

Durham St and McNabb St Intersection Safety Study and Proposals

February 2021



McNabb St and Durham St Intersection Improvement Project Team



Transoft Solutions

- Several full days of live camera recording analyzed
- Not only assessing on historical crash data.
- Near miss occurrences are measured as Post-Encroachment Time (PET)
- Better estimation of the probability of a collision.
- A combination of speed, road user classification, mass, and conflict angle are used to gauge collision severity.

True North Safety Group (TNS)

TNS are:

- Professionals in the Road, Transportation, Pedestrian and Bicycle Safety field.
- Retained to translate Transoft Solutions data into effective design proposals



BRUCE
county



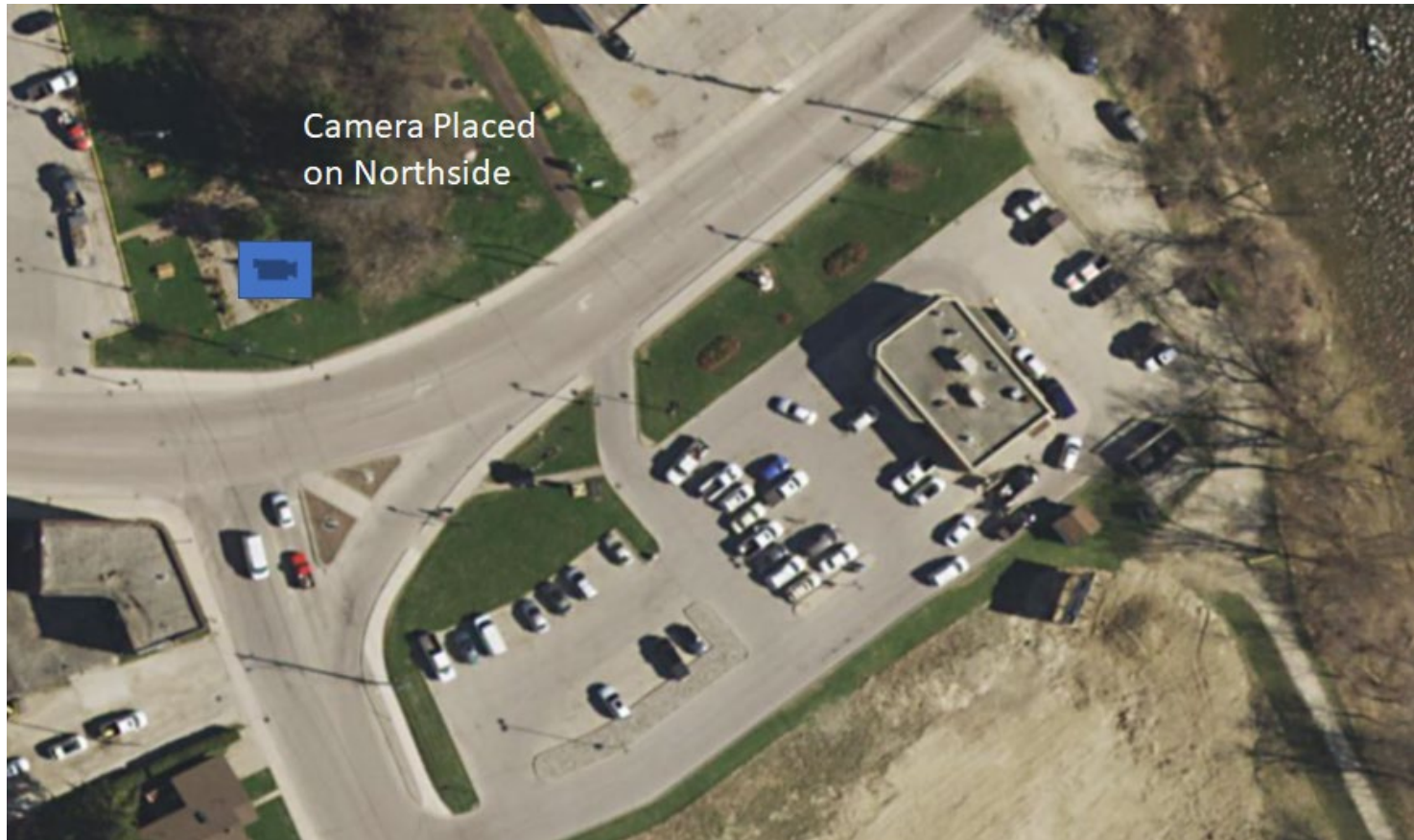
- Concerns raised over pedestrian safety (Nov 2018)
- Schoolchildren crossing road via route A-B-C
- Dangerous crossing point
- Meetings on the most suitable analysis strategy (2019)

