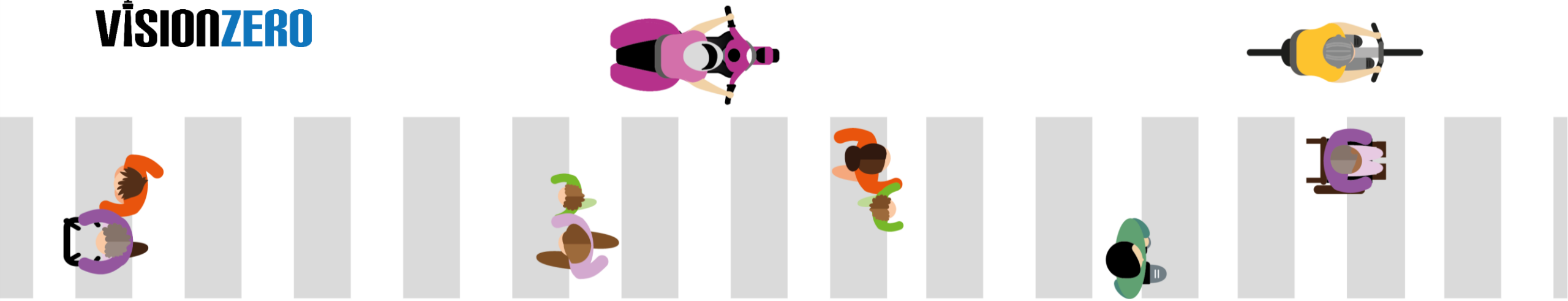


VISION ZERO
CITY OF TORONTO ROAD SAFETY PLAN

Sheyda Saneinejad, P.Eng
Manager, Vision Zero Projects
Transportation Services, City of Toronto

South and West Asian Community Consultative Committee
June 29, 2021

WHAT IS VISION ZERO
Traditional vs. Vision Zero Approach to Road Safety

Traditional Road Safety Approach	Vision Zero Approach
Traffic fatalities are inevitable	Traffic fatalities are preventable
Crashes are caused by non-compliant road users	Humans make mistakes. The roadway system should be designed and operated so those mistakes are not deadly
Try to reduce all collisions	Prevent collisions that result in serious injuries and fatalities. No serious injuries or loss of life is acceptable
Individual road users are responsible for their own safety	Safety is a shared responsibility between those who design, operate, maintain, and use the road
Reactive to historical crashes	Proactive and systemic prioritization

HOW WILL WE ACHIEVE VISION ZERO?

Engineering
Safety Measures

Education
Safety Measures

Enforcement
Activities

Engagement
Activities

Evaluation
Safety Measures

THROUGH STRATEGIC PARTNERSHIPS

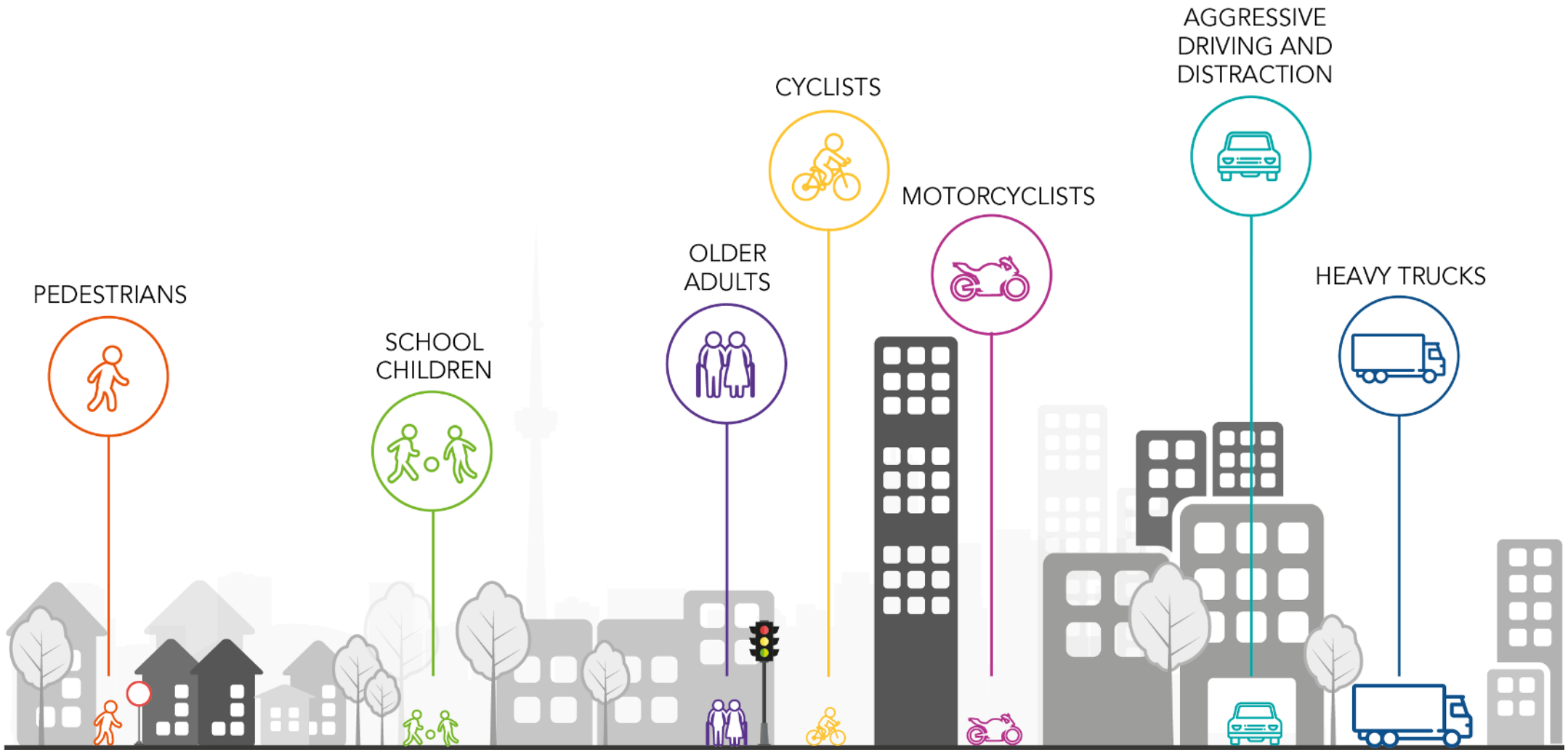
Toronto Transit Commission

Local School Boards

Toronto Police Service

Toronto Public Health

EMPHASIS AREAS



Vision Zero 2020 Accomplishments

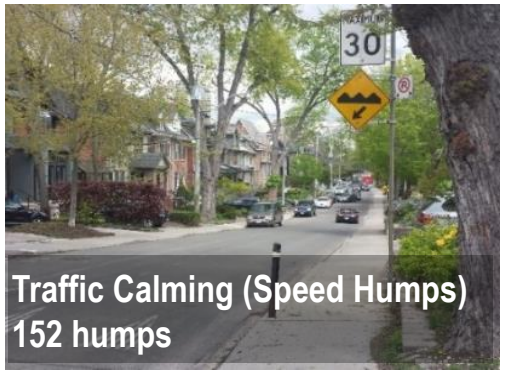
Geometric Safety Improvements
47 locations

