



Road Safety Plan Development Update

July 5, 2023
Development Services Committee



Objectives

- To address a January 31, 2023 request from DSC for York Region staff to present their traffic safety program including Automated Speed Enforcement (ASE).
- To inform Council on the progress of the Traveller Safety Plan (TSP) development, including updates about various York Region pilot programs, including ASE and pedestrian safety at intersections.
- To relate the TSP to road safety programming in Markham as a comprehensive, proactive, data-driven strategy to address road safety for Markham.



Agenda

1. Need for a Comprehensive Road Safety Plan
2. Traveller Safety Plan Development Update
3. York Region Traffic Safety Program Updates
4. Markham Traffic Safety Program Overview
5. Next Steps

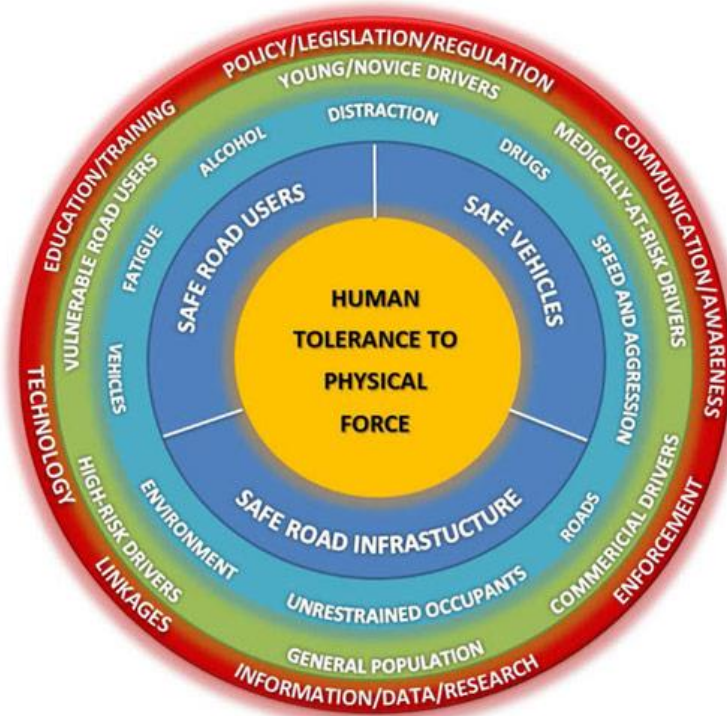


Need for a Comprehensive Road Safety Plan



A shift in how we address road safety

- Traditional approaches to addressing road safety are reactive in nature, and are not sustainable.
- Need to minimize serious injuries & fatalities by changing system-wide practices and policies to lessen the severity of collisions and conflicts.
- A “Safe System” approach considers all road users, including the most vulnerable (pedestrians & cyclists).
- City of Markham already took the first step by completing a City-wide Road Safety Audit in 2020 that can be used to develop a Road Safety Plan.



Source: Canadian Council of Motor Transport Administrators, adapted from the 2009 WHO report on the Global Status on Road Safety



Markham's Road Safety Plan Development Status

- Staff presented to Council a proposal to develop a Road Safety Plan in March 2019.
- A City-wide Road Safety Audit was completed and results were presented to Council in September 2020.
- Council approved a 2022 capital budget to develop a multi-year Road Safety Plan.
- In January 2022, City staff were notified that the Region would be developing a Traveller Safety Plan similar to the City's Road Safety Plan.
- On May 17, 2022, Council directed staff to collaborate with York Region to develop a combined Road Safety Plan (now called a Traveller Safety Plan).



Opportunity for Multi-jurisdictional Collaboration

- Road users do not recognize separate jurisdictional responsibilities in a multi-tiered transportation network.
- The application, vision and messaging of the Road Safety Plan needs to be consistent across all Regional and Local Municipal transportation systems.
- Regional and City staff recognize the clear overlap in goals, objectives, and methodology of respective Road Safety efforts.



York Region's Traveller Safety Plan (TSP)

- In Q1 2022, York Region engaged City of Markham and the other 8 local municipalities to collaborate in the development of a Region-wide Traveller Safety Plan that:
 - is based on Vision Zero (Safe System) principles;
 - considers requirements of both Regional and Local municipal roads;
 - will result in a Plan adaptable to City needs and allow the City to develop it's own Road Safety Capital Program.
- Development of the Plan started in October 2022 and is anticipated to be completed by Q4 2023.





Benefits and Efficiencies of Collaboration

- Leverage technological resource capabilities of the Region.
- Traveller Safety Plan and associated branding will produce consistent messaging across Regional & Local municipal levels.
- Markham will maintain autonomy with respect to implementing project, program and policy road safety decisions on City roads.
- Approved 2022 budget is available to develop a Markham road safety capital program that aligns with the TSP, to commence in Q1 2024.



