



Administrative Report

Office of the Director, Infrastructure & Planning Services

To: Warden MacDonald and Members of Essex County Council

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

Date: Wednesday, June 21, 2023

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

Report #: 2023-0621-IPS-R21-AB

Purpose

The purpose of this report is to inform and update Council on a funding opportunity available through the Disaster Mitigation and Adaptation Fund (DMAF), and seek Council's approval to make application to the DMAF. The subject application would be to fund eligible portions of improvements to the south leg of the County Road 22 and County Road 19 (CR 22/19) intersection along County Road 19.

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 \$2.0 billion over 10 years and was enhanced in 2021 with an additional commitment of \$1.375 billion, for a total of \$3.375 billion.

During the June 15, 2022 regular meeting, Council heard report 2022-0615-ISD-R18-AB (please refer to Appendix 1), and directed Administration to:

1. 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
2. prepare and present a report at a future meeting of Council with a recommendation to proceed, or not proceed, with an application.

Report 2022-0615-ISD-R18-AB provided a high-level summary of the DMAF program, highlighting that 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.

Administration submits that the closure of the subject intersection for any length of time due to a disaster would be considered a significant disruption to economic activity.

The DMAF program offers some flexibility in that it offers applications in two streams: Stream 1, with \$670 million, is allocated to small-scale projects (between \$1 million and \$20 million), and Stream 2, with \$2.7 billion, is allocated to large-scale projects (\$20 million and above). Projects submitted must have a minimum total eligible cost of \$1.0 million.

The maximum federal contribution for a municipal infrastructure project in either stream is 40% of the total eligible costs. Eligible expenditures for a project include capital, design, planning, and certain land acquisition costs.

On June 15, 2022 Administration also learned, and informed Council, that Infrastructure Canada had indefinitely postponed the intake of further applications to the DMAF. Given that the program was indefinitely postponed, Administration did not return to Council with a report.

Infrastructure Canada has now reopened the program and is receiving applications until July 19, 2023. All successful projects must be completed by December 31, 2032.

Discussion

Project Selection

Given the recent announcements of an EV battery plant, anticipated supply plants, “spin-off jobs”, the regional hospital, and recent County of Essex growth projections, there is one candidate project. Administration recommends that, within the County’s Expansion Capacity Program, improvements to the south leg of the CR22/19 intersection (CR22 to just south of Jamsyl Drive) best meets the eligibility criteria of the program. Particularly, improvements to the drainage systems and storm water

management facility align with the intention of the DMAF program, which is “aimed at reducing the socio-economic, environmental and cultural impacts triggered by natural hazards and extreme weather events taking into consideration current and potential future impacts of climate change in communities and infrastructure at high risk”.

Surface works are not eligible, but underneath the roadworks, pavement and traffic signals, regardless of the final configuration of the intersection, is the East Townline Drain (please refer to Figure 1). The East Townline Drain, is a municipal drain providing outlet for much of the lands within the Town of Tecumseh bounded by County Road 22, County Road 19, County Road 42 and Lesperance Road. The East Townline drain lies within the County Road 19 road allowance. In the immediate vicinity of the CR22/19 intersection, the drain must be enclosed and lowered to maintain storm and surface water flows. Enclosing and lowering the drainage works will create space for the surface works and space to meet the minimum cover requirements of future roadworks. “Cover” is the thickness of soil, aggregate and/or pavement on top of the drain enclosure.

Project Scope

The intersection of CR22/19 currently operates at a Level of Service (LOS) E, and at certain times of the day, at a LOS F. LOS E can be characterized as an intersection that is at capacity and vehicles queue and remain for several signal cycles. LOS F can be characterized as an intersection that is saturated and traffic exceeds the capacity. Changes to the intersection are inevitable, and any significant construction project will require the enclosure of the East Townline Drain to south of Jamsyl Drive to create the necessary space. There are several options available to review.

Options

1. Do nothing;
2. Minor modifications to improve operation and reduce delays;
3. Significant modifications to improve operation and reduce delays, at grade;
4. Construction of an interchange that may include a grade separation as determined by way of the “County Road 22 and County Road 19 Improvements Environmental Study Report (2008)”.