Leading Pedestrian Intervals
182 intersections

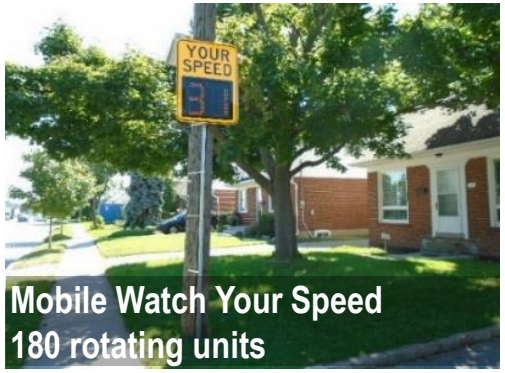
School Safety Zones
90 zones

Red Light Cameras
149 locations

New Traffic Control Devices
49 devices



Traffic Calming (Speed Humps)
152 humps



Mobile Watch Your Speed
180 rotating units

Cycling facilities
70km of new lanes
50km of lane upgrades

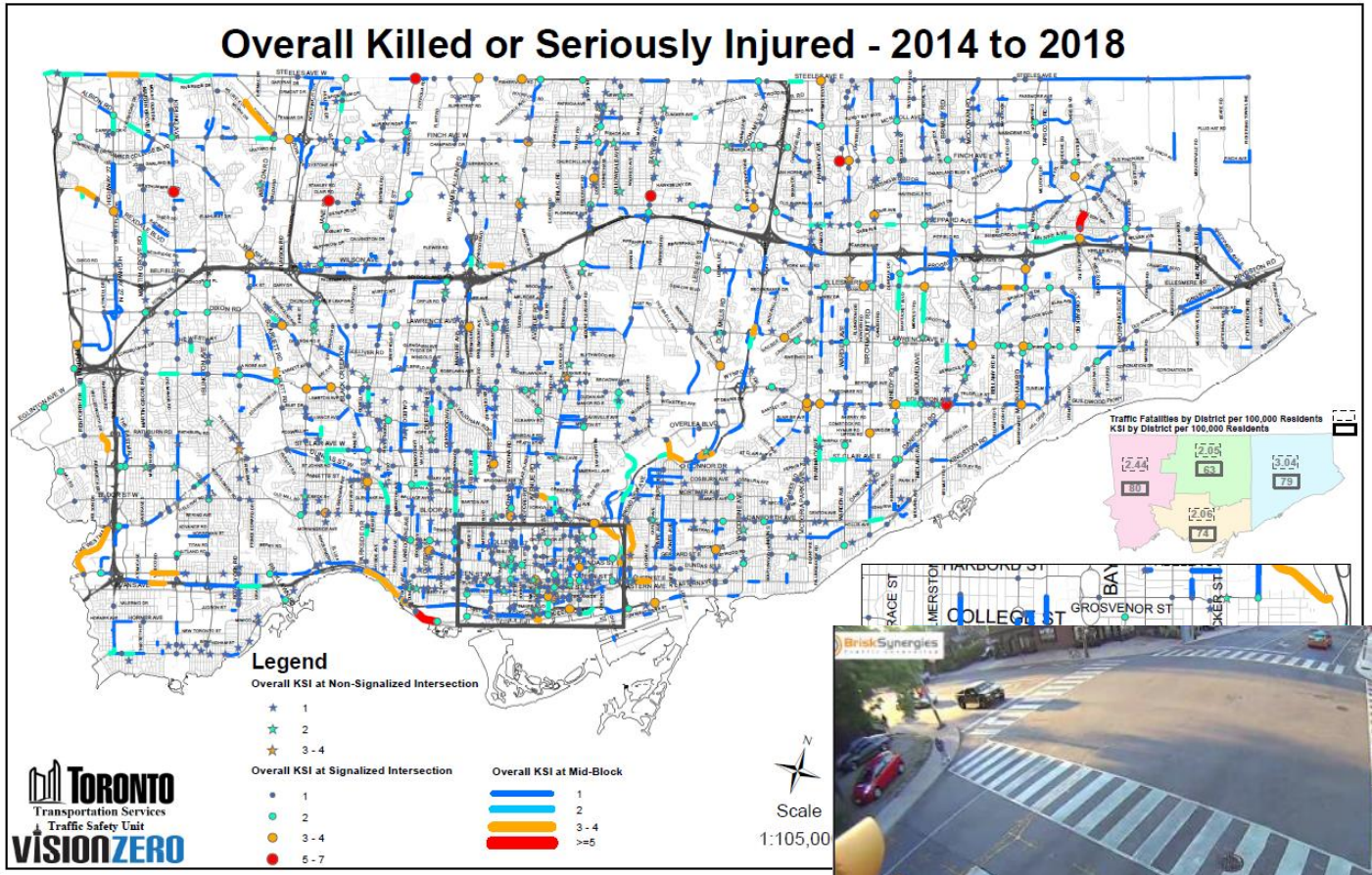
Automated Speed Enforcement
50 rotating units

Speed Limit Reductions
250km of arterials and collectors

ActiveTO Cycling facilities
24km of new cycle tracks
16km of on-street projects

School Crossing Guards
736 locations

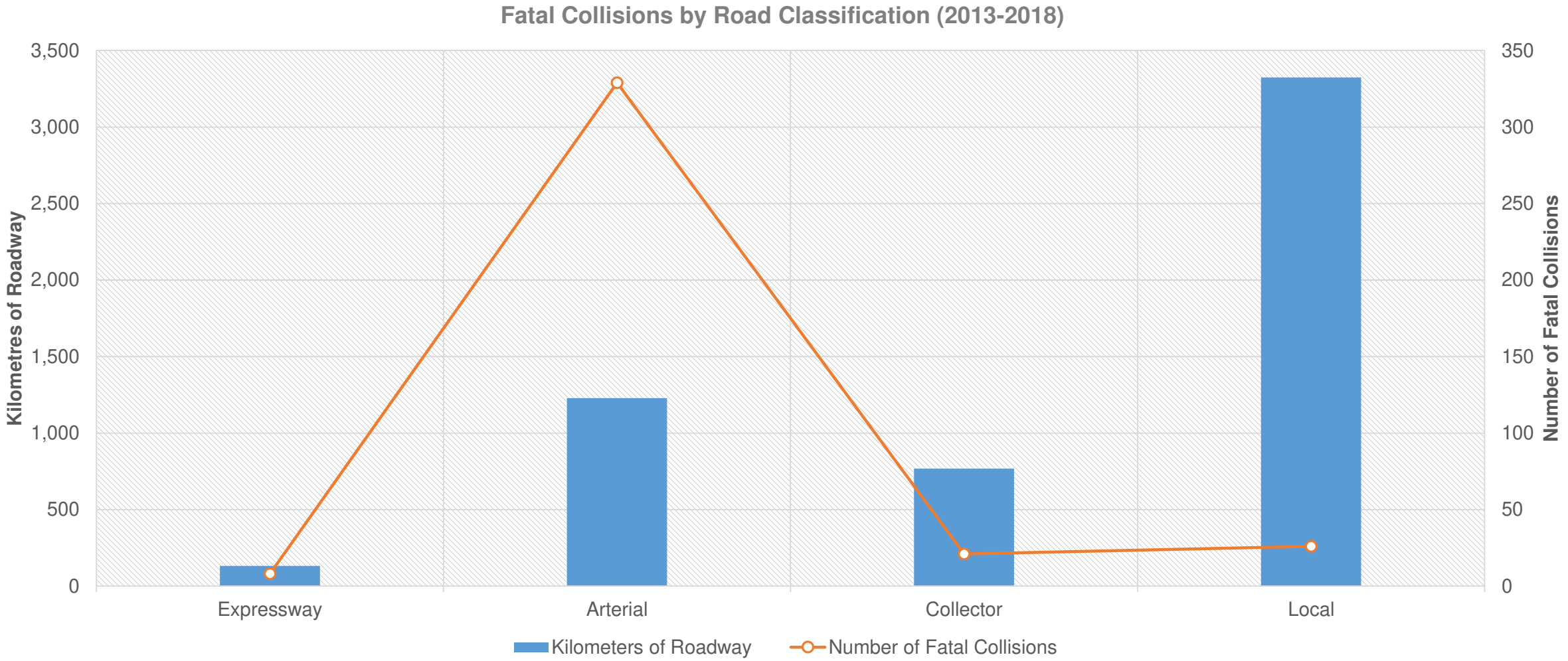
DATA DRIVEN DECISION MAKING AND PRIORITIZATION STRATEGY



Before: 58

After: 11

WHERE ARE FATAL COLLISIONS HAPPENING?

