

COMMITTEE OF THE WHOLE - JUNE 14, 2011

PEDESTRIAN/STREET SAFETY TASK FORCE

Recommendation

The Commissioner of Engineering and Public Works recommends that:

1. The attached report outlining the findings of the Pedestrian/Street Safety Task Force (Task Force) be received; and
2. That staff review findings and report to a future Committee of the Whole meeting.

Contribution to Sustainability

None at this time.

Economic Impact

None at this time.

Communications Plan

Engineering Services will work with Corporate Communications to develop a communications plan for the findings of the Task Force utilizing a news release, the City's website, social media and the City Page.

Purpose

The purpose of this report is to provide the findings of the Pedestrian/Street Safety Task Force.

Background - Analysis and Options

On February 16, 2010 Council approved the following:

1. *That the establishment of a Task Force on Pedestrian and Street Safety be undertaken by the City of Vaughan immediately which should be comprised of, but not limited to the following: Citizens, City and Regional planning and engineering professionals, police and by-law enforcement staff, school board representatives, representatives of seniors and youths, and a representative of the Province;*
2. *That a request for application for membership be advertised in the local media and placed on the City's website;*
3. *That the Task Force be provided with staff support coordinated by the Commissioner of Engineering and Public Works and the Commissioner of Planning; and*
4. *That the Task Force report back to Council within 12 months with their recommendations.*

The purpose of the Task Force was to bring together stakeholders and the different levels of government in order to determine the best course of action in dealing with the increasing number of roadway pedestrian fatalities in the City of Vaughan.

The following Terms of Reference were developed to guide the Pedestrian Street Safety Task Force:

- To review the current policies/practices of the City of Vaughan and the Region of York pertaining to our environment and infrastructure;

- To discuss issues such as driver and pedestrian education, legislative changes, co-ordination between various government levels and/or departments, public transit, road design recommendations, community involvement, etc;
- To work for improved pedestrian safety and better pedestrian access to public transit, schools, workplaces, shops, libraries, community centres, parks, including roads and other public spaces;
- To provide a forum for public consultation on pedestrian health and safety, convenience and comfort including working on findings to be brought forward to Committee of the Whole by June 2011;
- To provide educational programs to the general public to promote pedestrian and vehicular safety towards making roads a safer environment;
- To promote awareness of pedestrian safety as our City continues to grow; and
- To report the findings to Committee of the Whole in June, 2011 with a view to improving safety of both our drivers and pedestrians on City and Regional roads.

Relationship to Vaughan Vision 2020/Strategic Plan

This report speaks to the initiative that relates to enhancing and ensuring Community Safety, Health and Wellness.

This report is consistent with the priorities previously set by Council.

Regional Implications

A staff representative from the Region participated on the Task Force. Staff will provide a copy of the Task Force report to the Region of York.

Conclusion

The report outlining the findings from the Pedestrian Street Safety Task Force be received for information purposes.

Attachments

1. Report from the Pedestrian Street Safety Task Force

Report prepared by:

Jack Graziosi, Director of Engineering Services, Ext 8201

Respectfully submitted,

Bill Robinson, P. Eng.,
Commissioner of Engineering and Public Works

Pedestrian and Street Safety Task Force

Presented Report

to the Committee of the Whole, June 14, 2011

Submitted by the

Vaughan Pedestrian Street Safety Task Force (PSSTF)



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1.0 Executive Summary

On June 8, 2010, the Committee of the Whole approved the creation of the Vaughan Pedestrian/Street Safety Task Force (PSSTF).

The mandate of the Vaughan PSSTF was to bring together various stakeholders, members of the public and subject experts to formulate recommendations to Council as to the appropriate course of action to deal with the increased number of traffic/pedestrian conflicts on roads in the City of Vaughan. The PSSTF was directed to report back to Council within 12 months (June 2011) with its recommendations.

