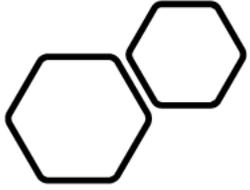


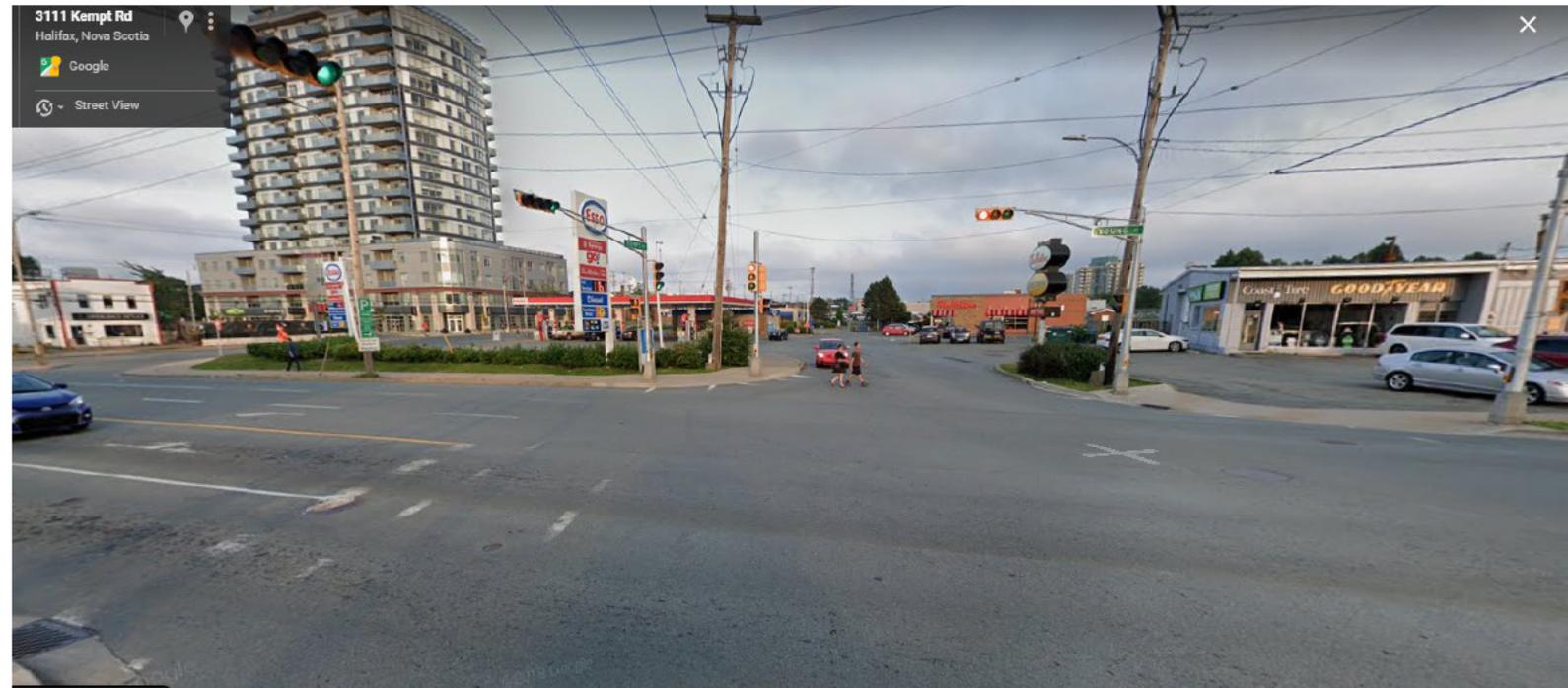
Safe Signalized Intersections

A priority for
Kjipuktuk/Halifax



**April 2020 – March
2021:**

Two pedestrian fatalities
and a life-threatening
injury caused by turning
drivers at signalized
intersections.





HRM incident data from 2018 onwards: 72% of pedestrian and cyclist incidents (490 of 684) occurred at intersections.

Mapping by theXS



(using open data from the [Halifax.ca website](https://www.halifax.ca))