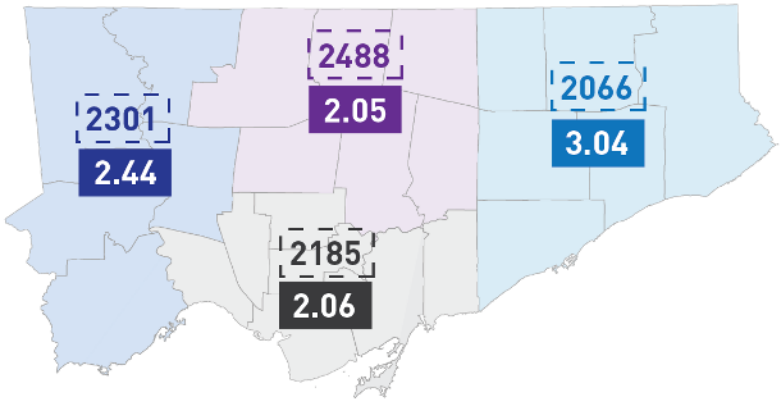


WHERE AND HOW PEDESTRIANS ARE BEING HIT

- 40% Mid-block crossing
- 18% Left turn at signalized intersection
- 11% Vehicle is going straight throughat traffic signal while pedestrian crosses without the right of way
- 8% Pedestrian hit on sidewalk or shoulder
- 6% Right turn at signalized intersection
- 5% Left turn at non-signalized locations
- 4% Red light running

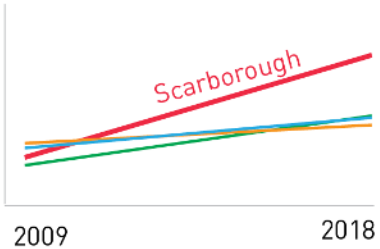
District Safety Action Plans – Scarborough District

Overall Collisions by District per 100,000 Residents
Traffic Fatalities by District per 100,000 Residents

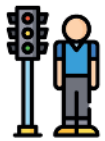


31%

Scarborough has the highest ratio of pedestrian collisions resulting in fatalities, compared to 20% in the other Districts



Rate of fatal collisions over the past 10 years has been increasing more rapidly in Scarborough compared to the other Districts



68%

of traffic fatalities in Scarborough involve pedestrians, compared to 56% in the other Districts

TOP 2

Causes of Pedestrian KSIs in Scarborough

44%

pedestrian crossing mid-block. This is compared to 35% in the remainder of the city

22%

pedestrian hit by left turning or right turning vehicle at signalized intersection

55%

of fatal collisions happen during dark conditions in Scarborough compared to 40% in other Districts

43%

of the City's mid-block pedestrian fatalities occur in Scarborough

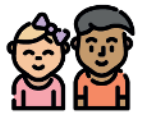
Arterial Roads

90%

of fatalities happen on arterial roadways in Scarborough, compared to 83% in other Districts

85%

of of KSIs in Scarborough occur on arterial roadways



80%

of KSI collisions amongst school-aged children in Scarborough occur on arterial roadways

34%

of pedestrian and cyclist fatal and serious injury collisions among school-aged children occur in Scarborough, while only 26% of school-aged children reside in Scarborough

District Safety Action Plans – Scarborough District

23%

of residents in Scarborough believe road safety is the most important issue in Toronto, compared to 12% in the remainder of the city

Retail and TTC Stops

Retail destinations and TTC stops are the most common types of attractors in the vicinity of mid-block pedestrian KSIs in Scarborough

Longest length of high speed[1] arterials roads

Scarborough has the longest length of high speed arterials roads contributing to more deadly mid-block collisions.

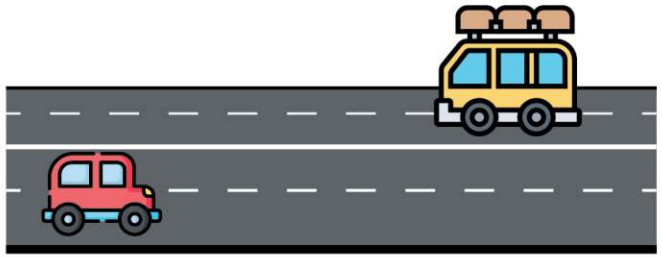
326km - Scarborough
231km - North York
189km - Etobicoke
66km - Toronto & East York

Longest walking distance between protected crossings

Scarborough has the longest distance between protected crossings compared to other districts.

870m - Scarborough
738m - North York
726m - Etobicoke
454m - Toronto & East York

Scarborough residents have to **walk up to 6 additional minutes to use a safe crossing** compared to residents of Toronto & East York. Infrequent safe crossing opportunities contributes to higher likelihood of mid-block crossings.



Longest length of wide[2] arterials

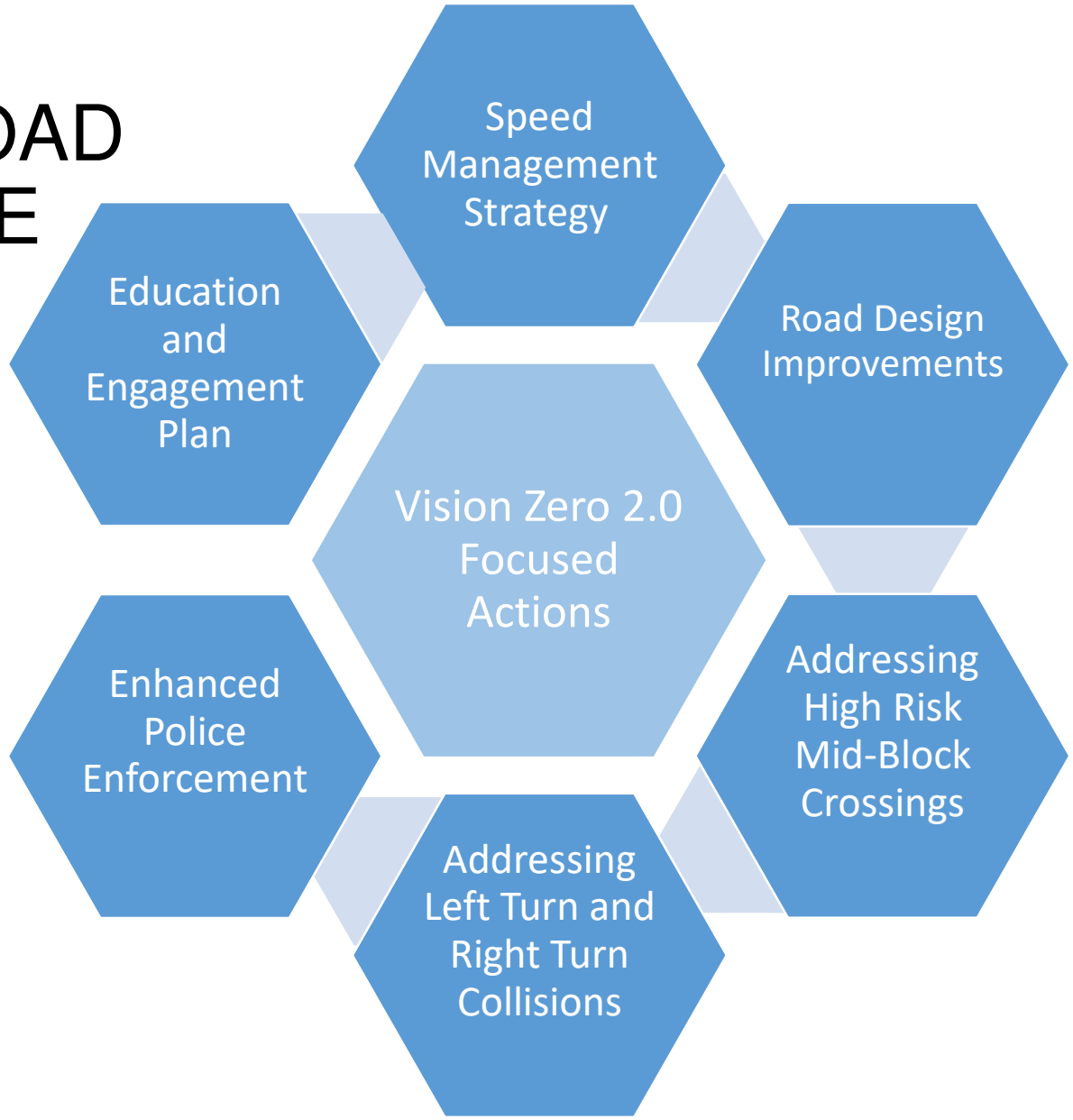
Scarborough has the longest length of wide arterial roads.

