

Region of Waterloo

Corporate Services

Treasury Services (Procurement)

To: Regional Council

Meeting Date: June 19, 2024

Report Title: Expansion to Miovision Technologies Miovision One Advanced Transportation Management System

1. Recommendation:

That the Regional Municipality of Waterloo accept the negotiated acquisition of Miovision Technologies Inc. for the Expansion of the TrafficLink Advanced Transportation Management System in the amount of \$4,005,223.20 plus all applicable taxes as set out in report COR-TRY-24-025 dated June 19, 2024.

That the Regional Municipality of Waterloo amend the 2024-2033 Transportation Capital Program by advancing \$1,064,000 in Project #07619 Advanced Transportation Management System from 2025 to 2024 funded from the Transportation Capital Reserve as set out in Appendix A.

2. Purpose / Issue:

Purchasing by-law 22-034 Section 8 item 2b requires Council approval for negotiated acquisitions if the value of the acquisition exceeds \$2,000,000.

3. Strategic Plan:

Award of this contract meets the following 2023-2027 Corporate Strategic Plan priorities:

Climate-aligned growth:

- Foster car-alternative options through complete streets and extended alternative transportation networks: By expanding equitable public and active transportation networks across the region, we will make it easier for people to get around and make climate-friendly choices.

Equitable services and opportunities:

- Design equitable Regional services that meet local community needs: We will work to ensure people have access to the services they need when, where, and how they need them most.

4. Report Highlights:

- This proposed project builds on successful ‘proof of performance’ pilots in which Miovision has collaborated with the Region since 2020.
- Previous pilot projects included the installation of Miovision cameras and communication equipment at some critical ION intersection locations. The benefits of these early installations included detailed tracking of operations to allow the provision of priority of ION trains travelling through the intersection, and reduced delays to pedestrians and automobiles.
- Staff are confident this state-of-the-art ATMS provides “best-value” for the Region. Based on staff experience, the expanded deployment to the remainder of the 250 traffic signals would continue to enhance and solidify a positive experience for all road users.
- Moving forward, the additional data generated will help guide how roads, transit and pedestrian and cycling facilities will improve now through 2041. Also full deployment would assist in the Region meeting its long-term green house gas reduction targets as the organization continues to expand its active transportation strategic plans.

5. Background:

The Region has been using Miovision Technologies One ATMS since July 2020. The following is a history of approvals related to implementation of Miovision’s Advanced Transportation Management System (ATMS):

- On February 19, 2019 Regional Council approved the 2019 Operating Budget and 2019-2028 Capital Program. Council’s approval of the 2019 budget included the approval to acquire an ATMS.
- On November 5, 2019 Regional Council approved the sole source procurement to Miovision Technologies Inc. for the TrafficLink ATMS as outlined in Report TES-TRP-19-07.
- On July 15, 2020 the original purchase of the TrafficLink ATMS from Miovision Technologies Inc. was approved in the amount of \$2,688,000 plus all applicable taxes as set out in Council Report TES-TRP-20-11/COR-TRY-20-77.
- In order to recognize the benefits of an ATMS and thoroughly maximize economies of scale, the continued deployment of the Miovision One ATMS was recommended following the completion of the current project as outlined in Council Report TES-TRP-20-11/COR-TRY-20-77 dated July 15, 2020.

The current Miovision deployment intended to apply Miovision One (formerly known as

TrafficLink) ATMS technology at approximately one-half of the Region's traffic signal network in urban areas. Regional staff request Regional Council to support enhancing the Region's remaining traffic signal network with the Miovision One system.

Staff continue to explore ways to leverage the untapped capabilities of the Region's new ATMS. The Region and Miovision Technologies have collaborated over the past few years to enhance the functionality the systems and reliability through hardware and software development to meet the Regions needs with changing industry requirements.

Regional staff intend to standardize the Miovision One ATMS and integrate it into the design of all new traffic signal installations. Regional staff are also investigating the use of this system for other applications such as roundabouts and rail crossings.

What Does the Miovision One ATMS Do?

The Miovision One ATMS is a system that employs cameras and other detection devices connected to the traffic signal controller at a signalized intersection, that, along with artificial intelligence, advanced machine learning technology and advanced software, retrieves data about all road users, and performs advanced analytics for staff to use to optimize the operation of the traffic signals. The data retrieved would include information about cyclists and pedestrians in addition to vehicles such as automobiles and trucks. At this time, the Miovision system does not incorporate artificial intelligence or any other advanced machine learning technology to alter signal operation automatically in real time. The Region has been using Miovision Technologies Miovision One ATMS since 2020.

ATMS Expansion Strategy:

To continue improving the Region's traffic network, the traffic control and management systems require continuous capital investment in communication and technology infrastructure, which is required to obtain and process real-time data used.

Based on the current budget capacity, staff recommend full system deployment at the remaining 263 traffic signals. As the system is modular, in the future additional locations can be added to operate full Miovision One system features as required.

6. Area Municipality Communication and Public/Stakeholder Engagement:

Nil.

7. Financial Implications:

There are sufficient funds in the Region's approved 2024-2033 Transportation Capital Program to complete the work under this contract.

As set out in the Detailed Financial Implications tables in Appendix A, \$1,064,000 in capital expenditure will need to be advanced from 2025 to 2024. Additionally, subject to

Council approval, the associated Miovision expansion in 2024 will result in incremental operating expenditure increases of \$460,100 in 2025, and \$57,900 in 2026 for a total incremental increase of \$518,000 and upon full implementation, the Miovision expansion would increase the total Advanced Transportation Management System operating budget from \$460,700 per year to \$978,700 per year, starting in 2026.

8. Conclusion / Next Steps:

Subject to Council approval, the work of this contract will begin July 2, 2024, and field hardware will be installed by Regional staff with completion expected by December 31, 2025.

9. Attachments:

Appendix A: Detailed Financial Implications.

Prepared By: Alex Albrecht, Procurement Specialist

Reviewed By: Lisa Evans, Manager Procurement/Chief Purchasing Officer

Approved By: Cheryl Braan, Commissioner Corporate Services/Chief Financial Officer