



Administrative Report

Office of the Director, Infrastructure & Planning Services

To: Warden McNamara and Members of Essex County Council

From: Allan Botham, P.Eng.
Director, Infrastructure & Planning Services

Date: Wednesday, June 15, 2022

Subject: Disaster Mitigation and Adaptation Fund Opportunity
County Road 22 and 19 Intersection

Report #: 2022-0615-ISD-R18-AB

Purpose

The purpose of this report is to inform Council of a funding opportunity available that may be advantageous to the County of Essex, particularly with respect to the County Road 19 and County Road 19/22 intersection expansion project.

Background

In an effort to support public infrastructure projects that mitigate existing and future climate-related risks and disasters triggered by climate change, the Federal government initiated the Disaster Mitigation and Adaptation Fund (DMAF). The DMAF committed an initial amount of \$2 billion over 10 years and was enhanced in 2021 with an additional commitment of \$1.375 billion, for a total of \$3.375 billion.

The objective of DMAF is to strengthen the resiliency of impacted communities and prevent the risk of infrastructure failure that could result in:

- Threats to health and safety;
- Threats to critical infrastructure, including interruptions in essential services;
- Significant disruptions in economic activity; and
- Increasingly high costs for recovery and replacement.

As of 2021, the DMAF offers two streams, with \$670 million allocated to the small-scale project stream (between \$1 million and \$20 million), and the remaining \$2.7 billion allocated to the large-scale project stream (\$20 million and above).

The maximum federal contribution for a municipal infrastructure project in either stream would be 40% of the total eligible costs. Eligible expenditures for a project include capital cost, design and planning, and land acquisition (when it is not the sole project component).

Projects that are eligible for the DMAF include public infrastructure projects that are new construction and/or modification or reinforcement of existing infrastructure that prevent, mitigate or protect against the impacts of climate change. The intent of the projects is to reduce the socio-economic, environmental and cultural impacts that are caused by natural hazards and extreme weather events and to take into consideration the current and potential future impacts of climate change in communities and infrastructure that are considered high risk.

Eligible applicants include, provincial, territorial, or municipal government.

The deadline to apply for both the large-scale projects and small-scale projects is July 20, 2022 at 7:00 PM EST.

It is important to note that a resolution of Council, in support of the application, is a requirement of the program.

Discussion

The 2022 Road Expansion budget included for improvements to the south leg of the County Road 19 and County Road 22 intersection to improve operations and the level of service to the intersection. The southern limit of the improvements for 2022/23 was just south of Jamsyl Drive.

Given the recent announcements of an EV battery plant and battery casing plant, the significant budgeted expenditure at the intersection, and the subject funding program, Administration is re-evaluating the plan. Traffic, like municipal drainage, does not respect or follow municipal boundaries, and the County road network, that is already experiencing a low level of service, is likely to decline fast and sooner than anticipated.

Historical Timeline

In 2005 the Essex-Windsor Regional Transportation Master Plan identified that the subject roadways were deficient to manage current and future traffic demands.

In 2008 an Environmental Assessment (EA) was completed with recommended improvements to County Road 19 and County Road 22. Within the recommendations of the 2008 report is the preferred solution of grade separated interchanges on County Road 22 at both Lesperance Road and County Road 19. Clearly, the recommended improvements were beyond the financial resources of the County of Essex at an estimated cost of \$200 million (2008 dollars).

In 2013, with the significant financial commitments and ongoing capacity and safety concerns at the subject intersection, Administration proposed an alternative. At that time Council supported a plan to improve the County Road 19/22 intersection to a condition significantly less than the recommended grade separation. To date, the north, east and west legs of the intersection have been improved with the addition of through lanes and turning lanes, but leaving the south leg untouched.

Capacity and operation of the intersection continues to degrade and the recent announcement of the EV battery plant, anticipated supporting manufacturing, and population growth projections will bring additional traffic.

DMAF Opportunity

Underneath the roadworks, pavement and traffic signals, is the East Townline Drain (please refer to Appendix A). The East Townline Drain, an open municipal drain, is such that it must be enclosed and lowered to meet requirements of future roadworks along County Road 19.

In 2018, and in response to changing climate conditions, the County of Essex, the Essex Region Conservation Authority and all 7 lower tier municipalities worked together to support a new stormwater standard. The Windsor/Essex Region Stormwater Management Standards manual sets out stormwater design criteria that acknowledge more severe weather events, which are higher than contemplated when the 2008 County Road 22 and County Road 19 EA was completed.