146km - Scarborough
144km - Etobicoke
110km - North York
43km - Toronto & East York

[1] High speed roads are defined as roads with posted speed limit at or above 60 km/hr. [2] wide roads are defined as roads with more than 4 lanes of traffic.

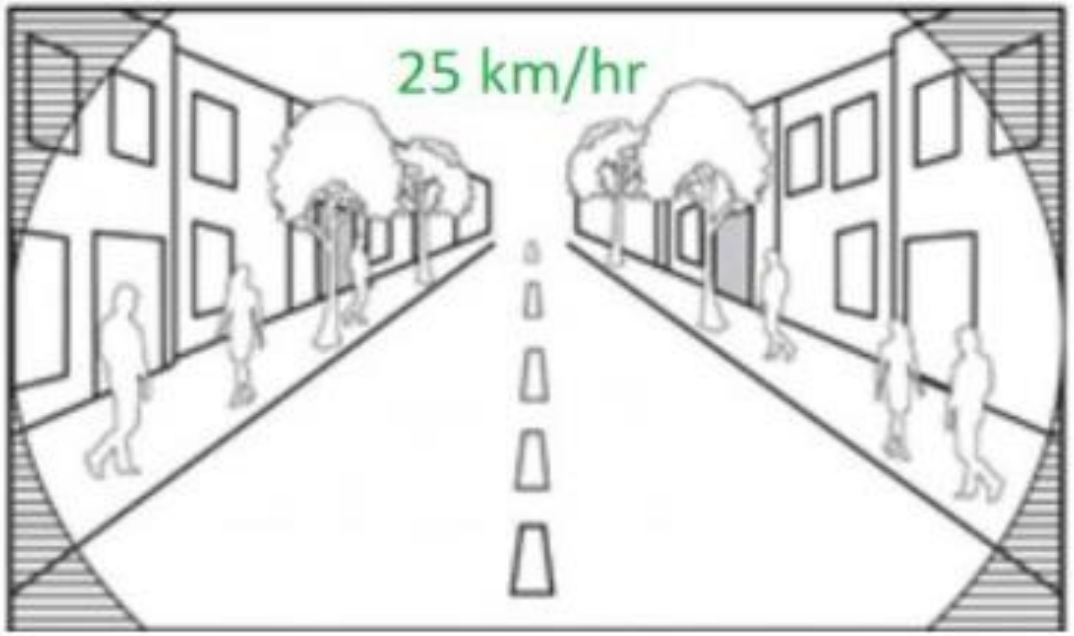
VISION ZERO 2.0 – ROAD SAFETY PLAN UPDATE

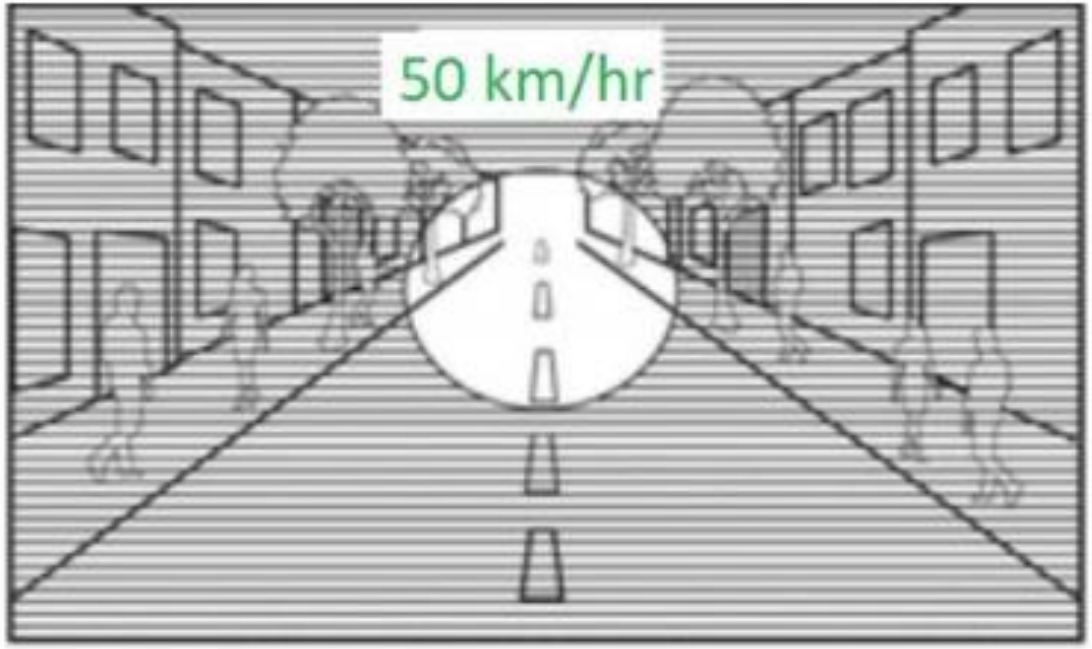
Unanimously approved by City Council on July 16th, 2019