TRAVELLER SAFETY PLAN

City of Markham, Development Services Committee

Nelson Costa

Manager, Corridor Control and Safety
Public Works, York Region

July 5, 2023



OUTLINE

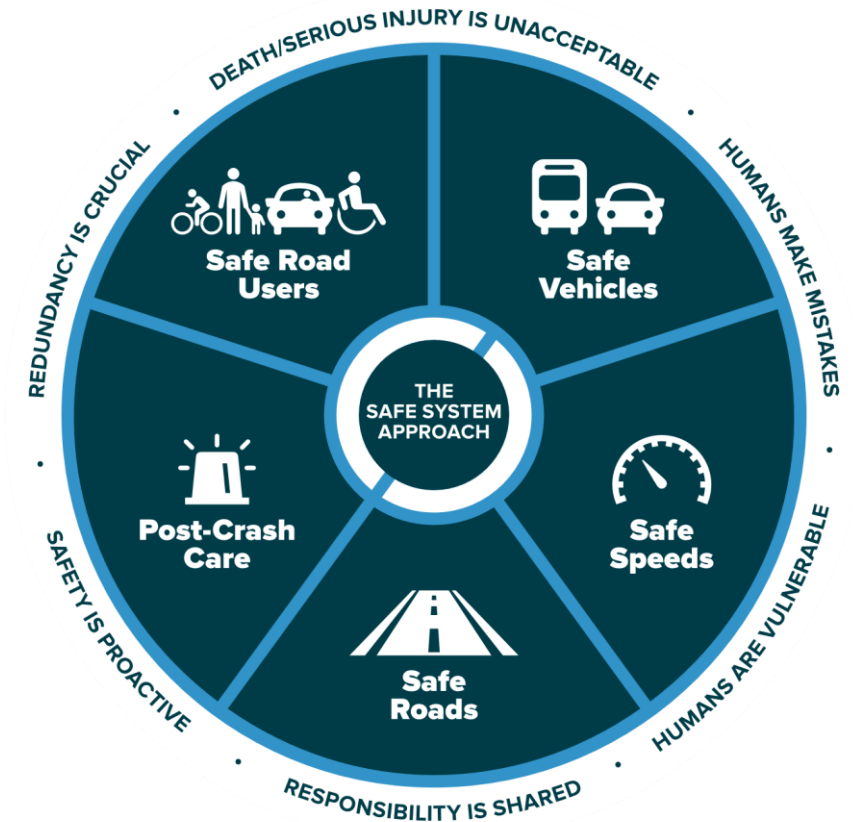
- Introduction of Traveller Safety Plan
- Automated Speed Enforcement (ASE)
- Intersection Pedestrian and Cycling Safety Measures



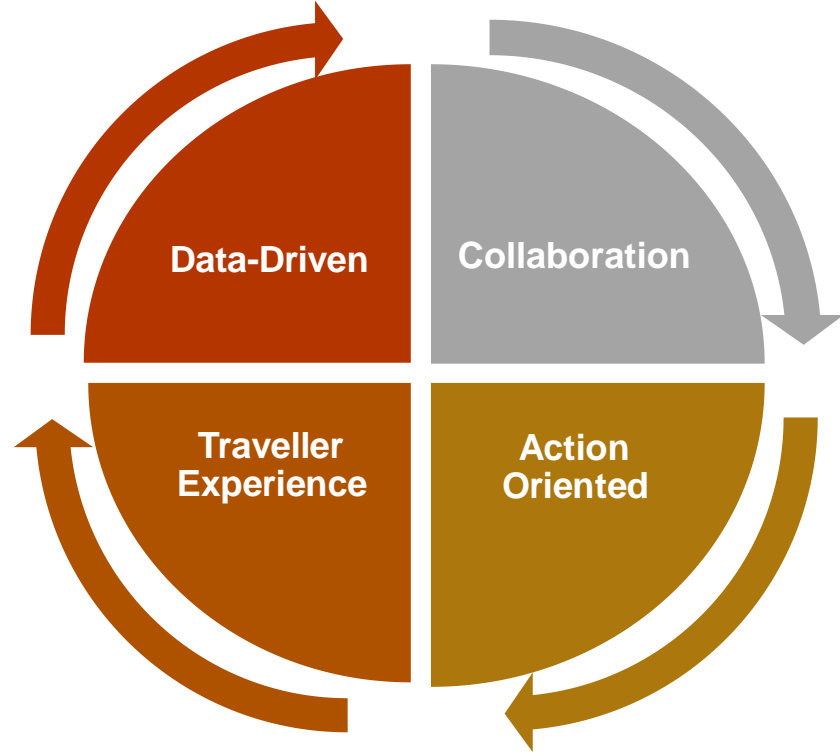
TRAVELLER SAFETY PLAN

SAFE SYSTEM APPROACH

- A plan to prevent all injuries and fatalities
- A safer road system: planned, designed, operated
- Shared responsibility



