

Cycling Advisory Committee

Report

The 8th Meeting of the Cycling Advisory Committee
August 21, 2019
Committee Room #4

Attendance PRESENT: C. Linton (Chair), K. Brawn, B. Cowie, C. DeGroot, R. Henderson, B. Hill, J. Jordan, C. Pollett, E. Raftis and J. Roberts and J. Bunn (Acting Secretary)

ABSENT: O. Toth

ALSO PRESENT: P. Kavcic, D. MacRae and C. Saunders

The meeting was called to order at 4:00 PM.

1. **Call to Order**

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. **Scheduled Items**

None.

3. **Consent**

3.1 7th Report of the Cycling Advisory Committee

That it BE NOTED that the 7th Report of the Cycling Advisory Committee, from its meeting held on July 17, 2019, was received.

3.2 Notice of Planning Application - Zoning By-law Amendment - 666-670 Wonderland Road North

That it BE NOTED that the Notice of Planning Application, dated August 7, 2019, from M. Vivian, Planner I, with respect to a Zoning By-law Amendment for the properties located at 666-670 Wonderland Road North, was received.

3.3 Notice of Study Completion - Clarke Road Improvements Municipal Class Environmental Assessment

That it BE NOTED that the Notice of Study Completion from P. Kavcic, City of London and I. Bartlett, Stantec Consulting Ltd., with respect to the Clarke Road Improvements Municipal Class Environmental Assessment for the Veterans Memorial Parkway Extension to Fanshawe Park Road East, was received.

4. **Sub-Committees and Working Groups**

None.

5. **Items for Discussion**

5.1 Position Statement: Reduction in Residential Speed Limits in London, ON, to under 40km/h

That it BE NOTED that the revised attached Position Statement from R. Henderson, with respect to reducing residential speed limits in London,

ON, to under 40 km/h, was received; it being noted that R. Henderson will attend the Civic Works Committee meeting, along with the Chair of the Cycling Advisory Committee, to speak to this matter.

5.2 Status of Cycling as a Sport/Recreational Activity in London

That a Sub-Committee BE ESTABLISHED to review and discuss sport and cycling in City of London communities.

5.3 2019 Work Plan

That discussion of the 2019 Cycling Advisory Committee (CAC) Work Plan BE DEFERRED to the September 2019 meeting of the CAC.

6. Adjournment

The meeting adjourned at 5:15 PM.

Cycling Advisory Committee

Report

The 7th Meeting of the Cycling Advisory Committee
July 17, 2019
Committee Room #4

Attendance PRESENT: C. Linton (Chair), K. Brawn, B. Cowie, C. DeGroot, R. Henderson, J. Jordan, C. Pollett, E. Raftis, J. Roberts and O. Toth; P. Shack (Secretary)

ABSENT: B. Hill

ALSO PRESENT: A. Giesen, P. Kavcic, T. MacDaniel and D. MacRae

The meeting was called to order at 4:00 PM.

1. Call to Order

1.1 Orientation

That it BE NOTED that the Cycling Advisory Committee heard a verbal presentation from M. Schulthess, Deputy City Clerk, with respect to an orientation.

1.2 Disclosures of Pecuniary Interest

None.

1.3 Election of Chair and Vice-Chair for the term ending November 30, 2019

That it BE NOTED that the Cycling Advisory Committee elected C. Linton and R. Henderson as Chair and Vice Chair, respectively, for the term ending November 30, 2019.

2. Scheduled Items

2.1 Dundas Street-Old East Village Infrastructure Renewal Project

That it BE NOTED that the ~~attached~~ presentation from T. Hitchon, Technologist II-Transportation, with respect to the Dundas Street-Old East Village Infrastructure Renewal Project, was received.

3. Consent

3.1 6th Report of the Cycling Advisory Committee

That it BE NOTED that the 6th Report of the Cycling Advisory Committee, from its meeting held on May 15, 2019, was received.

3.2 Public Meeting Notice - Official Plan and Zoning By-law Amendments - 124 St. James Street

That it BE NOTED that the Public Meeting Notice, dated July 2, 2019, from B. Debbert, Senior Planner, with respect to the Official Plan and Zoning By-law Amendments for 124 St. James Street.

3.3 Public Meeting Notice - Official Plan and Zoning By-law Amendments - 1631-1649 Richmond Street

That it BE NOTED that the Public Meeting Notice, dated July 3, 2019, from C. Lowery, Planner II, with respect to the Official Plan and Zoning By-law Amendments for 1631-1649 Richmond Street, was received.

3.4 Public Meeting Notice - Official Plan and Zoning By-law Amendments - 3334 and 3354 Wonderland Road South

That it BE NOTED that the Public Meeting Notice, dated July 3, 2019, from M. Campbell, Manager, Development Planning (Current Planning), with respect to the Official Plan and Zoning By-law Amendments for 3334 and 3354 Wonderland Road South, was received.

4. Sub-Committees and Working Groups

None.

5. Items for Discussion

None.

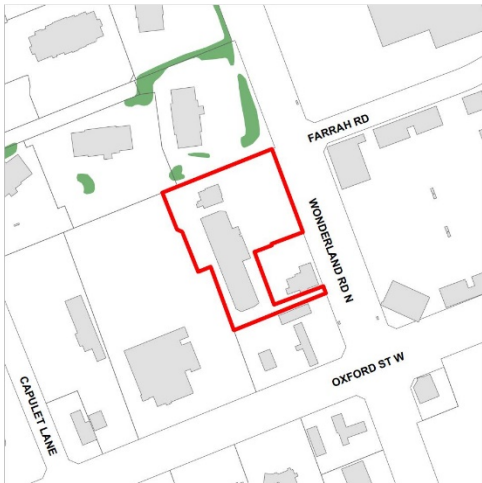
6. Adjournment

The meeting adjourned at 5:40 PM.

NOTICE OF PLANNING APPLICATION

Zoning By-Law Amendment

666-670 Wonderland Road North



File: Z-9093

Applicant: JFK Holdings c/o John Fragis

What is Proposed?

Zoning amendment to allow:

- A medical/dental office in addition to the uses permitted by the existing zoning
- Recognize a parking rate previously approved through a minor variance application of, 1 space per 11 square meters for all uses on site

LEARN MORE & PROVIDE INPUT

Please provide any comments by **August 28, 2019**

Melanie Vivian

mvivian@london.ca

519-661-CITY (2489) ext. 7547

Development Services, City of London, 300 Dufferin Avenue, 6th Floor,
London ON PO BOX 5035 N6A 4L9

File: Z-9093

london.ca/planapps

You may also discuss any concerns you have with your Ward Councillor:

Steve Lehman

slehman@london.ca

519-661-CITY (2489) ext. 4008

**If you are a landlord, please post a copy of this notice where your tenants can see it.
We want to make sure they have a chance to take part.**

Application Details

Commonly Used Planning Terms are available at london.ca/planapps.

Requested Zoning By-law Amendment

To change the zoning from a Highway Service Commercial Special Provision/Restricted Service Commercial Special Provision (HS(3)/RSC2(1)) Zone to a Highway Service Commercial Special Provision/Restricted Service Commercial Special Provision (RSC2(__)) Zone to permit a medical/dental office as a permitted use in the Restricted Service Commercial Special Provision (RSC2(__)) Zone in addition to the uses permitted by the existing zoning, and to recognize a parking rate previously approved through a minor variance application of 1 space per 11 square metres for all uses on site. Changes to the currently permitted land uses and development regulations are summarized below. The complete Zoning By-law is available at london.ca/planapps.