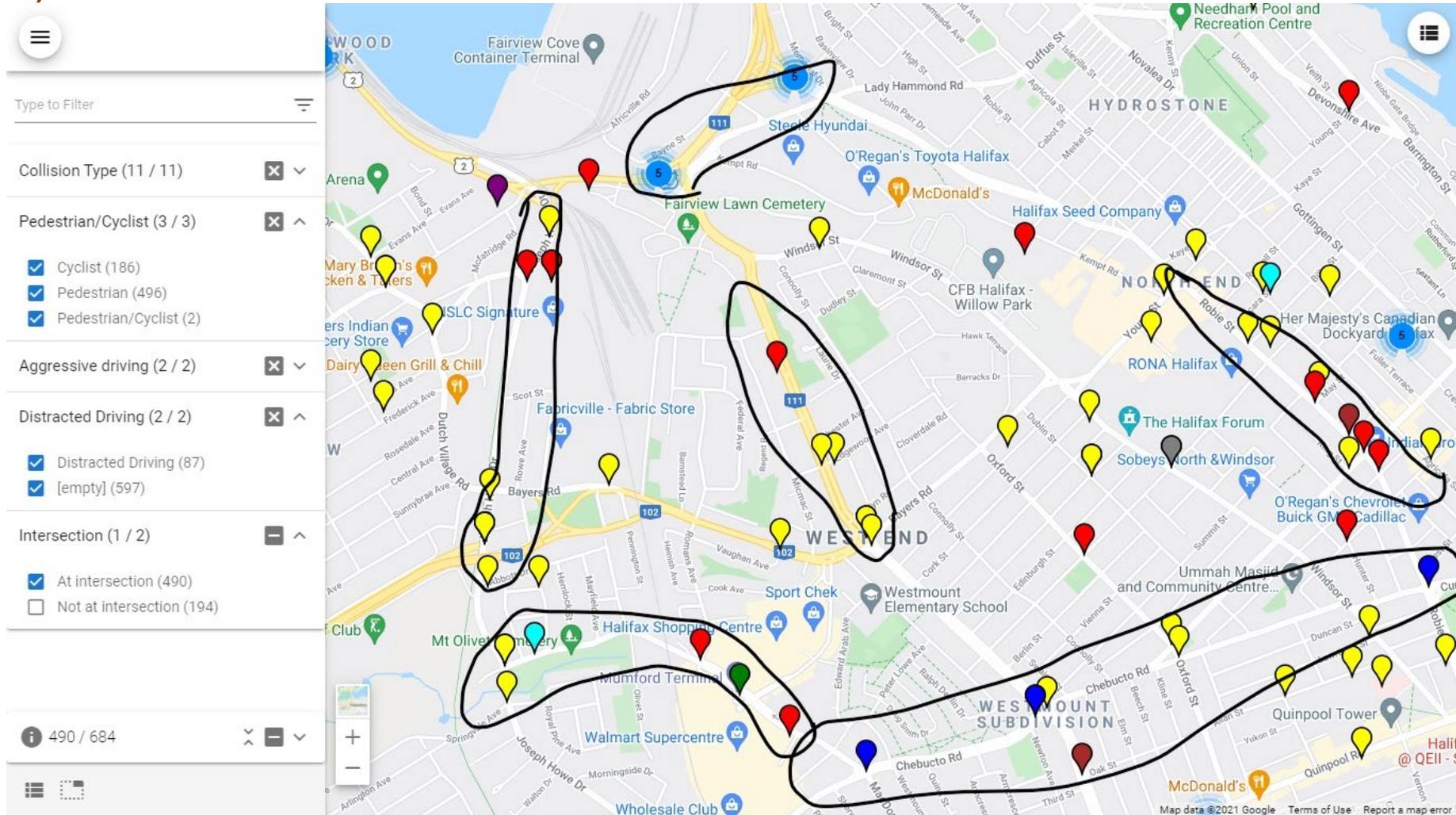
Incidents involving pedestrians	Incidents involving cyclists	Incidents between pedestrians and cyclists	Total	Incidents at intersections	Not at intersection
496	186	2	684	490	194

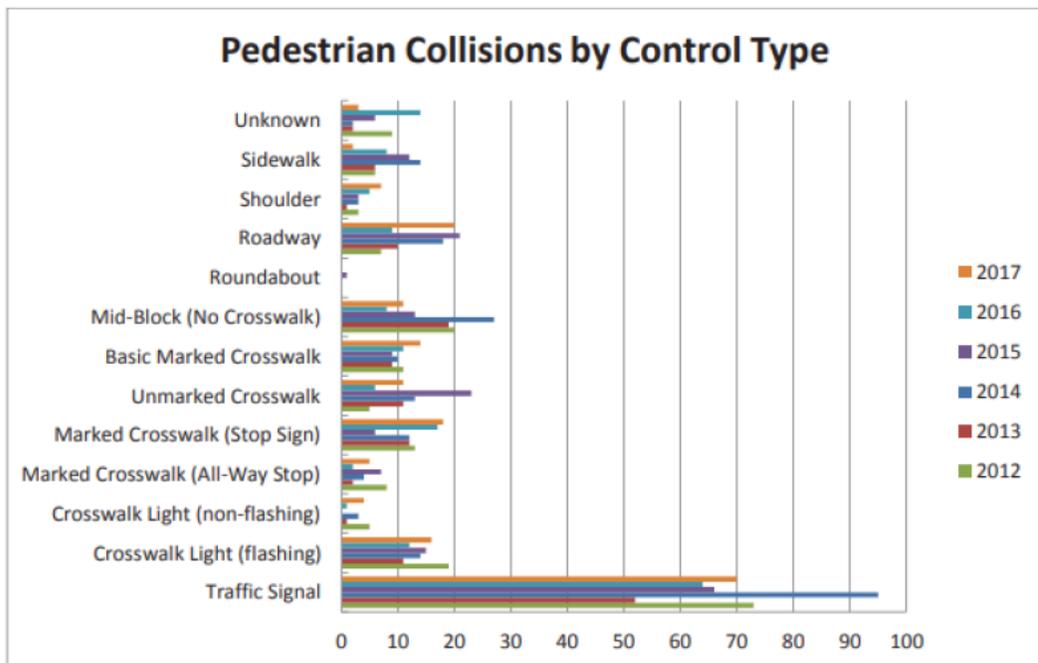
Proportion of pedestrian and cyclist incidents at intersections, 2018 onwards

Series 1 Point "Incidents at intersections" Value: 490 (72%)

■ Incidents at intersections ■ Not at intersection

- Map shows pedestrian and cyclists incidents from 2018 onwards at intersections only.
- Incident clustering along artery roads, including Joseph Howe, Robie, Connaught, Mumford and Chebucto.