MULTIPLE SAFETY PARTNERS AND INDUSTRY PROFESSIONALS



DELIVERY OF TRAVELLER SAFETY PLAN

PHASE 1 – Engagement and surveys

February to May 2023

PHASE 2 – Data analysis

June to August 2023

PHASE 3 – Develop plan for approval

Fall 2023

PUBLIC AND STAKEHOLDER ENGAGEMENT

1

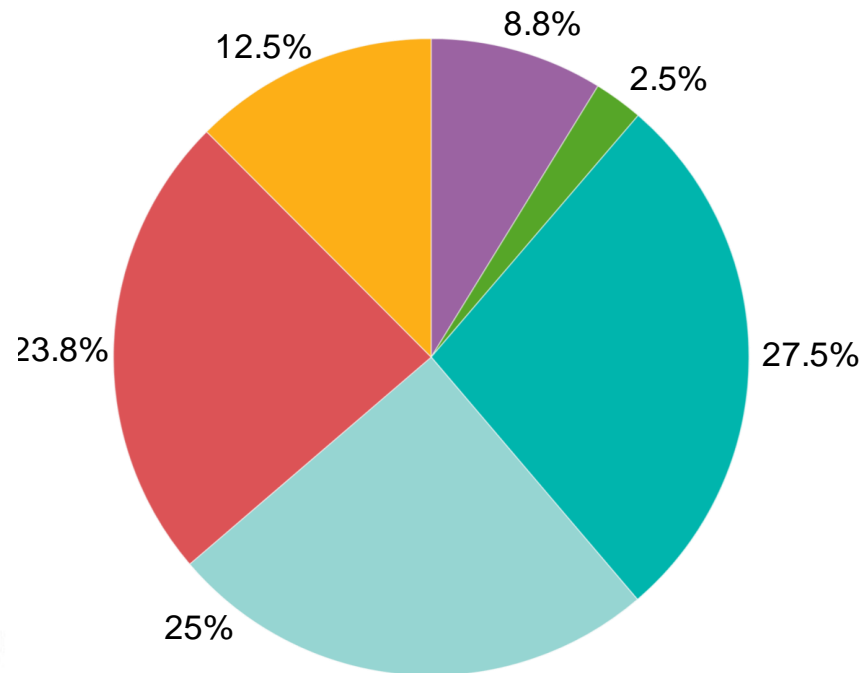
- Public engagement and surveys
- Stakeholder workshops
- Outreach to advocacy groups



COMMUNICATIONS, VIRTUAL PUBLIC INFORMATION CENTRE RESULT



york.ca/TravellerSafetyPlan



- Children & Senior Safety ● Excessive Truck Traffic
- Pedestrian Safety ● Cyclist Safety
- Intersection Concerns ● Speeding Concerns

SAFETY DATA ANALYSIS

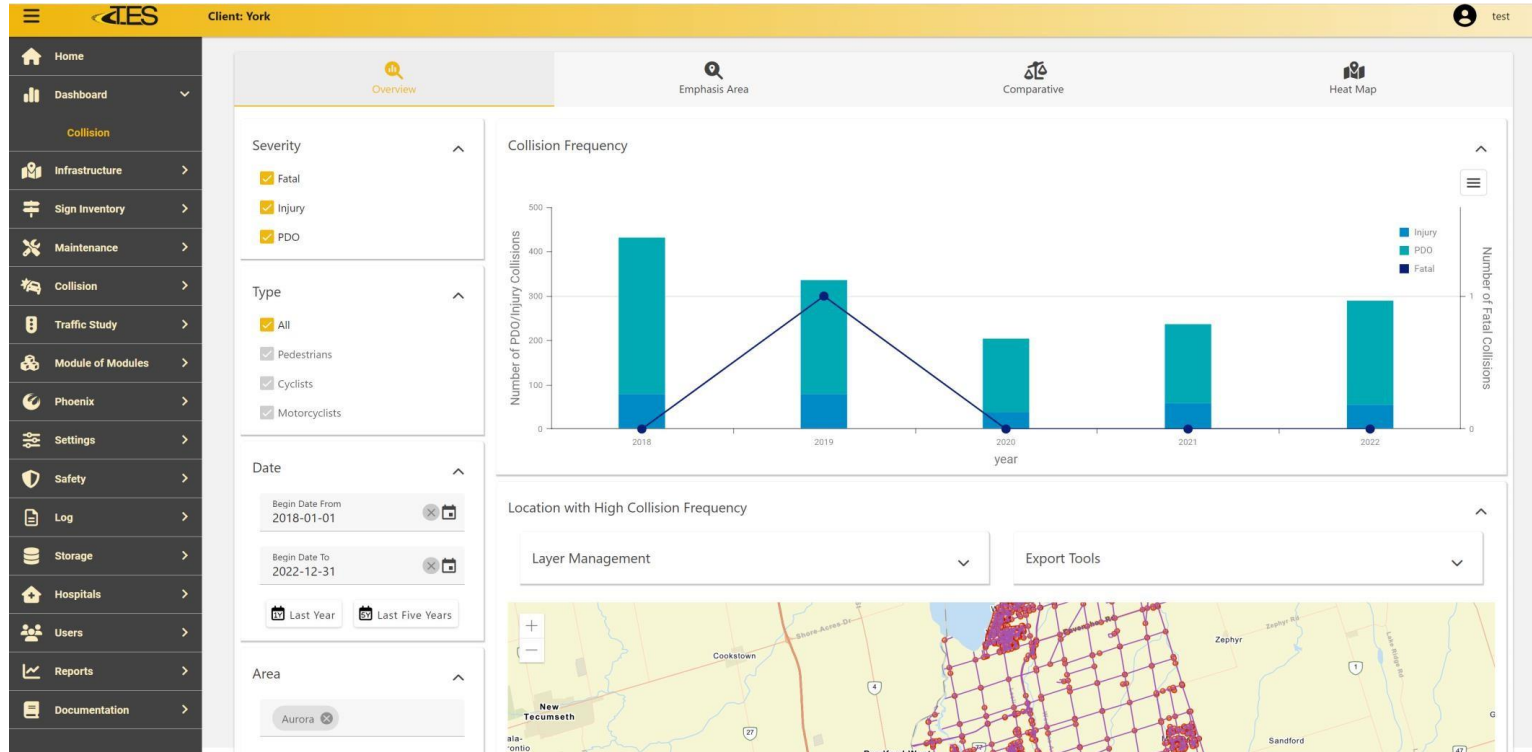
2

- Where are collisions happening?
- Who is involved in the collisions?
- Why are they happening?

