



The Corporation of the Township of Huron-Kinloss

Staff Report

Report Title: Road Patrol Software RFQ

Date: Sep. 16, 2024

Report Number: PW-2024-09-39

Department: Public Works

File Number: C11 PW 24

Prepared By: John Yungblut, Director of Public Works

Attachments: None

Recommendation:

THAT the Township of Huron-Kinloss Committee of the Whole hereby receives for information Report PW-2024-09-39 prepared by John Yungblut, Director of Public Works;

AND FURTHER agrees to enter into a three-year contract with IRIS R&D Group Inc. in the amount of \$115,526.60 plus HST for the provision of automated road patrol software and one pavement condition survey;

AND FURTHER authorizes the appropriate by-law to come forward as a matters arising at tonight's meeting.

Background:

For several years, Township staff have been exploring options for road patrolling software that will assist Public Works in improving compliance with the Minimum Maintenance Standards (MMS) in an efficient manner. We have developed an effective program for winter patrolling; however, we have identified gaps in our year round patrolling and documentation that could make it difficult for the Township to prove compliance with the MMS in the event of a claim.

The MMS was implemented by the Province of Ontario in 2002 to provide a defence for municipalities that are involved in a claim regarding the condition of a road. Municipalities are not legally required to comply with the MMS, however, it is a achievable standard that has been used effectively in several court cases and has been refined over the years to close any gaps that have been exposed through court rulings.

Since January, Township staff have narrowed our focus to two software providers that have solid reputations among municipalities in our area:

MESH (Go-Evo)

MESH is a popular application that is used by several municipalities in our area to document road patrols and assign work orders. They also offer various other

modules for inspections, parks, buildings, preventative maintenance of vehicles and public reporting.

Township staff would use the MESH application on a mobile device to input road patrol or other inspection information to create work orders that would then be assigned to operations staff by a supervisor.

We received the following quote for the road patrol module:

First year cost = \$11,441 plus HST

Second year cost = \$6,441 plus HST

Further information regarding MESH software can be found [here](#).

Iris (Iris R&D Group Inc.)

Iris uses artificial intelligence technology through a camera that is mounted on a vehicle to detect roadway deficiencies based on preset criteria and creates work orders while the vehicle travels along the roadway. It also takes photos of the deficiencies automatically that can be reviewed later when work orders are assigned.

This software is specific to road patrolling, but it can be set up to be used for sidewalk inspections as well. It cannot be used for inspection of parks and buildings like MESH offers, however.

First year cost (2 cameras) = \$32,930 plus HST

Second and third year cost (2 cameras) = \$25,380 plus HST

Optional pavement condition survey = \$31,836.60 plus HST

Further information regarding Iris software can be found [here](#).

Discussion/Analysis/Overview:

Initially, Township staff were exploring MESH as inspection and work order software that would work with multiple departments. Upon further investigation, we determined that our current and future needs would better met if the road patrol requirements were separated for other inspections and work orders.

Both MESH and Iris would be effective for road patrol purposes, however, we are unsure how much additional staff time would need to be allocated to allow for staff to meet the targets prescribed in the MMS if the MESH software is purchased. All Township roads should be patrolled anywhere from once every 7 days or once every 30 days depending on the road classification.

With the MESH software, patrollers will need to stop their vehicle each time a deficiency is identified to record the required information and capture photos. There will also be training required and monitoring by supervisors to ensure deficiencies are being recorded consistently among different patrollers.

In order to prove compliance with the MMS, patrollers should measure various deficiencies to determine if they are out of compliance with the MMS. For example, potholes on paved roads have to be at least 1000 cm² to be considered out of compliance and 1500 cm² on gravel roads. There are other measurements that must

be recorded as well such as cracks and shoulder drop offs. Although physical measurements are ideal, realistically, these measurements will likely be visual estimates so the patrols can be completed in a reasonable amount of time.

The Iris software eliminates the additional staff time required to record deficiencies, and the camera is calibrated to collect detailed measurements without any additional staff effort required. This allows staff to complete patrols in less time with very little training required while having accurate measurements and photographic evidence to provide a better defence in the event of a claim.

Furthermore, the Iris cameras can be set up to conduct automated pavement condition surveys that will provide a Pavement Condition Index (PCI) for all our paved roads when we request it for an additional fee. There is no need to purchase specialized hardware or software to complete these surveys.

The last time the completed a pavement condition survey was through a Local Authority Services (LAS) grant in 2020. If we were to complete a similar inspection now, the cost would be over \$60,000, so by purchasing the Iris cameras, we can save approximately \$30,000 each time we conduct PCI surveys.

The Iris camera technology is constantly evolving, so there may be other tasks that can be completed during road patrols in the future. For example, one function that is currently in development is sign reflectivity testing, which must be completed on regulatory signs annually. Currently, we have equipment to complete this testing as a specific work assignment, however, if this can be done automatically while patrols are being completed, it would be another significant savings in staff time.

To facilitate inspections and work orders in other areas of Township operations, Staff are currently investigating CityWorks software, which is a far more robust program than MESH with a very detailed asset management program. The intent would for all our asset data to be collected within CityWorks and the software we currently use, PSD Citywide, to be used for financial reporting purposes based on the data stored in CityWorks. Unfortunately, there is no single solution that will satisfy all our asset management requirements.

Township staff are still in the evaluation process with CityWorks and more information will be brought forward at the appropriate time.

Financial Impacts:

The first year of this contract, which will be \$64,766.60, is included in the 2024 budget. The expenditure is funded through a combination of Modernization of Municipal Services Reserve and NWMO Resource Program Funding. The 2024 budget allocated \$70,000 for this program.

The second and third years (2025 and 2026), which will be \$25,380 annually, will be included in future Operating Budgets.

Performance Measurement:

Regular Pavement Condition Index (PCI) evaluations on all our paved roadways will allow staff to determine if the overall condition of our paved roads is improving or deteriorating. This information is critical in establishing the appropriate capital investment required. Ideally, the PCI evaluations are completed on a three year cycle.

Sidewalks are inspected once per year for deficiencies; however, we have not implemented a sidewalk condition rating system so far.

Strategic Area:

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|---|--|
| <input type="checkbox"/> Embrace a thriving rural lifestyle | <input checked="" type="checkbox"/> Enhance Municipal Service Delivery |
| <input type="checkbox"/> Prepare for Inclusive Growth | <input type="checkbox"/> Ensure Financial Stability |

Strategic Goal: Strive for continuous improvement and increased efficiency

Respectfully Submitted By:

John Yungblut, Director of Public Works

Report Approved By:

Jodi MacArthur, Chief Administrative Officer