level approach to identifying ecological impairments and improving ecosystem function. While SAR are not a focus of the framework, many SAR benefit from this approach through the main restoration objectives. Other examples of landscape level approaches include TRCA's Restoration Opportunities Planning tool and TRCA's Toronto Waterfront Aquatic Habitat Restoration Strategy.

- In TRCA's experience, the delay in receiving approval for an authorization is mainly related to the ability of the limited amount of personnel who work in this area to review and respond to applicants. Different levels of authorizations could also be created where not all authorizations require ministerial approval, as the requirement for this high level of approval can cause delays.

- Providing adequate frontline staff and empowering them to provide feedback throughout the planning process will aid all questions noted in the Province's Discussion Paper. Timely response and certainty would speed up all processes, which applies to identification of habitat, feedback on what works may be permitted and feedback on what Overall Benefit works would be required.

- An extremely short timeline on assessing the form and success of implementation of the ESA for newly listed species would be exceedingly helpful. Deliberate documentation and sharing of information regarding the first few applications for a new species would give proponents and staff a clear understanding of what to expect through the permitting process.

- Partner agencies such as conservation authorities (CAs) could be engaged to provide restoration opportunities and services to aid in the permitting process. CAs have demonstrated expertise and capacity in delivering restoration planning and implementation related to ESA.

- CAs with capacity could undertake review roles for compliance with the ESA, as staff are likely already involved in the project through our roles in development planning and environmental assessment review. CAs could also assist in the development of a recovery strategy through experience, science and monitoring expertise.

Relationship to Building The Living City, TRCA 2013-2022 Strategic Plan
This report supports the following strategies set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 8 – Gather and share the best sustainability knowledge
Strategy 12 – Facilitate a region-wide approach to sustainability

FINANCIAL DETAILS
Staff is engaged in this policy analysis work per the normal course of duty, with funding support provided by TRCA's participating municipalities to account 120-12. No additional funding is proposed to support the policy analysis work associated with the preparation of these comments.

DETAILS OF WORK TO BE DONE
The enclosed comments have been submitted to the Province for consideration. Staff will continue to brief the Board on other legislative changes that result from this circulation.

Report prepared by: Daniel Brent, extension 5774; Mary-Ann Burns, extension 5763
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Date: March 14, 2019
Attachments: 1

Attachment 1: TRCA comments to ERO #013-4143

Toronto and Region Conservation Authority

March 4, 2019

BY E-MAIL ONLY (ESAreg@ontario.ca)

Public Input Coordinator
Species Conservation Policy Branch
300 Water Street
Floor 5N
Peterborough, ON K9J 3C7

Re: 10th Year Review of Ontario's Endangered Species Act (ERO #013-4143)

Thank you for the opportunity to comment on the Ministry of Environment, Conservation and Parks' Discussion Paper on the *Endangered Species Act*, "Protecting and Recovering Species at Risk in Ontario," which poses questions under four areas of focus:

1. Landscape approach – species specific approach (current) vs. landscape approach
2. Listing process and protections for species at risk
3. Species recovery policies and habitat regulations
4. Authorization processes

We understand the government is undertaking a review of the Act to improve protections for species at risk, consider modern and innovative approaches to achieve positive outcomes for species at risk, as well as to look for ways to streamline approvals and provide clarity to support economic development. The Toronto and Region Conservation Authority (TRCA) has an ongoing interest in protecting wildlife species and their habitat given our roles as:

- A regulator under Section 28 of the *Conservation Authorities Act*;
- A public commenting body under the *Planning Act* and the *Environmental Assessment Act*;
- A resource management agency operating on a local watershed basis; and
- One of the largest landowners in the Toronto region.

In these roles, TRCA supports our provincial and municipal partners in implementing the natural heritage policies of the Provincial Policy Statement and protects and restores wildlife habitat through our mandate under the *Conservation Authorities Act*. Where endangered species are affected by development, provincial staff undertake a concurrent review of planning proposals in accordance with the Act.