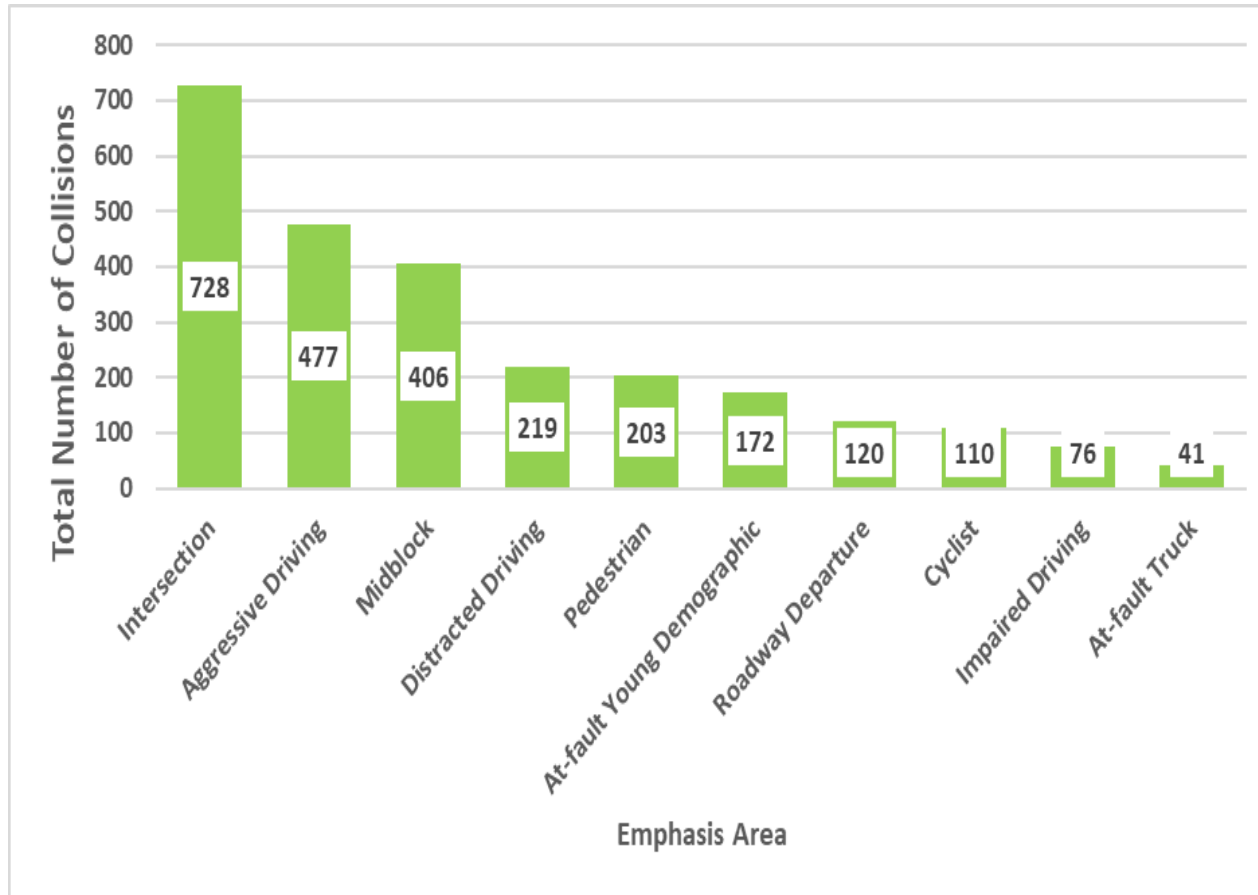


WEB-BASED DATA WAREHOUSE (TELEWORK FRIENDLY)

Includes Regional and local data, and new safety analytical tools



CITY OF MARKHAM COLLISIONS BY EMPHASIS AREA



REVIEW MUNICIPAL SAFETY PROGRAMS

3

- Initiatives
- Identify strengths and gaps
- Recommend new safety programs that can be applied to all roads in York Region