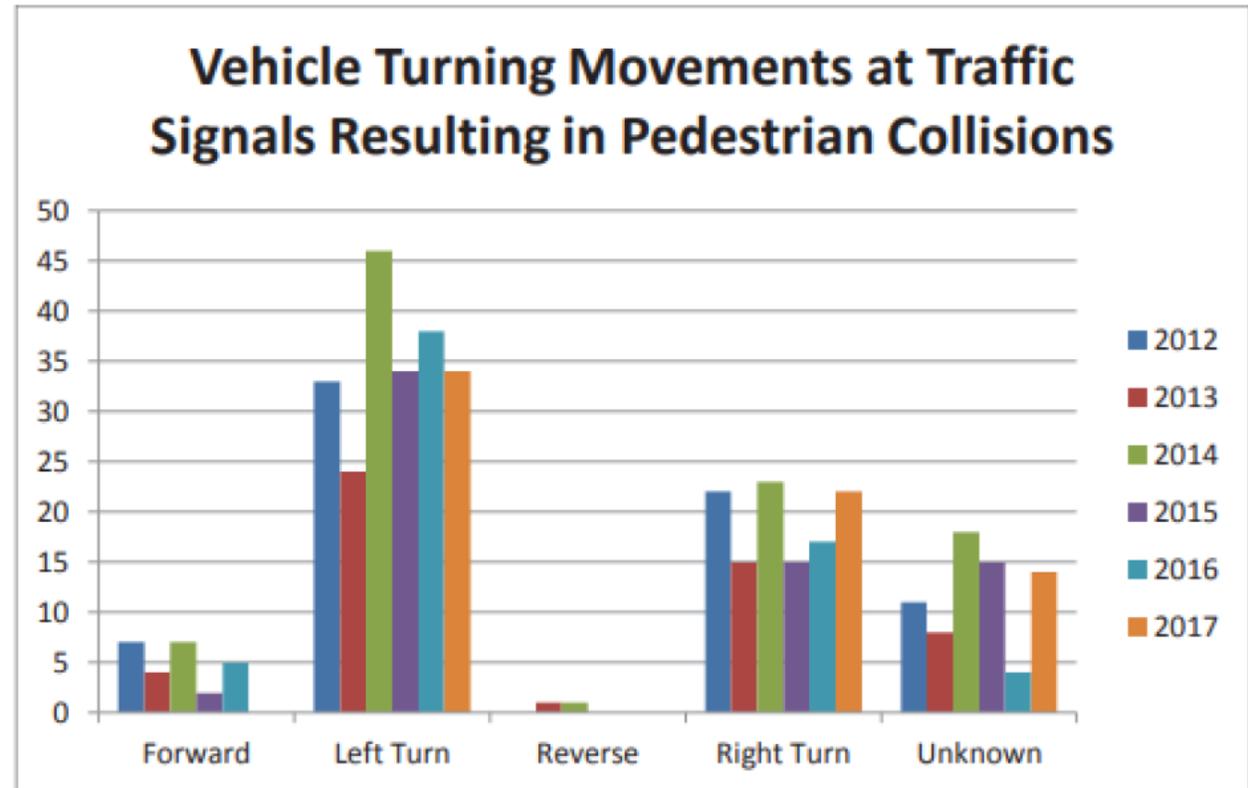


“Your ability to bike or cross the street safely is absolutely a matter of infrastructure”

- US Secretary of Transport Pete Buttigieg

2012 - 2017

39 (2013) to 69 (2014)
pedestrians a year were
hit at signalized
intersections by drivers
turning left or right.



Engineering

HRM Traffic Management is currently involved with multiple crosswalk and pedestrian safety initiatives.

A consistent trend:
Left turns at signalized
intersections are the
most common cause of
pedestrian incidents

Statistics compiled from police reports from January to December 2017 indicate a small increase in the number of pedestrian-vehicle collisions within the public Right of Way (ROW) compared to those in 2016. Table No. 1 provides a summary of the findings in comparison to previous years:

Table No. 1: Pedestrian Collisions

Pedestrian Collision History						
	2012	2013	2014	2015	2016	2017
Total Pedestrian Collisions Occurring within ROW	179	136	215	182	164	181

An assessment of the data compiled for 2017 shows that the most common pedestrian-vehicle collisions are occurring at traffic signals, with left hand turns being the most predominant vehicle movement. A total of 70 pedestrian-vehicle collisions occurred at a traffic signal in 2017, 34 were related to a left turn movement. This is consistent with previous years' findings.

The following four charts provide an update to the results presented in previous versions of the Pedestrian Safety Action Plan to include results from 2017:

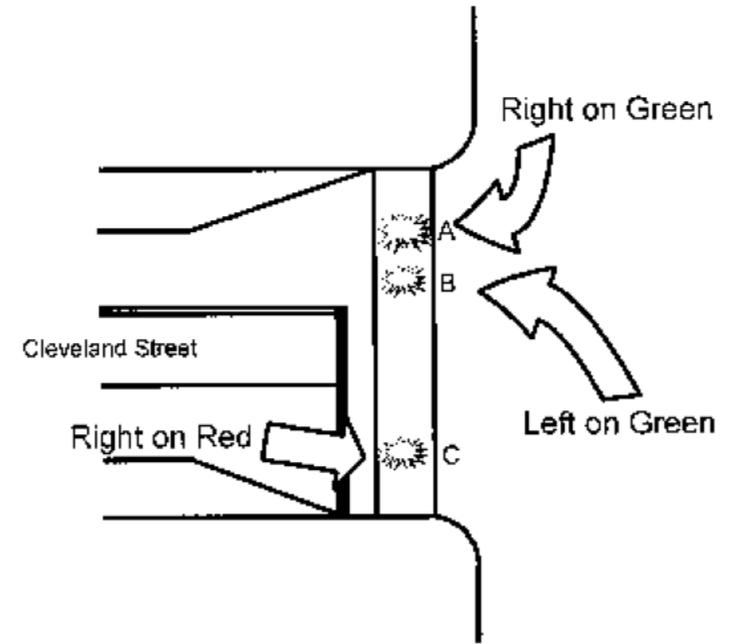
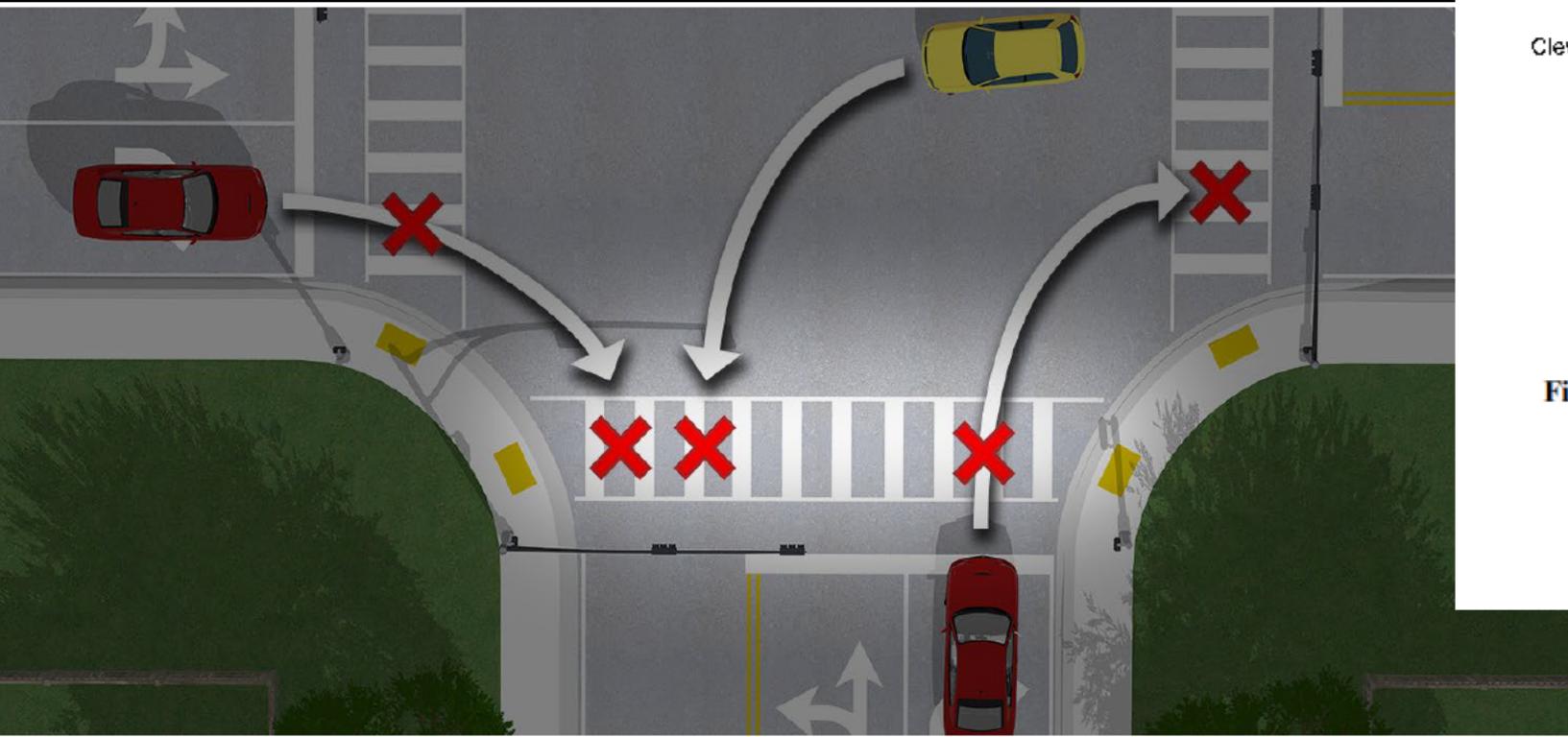


Figure 1. The three conflict paths that a pedestrian has to cross when crossing a street at the junction of two streets with two-way traffic and no turn restrictions.