Current Zoning

Zone: Highway Service Commercial Special Provision/Restricted Service Commercial Special Provision (HS(3)/RSC2(1)) Zone

Permitted Uses: The Highway Service Commercial Special Provision (HS(3)) Zone permits a site-specific range of uses including animal hospitals; convenience service establishments; convenience stores; duplicating shops; financial institutions; personal service establishments; restaurants; video rental establishments, brewing on premises establishment. The Restricted Service Commercial Special Provision (RSC2(1)) Zone permits a site-specific range of uses including animal hospitals; bulk beverage stores; catalogue stores; dry cleaning and laundry depots; duplicating shops; hardware stores; home appliance stores; kennels; liquor, beer and wine stores; repair and rental establishments; retail stores; service and repair establishments; studios; and taxi establishments.

Special Provision(s): The Special Provision for the Highway Service Commercial Provision (HS(3)) Zone prohibits restricted automotive uses. The Restricted Service Commercial Special Provision (RSC2(1)) Zone provides for a site-specific list of permitted uses as detailed under Permitted Uses above.

Requested Zoning

Zone: Highway Service Commercial Special Provision/Restricted Service Commercial Special Provision (HS(3)/RSC2(__)) Zone

Permitted Uses: The Highway Service Commercial Special Provision (HS(3)) Zone permits a site-specific range of uses including animal hospitals; convenience service establishments; convenience stores; duplicating shops; financial institutions; personal service establishments; restaurants; video rental establishments, brewing on premises establishment. The existing Restricted Service Commercial Special Provision (RSC2(1)) Zone permits a site-specific range of uses including animal hospitals; bulk beverage stores; catalogue stores; dry cleaning and laundry depots; duplicating shops; hardware stores; home appliance stores; kennels; liquor, beer and wine stores; repair and establishments; retail stores; service and repair establishments; studios; and taxi establishments.

Special Provision(s): The Special Provision for the Highway Service Commercial Provision (HS(3)) Zone prohibiting restricted automotive uses will remain. The Restricted Service Commercial Special Provision (RSC2(__)) Zone to add medical/dental offices to the site-specific range of uses in Permitted Uses above. Add a regulation to recognize in the Zoning By-law the parking rate approved through a previous minor variance of 1 space per 11 square metres for all uses on the site. (A.011/07).

Planning Policies

Any change to the Zoning By-law must conform to the policies of the Official Plan, London's long-range planning document. These lands are currently designated as Auto-Oriented Commercial Corridor in the Official Plan, which permits hotels; motels; automotive uses and services; commercial recreation establishments; restaurants; sale of seasonal produce; building supply outlets and hardware stores; furniture and home furnishing stores; warehouse and wholesale outlets; self-storage outlets; nursery and garden stores; animal hospitals or boarding kennels; and other types of commercial uses that offer a service to the traveling public as the main uses.

The subject lands are in the Transit Village Place Type in *The London Plan*, permitting a range of residential, retail, service, office, cultural, institutional, hospitality, entertainment, recreational, and other related uses.

How Can You Participate in the Planning Process?

You have received this Notice because someone has applied to change the zoning of land located within 120 metres of a property you own, or your landlord has posted the notice of

application in your building. The City reviews and makes decisions on such planning applications in accordance with the requirements of the *Planning Act*. The ways you can participate in the City's planning review and decision making process are summarized below. For more detailed information about the public process, go to the [Participating in the Planning Process](#) page at [london.ca](#).

See More Information

You can review additional information and material about this application by:

- visiting Development Services at 300 Dufferin Ave, 6th floor, Monday to Friday between 8:30am and 4:30pm;
- contacting the City's Planner listed on the first page of this Notice; or
- viewing the application-specific page at [london.ca/planapps](#).

Reply to this Notice of Application

We are inviting your comments on the requested changes at this time so that we can consider them as we review the application and prepare a report that will include Development Services staff's recommendation to the City's Planning and Environment Committee. Planning considerations usually include such matters as land use, development intensity, and form of development.

Attend a Future Public Participation Meeting

The Planning and Environment Committee will consider the requested zoning changes on a date that has not yet been scheduled. The City will send you another notice inviting you to attend this meeting, which is required by the *Planning Act*. You will also be invited to provide your comments at this public participation meeting. The Planning and Environment Committee will make a recommendation to Council, which will make its decision at a future Council meeting.

What Are Your Legal Rights?

Notification of Council Decision

If you wish to be notified of the decision of the City of London on the proposed zoning by-law amendment, you must make a written request to the City Clerk, 300 Dufferin Ave., P.O. Box 5035, London, ON, N6A 4L9, or at docservices@london.ca. You will also be notified if you speak to the Planning and Environment Committee at the public meeting about this application and leave your name and address with the Secretary of the Committee.

Right to Appeal to the Local Planning Appeal Tribunal

If a person or public body would otherwise have an ability to appeal the decision of the Council of the Corporation of the City of London to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of London before the by-law is passed, the person or public body is not entitled to appeal the decision.

If a person or public body does not make oral submissions at a public meeting or make written submissions to the City of London before the by-law is passed, the person or public body may not be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so.

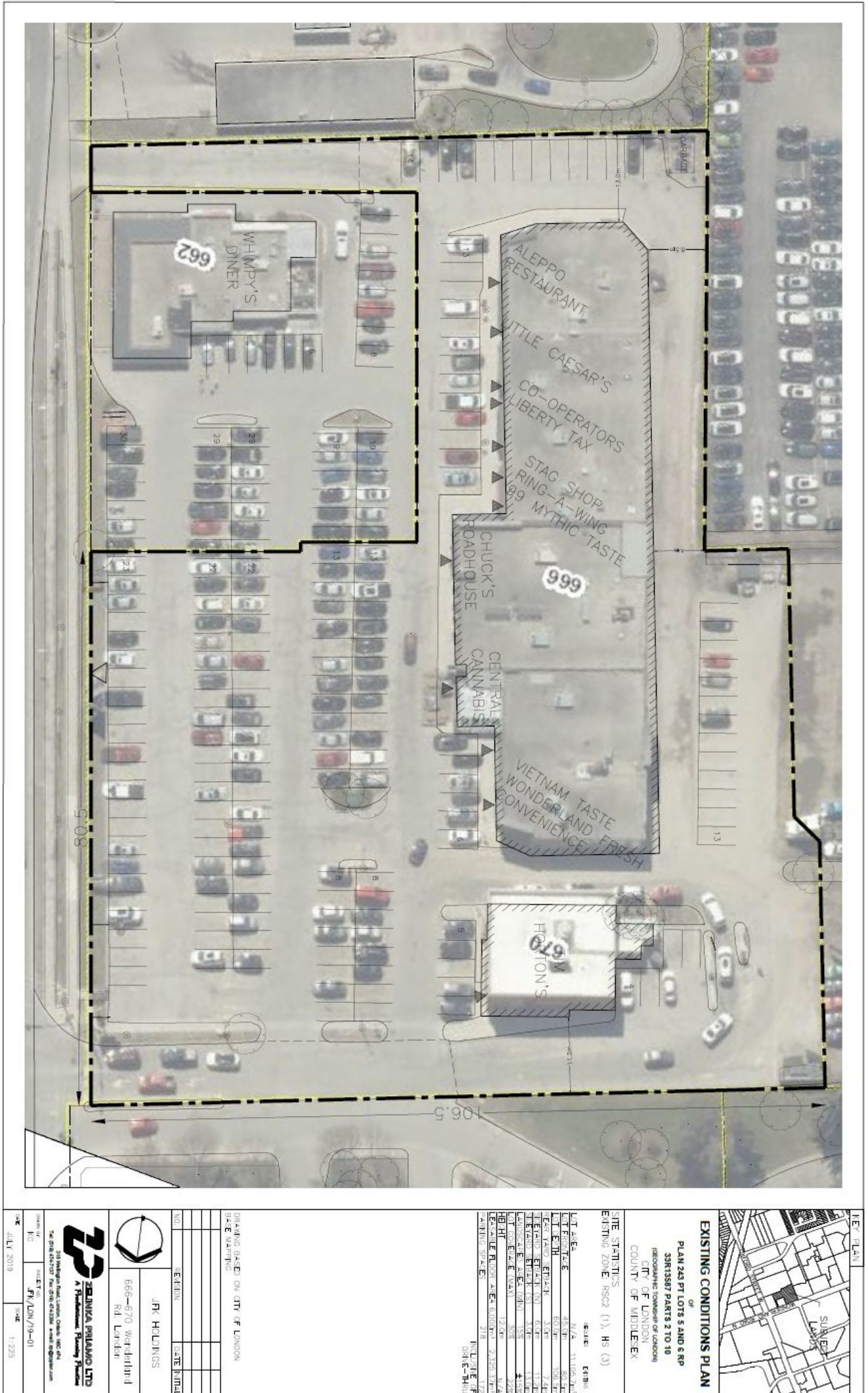
For more information go to <http://elto.gov.on.ca/tribunals/lpat/about-lpat/>.