DESIGN AND PLAN SAFERSTREETS

4

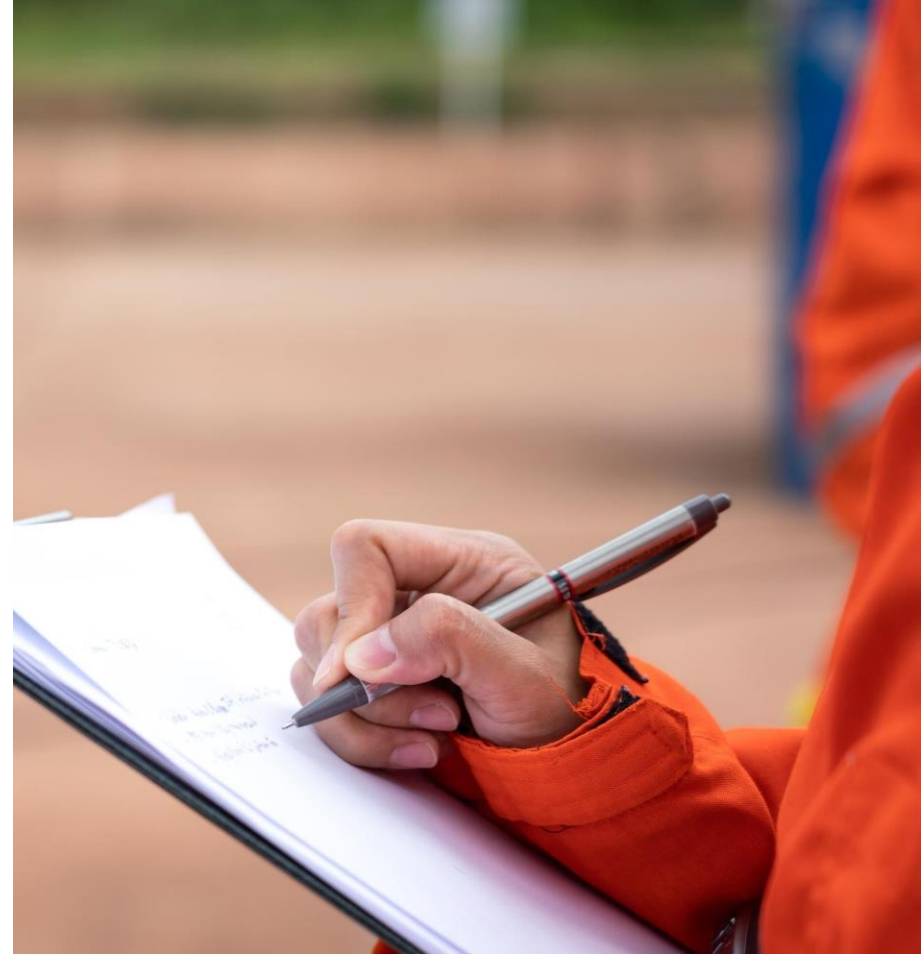
- Reviewing planning and design standards through a road safety lens
- Developing guidelines for implementing safety countermeasures



RECOMMENDATIONS AND ACTION PLAN

5

- Identify how to address safety issues
- Create an action plan for each type of traveller



PERFORMANCE METRICS AND MONITORING

6

- Development of performance metrics
- Set numeric targets
- Create an evaluation/monitoring plan



NEXT STEPS

- Continue scheduling technical meetings and workshops
- Complete tasks and deliverables
- Completing safety data analysis and identifying qualified countermeasures
- Develop and present the Plan to Council by year end



AUTOMATED SPEED ENFORCEMENT

HOW ASE WORKS



Set up ASE Unit
and perform site
acceptance testing



ASE Unit
detects
speeding



Picture is
taken



Images sent to
City of Toronto
Joint Processing
Centre



Provincial
Offence Officers
produces ticket



Tickets filed with
Provincial Courts and
Mailed to registered
vehicle plate owner



Vehicle owner can
pay the fine, pursue
early resolution or
challenge the
ticket/request a trial

HOW MUNICIPALITIES GET STARTED



**Join the ASE
Committee**



Select sites
(community
safety zones/
school zones)