Multiple vehicle/pedestrian conflict points



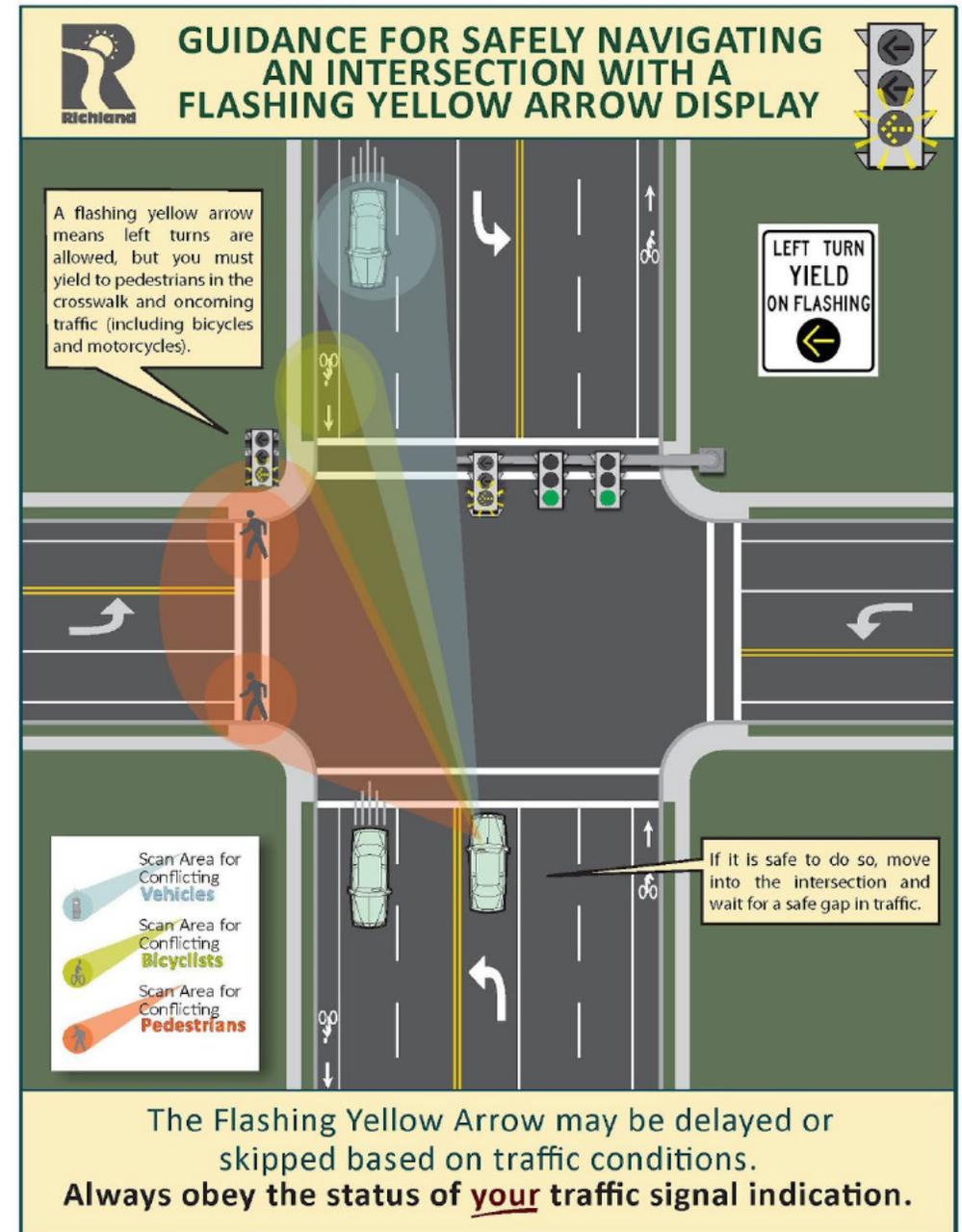
Watch for turning vehicles. Keep watching as you cross. Thank drivers with a wave and a smile.

Why expect pedestrians to do something lethally dangerous and impossible?

Can seniors, children and people with disabilities execute this task? Who says they can?

Where are drivers looking?

Research has shown drivers are not distracted: They are necessarily focused on the task of looking between traffic lights and conflicting flows of vehicles, to time their turn safely.