The PSSTF decided to concentrate on three key areas when formulating recommendations to Council. These areas are:

- Policy Development and Reform
- Operations and Design Standards
- Education and Outreach Programs

The Pedestrian Street Safety Task Force recommends the following:

1. **Sidewalk Policy:** It is recommended that the City of Vaughan review the current policy of not requiring a sidewalk if there are less than 40 units to require sidewalks on at least one side of all residential roads, for all future development;
2. **Pedestrian Charter:** It is recommended that the City of Vaughan adopt a Pedestrian Charter similar to those in other major jurisdictions with the objective of creating healthy, efficient and sustainable communities where people choose to walk;
3. **Pavement Markings:** It is recommended that the City of Vaughan develop a policy to incorporate enhanced pavement markings and lighting at existing and future signalized intersections, with a focus on areas with high pedestrian exposure;
4. **Signalization:** It is recommended that the City partner with the Region of York and MTO to explore the use of “no right on red” at signalized intersections, where it may be beneficial;
5. **Intersection Design Improvements:** That the City of Vaughan in collaboration with the Region of York (where required), audit all intersection infrastructure for opportunities to improve pedestrian safety and that a prioritized list for the planning and programming of future infrastructure remediation that enhances pedestrian safety be prepared in order to identify budget requirements and securing of funds;

6. **Education:** It is recommended that the City of Vaughan continue to partner with the Region of York, York Regional Police and the Province with a view to expanding and enhancing existing educational programs and messages; and,
7. **Education:** It is recommended that the City of Vaughan inform community groups of the availability of Provincial government funding for road safety initiatives.

2.0 Acknowledgements

We wish to express our sincere gratitude to the members of the public of the Pedestrian Street Safety Task Force (PSSTF) for their time in providing their valuable input, and detailed investigation of all the issues related to pedestrian street safety in an effort to improve the quality of life for all Vaughan residents. This report bears the imprint of those members.

We also wish to express our gratitude to the various City and Regional officials and other stakeholder members of PSSTF who rendered their help during the period of this task force for their time and constructive contributions.

Paolo Masaro, Chair

and Liz Bottos, Co-Chair

3.0 Background

The PSSTF met on a monthly basis to discuss and formulate recommendations for Council. The recommendations found in this report have been considered carefully by the PSSTF and are presented as the most practical solutions to satisfy the PSSTF mandate.

For the purpose of this report, references to the Region of York refer to roads and intersections within the Regional road allowance right-of way and references to City of Vaughan refer to roads and infrastructure within the municipal right-of-way.

It should be stated that the implementation of any device or policy to favour pedestrian movement must be shown not to further degrade the operations on a City or Regional roadway. A key component of safety for a road user is expectation; and that a driver of a vehicle has an expectation of consistent design of road infrastructure. For example:

- Stop signs are red octagons;
- Higher posted speeds occur on rural roads; and
- Speed enforcement is common in school zones, etc.

Likewise, a pedestrian has an expectation that:

- Sidewalks are of a uniform width and are traversable;
- Curb-cuts and ramp downs are provided at both ends of a crosswalk;
- Pushing the button provides enough time to cross; and
- The alignment grooves for visually-impaired pedestrians in the sidewalk at the start of the crosswalk provide a safe direction to cross.

When expectancy violations occur, the risk of collisions / incidents increase as the road user has to quickly adjust to the new condition that may not have been expected or anticipated.

The following members of the PSSTF prepared the report:

Paolo Masaro (**Chair**)

Elizabeth Bottos (**Co Chair**)

Tim Arnott

Mark Carafa

Roger Dickinson

Michael Dilorio

Lauri Hewitt

Lance Dutchak

Members from the City, the Region and other Stakeholders include:

- Engineering Services Department Representative
Jack Graziosi, Director of Engineering Services
- Planning Department Representative
Christina Napoli, Senior Planner
- Enforcement Services Department Representative
Tony Thompson, Director of Enforcement Services
- Region of York Transportation Services Representative
Nelson Costa, Manager of Road Safety & Traffic Data Management
- York Region Police Representative
Tony Cusimano, Superintendent
Jason McIlveen, Sergeant
- City of Vaughan Safe City Co-ordinator
Robert Leonardis
- York Catholic District School Board and York Region District School Board Representative
Megan Lui
- Provincial Representative- Ministry of Transportation
Elaine Dimitroff

Documents/Presentations Provided to the PSSTF

The following are a collection of the most significant materials provided to the PSSTF to consider while formulating potential recommendations:

- Pedestrian Collision Statistics Presentation- Regional Municipality of York
- Pedestrian Safety Presentation- City of Vaughan Engineering Services
- Vulnerable Road Users Report 1: Pedestrians- Regional Municipality of York
- Pedestrian Crossing Policy on Regional Roads- Regional Municipality of York

Vaughan Pedestrian/Street Safety Task Force Report (PSSTF)

- Collection of subject related newspaper and magazine articles
- Neighbourhood Traffic Committee Policy and Procedure (Neighbourhood Traffic Calming Plan Proposal)- City of Vaughan
- Warrants for the use of Traffic Calming Measures- City of Vaughan
- School Crossing Guard Locations Policy and Procedure- City of Vaughan
- Transportation Policy- York Region District School Board
- Road Safety Presentation- York Regional Police (**Summary Appendix #1**)
- City of Vaughan Policy Manual, Policy No. 09.1.06, Engineering and Public Works, Development/Engineering Re: Sidewalks in new subdivisions.