**Update bylaws
and sign
inventory
to reflect
legislative
requirements**



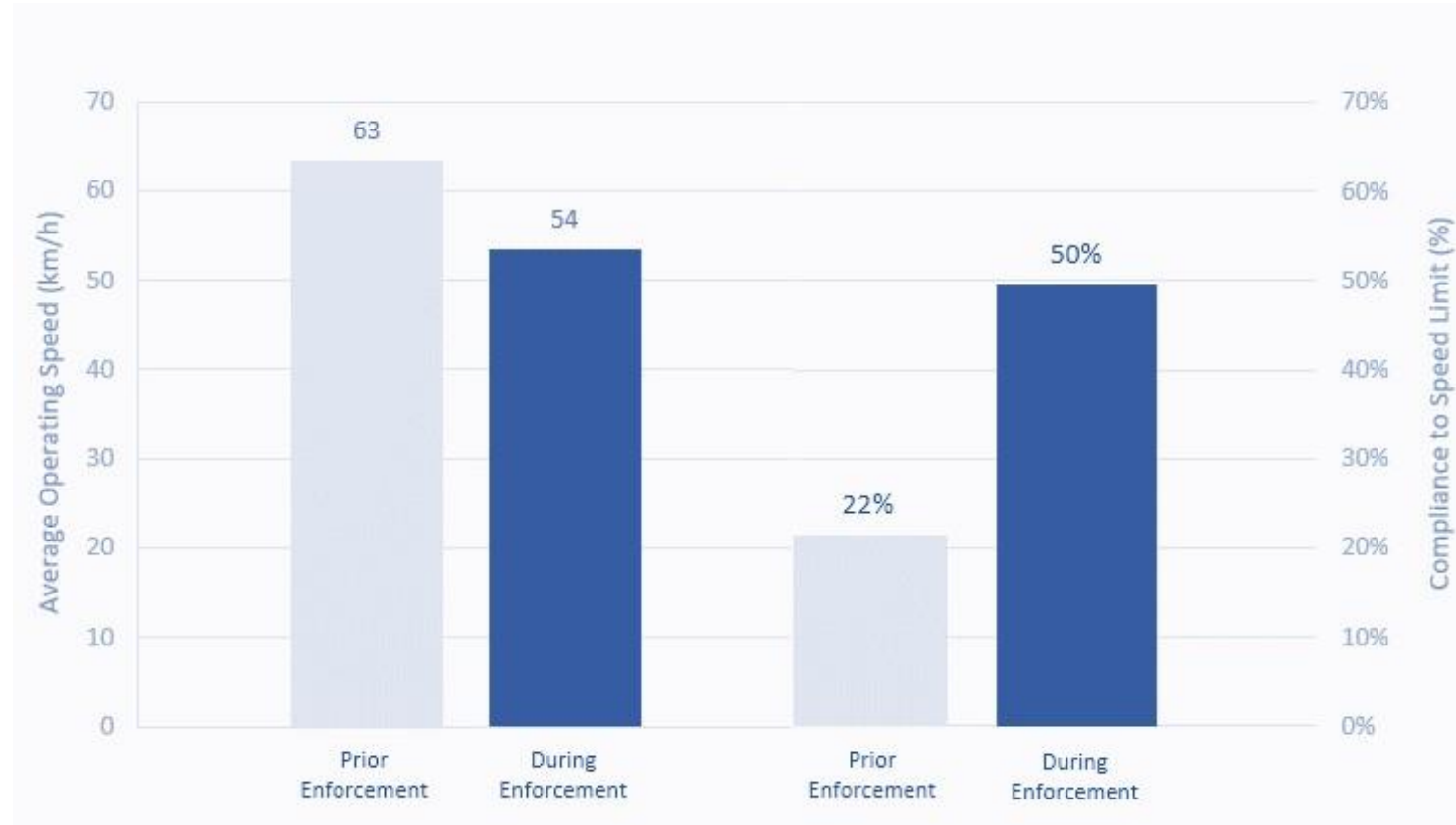
**Report to
Council for
authority,
budget, and
agreements**



**Execute
agreements**

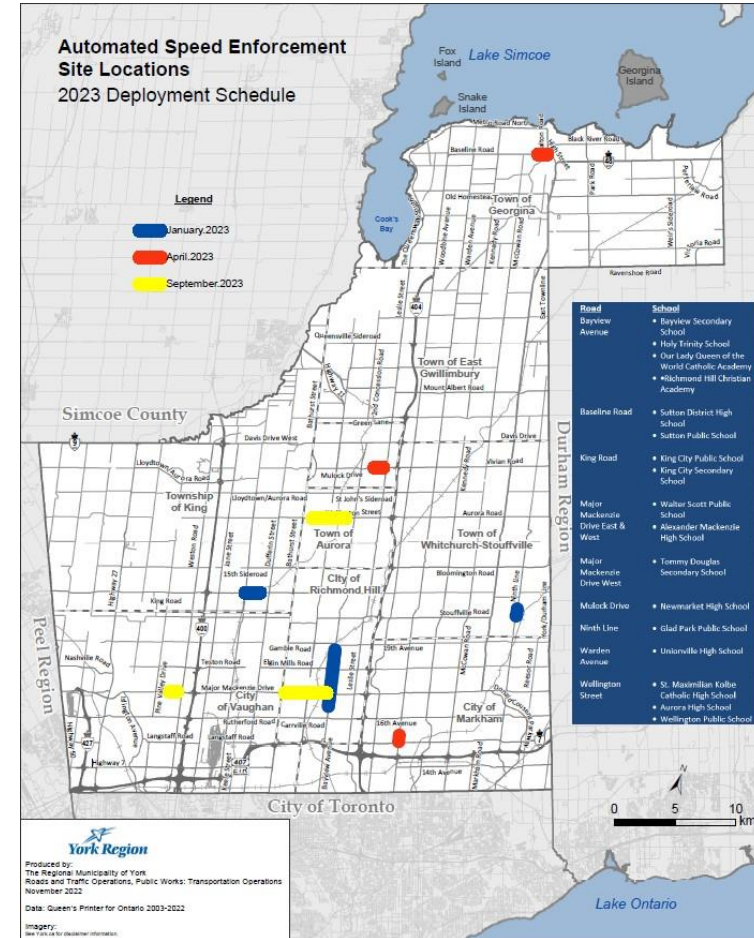
Process can take 12 to 16 months

EVIDENCE SUPPORTS EFFECTIVENESS OF ASE



AUTOMATED SPEED ENFORCEMENT PROGRAM

- Three mobile cameras in use on Regional roads covering nine community safety zones, encompassing 17 school areas
 - May and June 2023: Warden Avenue at Unionville High School at Unionville High School
- Equitable approach in selecting sites covering all municipalities