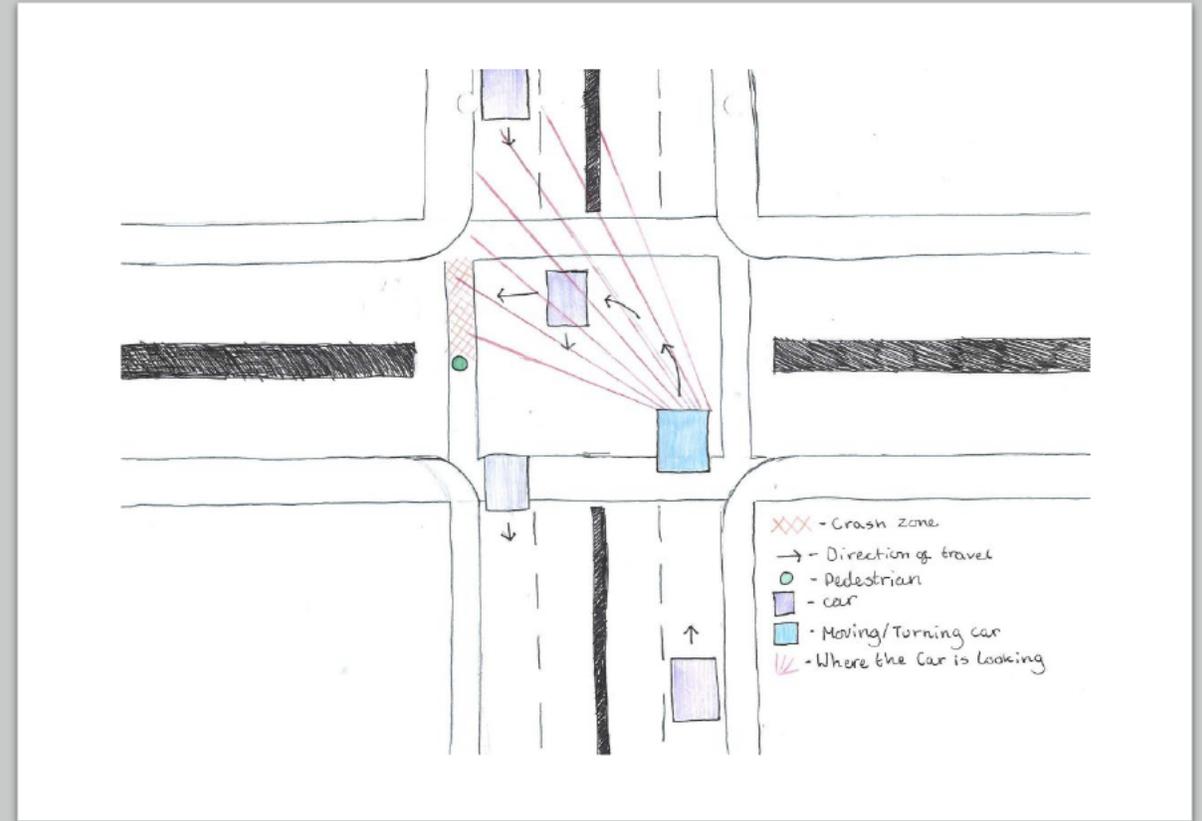
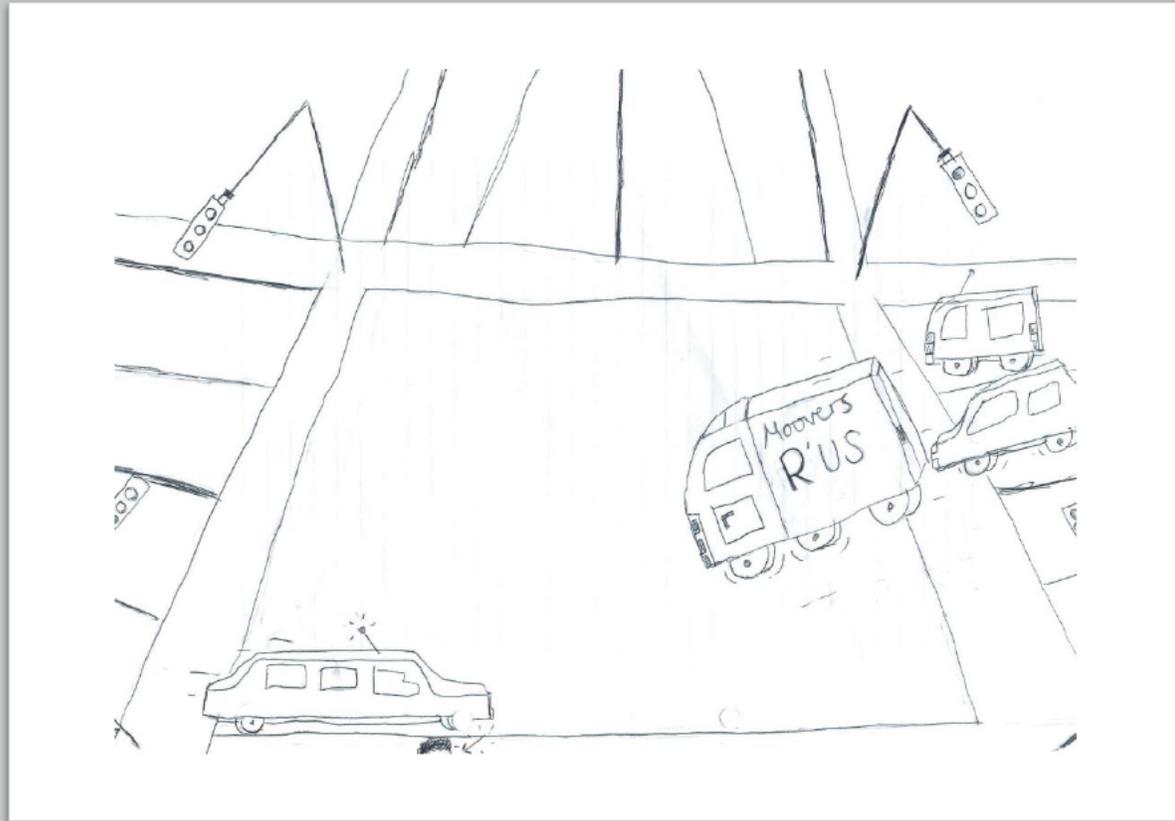


Yield rates (%) by
drivers for
pedestrians crossing
legally at signalized
intersections in
HRM:

Unknown



Who is the current traffic control system designed for?