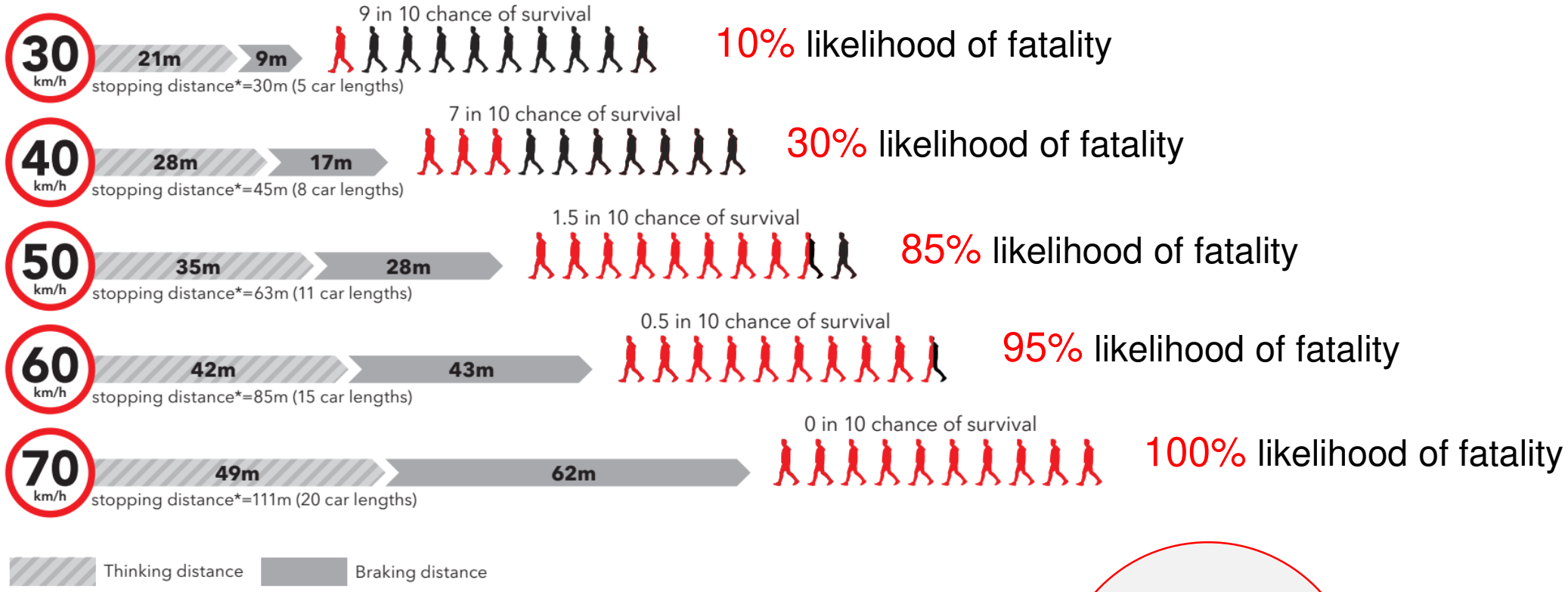
THE PROBLEM WITH SPEED

Driver’s field of vision at different driving speeds





THE PROBLEM WITH SPEED



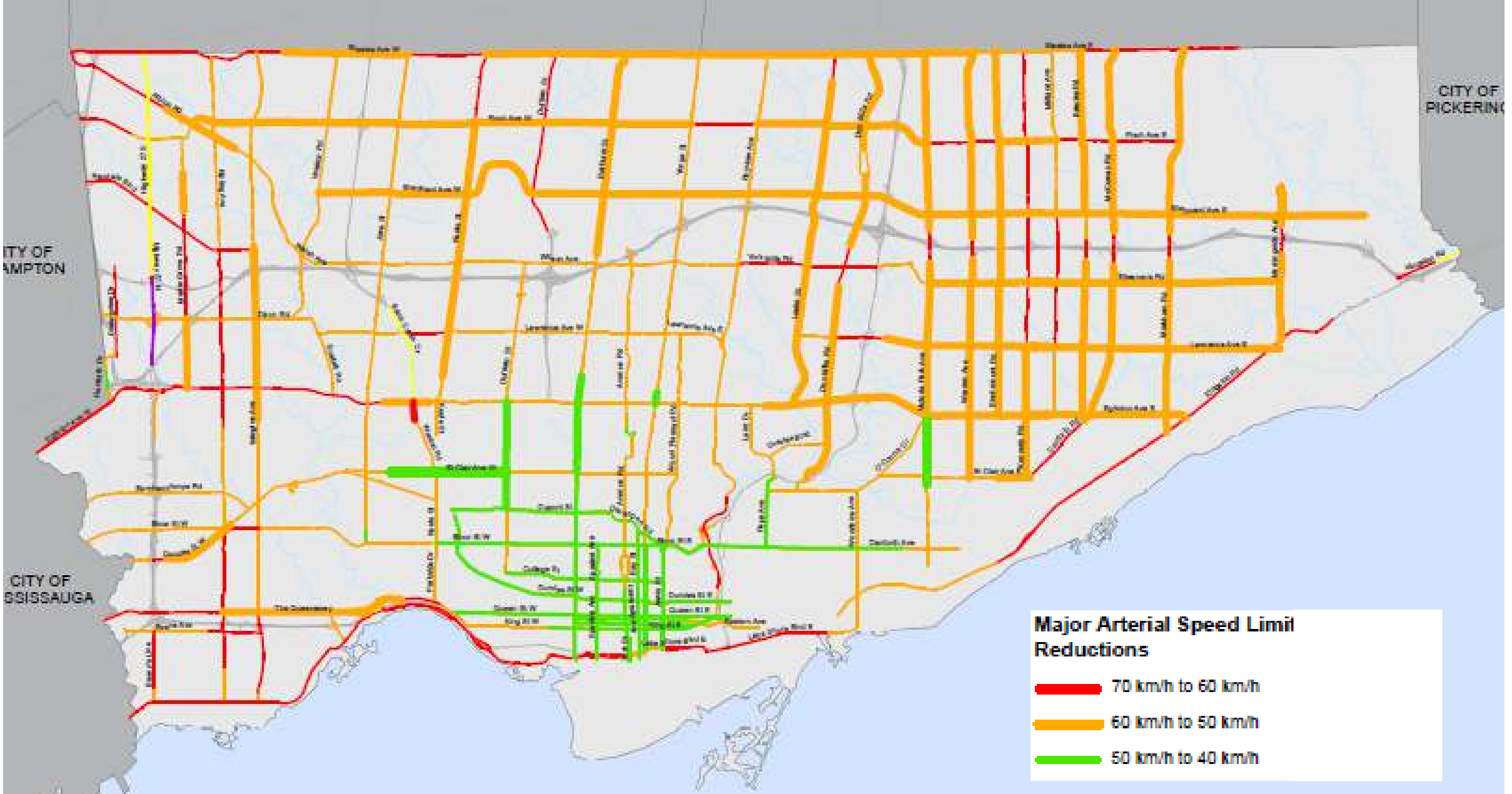
21% of roads

VS.

83% of KSIs

SPEED MANAGEMENT STRATEGY

1) Revised speed limit setting practices
2) Road design improvements
3) Enhanced police enforcement
4) Proactive deployment of Watch Your Speed signs
5) Speed limit reductions
6) Public education
7) Automated speed enforcement

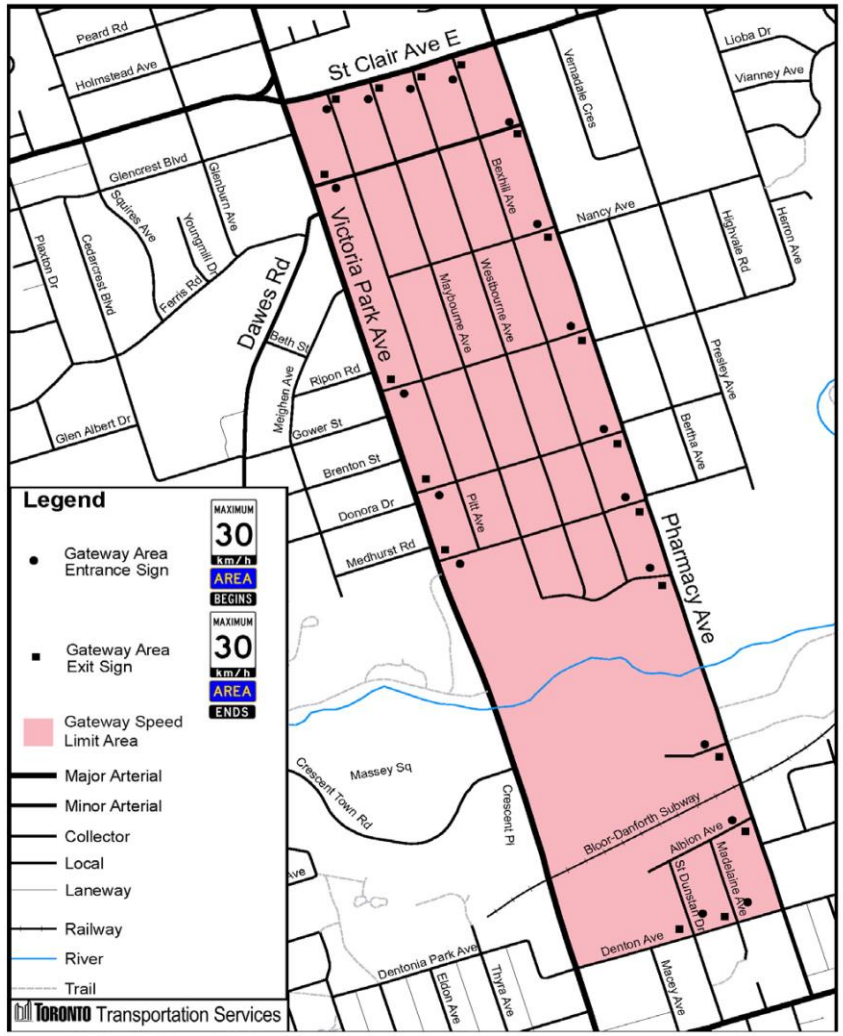


SPEED LIMIT REDUCTIONS

SPEED LIMIT REDUCTIONS – Local 30 km/h

- VZP is working to develop a program for all local residential roads being reduced through establishing 30km/h neighbourhood zones with gateway signage and pavement markings