AUTOMATED SPEED ENFORCEMENT OUTLOOK

- Process to address disputes and collect fines is currently being developed
- Region is exploring the creation of a Joint Processing Centre
- York Region's goal is to operate 60 cameras by 2027
- Addressing aggressive driving is a collision emphasis area



INTERSECTION PEDESTRIAN AND CYCLING SAFETY MEASURES

SAFETY MEASURES TARGETING TURNING VEHICLES

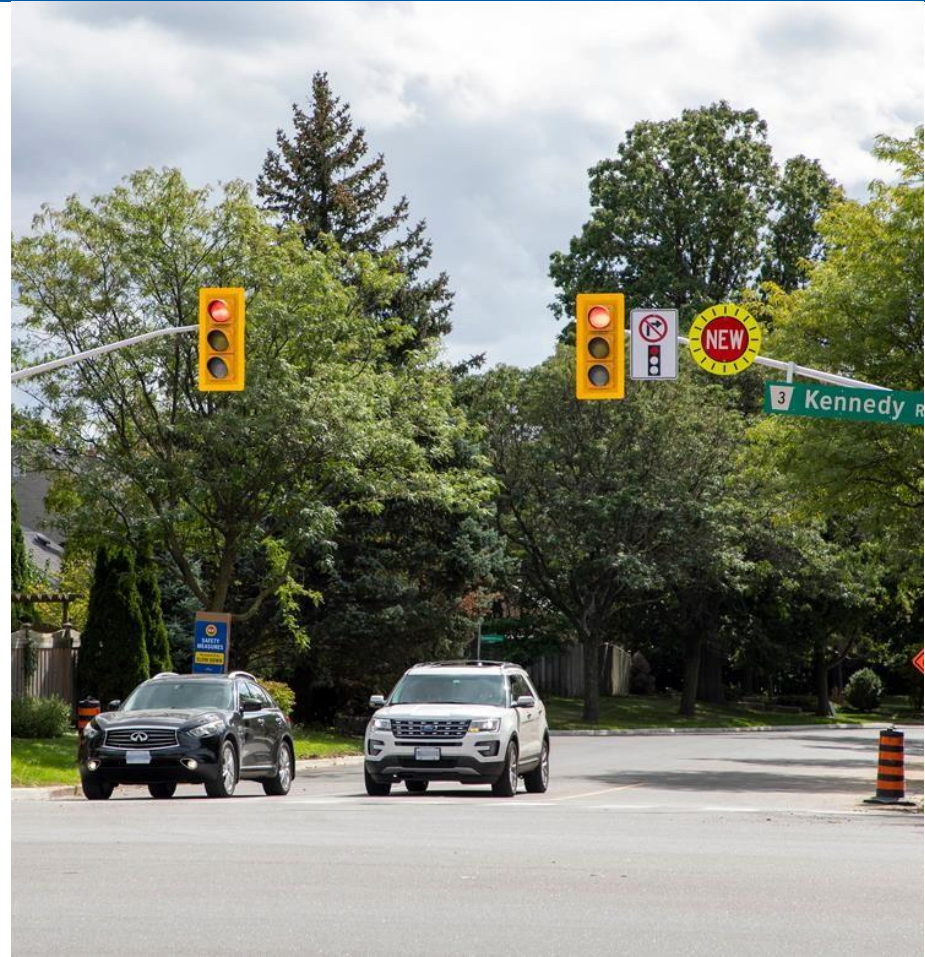
- Developed risk exposure index to prioritize locations for pedestrian and cycling safety measures
- Safety measures piloted at four intersections
- Results showed probability of conflicts significantly reduced:
 - Total collisions reduced by more than 60%
 - Angle collisions, which typically result in serious injury, reduced by 75%



EXPANDED SAFETY MEASURE IN THE CITY OF MARKHAM

Implemented no right turn on red (NROR) at seven intersections in the City of Markham

- 16th Avenue and Main Street
- Markham/Highway 48
- 16th Avenue and Woodbine Avenue
- Highway 7 and Kennedy Road
- Highway 7 and McCowan Road
- Kennedy Road at The Bridle Trail
- Kennedy Road at Carlton Road
- McCowan Road and Carlton Road/Raymerville Drive



PRELIMINARY RESULTS AND IMPACT



Positive Results


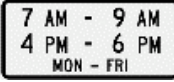


- Reduced conflicts between vehicles and pedestrians, and vehicles and cyclists, between 30% to 80%
- No reported collisions involving pedestrians and cyclists since implementation
- Positive feedback was received from pedestrians and cyclists