Transoft Solutions carried out a study for five consecutive days at the intersection from Monday September 14th to Friday September 18th 2020 recording from 7am until 7pm. The movements recorded by the camera included the following:

- All movements of vehicles through the intersection of McNabb St and Durham St
- Vehicle movements in and out of Tim Hortons from Durham St access
- Pedestrian movements between the Durham St Bridge and through McNabb St intersection



BRUCE
county



- A wide lens camera recorded all traffic movements
- Camera showed activity between bridge and intersection



BRUCE
county



- A near miss analysis shows where most 'close calls' occur
- Blue arrows show top 2 concerns identified



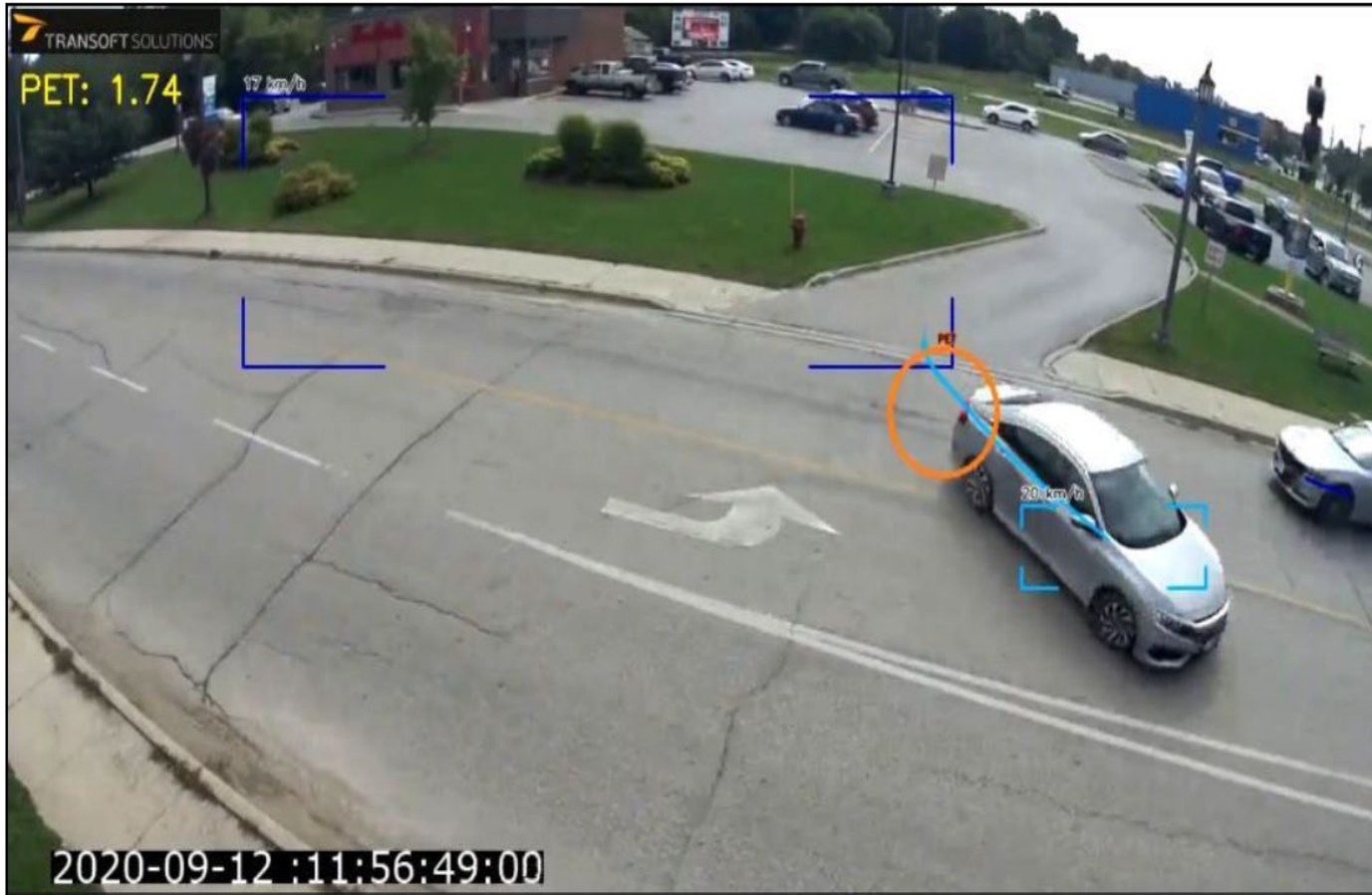
BRUCE
county



An example of pedestrians crossing on Durham St at McNabb St intersection



BRUCE
county



Example of a motorist making an illegal left turn out of Tim Hortons



BRUCE
county

- **Proposals for Improvements**
- **Long Term Proposals**
- Planned bridge replacement project for Durham St Bridge (2024/25)
- May result in the new bridge being at a different approach angle.
- New bridge approach angle may change road approach angle.
- **Short Term Proposals**
- Address the two main concerns identified