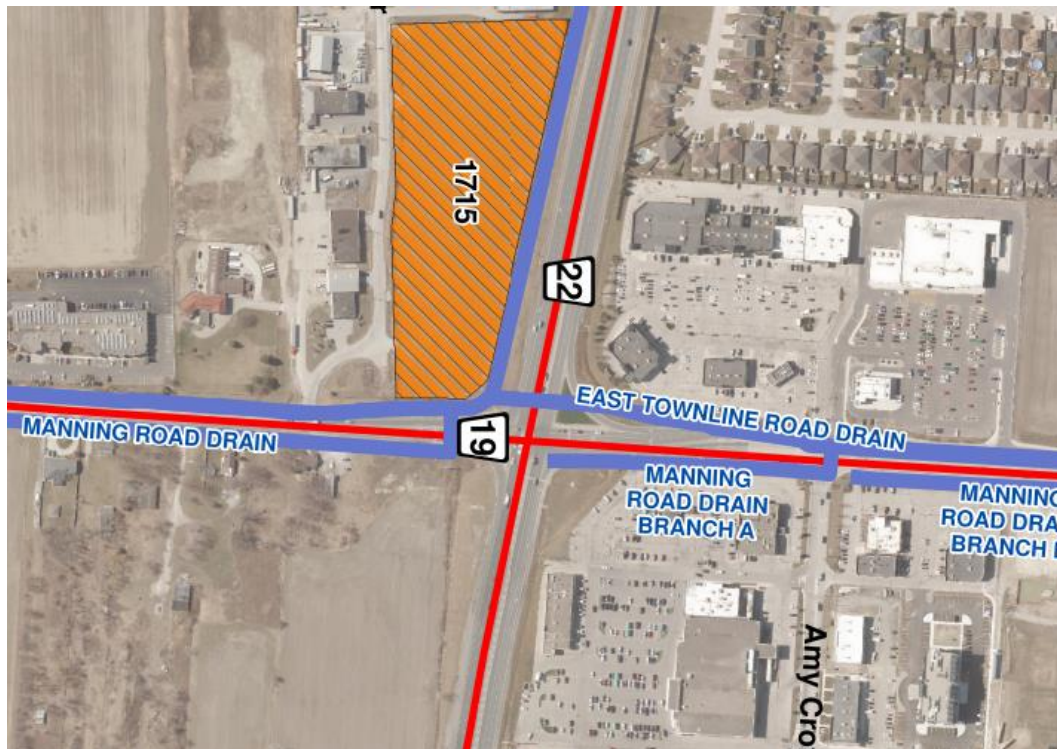


Figure 1

A 'do nothing' scenario is not recommended as the conditions will worsen and there is no preparation for the future, expected traffic.

Minor modifications by way of a second northbound left turn lane and lengthened northbound right turn lane are an option. Note that this option requires storm water management improvements, including the enclosure of the East Townline Drain that may have to be removed and replaced when further improvements are made.

Significant modifications to allow for additional and longer left and right turn lanes, and bike lanes is another option. Administration would recommend that this option include the East Townline Drain enclosure with a stormwater management pond, complete with pumping station, of a size that would support future stormwater management needs. The drain enclosure and pump station would remain even if a grade separated interchange were constructed.

Construction of a grade separated interchange must be considered and likely debated in the near future. The "County Road 22 and County Road 19 Improvements Environmental Study Report (2008)" concluded that the recommended improvement to the CR22/19 intersection is a Single Point

Urban Interchange (SPUI) (please refer to Figure 2). Growth and development are only increasing, as evidenced by: recent census data, preliminary reporting provided by Watson and Associates related to the Official Plan update, the on-going Southwestern Ontario Transportation Planning Study (MTO), and announcements of supply manufacturing to the EV plant.

Regardless of the configuration of the intersection, and to maximize the benefit of a DMAF application for stormwater works, it is Administration's position that, the drainage and stormwater works should be constructed now to meet requirements well into the future. Therefore, Administration recommends that the County of Essex apply to DMAF for the stormwater works knowing that the constructed configuration of the intersection may change should additional funding become available for the recommended, grade separated interchange.

Risks

Communication with Infrastructure Canada suggests that the current intake to the DMAF program is intended to be the last. The program intends to allocate the remaining funds. Consideration must also be given to the risks affecting the success of a DMAF supported project as the program stipulates that construction works must be complete by December 2032.

Completion of a Drainage Act process averages 18 to 24 months. Dillon Consulting has already been appointed by the Town of Tecumseh as the drainage engineer for the East Townline Drain. The drainage process may conclude that 100% of the cost of construction of the drain enclosure would be the responsibility of the County as the drain could remain unchanged if the road is not improved/widened.

County owned property at the southwest corner of the intersection of County Road 19 and County Road 22 must be remediated and will become the location of the pond and pumping station should Option 3 proceed. This work will be included in the DMAF application for cost sharing.