As outlined in this submission, through research, science and expertise, TRCA has developed a number a number of tools and strategies that can be used to inform and support the implementation of the Endangered Species Act (ESA). Comprehensive, creative and collaborative approaches early in the planning process, including the use of such tools, facilitates better decision making, positive outcomes, greater certainty for all stakeholders and streamlining opportunities. With TRCA's roles and experience in mind, we offer the following responses to the Discussion Paper questions.

Area of Focus 1: Landscape Approaches

Discussion Question:
In what circumstances would a more strategic approach support a proposed activity while also ensuring or improving outcomes for species at risk? (e.g., by using a landscape approach instead of a case-by-case approach, which tends to be species and/or site-specific.)

A strategic landscape approach to protecting habitat for species at risk (SAR), ensuring that populations are sustainable, and that pathways exist for population dispersion and migration, are all integral to protecting biodiversity in Ontario. Case-by-case implementation does not address these wider issues. However, in an ecosystem approach, species recovery plans and management plans are essential components to identify the required habitats for species and in turn to inform an overall landscape strategy. The introduction of a more strategic approach should not eliminate the need for the continued implementation of a case-by-case approach, given that it is necessary to protect existing populations and critical habitat areas.

A more streamlined, up-front approach to managing SAR on large projects would avoid delays and increase certainty. For large scale planning exercises, such as Municipal Comprehensive Reviews, regional infrastructure master plans, provincial highway and transit corridor studies, addressing SAR as early as possible would result in better outcomes for those species and those delivering the projects. This up-front approach would also apply to watershed plans, subwatershed plans, Master Environmental Servicing Plans and Environmental Assessments associated with these large scale exercises. Early input would require clear direction from reviewers on SAR tied to earlier planning milestones. The intent here would be to "set-up" the project to satisfy ESA requirements. Currently, feedback is deferred to detailed design or the end of a planning process causing uncertainty and delay.

Discussion Question:
Are there existing tools or processes that support managing for species risk at a landscape scale that could be recognized under the Endangered Species Act?

The protection of identified natural heritage systems that is achieved through land use planning processes can be used as a tool in support of managing for SAR at a landscape scale. Within more developed areas, the natural heritage systems contain much of the wildlife habitat and many systems identify how much habitat is required on the landscape to support biodiversity in that region.

Science being developed at TRCA on landscape connectivity, aquatic systems and road ecology could be used to inform ESA implementation. Capacity exists at TRCA to input science into ESA-related decisions as well as provide a feedback loop where gaps in science could be identified and filled through experience gained in the application of the ESA.

In addition, TRCA's Integrated Restoration Prioritization framework is a landscape level approach to identifying ecological impairments and improving ecosystem function. While SAR are not a focus of the framework, many SAR benefit from this approach through the main restoration objectives that address hydrological processes, natural cover, connectivity and landforms and soils. Complemented

by the framework, TRCA's Restoration Opportunities Planning tool is a method to inventory feasible ecological restoration projects at the watershed sub-catchment scale that include SAR considerations.

Another example of a landscape level approach to ecological restoration and enhancements is TRCA's Toronto Waterfront Aquatic Habitat Restoration Strategy. This approach aims to maximize the ecological integrity of the Toronto Waterfront by identifying aquatic community potential, identifying limiting factors, evaluating opportunities and proposing actions to protect and enhance nearshore habitats, developing indices to evaluate success, and implementing projects to restore aquatic habitats across the waterfront; Aquatic SAR benefit from overall improvements to aquatic habitat.

Area of Focus 2: Listing Process and Protections for Species at Risk

Discussion Question:
What changes would improve the notification process of a new species being listed on the Species at Risk in Ontario List? (e.g., longer timelines before a species is listed.)

The automatic listing provision applies only to endangered and threatened species, many of which have been special concern or vulnerable prior to their up-listing. Providing longer timelines before a species is listed is counter to the government's goal of enabling positive outcomes for SAR. A method of informing the public that a species is being considered for listing as threatened or endangered is preferable over delaying protection for a species that has been identified as requiring such protection.

Discussion Question:
Should there be a different approach or alternative to automatic species and habitat protections? (e.g., longer transition periods or ministerial discretion on whether to apply, remove or temporarily delay protections for a threatened or endangered species, or its habitat.)