Attachment 13 - Sample Local Road Reduced Speed Limit Area Gateway Signage and Pavement Marking



ADDRESSING HIGH-RISK MID-BLOCK CROSSINGS

- Updated traffic control warrants
- TTC stop consolidations
- Systematic review of high-risk mid-block segments

40% of Ped KSIs

Top Pedestrian KSI

Eglinton Avenue East, Scarborough District
Image source: Walkability in Toronto's High-Rise Neighbourhood (2010), Paul Hess and Jane Farrow

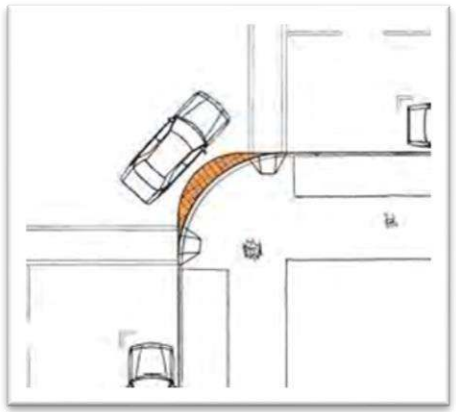
GEOMETRIC SAFETY IMPROVEMENTS

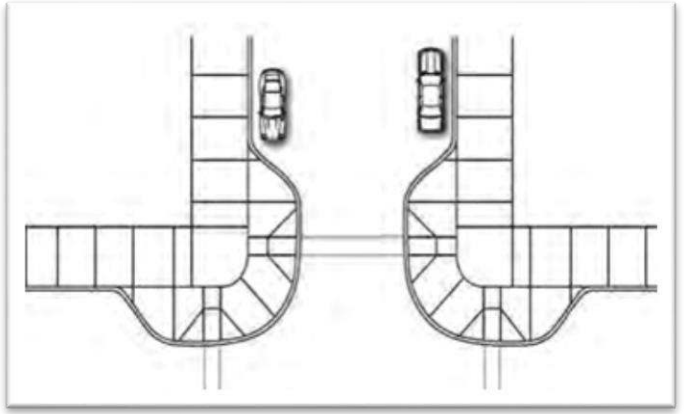
GEOMETRIC SAFETY IMPROVEMENTS

TORONTO

GEOMETRIC SAFETY IMPROVEMENTS

INTERIM GEOMETRIC SAFETY IMPROVEMENTS



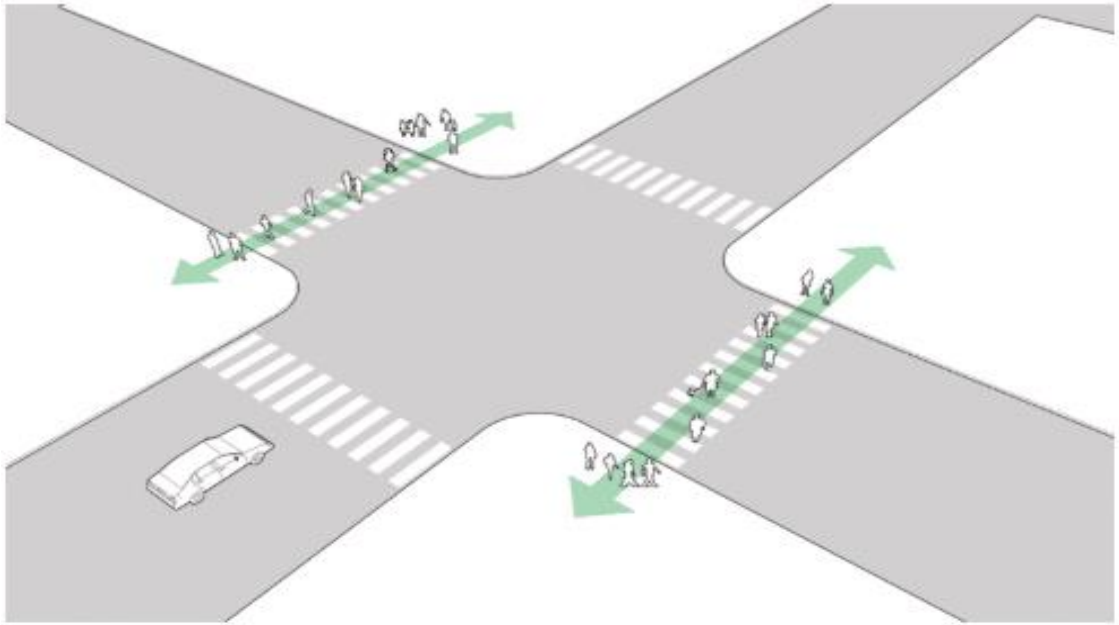


INTERIM GEOMETRIC SAFETY IMPROVEMENTS

TORONTO

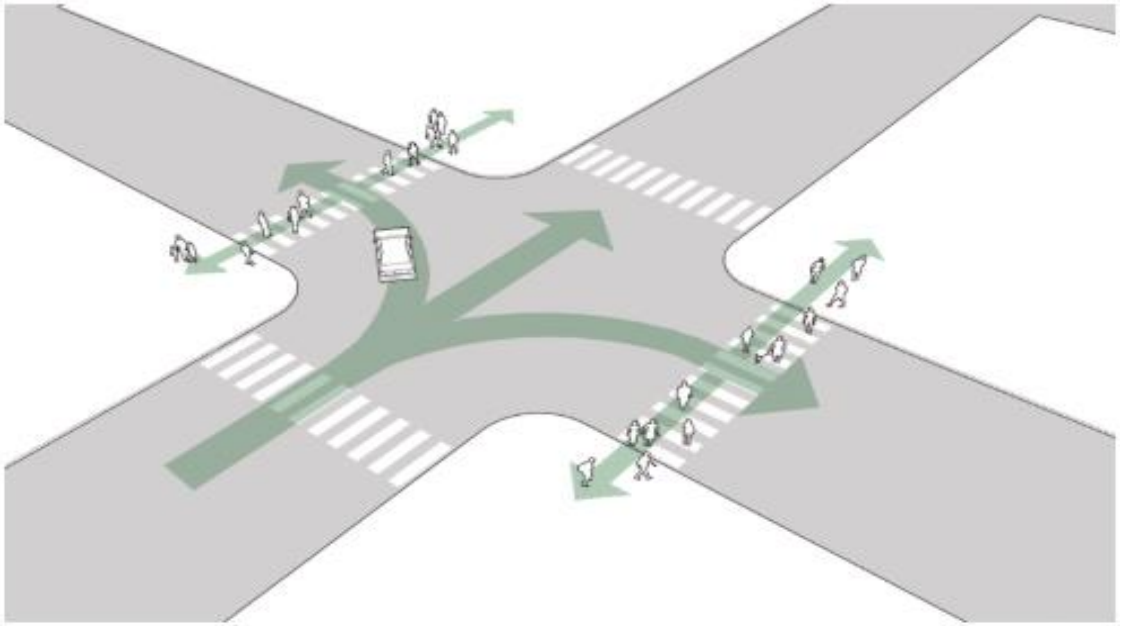
ADDRESSING LEFT-TURN COLLISIONS AT SIGNALS

- Leading Pedestrian Intervals – A Network Wide Application



Phase 1: Pedestrians only

Pedestrians are given a minimum 3–7 second head start entering the intersection.