Nova Scotia Trunk 2

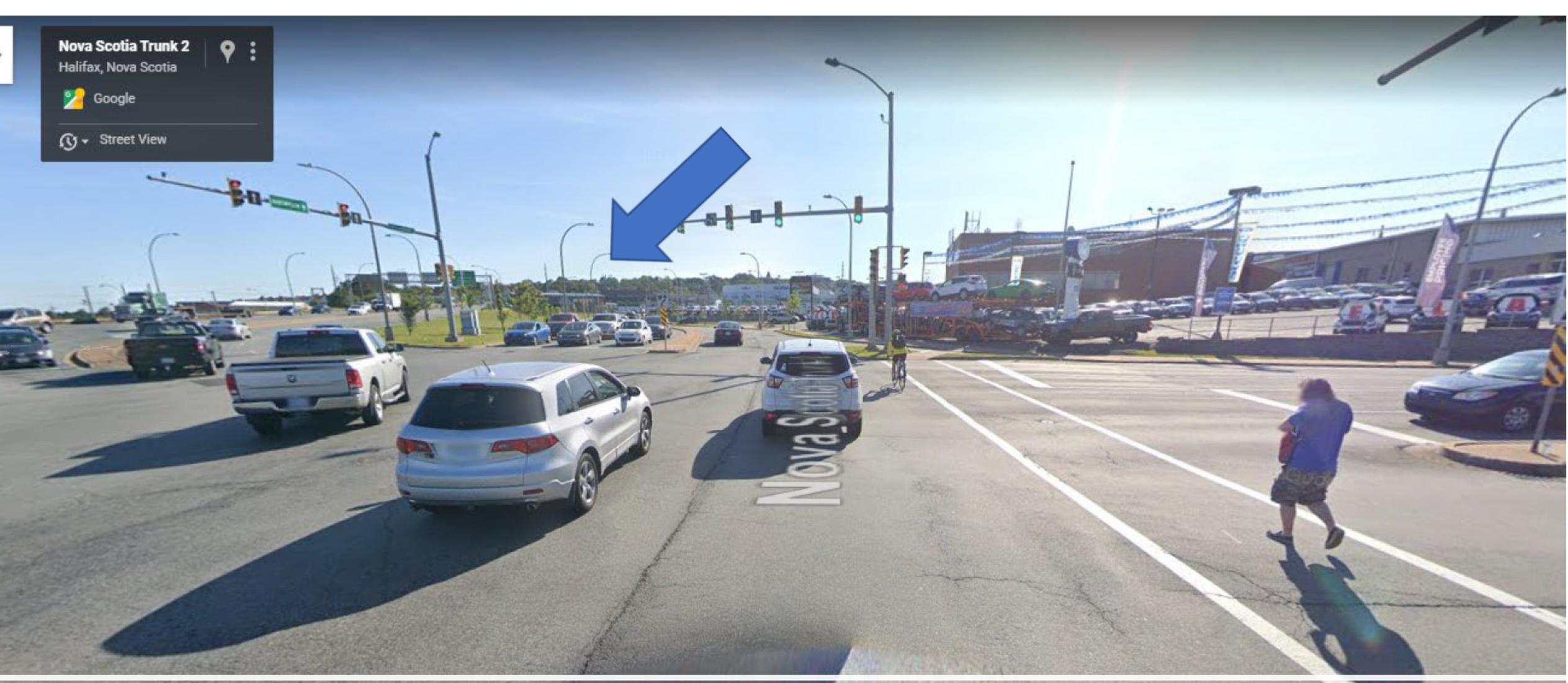
Halifax, Nova Scotia



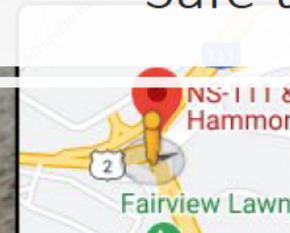
Google



Street View



Safe traffic lights: Drivers turning left are held with a red light when pedestrians cross.



xi strikes two women in Spring Garden ad crosswalk

rted · Posted: Nov. 21, 2018, 9:08 a.m. | Updated: Nov. 21, 2018, 9:08 a.m.



file

A male taxi driver was issued a ticket after two women were struck in a crosswalk in Halifax early Wednesday morning.

The two pedestrians, ages 26 and 33, had the walk signal and were crossing southbound on Spring Garden Road at 12:49 a.m., according to a Halifax Regional Police news release.

The taxi was heading south on South Park Street and turned left onto Spring Garden Road when he struck the two women, knocking them to

Are head starts for pedestrians adequate?

- US Department of Transport: Leading Pedestrian Intervals [reduce pedestrian incidents by 13%](#).
- Effectiveness may depend on intersection dimensions and number of traffic lanes, also the walking speed and age/ability of pedestrians?
- LPI's do not prevent conflict between turning drivers and pedestrians, [or pedestrians being struck due to this](#) – a taxi driver struck two women when turning left at South Park/Spring Garden Road [shortly after LPI phasing was introduced](#).

Vulnerable road user experiences are important as determiners of safety requirements

“Can one legitimately add a few seconds of delay for a multitude of drivers and compare these with the suffering of seven anonymous pedestrians injured in 100 years? Even if such reasoning is commonly used, it seems a somewhat absurd device for making wise decisions.

Surely the problem is not only that people are being injured but also, and perhaps primarily, that they fear being injured. Thus, to confine our thinking to the objective count of corpses might be too narrow a perspective, a scope that disregards the concept that people - and perhaps older persons in particular - wish not only to be safe but also to feel safe.”

– Transportation Research Board Report on Transportation in an Aging Society, [1988](#)

Vulnerable road user experiences are important as determiners of road safety requirements: 1

 HRM Safe Streets for Everyone

 created a poll. April 25 at 5:52 PM

Hi all. I'm presenting to the Transportation Standing Committee next week on signalized intersections to request a municipal policy relating to safe traffic signals and no right turn on reds. The policy would require the safety needs of pedestrians (and also cyclists) to be prioritised.

Please answer this poll honestly! How safe do you feel using signalized intersection crosswalks as a pedestrian? This poll is specifically for pedestrian use only please. Please comment with anything specific related to why you feel safe or unsafe.

- Added by you
Very unsafe
36 votes
- Added by [redacted]
when making right turns on red, cars look for other cars, not pedestrians
22 votes
- Added by [redacted]
car stop to close to crosswalk
15 votes
- Added by you
Quite safe
5 votes
- Added by you
Quite unsafe
5 votes
- Added by [redacted]
were i live the cars dont stop i have to hold up my cane so they will have to stop sometimes it will work but most times it don't work.
2 votes
- Added by you
Very safe
- Add an option

Vulnerable road user experiences are important as determiners of safety requirements: 2



December 21, 2017 · 🌐



From December 21, 2017 Herald Voice of the People

Crosswalk flags crucial

Re: Norm Collins' Dec. 9 letter on behalf of the Crosswalk Safety Society of Nova Scotia. I felt compelled to write my thank-you to this group.

In June, after losing his driver's licence due to vision loss, my husband was in the crosswalk at Scott Street and Joseph Howe Drive in Halifax. The light was with him. He was struck by a car, thrown upon its roof, and back onto the road. Four weeks later, he lost his speech and required brain surgery for a subdural hematoma.

There is a crosswalk at the bottom of Central Avenue in Fairview — with orange flags! We grab our flags and head across, making eye contact with the drivers before we venture forth.

[Redacted], Halifax

Vulnerable road user experiences are important as determiners of safety requirements: 3

A pedestrian accident at the corner of Portland Street and Eisener Boulevard in Dartmouth a few weeks ago resulted in the tragic death of a woman, in her 70s, known to be a careful and experienced walker.