If ministerial discretion is used, it should be motivated by what the science has revealed as the level of need for protection and not by limiting encumbrance to land use planning processes. As an alternative to longer notice times or ministerial discretion, perhaps transition provisions could be established for automatic listings whereby if a planning application has reached a late stage milestone, the listing would not apply.

Discussion Question:
In what circumstances would a different approach to automatic species and habitat protections be appropriate? (e.g., there is significant intersection between a species or its habitat and human activities, complexity in addressing species threats, or where a species' habitat is not limiting.)

A circumstance where automatic habitat protections may not be appropriate is when loss of habitat is not the reason for the threat to the species, such as declining numbers based on a disease outbreak.

Discussion Question:
How can the process regarding assessment and classification of a species by the Committee on the Status of Species at Risk in Ontario be improved? (e.g., request an additional review and assessment in cases where there is emerging science or conflicting information.)

TRCA suggests that better and earlier communication by the Committee would be helpful to provide more certainty for all stakeholders. COSSARO is an independent body and should be basing all decisions on emerging science and already considering conflicting information so additional review and assessment would not be required.

Area of Focus 3: Species Recovery Policies and Habitat Regulations

Discussion Question:
In what circumstances would a species and/or Ontarians benefit from additional time for the development of the Government Response Statement? (e.g., enable extending the timeline for the Government Response Statement when needed, such as when recovery approaches for a species are complex or when additional engagement is required with businesses, Indigenous peoples, landowners and conservation groups.)

As there is already flexibility built into the timeline through the development of the recovery strategy, it does not seem that additional flexibility should be required at this secondary stage.

Discussion Question:
In what circumstances would a longer timeline improve the merit and relevance of conducting a review of progress towards protection and recovery? (e.g., for species where additional data is likely to be made available over a longer timeframe, or where stewardship actions are likely to be completed over a longer timeframe.)

Creating a longer timeline before conducting a review of progress does not seem to support the goal of enabling positive outcomes for SAR. Five years of data collection should allow researchers to assess the recovery strategy.

Discussion Question:
In what circumstances is the development of a habitat regulation warranted, or not warranted? (e.g., to improve certainty for businesses and others about the scope of habitat that is protected.)

Habitat regulations should be created to provide clarity and certainty for everyone. It is not clear when it would not be warranted as that would lead to less clarity. Habitat regulations could be improved as they can be far too detailed in their requirements. As a result, the requirements can impede their intended function. For example, the requirement for the use of double silt fencing on Redside Dace projects can cause significant disturbance within highly sensitive habitat. The use of an alternative product often performs better in such circumstances. A similar example using Redside Dace are site level prescriptions that can be too rigid, targeting habitat requirements for one species rather than considering habitat prescriptions that benefit the entire natural system.

Overall, the Province's development of recovery strategies could benefit from engaging with existing local forums such as TRCA's Regional Watershed Alliance (RWA). The RWA is a formal community-based committee that works to advance TRCA's Living City vision of sustainable communities, regional biodiversity and healthy rivers and shorelines through advocacy, knowledge sharing and collective action. For recovery strategies affecting TRCA's jurisdiction, consultation with RWA and similar forums would aid in ensuring the strategies' effective local implementation. This collaborative work would be an opportunity for integrating ESA requirements with other environmental initiatives in a given jurisdiction, achieving maximum impact.

Area of Focus 4: Authorization Process
Are there other approaches to authorizations that could enable applicants to take a more strategic or collaborative approach to address impacts to species at risk? (e.g., create a new authorization, such as a conservation agreement.)
What changes to authorization requirements would better enable economic development while providing positive outcomes and protections for species at risk? (e.g., simplify the requirements for a permit under s. 17(2)d, and exemptions set out by regulation.)

How can the needs of species at risk be met in a way that is more efficient for activities subject to other legislative or regulatory frameworks? (e.g., better enable meeting Endangered Species Act requirements in other approval processes.)