In 2021, there were alternatives to the size and depth of the drain enclosure that were analyzed against traffic volumes, present and future, but at a different level of urgency prior to the recent manufacturing announcements. If the need for a grade separation and interchange were far enough into the future, an interim, smaller solution seemed reasonable.

Two possible solutions to the south leg of County Road 19 at County Road 22, southerly to just south of Jamsyl Drive, are:

1. Build an interim solution of a smaller enclosure that would allow the addition of a number of lanes of traffic. This alternative would not provide any mitigation to future and expected rainfall events. This solution would have to be removed and replaced should further improvements be required at the intersection. All from approximately the intersection of County Road 19 and 22, and southerly to just south of Jamsyl Drive.
2. Build an enclosure with a stormwater management pond and pumping station of a size that would support future stormwater management needs. The larger solution would also support roadworks in multiple scenarios of additional lanes, off ramps, active transportation and grade separation. All from approximately the intersection of County Road 19 and 22, and southerly to just south of Jamsyl Drive.

It is Administration's position that, regardless of the final configuration of interim improvements to the south leg of the intersection, or a grade separation of the entire intersection, the underground works should be constructed to meet requirements well into the future. The DMAF opportunity is Option 2.

Risk Assessment

Administration continues to collect data on cost, the pace of development, reasonable timelines for construction and Drainage Act timelines.

A traffic study commissioned by the City of Windsor to consider the impact of the EV battery plant is incomplete.

Growth and development are increasing as evidenced by the recent census data, preliminary data provided by Watson and Associates related to the Official Plan update, the on-going Southwestern Ontario Transportation Planning Study (MTO), and announcements of supporting manufacturing to the EV plant.

A Drainage Act process averages 18 to 24 months to finalize. Dillon consulting has already been appointed by the Town of Tecumseh as the drainage engineer for the East Townline Drain. It is likely that 100% of the cost of construction of the drain would be the responsibility of the County as the drain could remain unchanged if the road is not improved/widened.

The property at the southwest corner of the intersection of County Road 19 and County Road 22 will be remediated and become the location of the pond and pumping station should Option 2 proceed. This work will be included in the DMAF application for cost sharing.

Approved funding from the DMAF program must be expended by December 2032.

Financial Implications

Administration and our consultant will continue to refine the details of the work, estimated costs and prepare an application. A second report is forthcoming for Council's consideration at the July 20, 2022 meeting of County Council, and prior to the funding deadline. Further discussion and recommendations will be presented regarding funding options and commitments.

Also prior to the July 20, 2022 meeting, the Infrastructure and Finance departments will continue to collaborate, and discuss the impact of the possible change in direction on the overall infrastructure program. Given the size of the project, timelines, and the unknowns noted above, the administrative report at the next meeting could recommend that the County not proceed with the application.

The estimated total project cost for Option 2, to upgrade the East Townline Drain, construct a stormwater management pond, pumping station, a 4-lane urban cross section, turning lanes, a multi-use path and traffic signals is estimated to be \$30,000,000 to \$40,000,000. The Federal DMAF program contributes funding up to 40% of eligible costs.

Administration recommends that the stormwater management pond, pumping station and Municipal Drainage portions of the total cost are eligible, and are estimated to be \$20,000,000 to \$25,000,000. Therefore, \$8,000,000 to \$10,000,000 would be expected from the DMAF program.

A successful application could result in the award of a contract to flow funding to the County of Essex. At that time a report will be presented to Council detailing a funding plan, and whether or not to execute an agreement.

Consultations

In preparation of this report, Infrastructure and Planning consulted with the Town of Tecumseh, and the Director of Financial Services.

Recommendation

That Essex County Council receive Report 2022-0615-ISD-R18-AB and direct Administration to prepare an application to the Disaster Mitigation and

Adaptation Fund for improvements to County Road 19, the East Townline Drain and associated stormwater management systems;

And further that Essex County Council direct Administration to prepare and present a report at the July 20, 2022 meeting of Council, with a recommendation to proceed, or not proceed, with the submission of the application to the Disaster Mitigation and Adaptation Fund.

Approvals

Respectfully Submitted,

Allan Botham

Allan Botham, P.Eng., Director, Infrastructure and Planning Services

Concurred With,

Mike Galloway

Mike Galloway, MBA, CMO, Chief Administrative Officer

Appendix Number	Title
A	Report Location Map – County Road 19 and 22 Intersection