

**Section I – Items for Board of Directors Action**

**TO:** Chair and Members of the Board of Directors  
Friday, March 24, 2023 Meeting

**FROM:** Michael Tolensky, Chief Financial and Operating Officer

**RE:** **2023 SPRING LEAF-OFF AIRBORNE LiDAR DATA ACQUISITION  
AND CLASSIFICATION GTA TO HAMILTON**  
RFP No. 10038972

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**KEY ISSUE**

Award of Request for Proposal (RFP) No. 10038972 for airborne capture of LiDAR (Light Detection and Ranging) data for an area covering 4 Conservation Authority jurisdictions including Toronto and Region Conservation Authority (TRCA), Lake Simcoe Conservation Authority, Credit Valley Conservation Authority and Conservation Halton, or parts thereof. The successful vendor will acquire and classify data to meet the Federal Airborne LiDAR Acquisition Guideline which will then be used to produce reliable floodplain mapping within the project area.

**RECOMMENDATION:**

**WHEREAS TRCA is engaged in a project that requires highly accurate 3D landscape terrain data;**

**WHEREAS TRCA is working with other Conservation Authorities and leveraging secured provincial and federal Flood Hazard and Information Mapping Program funding to maximize efficiencies for this project;**

**AND WHEREAS TRCA solicited proposals through a publicly advertised process and evaluated the proposals based on pre-established criteria;**

**THEREFORE LET IT BE RESOLVED THAT Request for Proposal (RFP) No. 10038972 for 2023 Spring Leaf-Off Airborne LiDAR Data Acquisition and Classification GTA to Hamilton be awarded to Airborne Imaging Inc. at a total cost not to exceed \$800,130, plus applicable taxes, to be expended as authorized by TRCA staff;**

**THAT TRCA staff be authorized to approve additional expenditures to a maximum of \$40,000, plus applicable taxes, in excess of the contract cost as a contingency allowance if deemed necessary;**

**THAT should TRCA staff be unable to negotiate a contract with the above-mentioned proponent, staff be authorized to enter into and conclude contract negotiations with other Proponents that submitted proposals, beginning with the next highest ranked Proponent meeting TRCA specifications;**

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

### **BACKGROUND**

TRCA requires high accuracy elevation data to support various programs and projects throughout the organization. Some examples of the application of data to our work include floodplain mapping, erosion control design projects, forestry assessments, restoration planning generic regulation mapping and many more. LiDAR is an acronym of “light detection and ranging” or “laser imaging, detection and ranging.” It is a well-established method for determining ranges by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver. LiDAR is a remote sensing technology that provides this type of data in a cost-effective manner across large landscapes. TRCA has purchased 2 previous LiDAR datasets and is now pursuing updated LiDAR data.

TRCA is leading a group of 4 conservation authorities to procure LiDAR data for all 4 organizations jurisdictions. This purchase is being financially supported through the provincial and federal governments Flood Hazard Information and Mapping Program (FHIMP) grant funding. The grant will provide matching funding for LiDAR data acquisition to assist in the production of local floodplain mapping, contribute to the provincial and federal LiDAR acquisition strategies and the data itself will be made open for use by the public. Each conservation authority has an approved FHIMP application for the same data and given that the jurisdictions are geographically connected and there are measurable cost benefits to volume purchasing, the decision was made to collaborate on the data acquisition.

The specifications of this data are set to match the 2 previous collections from 2014/2015 and 2019 that TRCA has previously purchased. The only difference between the 2 datasets is the 2014/2015 one was flown in spring, leaf-off condition while the 2019 is summer leaf-on. This proposed acquisition will be for the spring leaf-off condition.

### **RATIONALE**

RFP documentation was posted on the public procurement website [www.bidsandtenders.ca](http://www.bidsandtenders.ca) on February 24<sup>th</sup>, 2023 and closed on March 13<sup>th</sup>, 2023. 3 addendums were issued to respond to questions received. A total of 15 firms downloaded the documents and 6 proposals were received from the following Proponent(s):

- **Aeroquest Mapcon Inc.**
- **Airborne Imagine Inc.**
- **Eagle Mapping Ltd.**
- **Kisik Aerial Survey Inc.**
- **LiDAR Services International Inc.**
- **Quantum Spatial Canada Inc.**

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An Evaluation Committee comprised of staff from Information Technology and Records Management as well as representatives from the other 4 partner Conservation Authorities reviewed the proposals. The criteria used to evaluate and select the recommended Proponent included the following:

<b>Criteria</b>	<b>Weight</b>	<b>Minimum Score</b>
Proponent's Information and Profile	5%	n/a
Key Personnel	5%	n/a
Experience	25%	n/a
Methodology	15%	n/a
Scope of Work Capabilities	25%	n/a
Proposed Work Plan and Timeframe	10%	n/a
Quality Control Strategy	10%	n/a
<b>Sub-Total</b>	<b>95%</b>	<b>n/a</b>
Pricing	5%	n/a
<b>Sub-Total</b>	<b>5%</b>	<b>n/a</b>
<b>Total Points</b>	<b>100%</b>	<b>n/a</b>

The highest ranked proponent was superior in their experience operating in the project area and in producing deliverables that meet the technical requirements. They are using current and appropriate sensors for urbanized and rural landscapes and demonstrated a clear work plan, timeline, and resource capacity to achieve completion in the spring, leaf-off season. Therefore, it is recommended that contract No. 10038972 be awarded to Airborne Imaging Inc. at a total cost not to exceed \$800,130.40, plus \$40,000.00 contingency, plus applicable taxes, it being the highest ranked Proponent meeting TRCA specifications. Proponent's scores and staff analysis of the evaluation results can be provided in an in-camera presentation, upon request.

### **Relationship to TRCA's 2022-2034 Strategic Plan**

This report supports the following Pillar(s) and Outcome(s) set forth in TRCA's 2023-2034 Strategic Plan:

#### **Pillar 1 Environmental Protection and Hazard Management:**

- 1.1 Deliver provincially mandated services pertaining to flood and erosion hazards

#### **Pillar 1 Environmental Protection and Hazard Management:**

- 1.4 Balance development and growth to protect the natural environment ensuring safe sustainable development

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### **Pillar 2 Knowledge Economy:**

2.1 Research and development that drives innovation and climate-based solutions

### **Pillar 2 Knowledge Economy:**

2.3 Advocacy and adaptability in the face of policy pressures

### **DETAILS OF WORK TO BE DONE**

The key deliverables and project schedule are outlined below:

- LiDAR acquisition and QC (April – May, 2023)
- Data acquisition (April – May, 2023)
- Data classification and editing (May – August, 2023)
- QC (June – October, 2023)
- Preliminary Deliverables (July 2023)
- Provisional products (July – November, 2023)
- Creation of Deliverables (August – November, 2023)
- Index file, metadata and reports (November – December, 2023)
- Final Delivery (December 15, 2023)
- Data Evaluation by TRCA (December – February 2024)
- Project Close meeting (February 2024)

The Proponent staff resources dedicated to the project are as follows:

There are 6 key personnel dedicated to this project including a Director, Business Development Manager, Data Processing Manager, Operations and Project Manager, LiDAR Processing Manager and Field Project Manager and the full team consists of 20 individuals.

### **FINANCIAL DETAILS**

Funds for the contract are identified in 4901 – FHIMP – 2023 Jurisdictional LiDAR Acquisition project 4901 - FHIMP - 2023 Jurisdictional LiDAR Acquisition project (ON22-027) (157-02).

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