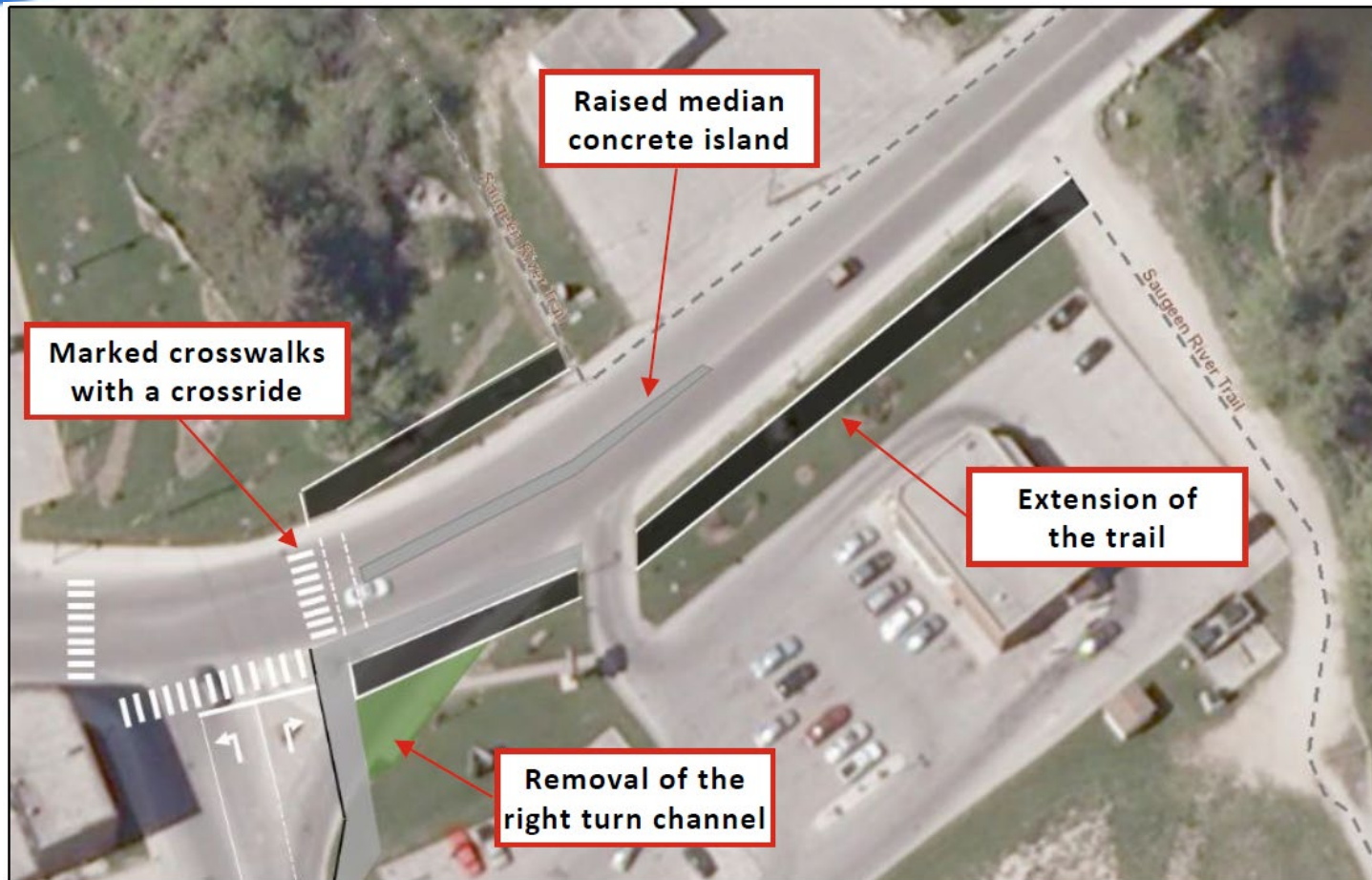


BRUCE
county

- **Short Term (2021/22)**
 - Installation of signalized pedestrian crossing at intersection.
 - Pedestrian barrier along Durham St
 - Improved NO LEFT TURN signage on egress from Tim Hortons
 - Improved NO ENTRY signage into Tim Hortons from Durham St.
- **Long Term (2025/26)**
 - Traffic signalization at intersection
 - Central Island on Durham St
 - Pedestrian barrier on Durham St
 - South side sidewalk offset from road
 - Removal of right turn channel



BRUCE
county



- Redesign proposed for 2026
- Also pedestrian barrier along the road edge

Costs

- **Short Term (2021/22)**
- Approximately \$150,000 to install pedestrian crossing including design and sidewalk alterations
- Pedestrian barrier and potential minor sidewalk alterations approximately \$10,000
- Signage adjustments at Tim Hortons approximately \$1000

Costs

- **Long Term (2026)**
- Approximately \$250,000 to install traffic signalized intersection
- Central median on Durham St \$5000
- Removal of right turn lane with aesthetic considerations \$25,000
- Sidewalk realignment alongside Tim Hortons \$20,000
- If Durham St requires realigned to tie in with the bridge replacement this will be incorporated into the bridge project



BRUCE
county

Further Thoughts and In Conclusion.....

- Discussions with local residents has confirmed that this is an issue of some concern particularly the schoolchildren/pedestrians crossing near the bridge and at the intersection
- Transoft study did not show the issue of schoolchildren crossing as a major problem however this was anticipated to some extent – issue remains a priority and other concerns have been identified
- Installation of a crossing near the bridge at this time would not be safe due to the elevation of the road over the bridge being higher than adjacent to Tim Hortons – forward visibility constraints
- Consideration that more substantial improvements could be tied to bridge replacement project

- Traffic signals would be tied in with considerations to progression through Walkerton.
- TES plan to present to take a report to County of Bruce Committee on February 18th , 2021.