Notice of Collection of Personal Information

Personal information collected and recorded at the Public Participation Meeting, or through written submissions on this subject, is collected under the authority of the *Municipal Act*, 2001, as amended, and the *Planning Act*, 1990 R.S.O. 1990, c.P.13 and will be used by Members of Council and City of London staff in their consideration of this matter. The written submissions, including names and contact information and the associated reports arising from the public participation process, will be made available to the public, including publishing on the City's website. Video recordings of the Public Participation Meeting may also be posted to the City of London's website. Questions about this collection should be referred to Cathy Saunders, City Clerk, 519-661-CITY(2489) ext. 4937.

Accessibility – Alternative accessible formats or communication supports are available upon request. Please contact accessibility@london.ca or 519-661-CITY(2489) extension 2425 for more information.

Site Concept

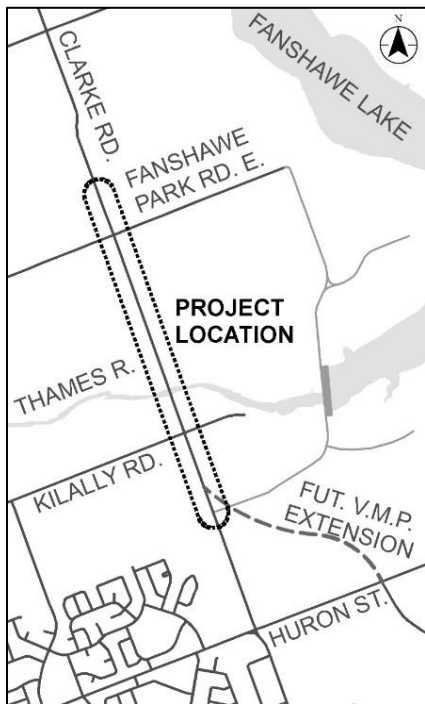


Existing conditions plan for the subject parcel identifying property lines, building locations and existing parking spots.

The above image represents the applicant's proposal as submitted and may change.

Notice of Study Completion
Clarke Road Improvements Municipal Class Environmental Assessment
Veterans Memorial Parkway Extension to Fanshawe Park Road East, City of
London

The City of London retained Stantec to complete a Municipal Class Environmental Assessment (EA) study to plan for improvements on Clarke Road to address future traffic volumes associated with background development and improvements to the Veterans Memorial Parkway (VMP). The preferred plan includes a symmetrical widening of Clarke Road from two to four lanes (with consideration given to the ultimate build-out of six lanes). The preliminary design of the Clarke Road corridor includes four 3.75 m lanes with a 1.0 m flush median and 3.0 m paved shoulder, as well as a separated 3.0 m multi-use pathway along the west side of the road corridor. The preferred preliminary design also includes a new multi-span bridge to replace the existing J.W. Carson bridge over the Thames River.



The study was completed following the Municipal Class Environmental Assessment (EA) (as amended in 2015), under the *Ontario Environmental Assessment Act*, as a Schedule 'C' project. A summary of the study process and recommendations are documented within an Environmental Study Report, a copy of which is available for public review for **45 calendar days from Monday, July 29, 2019 to Wednesday, September 11, 2019** online and at the following locations:

<http://www.london.ca/residents/Environment/EAs/Pages/Clarke-Road-Improvements.aspx>

City Hall, Clerk's Office, 3rd Floor and Transportation Division, 8th Floor, 300 Dufferin Avenue, London, N6A 4L9: Monday to Friday 8:30 a.m. to 4:30 p.m.

London Public Library, Central Branch, 251 Dundas Street, London, N6A 6H9: Monday to Thursday 9:00 a.m. to 9:00 p.m., Friday 9:00 a.m. to 6:00 p.m. and Saturday 9:00 a.m. to 5:00 p.m.

If you have questions or concerns regarding the information provided in the Environmental Study Report, please contact a member of the project team before

Wednesday, September 11, 2019:

Peter Kavcic, P.Eng.
Transportation Design Engineer
Transportation Planning & Design
City of London
pkavcic@london.ca
519-661-CITY (2489) ext. 4581

Isaac Bartlett, P.Eng.
Project Manager
Stantec Consulting Ltd.
Isaac.bartlett@stantec.com
519-675-6643

If concerns regarding this project cannot be resolved in discussion with the City of London, a person/party may submit a Part II Order Request Form. The Part II Order Request Form is available online on the Forms Repository website (<http://www.forms.ssb.gov.on.ca/>) by searching "Part II Order" or "012-2206E" (the form ID number). Completed forms must be sent to the Minister of the Environment, Conservation and Parks, with a copy of the form to the Director of Environmental Assessment and Permissions Branch and the City Clerk:

Minister
Ministry of the Environment, Conservation and Parks
77 Wellesley Street West, Floor 11
Toronto ON M7A 2T5
Minister.mecp@ontario.ca

Director, Environmental Assessment and Permissions Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto ON M4V 1P5
enviopermissions@ontario.ca

City of London
Office of the City Clerk
300 Dufferin Avenue, 3rd floor
London ON N6A 4L9

If the request has been turned down, the City can implement the project subject to any conditions imposed. If the request has been granted, the City can begin preparing terms of reference for an Individual EA, if they still wish to move ahead with the project.

Please note that all personal information included in a Part II Order Request – such as name, address, telephone number and property location – is collected, maintained, and disclosed by the Ministry of the Environment, Conservation and Parks for the purpose of transparency and consultation. The information is collected under the authority of the *Environmental Assessment Act* or is collected and maintained for the purpose of creating a record that is available to the general public as described in s.37 of the *Freedom of Information and Protection of Privacy Act*. Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. Questions about this collection should be referred to the City Clerk, at 519-661-2489, extension 4937.

This Notice issued Thursday, July 18, 2019.