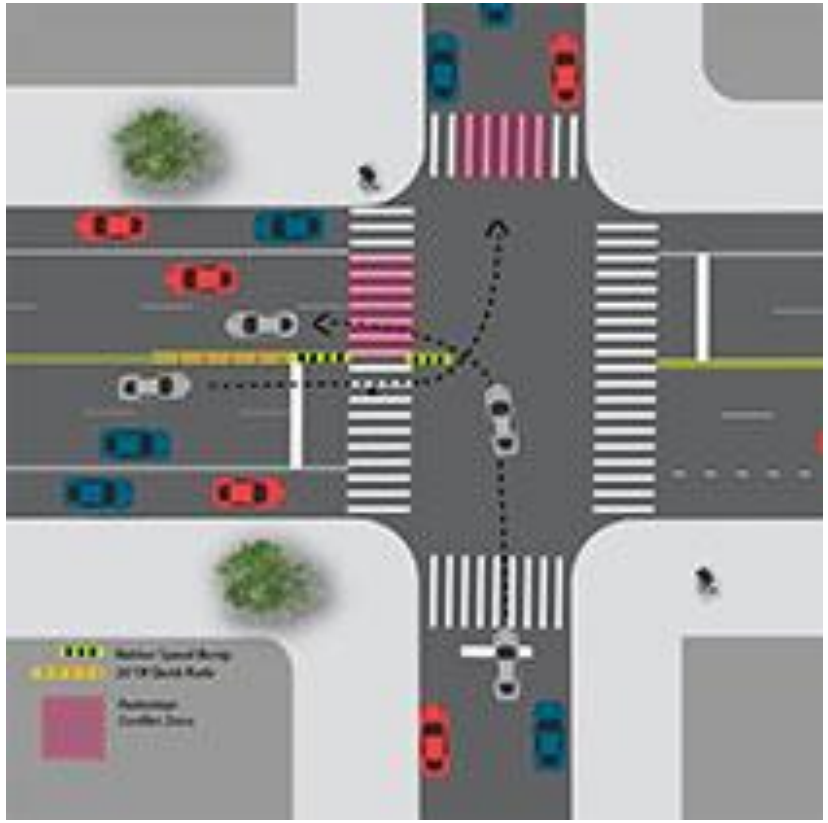


Phase 2: Pedestrians and cars

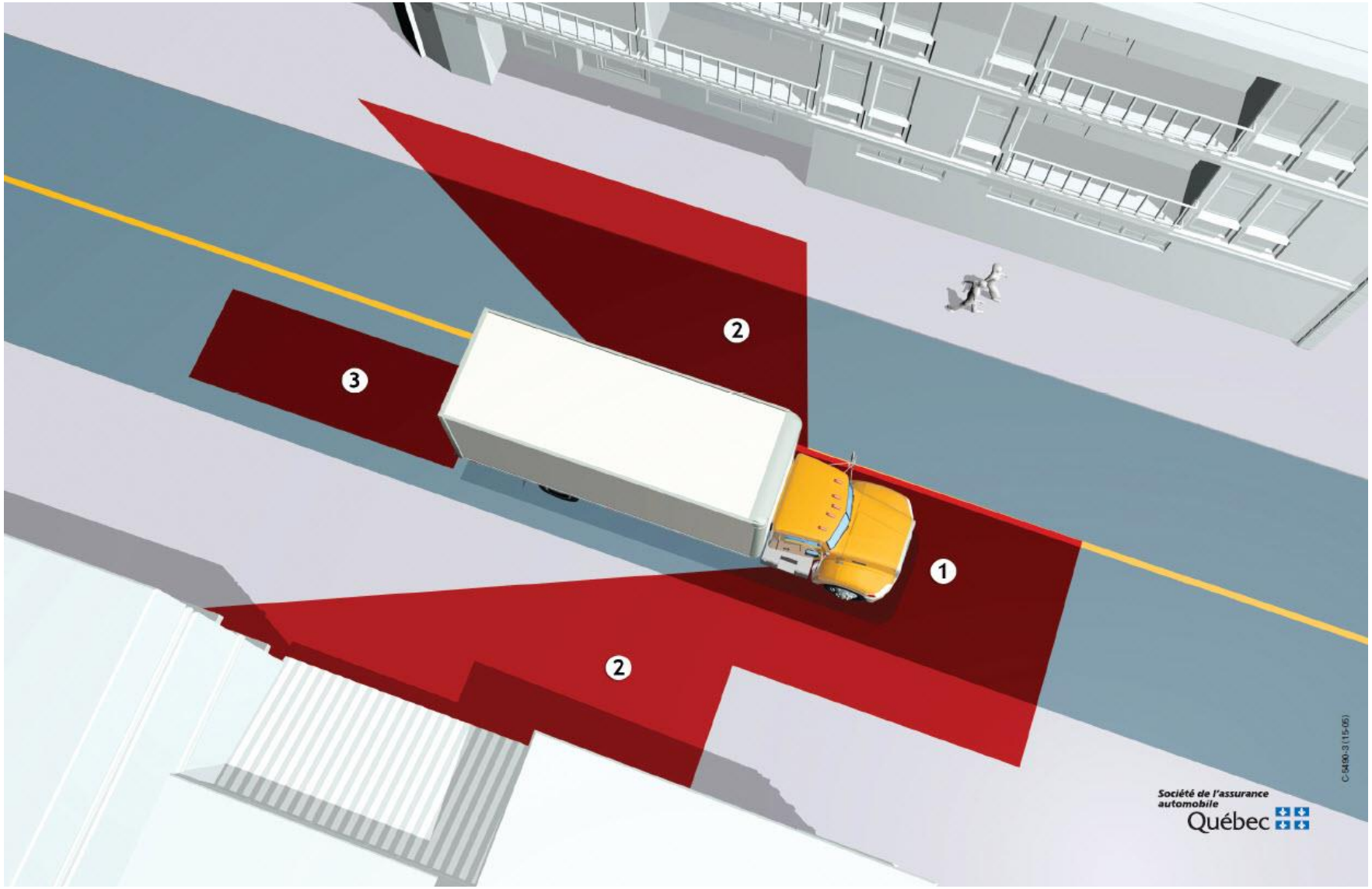
Through and turning traffic are given the green light. Turning traffic yields to pedestrians already in the crosswalk.