On Wednesday afternoon (April 15), I discovered how this can happen. Leaving my car on Baker Drive for servicing, I arrived at that same intersection. Halfway across, the “WALK” light changed to the flashing red hand, with 18 seconds to complete my crossing. Lots of time, but I heard a loud blast of a horn, and a vehicle making a left from Portland to Eisener roared in front of me, the driver shaking her fist.

Too shocked to do anything but point to the flashing “WALK” sign, I was unable to get her licence plate. At the next intersection, I carefully read the instructions for the lights, which said one “continues through the intersection” when the walk light is flashing. I guess there are still drivers who will assume they have the right-of-way, even when making a left turn across oncoming traffic and through a crosswalk in which the walker STILL has the right-of-way.



██████████ Hammonds Plains

Share story:



Vulnerable road user experiences are important as determiners of safety requirements: 4

- <https://twitter.com/hfxlibrarian/status/1171030370705387521>
- <https://twitter.com/hfxlibrarian/status/1179710368802906113>



Assess danger



Implement policy for safe traffic light phasing and no RTOR

- **On what basis** are dangerous vehicle/pedestrian conflicts created by current traffic lights justified?
- Why are directional lights (shown) not at all multiple lane locations?
- Who says right turns on red (and green) are safe when combined with pedestrian movements? How, why and when are they safe?





Vulnerable road user safety can't be denied or granted on the basis of a \$ balancing exercise, but.....

- The cost of delay caused to drivers from an arterial intersection with a left turn protected signal phase for pedestrians: US \$11,000 over one year ([page 240](#), 1988 report)
- In a [2012 report](#) Vancouver assessed the costs of pedestrian incidents over a five year period to be in excess of \$760 million - page e-5.

Transportation Association of Canada statement – is vulnerable road user safety a priority?

“if you’re asking whether TAC guidance suggests “prioritizing vulnerable road users” -- then the answer to that would be yes.

Clearly, a pedestrian is inherently less well protected than an automobile occupant, and warrants special treatments to compensate for risk.

Our guidance on traffic calming, pedestrian crossings, etc., speaks very much to this point.”



Research on permissive-
yield traffic light phasing

“Transportation efficiency for neither motor vehicles nor pedestrians was improved at intersections with conflicting left-turning vehicle-pedestrian traffic lights. Road engineers and policymakers should reconsider the value of conflicting left-turning vehicle-pedestrian traffic lights at road intersections.”

Conflicting traffic lights cannot improve transportation efficiency, but increase risky conflicts between vehicles and pedestrians.”

- [Left-turning vehicle-pedestrian conflicts at signalized intersections with traffic lights: Benefit or harm?](#)



Guidance on vulnerable road users & traffic control systems: 1

World Health Organisation:

“Infrastructure facilities and traffic control mechanisms that separate pedestrians from motor vehicles and enable pedestrians to cross roads safely are important mechanisms to ensure pedestrian safety”

Interventions recommended by WHO include:

“making infrastructural changes to road design to ensure that vulnerable road users are not exposed to unnecessary risk by mixing them with motorized traffic.”

Guidance on vulnerable road users & safe traffic control systems: 2

[BC Coroners Service Child Death Review of 2016:](#)

“Roadway design and intersection signal controls must be part of a safe system design for vulnerable road users. To reduce and prevent pedestrian, cyclist and boarder injuries and death, road design should separate vulnerable road users from vehicles through space or time and reduce or eliminate concurrent movement of vehicles and people”

Milena: Bayers Road/Young/Windsor



Milena: Curb designs



Councillor recommendation

Propose a **written policy** relating to traffic lights, controls and right on red permissions at all signalized intersections. A policy could:

1) Establish the value of safe traffic light phasing and no right on reds: Prevent tens of injuries a year, save lives, create a safe and welcoming urban environment for all, save \$millions.

2) Identify infrastructure required to provide vulnerable road user safety at signalized intersections – ensuring dangerous vehicle/pedestrian conflicts are eliminated by necessity.

3) Identify any specific **intersection** conditions/design where permissive yield traffic light phasing and right turn on reds is safe when combined with vulnerable road user movements.

Staff recommendation

Complete a [safety audit/crosswalk review](#) specifically for signalized intersections in HRM.

This should identify:

- (a) Safety issues experienced by vulnerable road users including cyclists, pedestrians, wheelchair users, seniors, children, people with learning and physical disabilities.
- (b) suitable infrastructure to provide safety at different types of intersections.

Staff Recommendation

Execute the following key action requirements in the Road Safety Framework:

Working with different communities, understanding their needs and facilitating open communications is critical to inclusive outreach programs (page 14)

*Facilitating collaboration with other road safety stakeholders is the **most important function** of this Plan. Working together achieves better outcomes, uses resources efficiently and builds upon different organizational strengths (page 6)*

Signalized Intersections: Identify 10-20 worst intersections on an EB or other statistical basis. Build customized plan for each intersection based on collision patterns” Attachment D, Future Countermeasures, page 3 of 8.

“Develop action plan for worst 10 types of (pedestrian) collisions. Consider rates/frequencies, consistency of collision patterns and crosswalk specific assessments.” Attachment D, Future Countermeasures, page 6 of 8:



MVC: Oxford Street between Liverpool and London Street is closed after a pickup truck struck a pedestrian. Halifax police have closed the street for an investigation. No word on the injuries to the pedestrian at this time.



5:47 PM · Apr 15, 2021 · Twitter for iPhone



Lack of infrastructure is also an issue at uncontrolled intersections

Safety issues due to; a) parked vehicles, b) ability for drivers to turn at speed, c) pedestrians are often outside the driver's cone of vision or in blind spots.

Adaptations suitable for implementation HRM-wide need to be identified in the pedestrian safety action plan.