Positions statement: reduction in residential speed limits in London, ON, to under 40km/h

Principal authors

Rebecca Henderson, PhD candidate, Faculty of Health Sciences, Yuanhao Lai, PhD candidate, Statistical and Actuarial Sciences, Jacob Shelley, PhD, Faculty of Health Sciences and Faculty of Law, Andrew Johnson, PhD, Faculty of Health Sciences

The data presented here is part of Rebecca Henderson's doctoral thesis. The full report is unpublished.

Position statement supported by:

London Cycle Link

Abstract

We studied 1,656 reported motor vehicle - bicycling collisions between 2006 and 2017 in London, ON. With speeds exceeding 40 km/h, bicyclists were always injured. A multinomial logistic regression model is further used to determine the relationship between motorist speed and bicyclist injury. Our model indicates that the probability of causing severe injury at motorist speeds of 30km/h, 40km/h and 50km/h are (respectively) 8.5%, 13% and 19%. Given the high injury rate when speeds over 40km/h, **we recommend a speed limit under 40km/h when vulnerable road users mix with motorists.**

Background

The City of London in Southwestern Ontario is increasingly focussed on bicycle safety. Strategies to reduce injury and fatal injury are outlined in three City of London planning reports: Cycling Master Plan (2016), Road Safety Strategy 2014-2019 (2014); and Smart Moves 2030 Transportation Master Plan (2013). The plans set objectives to create actionable policies. The London Road Safety Strategy (2013) set a goal to decrease injuries and fatalities by 10% between 2014-2019. One of the recommended actions in Transportation 2030 was to identify bicycling safety hotspots and concerns to better understand the role of location, and bicyclist and motorist manoeuvres. A focus on bicycling safety and reduction of injuries will support the City's Cycling Master Plan (2016) to increase the proportion of commuting trips made by bicycling from 1.7% to 5% over the next 5-10 years (2026). The City recognizes the critical role that cycling can play in creating green and livable communities, and is committed toward making cycling safe, convenient, and comfortable for people of all ages and abilities.

On May 16, 2017, London Ontario Municipal Council made an important step to improve our collective safety, and adopted the following Vision Zero Principles: (1) No loss of life is acceptable, (2) Traffic fatalities and serious injuries are preventable, (3) We all make mistakes, (4) We are all physically vulnerable when involved in motor vehicle collisions, and (5) Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and maintain our roadways.

There were 1,656 reported motor vehicle – bicycle collisions on City streets between 2006-2017. Despite the City of London planning reports and the adoption of Vision Zero principles, there continue to be bicycle fatalities in our City. In 2018 and 2019, three people were killed while riding their bikes in London, and two others killed in Tillsonburg and Aylmer. The road violence on London friends, neighbours and families continues. The City of London’s politicians, transport engineers, police and professional advocates must move beyond commitment, and set actionable priorities to design roads and address speeds to eliminate injury and death.

Data

The collision data was provided by the City of London Police Department. Accident Support Services International Ltd (ASSI) is the official reporting center for Police Services throughout Canada. ASSI collects and maintains statistics for all reported collisions involving motor vehicles in Ontario. The Police Department provided the ASSI dataset for all reported collisions between January 1, 2006 and December 31, 2017. There were 1,656 reported motor vehicle - bicycling collisions between 2006 and 2017 in London, ON – an average of 138 reported collisions per year.

Speed: Motorist speeds are self-reported to attending police officers.

Injury: Injury determinations are made by the attending police officers (i.e. not medical professionals). See Table 1 for definitions.

Table 1 Injury definitions¹

Injury	Definition
None	no injury
Minimal	a non-fatal injury at the time of the collision, including abrasions, bruises, and complaints of pain which does not require the injured person to go to the hospital.
Minor	a non-fatal injury requiring medical treatment at a hospital emergency room, but not requiring hospitalization of the involved person at the time of the collision.
Severe	major: a non-fatal injury that is severe enough to result in the person involved being hospitalized -and- fatal: a fatal injury where the person sustains bodily injuries resulting in death (within 366 days of the date of the motor vehicle collision)

Probability of bicyclists' injury level versus speed
Reported motor vehicle - bicyclist collision in London, ON, 2006 - 2017

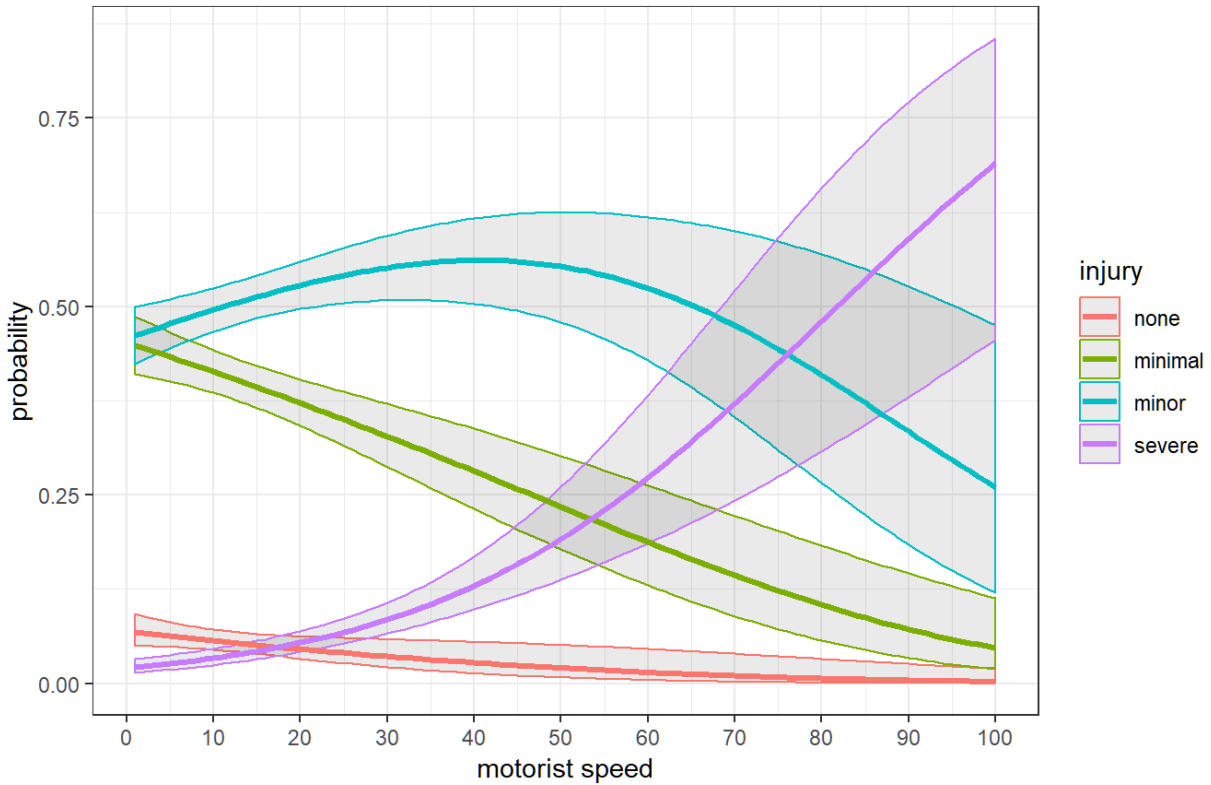


Figure 1 Estimated probability of injury level with the shading area indicating 95% confidence intervals