Consideration for the coordination of construction projects within the County of Essex and the City of Windsor is also a risk factor. The County, Tecumseh and Windsor all have projects underway or looming in the vicinity. The EV plant, the EC Row intersection with Banwell Road, County Road 42, and others must proceed.

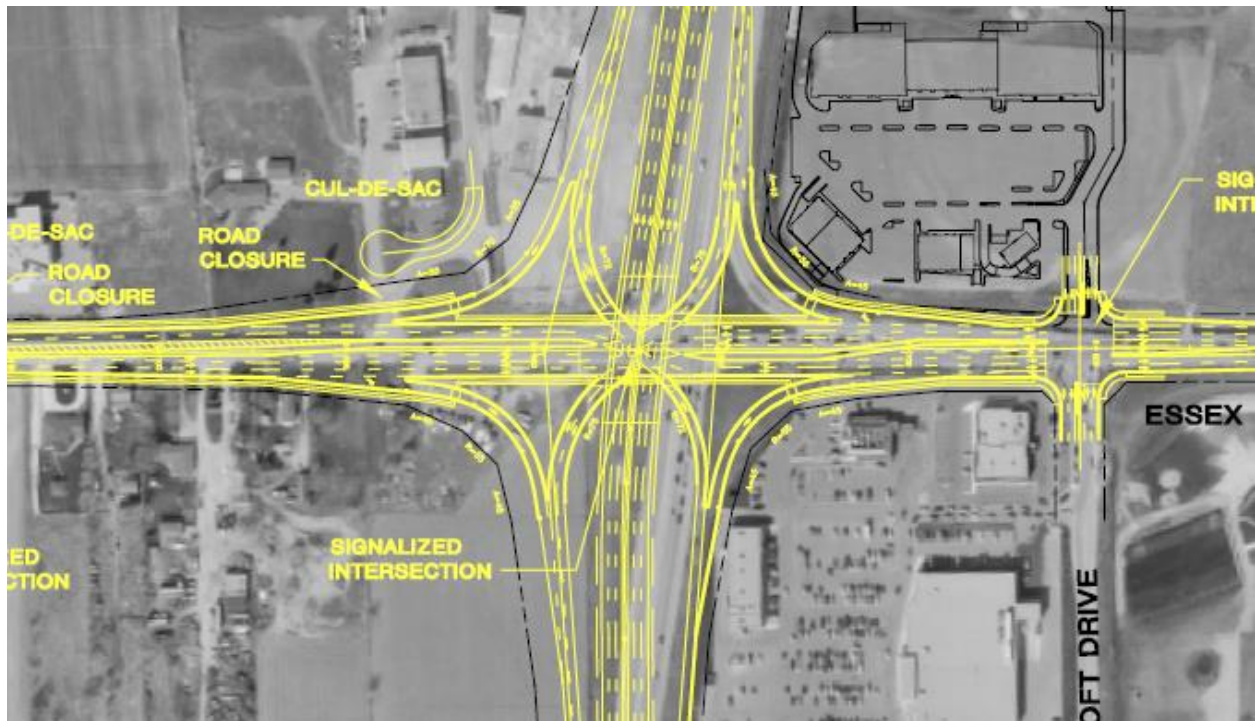


Figure 2

Financial Implications

The estimated total project cost for Option 3, to upgrade the East Townline Drain, construct a stormwater management pond, and pumping station for the future, along with significant improvements to the intersection, is estimated to be \$33,000,000 to \$45,000,000. Surface works would include a 4-lane urban cross section, at grade, with turning lanes, a multi-use path and traffic signals at Jamsyl Drive.

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. (please refer to Table 1)

A successful application could result in the award of a Transfer Payment Agreement 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.

Table 1

Task	Estimated Cost	Eligible for DMAF	Year Construction Begins
Stormwater Facilities (Pond, Pump Station, Drain Enclosure), Engineering	\$20,000,000 - \$25,000,000	Yes	2024
Roadworks, Traffic Signals, Utility Relocation, Engineering	\$13,000,000-\$20,000,000	No	2026
Total	\$33,000,000 - \$45,000,000		

Consultations

Financial Services

Recommendation

That Essex County Council authorize Administration to prepare, and submit, an application to the Disaster Mitigation and Adaptation Fund, all as described in report 2023-0621-IPS-R21-AB.

Approvals

Respectfully Submitted,

Allan Botham

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

Concurred With,

Mary Birch

Mary Birch, BA, CMO, Interim Chief Administrative Officer

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Disaster Mitigation and Adaptation Fund Application – County Road 22 and County Road 19 Intersection

Appendix Number	Title
1	County Council Report 2022-0615-ISD-R18-AB