ADDRESSING LEFT-TURN COLLISIONS AT SIGNALS

- Left turn calming pilot



SAFE VEHICLES



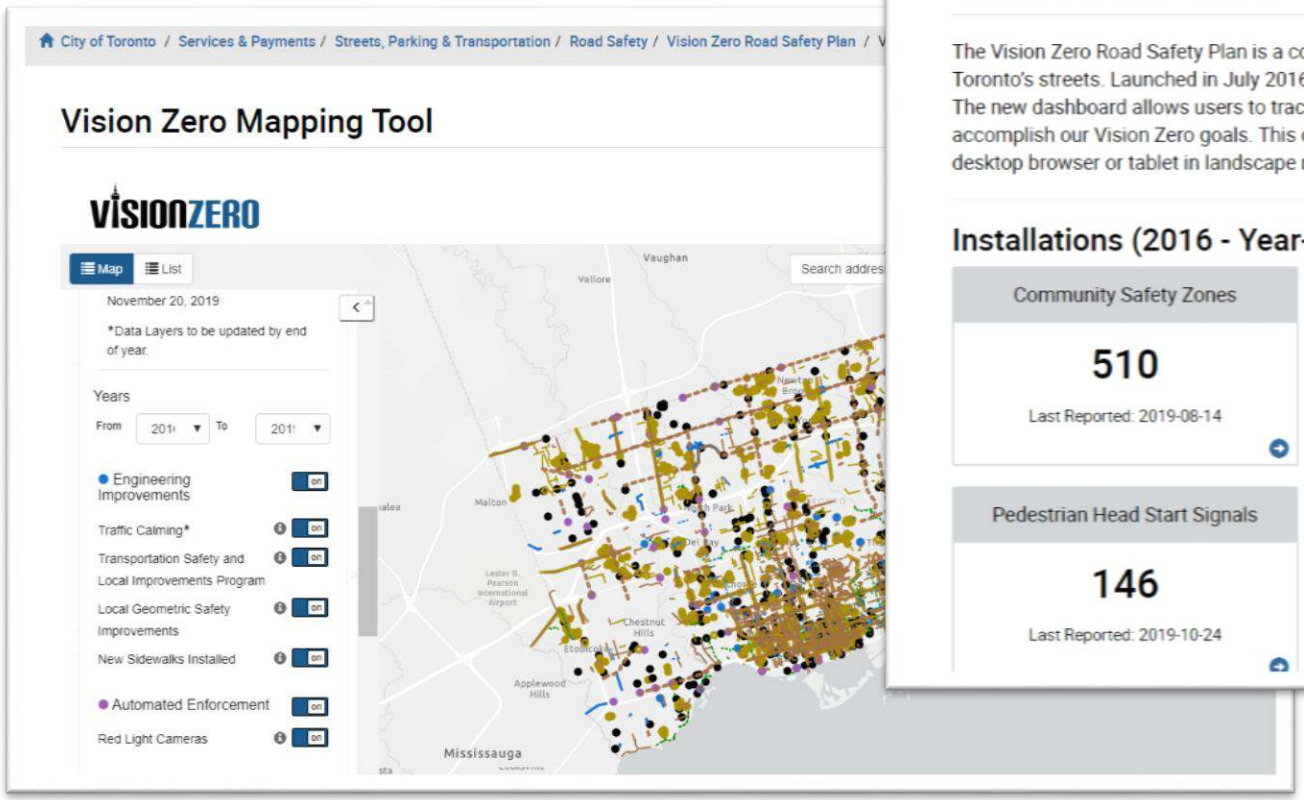
SAFE VEHICLES

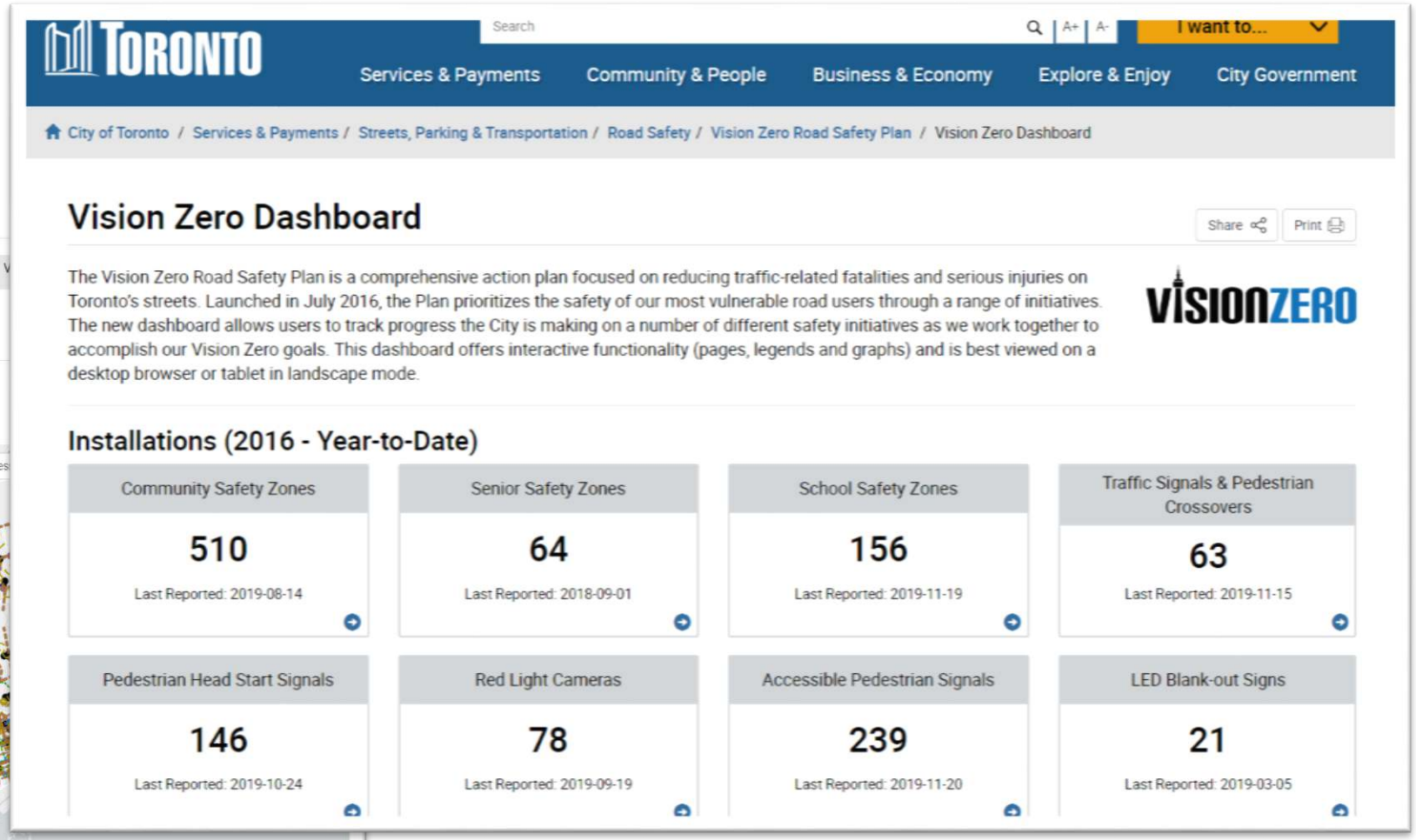
SAFE VEHICLES

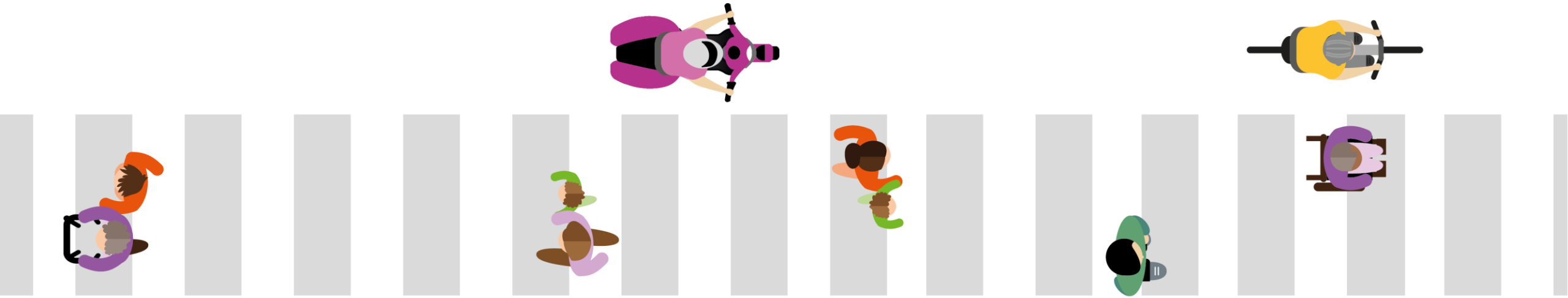
- Council direction through members motion to add heavy trucks as an emphasis area (Oct 2019)
- Commitment from Solid Waste to install Side Guards on all Solid Waste trucks
- Commitment from Solid Waste to equip all trucks with telematics and 360 cameras
- Transportation Services exploring 360 cameras for plows
- Council direction for Fire Services to investigate smaller firetrucks
- Working with Transport Canada in sharing our work on truck safety
- Construction hub coordination

VISION ZERO DASHBOARD AND MAP

- Vision Zero Map
- Vision Zero Dashboard







VISION ZERO

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Mateen.Mahboubi@toronto.ca