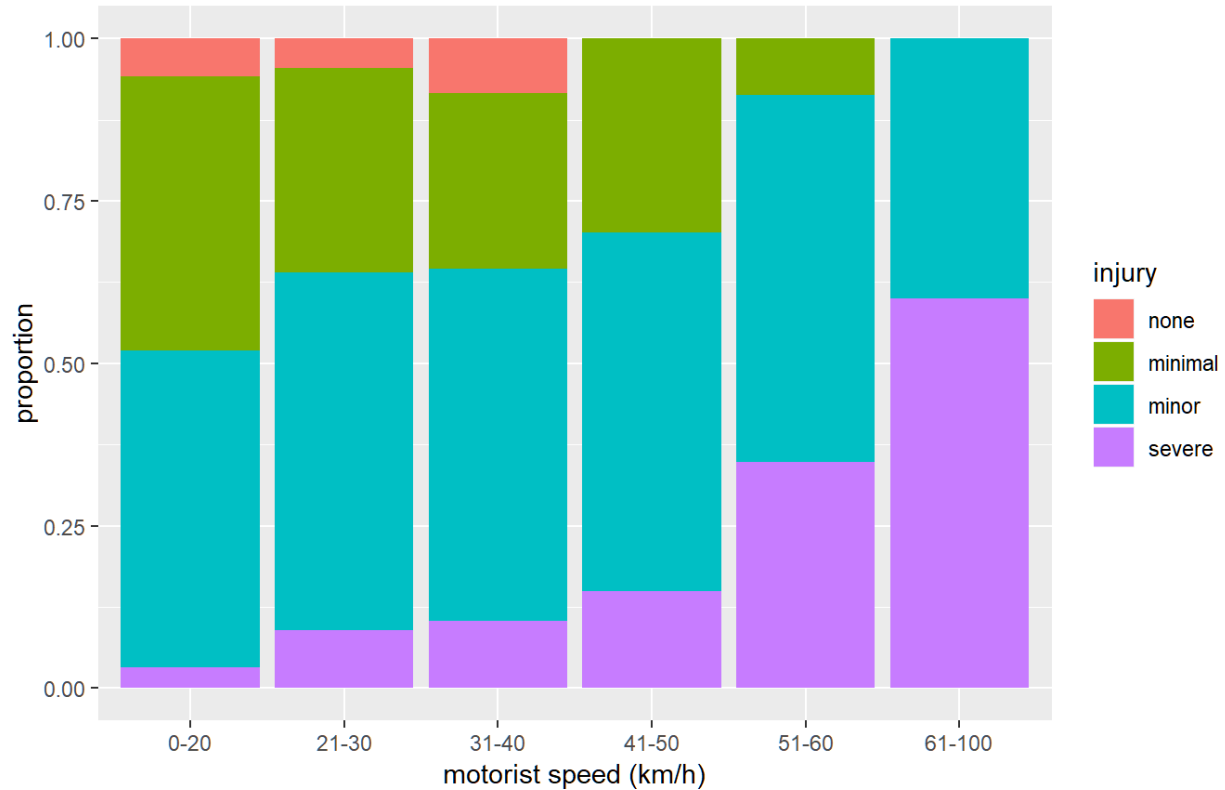
¹ Ontario Ministry of Transportation, 2019

Table 2 Proportion of bicyclist injury within each speed interval in London, ON, 2006 - 2017

	0-20km/h	21-30km/h	31-40km/h	41-50km/h	51-60km/h	61km/h or more
None	6%	4%	8%	0%	0%	0%
Minimal	42%	32%	27%	29%	9%	0%
Minor	49%	55%	54%	55%	56%	40%
Severe	3%	9%	11%	15%	35%	60%

Proportions of bicyclists' injury level versus speed

Reported motor vehicle - bicyclist collision in London, ON, 2006 - 2017



Main results

Table 2 summarizes the proportion for each bicyclist injury within each speed interval of the data. We conducted a multinomial logistic regression to estimate the probability of each injury level using the motorist speed (km/h) as the input factor. The estimated probabilities are visualized in Figure 1.

When describing the data and the model, with a focus on the “none” category of injury (i.e., “no injury”) with motorist speeds of less than 40 km/h, the proportion of cyclists that do not have an injury is low (4%-8%). Meanwhile, bicyclists are always injured when motorists exceed speeds of 40 km/h.

From Figure 1, there are downward trends in both the probability of no injury (red) and the probability of minimal injuries (green). As motorist speed increases, the probability of zero or minimal injury decreases, but the probability of minor and severe injuries increase. Minor injuries (blue in Figure 1) require medical attention at a hospital. They may include sprains, breaks, and mild traumatic brain injuries. Around 50% of bicyclists have a minor injury with any speed less than 60 km/h (Table 2). When motorist speeds increase to 60 km/h or more, minor injuries decrease to 40% and are replaced by severe, including fatal, injuries. Figure 1 also shows that the probability of severe injuries has an upward trend and the probability of minor injuries has a peak at around 40km/h.

At more than 50km/h, we see severe (i.e. major and fatal) injuries (purple in Figure 1) start increasing sharply. With a severe injury, bicyclists are admitted to hospital for catastrophic injuries. From table 2, we find that the proportion of serious or fatal injuries is less than 1 in 10 when speed is below 30km/h. However, when above 40 km/h, we see this climb to 15%. Between 50-59 km/h, the proportion of severe injuries climb to 35%, and at more than 60km/h, the proportion of severe injuries is 60%.

The multinomial model gives smooth estimates for the probabilities of causing severe injury at motorists' speeds of 30 km/h , 40 km/h, 50 km/h and 60 km/h, which are respectively 8.5% (6.6% – 10.7%), 13% (10%-17%), 19% (14%-26%) and 27% (19%-38%), where the range within the parenthesis indicates the 95% confidence interval of the estimates.

Current residential speeds limits in London requires motorists are required to stay within our speed range of 40 – 50 km/h. According to Table 2, when a motor vehicle travels at 51 - 60 km/h (as compared to 41 - 50km/h), the odds of having a severe injury compared to non-severe (none, minimal or minor) injury is $\frac{35/65}{15/85} \approx 3:1$. When a motor vehicle travels at 41 - 50 km/h (as compared to 31 - 40km/h), the odds of having a severe injury compared to non-severe (none, minimal or minor) injury is $\frac{15/85}{11/89} \approx 1.5:1$. Meanwhile, at 50 - 60 km/h, 35% of injuries require hospitalization, and 90% require medical attention at a hospital. Therefore, it is necessary to keep the motorist speed under 50km/h to avoid severe injury level. However, keeping motor vehicle speeds under 40km/h can reduce the odds of having severe injuries from 19% to 13%. Another important fact is that bicyclists are always injured when motorists exceed speeds of 40 km/h (None=0% in Table 2).

Therefore, we suggest that the motorist speed should be kept under 40km/h for its low risk/probability of severe injuries and the relatively high proportion of causing “none” injuries.

Do other factors matter?

This collision data also provides other factors such as the age, gender of a bicyclist or a motorist, weather conditions (i.e. clear, rain, wind), time of day, bicyclist or motorist condition (e.g. normal, substance use, distracted), riding a bike on the sidewalk or the road, collision location (e.g. at intersection, driveway, non-intersection). Interestingly, the influence of the other factors becomes trivial compared to speed when we tried to include these factors in the multinomial model. No other factors are statistically significant at an alpha (error rate) of less than 5%.

Conclusion:

Factors that have a direct impact on injury may include the motorist's speed, bicyclist's speed, impact speed, the change in direction during impact, and the speed limit. *However, the speed limit is the dominant factor.* When there are municipal efforts to increase the number of people on bikes and kilometres travelled, we want to prioritize safety. When it comes to speed and collisions, there's only one variable that we can address and directly modify by policy-makers: the speed limit. The speed limit influences compliance with the speed limit, and motorists reduce travel speeds. We have the data on travel speeds and injury. Prioritizing vulnerable road users and amending the by-law to reduce residential speed limits under 40 km/h - such as 30 km/h - is the only option to achieve goals set by London's multiple strategic planning documents on road safety.

