



Date: May 6, 2024

To: Mayor and Council

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RE: 2024 Main Street Division Street Intersection Report

RECOMMENDED ACTION

That the Division Street / Main Street Intersection be improved with the addition of a dedicated westbound right turn lane as per Appendix B within the existing pavement width to improve traffic movement in the Kingsville Downtown core.

BACKGROUND

During strategic planning in 2023, Council identified traffic congestion as one of the primary concerns raised by residents in Kingsville. As such, traffic improvements were listed as an action towards addressing Priority #4: Resilient Infrastructure.

To investigate and recommend solutions, RC Spencer was retained to conduct a traffic operations assessment of the Division Street / Main Street Intersection. This study aimed to examine existing intersection traffic conditions and identify operational improvements that could result from implementing a dedicated westbound right turn lane within the existing pavement width.

DISCUSSION

As illustrated in the appendices, Division Street at Main Street is a four-legged signalized intersection. Each approach incorporates a dedicated left turn lane and a shared through / right turn lane. Sidewalks are provided on all four legs (on both sides). The land use around this intersection is primarily commercial, and within the study area, parking is permitted on both sides of all four legs.

For the examination, RC Spencer used updated turning movement counts taken on August 17, 2023 to provide the basis for industry-standard traffic operations using industry-leading software analysis. With these results, two alternatives were examined to improve the existing conditions.

Alternative A (Appendix A) utilizes the existing westbound pavement width (in front of the existing parking spaces) to accommodate a 20m right turn lane; the corresponding

left turn lane is also maximized with a 20m storage lane. The existing parking spaces are not affected in this alternative.

Alternative B (Appendix B) utilizes the existing westbound pavement width (in front of the existing parking spaces), but it also infringes on the two closest parking spaces on both sides of the roadway. This alternative accommodates a 40m right turn lane, and the corresponding left turn lane is extended to 30m. The two nearest parking spaces will need to be removed on the north and south sides of the roadways, resulting in a net on-street parking loss of four spaces.

The recommended geometric improvements were modelled to evaluate their effectiveness. The results indicate that a 20m right turn lane (with 25m taper) should adequately serve westbound vehicles wanting to make a right turn. While the potential loss in parking is a consideration, it's important to weigh this against the improved accessibility to the dedicated westbound right (and left) turn lane. If the loss in parking is deemed detrimental to the downtown core's viability, it can be retained, but it's important to note that access to the dedicated lanes may be limited during peak hours.

In summary, both options will benefit from the addition of a westbound right-hand turn lane that will enhance the flow of westbound traffic on Main St E. However, Option B stands out as it will result in a further reduction of queue lengths and allow for more stacking at the intersection. This will reduce congestion in the downtown core and possibly lower the number of times traffic queues at the Main & Division all the way to the Spruce and Main intersection.

FINANCIAL CONSIDERATIONS

All changes can be made by removing the existing paint markings and replacing with the new chosen layout. A quote received in 2023 to complete this work totaled \$4,195.00 excluding HST.

ENVIRONMENTAL CONSIDERATIONS

Improved traffic flow reduces traffic idling and harmful emissions.

CONSULTATIONS

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