Negative Impact

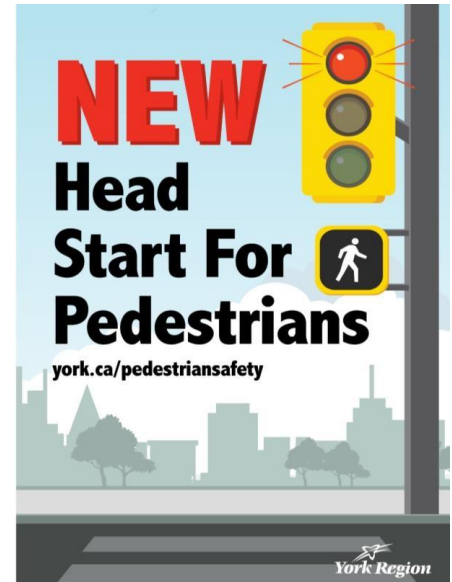
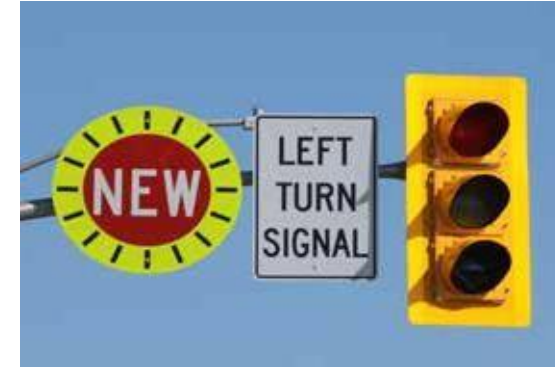
- York Region received more than 200 resident concerns about unnecessary delays when pedestrian and cyclists were not active

NO RIGHT TURN ON RED BY TIME-OF-DAY

Recommended Options	Intersections	NROR by Time of Day
1 During rush hours when traffic, pedestrian and cyclist volumes are highest	16th Avenue and Woodbine Avenue Kennedy Road and Carlton Road	 
2 High pedestrian traffic area (i.e. intersections near school areas, shopping centres and parks)	16th Avenue and Main Street Markham North/Markham Road Highway 7 and Kennedy Road Highway 7 and McCowan Road Kennedy Road and The Bridle Trail McCowan Road and Carlton Road/Raymerville Drive	 

OTHER PEDESTRIAN AND CYCLIST SAFETY MEASURES

- Pedestrian head start, and fully protected left-turns will be implemented from late 2023 to 2025
 - Kennedy Road and The Bridle Trails (completed)
 - Kennedy Road and Carlton Road (completed)
 - McCowan Road and Carlton Road/Raymerville Drive (Q4 2023)
 - Highway 7 and Kennedy Road (2024)
 - Highway 7 and McCowan Road (2025)
 - 16th Avenue and Woodbine Avenue (2025)
- Addressing vulnerable road user safety is a collision emphasis area



THANK YOU

Nelson Costa

Manager, Corridor Control and Safety
Regional Municipality of York

nelson.costa@york.ca





Markham Traffic Safety Program Overview



Markham's Current Traffic Safety Strategy

- Markham's traffic safety strategy has evolved over many years to meet the needs of an increasingly complex transportation system, and covers a broad range of issues.
- Road authorities and public agencies manage safety performance of the road system through five main pillars:
 1. *Education;*
 2. *Encouragement;*
 3. *Enforcement;*
 4. *Engineering; and*
 5. *Evaluation.*
- Markham's existing road safety strategy has been developed to align with this approach, comprised of multiple initiatives that focus on a combination of one or more of these five pillars.



Education

- **Speed Display Boards**
 - Average Speed reduction while deployed is approximately 10 km/h, but varies depending on road profile
- **In-street Flexible Signs & Bollards in School Zones**
 - Reduction in vehicle speed ranges between 3 - 11km/h, depending on pre-existing vehicle speeds and road profile
 - Compliance averages approximately 55%
- **Educational Outreach**





Encouragement

- School Crossing Guards
 - 93 locations
- Active School Travel
 - Pilot initiative's conducted at 9 schools
- Special Events





Enforcement

- York Regional Police (YRP)
- Road Watch by YRP (www.yrp.ca/roadwatch)
 - Citizen reporting
- Markham By-laws / Parking Control





Engineering

- Intersection and Pedestrian Traffic Controls
- Pedestrian Accessibility Improvements at Signalized Intersections
- Infill Sidewalk Completion Program
- Traffic Calming





Evaluation

- Annual Data Collection Program
- Traffic Safety Investigations & Reviews
- Project Evaluation





Current Traffic Calming Policy

- Vertical traffic calming devices (speed bumps/humps, raised intersections, raised crosswalks) used as primary form of speed mitigation from 1999 – 2009.
- In May 2010, Council adopted a policy prohibiting the installation of any new vertical traffic calming.
- In June 2004, York Region Transit policy prohibits YRT service on any roadway where vertical traffic calming measures (all types) are provided.
- Markham's vertical traffic calming policy will be reviewed following completion and endorsement of the Traveller Safety Plan.



Next Steps

- Q4 2023 – Regional Council Endorsement of the Traveller Safety Plan
- Q1 2024 – City Staff to report/present to Council, recommending:
 - Endorsement of the Traveller Safety Plan.
 - Reviewing and update City's vertical traffic calming policy.
 - Retaining a consultant to develop a multi-year capital program for Markham that aligns with recommendations of the Traveller Safety Plan, and considers all forms of traffic calming, including vertical traffic calming and Automated Speed Enforcement.
 - Facilitating internal and public consultation, including a Council workshop, to inform the Program's development
- Q4 2024 – Report to Council in with a multi-year capital program.



Questions