Positions statement: reduction in residential speed limits in London, ON, to under 40km/h

Principal authors

Rebecca Henderson, PhD candidate, Faculty of Health Sciences, Yuanhao Lai, PhD candidate, Statistical and Actuarial Sciences, Jacob Shelley, PhD, Faculty of Health Sciences and Faculty of Law, Andrew Johnson, PhD, Faculty of Health Sciences

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Motor vehicle speed and pedestrian fatalities

Injuries and fatalities from road traffic crashes are a significant public health problem. Worldwide, motor vehicle traffic accidents account for the majority of deaths and disabilities of injury (World Health Organization, 2004). Hussain et al.'s meta-analysis of 20 studies on motor vehicle speed and pedestrian fatalities identified speed as the key risk factor in motor vehicle crashes due to the probability of a crash and injury severity¹. The results of the meta-analysis support setting speed limits of 30–40 km/h. These speed limits are commonly used by best practice countries that have the lowest road fatality rates and that practice a Safe System Approach to road safety.

¹ Hussain Q, Feng H, Grzebieta R, Brijs T, Olivier J. The relationship between impact speed and the probability of pedestrian fatality during a vehicle-pedestrian crash: A systematic review and meta-analysis. *Accid Anal Prev* [Internet]. 2019;129(April):241–9. Available from: <https://doi.org/10.1016/j.aap.2019.05.033>

Background

The City of London in Southwestern Ontario is increasingly focussed on bicycle safety. Strategies to reduce injury and fatal injury are outlined in three City of London planning reports: Cycling Master Plan (2016), Road Safety Strategy 2014-2019 (2014); and Smart Moves 2030 Transportation Master Plan (2013). The plans set objectives to create actionable policies. The London Road Safety Strategy (2013) set a goal to decrease injuries and fatalities by 10% between 2014-2019. One of the recommended actions in Transportation 2030 was to identify bicycling safety hotspots and concerns to better understand the role of location, and bicyclist and motorist manoeuvres. A focus on bicycling safety and reduction of injuries will support the City's Cycling Master Plan (2016) to increase the proportion of commuting trips made by bicycling from 1.7% to 5% over the next 5-10 years (2026). The City recognizes the critical role that cycling can play in creating green and livable communities, and is committed toward making cycling safe, convenient, and comfortable for people of all ages and abilities.

On May 16, 2017, London Ontario Municipal Council made an important step to improve our collective safety, and adopted the following Vision Zero Principles: (1) No loss of life is acceptable, (2) Traffic fatalities and serious injuries are preventable, (3) We all make mistakes, (4) We are all physically vulnerable when involved in motor vehicle collisions, and (5) Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and maintain our roadways.

There were 1,656 reported motor vehicle – bicycle collisions on City streets between 2006-2017. Despite the City of London planning reports and the adoption of Vision Zero principles, there continue to be bicycle fatalities in our City. In 2018 and 2019, three people were killed while riding their bikes in London. The City of London's politicians, transport engineers, police and professional advocates must move beyond commitment, and set actionable priorities to design roads and address speeds to eliminate injury and death.

Data

The collision data was provided by the City of London Police Department. Accident Support Services International Ltd (ASSI) is the official reporting center for Police Services throughout Canada. ASSI collects and maintains statistics for all reported collisions involving motor vehicles in Ontario. The Police Department provided the ASSI dataset for all reported collisions between January 1, 2006 and December 31, 2017. There were 1,656 reported motor vehicle - bicycling collisions between 2006 and 2017 in London, ON – an average of 138 reported collisions per year.

Speed: Motorist speeds are self-reported to attending police officers.

Injury: Injury determinations are made by the attending police officers (i.e. not medical professionals). See Table 1 for definitions.

Table 1 Injury definitions²

Injury	Definition
None	no injury
Minimal	a non-fatal injury at the time of the collision, including abrasions, bruises, and complaints of pain which does not require the injured person to go to the hospital.
Minor	a non-fatal injury requiring medical treatment at a hospital emergency room, but not requiring hospitalization of the involved person at the time of the collision.
Severe	major: a non-fatal injury that is severe enough to result in the person involved being hospitalized -and- fatal: a fatal injury where the person sustains bodily injuries resulting in death (within 366 days of the date of the motor vehicle collision)

Probability of bicyclists' injury level versus speed
Reported motor vehicle - bicyclist collision in London, ON, 2006 - 2017

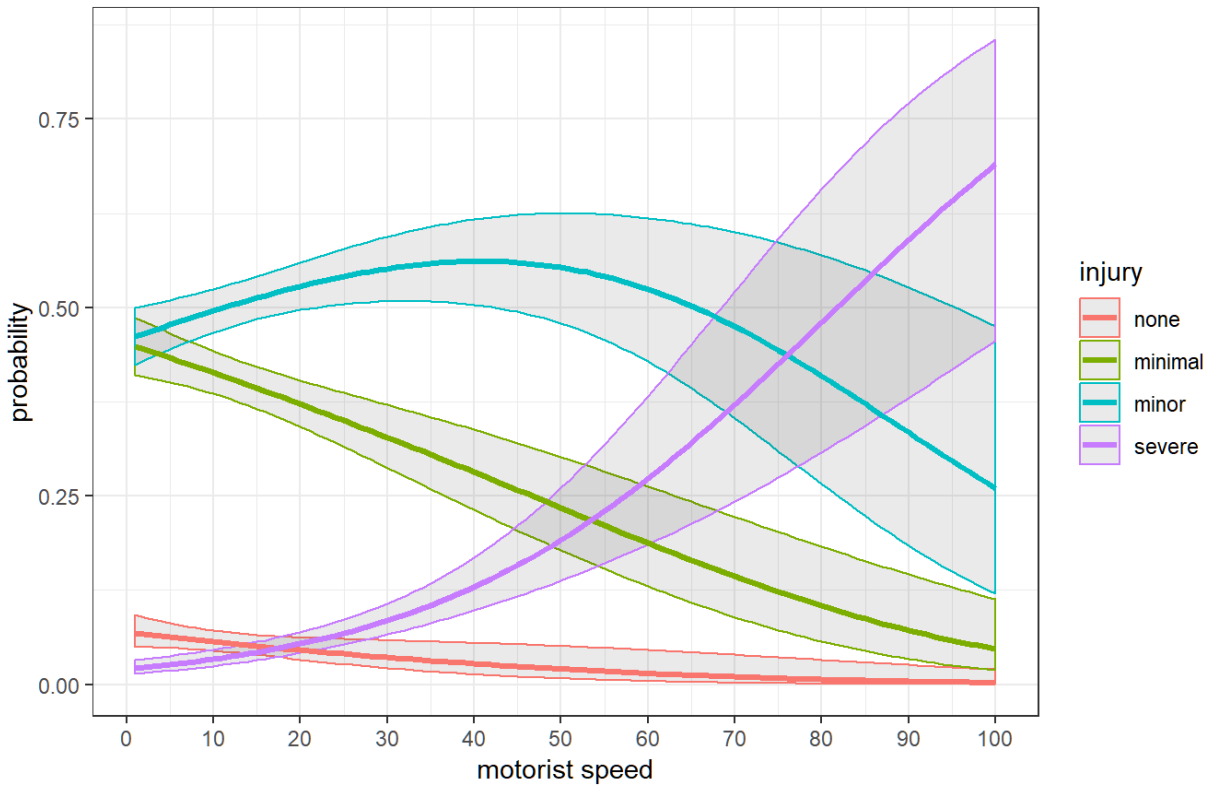


Figure 1 Estimated probability of injury level with the shading area indicating 95% confidence intervals