Providing adequate frontline staff and empowering them to provide feedback throughout the planning process will aid all questions noted here. Timely response and certainty would speed up all processes. This applies to identification of habitat, feedback on what works may be permitted and feedback on what Overall Benefit works would be required. Perhaps these requirements could be tied to specific milestones in the environmental assessment and planning processes. A proponent should be able to proceed through such processes with certainty. Wholesale changes at detailed design can cause significant delay and poor outcomes for the protected species and natural heritage system as a whole.

An extremely short timeline on assessing the form and success of implementation of the ESA for newly listed species would be exceedingly helpful. Deliberate documentation and sharing of information regarding the first few applications for a new species would give proponents and staff a clear understanding of what to expect through the permitting process. This would provide all parties more clarity on what to expect moving through the process including implementation on the ground. A critique within the first year of up-listing could aid those projects to be approved in year two and beyond.

Discussion Question:
What new authorization tools could help businesses achieve benefits for species at risk? (e.g., in lieu of activity-based requirements enable paying into a conservation fund dedicated to species at risk conservation, or allow conservation banking to enable addressing requirements for species at risk prior to activities.)

While complicated to implement, paying into a conservation fund dedicated to SAR conservation or conservation banking (e.g., DFO's habitat bank) could provide a more strategic approach to species protection than individual activity-based requirements. Under this scenario, land acquisition to protect habitat in perpetuity, or to implement large-scale habitat restoration activities, are likely not feasible conservation options.

If a fund or bank approach is not feasible, identification of Overall Benefit projects available within a given area would be helpful. The process would be quicker if a series of available projects (a catalogue) were provided to proponents. This would require efforts in advance by the Province and their partners; however, it would allow proponents to avoid having to scramble to find an appropriate project in their final push for a permit. Partner agencies such as conservation authorities (CAs) could be engaged to provide restoration opportunities and services to aid in the permitting process. CAs have demonstrated expertise and capacity in delivering restoration planning and implementation related to ESA.

Discussion Question:
Are there other approaches to authorizations that could enable applicants to take a more strategic or collaborative approach to address impacts to species at risk? (e.g., create a new authorization, such as a conservation agreement.)

Different levels of authorizations could be created where not all authorizations require ministerial approval. The requirement for this high level of approval seems to cause time delays during the permitting process.

Discussion Question:
What changes to authorization requirements would better enable economic development while providing positive outcomes and protections for species at risk? (e.g., simplify the requirements for a permit under s. 17(2)d, and exemptions set out by regulation.)

In TRCA's experience, the delay in receiving approval for an authorization is mainly related to the ability of the limited amount of personnel who work in this area to review and respond to applicants. Therefore, in order to better enable economic development, more staff responsible for reviewing plans and providing authorizations is required.

Discussion Question:
How can the needs of species at risk be met in a way that is more efficient for activities subject to other legislative or regulatory frameworks? (e.g., better enable meeting Endangered Species Act requirements in other approval processes.)

The government should ensure that reviews can happen as efficiently as possible and that the fewest number of required reviewers are used. Anyone who reviews plans for compliance with the ESA must be qualified to perform this review. Conservation authorities (CAs) with capacity could undertake this role as staff are likely already involved in the project through our roles in development planning and environmental assessment review. CAs could play a more prominent role in the application of the ESA through delegation by the Province, which could include habitat delineation, permit negotiation and issuance, timing window application and Overall Benefit Permit planning and implementation. CAs could also assist in the development of recovery strategy through experience, science and monitoring expertise.

Thank you once again for the opportunity to provide comments on this important initiative. TRCA would be pleased to discuss these and other opportunities for enhancing certainty and efficiencies in the development and infrastructure review processes where endangered species are concerned. Should you have any questions, require clarification, or wish to meet to discuss any of the above remarks, please contact the undersigned.

Sincerely,

John MacKenzie, M.Sc.(Pl), MCIP, RPP
Chief Executive Officer

BY E-MAIL
cc:
TRCA: Nick Saccone, Director, Restoration and Infrastructure
Chandra Sharma, Director, Community Engagement and Outreach
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Laurie Nelson, Interim Director, Policy Planning
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