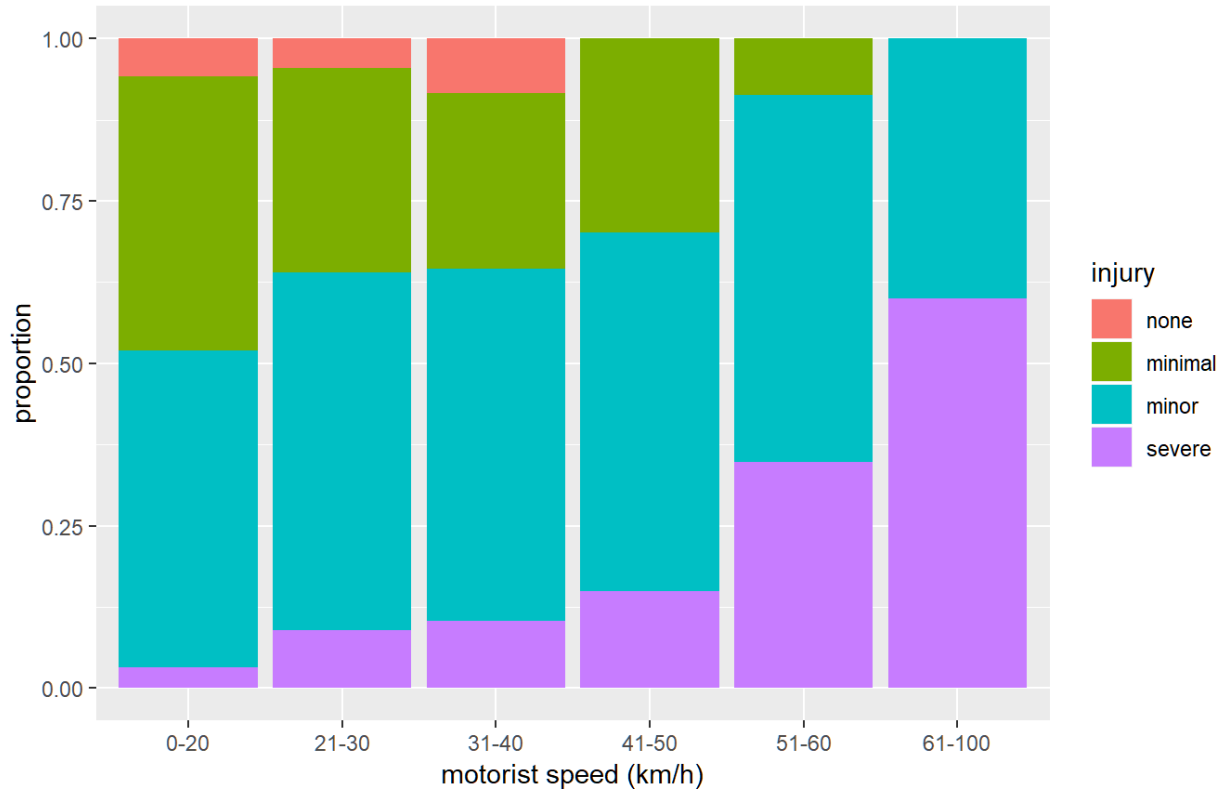
² Ontario Ministry of Transportation, 2019

Table 2 Proportion of bicyclist injury within each speed interval in London, ON, 2006 - 2017

	0-20km/h	21-30km/h	31-40km/h	41-50km/h	51-60km/h	61km/h or more
None	6%	4%	8%	0%	0%	0%
Minimal	42%	32%	27%	29%	9%	0%
Minor	49%	55%	54%	55%	56%	40%
Severe	3%	9%	11%	15%	35%	60%

Proportions of bicyclists' injury level versus speed

Reported motor vehicle - bicyclist collision in London, ON, 2006 - 2017



Main results

Table 2 summarizes the proportion for each bicyclist injury within each speed interval of the data. We conducted a multinomial logistic regression to estimate the probability of each injury level using the motorist speed (km/h) as the input factor. The estimated probabilities are visualized in Figure 1.

When describing the data and the model, with a focus on the “none” category of injury (i.e., “no injury”) with motorist speeds of less than 40 km/h, the proportion of cyclists that do not have an injury is low (4%-8%). Meanwhile, bicyclists are always injured when motorists exceed speeds of 40 km/h.

From Figure 1, there are downward trends in both the probability of no injury (red) and the probability of minimal injuries (green). As motorist speed increases, the probability of zero or minimal injury decreases, but the probability of minor and severe injuries increase. Minor injuries (blue in Figure 1) require medical attention at a hospital. They may include sprains, breaks, and mild traumatic brain injuries. Around 50% of bicyclists have a minor injury with any speed less than 60 km/h (Table 2). When motorist speeds increase to 60 km/h or more, minor injuries decrease to 40% and are replaced by severe, including fatal, injuries. Figure 1 also shows that the probability of severe injuries has an upward trend and the probability of minor injuries has a peak at around 40km/h.

At more than 50km/h, we see severe (i.e. major and fatal) injuries (purple in Figure 1) start increasing sharply. With a severe injury, bicyclists are admitted to hospital for catastrophic injuries. From table 2, we find that the proportion of serious or fatal injuries is less than 1 in 10 when speed is below 30km/h. However, when above 40 km/h, we see this climb to 15%. Between 50-59 km/h, the proportion of severe injuries climb to 35%, and at more than 60km/h, the proportion of severe injuries is 60%.

The multinomial model gives smooth estimates for the probabilities of causing severe injury at motorists' speeds of 30 km/h , 40 km/h, 50 km/h and 60 km/h, which are respectively 8.5% (6.6% – 10.7%), 13% (10%-17%), 19% (14%-26%) and 27% (19%-38%), where the range within the parenthesis indicates the 95% confidence interval of the estimates.

Current residential speeds limits in London requires motorists to stay within our speed range of 40 – 50 km/h. According to Table 2, when a motor vehicle travels at 51 - 60 km/h (as compared to 41 - 50km/h), the odds of having a severe injury compared to non-severe (none, minimal or minor) injury is $\frac{35/65}{15/85} \approx 3:1$. When a motor vehicle travels at 41 - 50 km/h (as compared to 31 - 40km/h), the odds of having a severe injury compared to non-severe (none, minimal or minor) injury is $\frac{15/85}{11/89} \approx 1.5:1$. Meanwhile, at 50 - 60 km/h, 35% of injuries require hospitalization, and 90% require medical attention at a hospital. Therefore, it is necessary to keep the motorist speed under 50km/h to avoid severe injury level. However, keeping motor vehicle speeds under 40km/h can reduce the odds of having severe injuries from 19% to 13%. Another important fact is that bicyclists are always injured when motorists exceed speeds of 40 km/h (None=0% in Table 2).

Therefore, we suggest that the motorist speed should be kept under 40km/h for its low risk/probability of severe injuries and the relatively high proportion of causing “none” injuries.

Do other factors matter?

This collision data also provides other factors such as the age, gender of a bicyclist or a motorist, weather conditions (i.e. clear, rain, wind), time of day, bicyclist or motorist condition (e.g. normal, substance use, distracted), riding a bike on the sidewalk or the road, collision location (e.g. at intersection, driveway, non-intersection). Interestingly, the influence of the other factors becomes trivial compared to speed when we tried to include these factors in the multinomial model. No other factors are statistically significant at an alpha (error rate) of less than 5%.

Conclusion:

Factors that have a direct impact on injury may include the motorist's speed, bicyclist's speed, impact speed, the change in direction during impact, and the speed limit. *However, the speed limit is the dominant factor.* When there are municipal efforts to increase the number of people on bikes and kilometres travelled, we want to prioritize safety. When it comes to speed and collisions, there's only one variable that we can address and directly modify by policy-makers: the speed limit. The speed limit influences compliance with the speed limit, and motorists reduce travel speeds. We have the data on travel speeds and injury. Prioritizing vulnerable road users and amending the by-law to reduce residential speed limits under 40 km/h - such as 30 km/h - is the only option to achieve goals set by London's multiple strategic planning documents on road safety.

Cycling Advisory Committee Work Plan – 2018

Updated June 28, 2018 - Dave Mitchell

Activity	Background	Responsibility	Proposed Timeline	Proposed Budget	Cycling Master Plan Alignment	Link to Strategic Plan	Status
<p>Assist the City in enhancing cycling connections throughout the City to the Provincial cycling network.</p>	<ul style="list-style-type: none"> • To be provided through Cycling Master Plan, EA input • Explore potential of rail corridor to St Thomas • Help define preferred route to attach to Trans Canada Trail in St Thomas 	<p>CAC</p>	<p>2017-2018</p>		<ul style="list-style-type: none"> • Action #3 Identifying Touring Loop Routes 	<p>CITY BUILDING POLICIES Elevate London’s Profile as a Regional Cultural Centre 534 Advance the eco-tourism, agri-tourism, and cultural tourism opportunities available in the city and support linkages to surrounding regional cultural facilities.</p> <p>OUR STRATEGY 60 Direction #6 10. As opportunities arise, utilize rail corridors as mobility links for transit, cycling, and walking.</p>	<p>Discussion with St.Thomas and Elgin county are currently on hold pending completion of a rail segment</p>

<p>Provide recommendations for better integration of the recreational and commuter cycling networks</p>	<ul style="list-style-type: none"> • To be provided through Cycling Master Plan, EA input. • Participate in East/West cycle track analysis 	<p>CAC</p>	<p>June-</p>		<ul style="list-style-type: none"> • Action #7 Identifying & Enhancing Local Cycling Hubs • Action #8 Enhancing Bicycle Parking • Action #9 Establishing Performance Measures • Action #10 Designing & Implementing Crossings & Transitions 	<p>Our Strategy 60 Direction #6 Place a new emphasis on Creating attractive mobility choices</p>	<p>Consulting firm has been announced and information sessions to begin in June</p>
<p>Provide input to CoL Cycling web presence</p>	<ul style="list-style-type: none"> • City staff is creating a new web portal on the CoL website specific to cycling 	<p>CAC</p>	<p>Stage 1 Mar-May Stage 2 TBD</p>		<ul style="list-style-type: none"> • Action #6 Creating a Cycling Specific Web Presence 		<p>Analysis has been submitted - awaiting content launch and potential for promotion through CAC</p>
<p>Promote safe cycling through education and improved facilities and infrastructure</p>	<ul style="list-style-type: none"> • Need to support / initiate City, business and other 	<p>CAC</p>			<ul style="list-style-type: none"> • Action #2 Establishing a Winter Cycling Network 	<p>Our Strategy 60 Direction #7 Build strong, healthy and attractive</p>	<p>Colborne street cycle track has been implemented - promotion and analysis</p>

	<p>community partner initiatives relating to mapping, bicycle parking, cycling lanes, etc.</p> <ul style="list-style-type: none"> • Promotional outreach for cycling • Promotion of the Cycling Master Plan 				<ul style="list-style-type: none"> • Action #8 Enhancing Bicycle Parking • Action #9 Establishing Performance Measures 	<p>neighbourhoods for everyone</p> <p>6. Identify, create and promote cycling destinations in London and connect these destinations to neighbourhoods through a safe cycling network.</p>	<p>Kiwanis park bridge has been implemented - promotion required</p> <p>User friendly version of Cycling Master Plan is still pending</p> <p>Updated Cycling Map is in progress</p>
Addressing Bicycle Theft	<ul style="list-style-type: none"> • Promotion of best practices in bicycle security 		CAC Bike security working group		<ul style="list-style-type: none"> • Action #8 Enhancing Bicycle Parking 		
Provide input and recommendations to Environmental Assessments relating to road and cycling infrastructure to assist in managing and upgrading transportation infrastructure.	<ul style="list-style-type: none"> • EA's provide a primary opportunity to ensure cycling priorities are taken into consideration for new roadworks and 	CAC	Ongoing			<p>Our Strategy 60</p> <p>Direction #7 Build strong, healthy and attractive neighbourhoods for everyone</p> <p>6. Identify, create and promote cycling destinations in London and connect</p>	

	infrastructure projects.					these destinations to neighbourhoods through a safe cycling network.	
Educational Initiatives	<ul style="list-style-type: none"> Attend Share the Road conference 	Rebecca Henderson	April 20	\$200	<ul style="list-style-type: none"> Action #9 Establishing Performance Measures 		Report received
Recognition Program	<ul style="list-style-type: none"> Dovetail into Mayor's annual recognition awards 	Cycling Award sub-committee					On hold until post election
Assist in the annual London Celebrates Cycling event	<ul style="list-style-type: none"> Work with city staff and stakeholders to provide a signature event that promotes all components of cycling culture 	London Celebrates Cycling subcommittee	Mar-Jun		<ul style="list-style-type: none"> Action #5 Identifying & Implementing CAN-Bike Program Action #12 Establishing High-Profile Events Action #9 Establishing Performance Measures 	CITY BUILDING POLICIES Support cultural and innovative programming to create a city that exudes innovation, vibrancy, creativity and entrepreneurialism 535 - 539	Completed - statistical analysis and follow-up to be completed

<p>Safe cycling education and enforcement</p>	<ul style="list-style-type: none"> Multiple requests to council recommending non-child cycling on sidewalks indicating a need for a campaign 	<p>CAC</p>	<p>TBD</p>		<ul style="list-style-type: none"> Action #5 Identifying & Implementing CAN-Bike Program Action #11 Enhancing Enforcement 		
<p>Continue to identify / assess specific routes (to be mapped and signed) for key destinations and loops.</p>	<ul style="list-style-type: none"> Continue to support cycling infrastructure at the municipal, provincial and federal levels. Monitor implementation of initiatives identified in the cycling master plan including potential stand-alone initiatives. 	<p>CAC</p>	<p>Ongoing</p>			<p>Strengthening Our Community – 5.1; Building a Sustainable City – 1.a, 2.a, 5.b</p>	

<p>Provide recommendations on operational requirements / improvements which will facilitate cycling</p>	<ul style="list-style-type: none">Operational priorities (i.e. – street cleaning, snow plowing) need to be established and/or coordinated to ensure key cycling routes are maintained appropriately and that operational activities are not ‘out of sync’ (i.e. – cleaning streets before sidewalks, then putting all the sand from the sidewalks onto the street & cycling lanes that had just	<p>CAC</p>	<p>Ongoing</p>			<p>Strengthening Our Community – 5.1; Building a Sustainable City – 1.a, 2.a, 5.b</p>	
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