4.0 Terms of Reference

The Terms of Reference provided to the PSSTF are:

- *To review the current policies/practices of the City of Vaughan and the Region of York pertaining to our environment and infrastructure;*
- *To discuss issues such as driver and pedestrian education, legislative changes, co-ordination between various government levels and/or departments, public transit, road design recommendations, community involvement, etc;*
- *To work for improved pedestrian safety and better pedestrian access to public transit, schools, workplaces, shops, libraries, community centres, parks, including roads and other public spaces;*
- *To provide a forum for public consultation on pedestrian health and safety, convenience and comfort including working on findings to be brought forward to Committee of the Whole by June 2011;*
- *To provide educational programs to the general public to promote pedestrian and vehicular safety towards making roads a safer environment;*
- *To promote awareness of pedestrian safety as our City continues to grow; and*
- *To report the findings to Committee of the Whole in June, 2011 with a view to improving safety of both our drivers and pedestrians on City and Regional roads.*

A starting point for the PSSTF was to utilize a brainstorming session to determine priorities and establish a schedule for future discussions at subsequent meetings. The outcome of this brainstorming session resulted in the creation of the "Work Breakdown Structure" (**Appendix #2**). This tool was used to track and monitor workflows and timelines in order to achieve the PSSTF mandate in a timely and efficient manner.

As there were numerous topics raised by PSSTF members during the brainstorming session, the group decided to focus its efforts on the following three key areas while formulating recommendations to Council:

- Policy Development and Reform;
- Operations and Design Standards; and,
- Education and Outreach Programs.

5.0 Statistical Information- Pedestrian Injuries and Fatalities

A key component of the PSSTF review was a review of statistical information relating to pedestrian injuries and fatalities in the City of Vaughan and the Region of York as a whole. This statistical information was provided to the PSSTF through two main sources: Pedestrian Collision Statistics Presentation (July 2010) given by York Region Transportation Services and the Vulnerable Road Users Report (August 2009) provided by the Regional Municipality of York.

These two sources provided the PSSTF with the most relevant and up-to-date information on the trends of pedestrian collisions and fatalities across the Region. By analysing these statistics and trends, the PSSTF was able to focus on recommendations that would help reduce the number of pedestrian collisions in the City of Vaughan.

Major highlights from these documents include:

- Most pedestrian collisions that cause injury and fatalities tend to occur in the Fall and Winter months;
- Pedestrian collisions tend to increase during weekdays;
- Pedestrian collisions tend to occur more frequently during the hours of 5:00 pm to 8:00 pm;
- A majority of pedestrian collisions occur at signalized intersections rather than stop sign intersections or mid-block crossings;
- Collisions involving pedestrians account for about 6.7% of all casualty (fatal and injury) on York Regional roads;
- From 2004 to 2009, an average of about 8 pedestrians were killed per year in York Region;
- The statistical information provided in the Region of York “Pedestrian Safety Initiatives”, Report No. 1 of the Transportation Services Committee, Regional Council Meeting of January 27, 2011 (**Appendix #3**), indicates that the trend in the responsibility for injuries and fatalities lies with pedestrians in most collisions; and,

- York Regional Police provided a presentation (**Summary, Appendix #1**), indicating that children and seniors are most vulnerable as pedestrians. The most common error with drivers is speeding and failure to yield right of way.

After reviewing and discussing the available statistical information, policies and practices, it was clear that in order to improve pedestrian and street safety in Vaughan and across the Region, there must be an understanding that pedestrian and street safety is a shared responsibility by the pedestrian and the motorist.

Walking and cycling, are actively being promoted at the regional and municipal level. The City of Vaughan's Vision 2026, the New Official Plan, the Transportation Master Plan and the Pedestrian and Cycling Master Plan all contain objectives aimed at promoting walking and cycling as an alternative mode of transportation. The PSSTF has also taken this regional goal of promoting walking into consideration during the decision making process and ultimately, the recommendations herein.

6.0 Recommendation Background

RECOMMENDATIONS #1 -3 (POLICY)

1. **Sidewalk Policy:** *It is recommended that the City of Vaughan review the current policy of not requiring a sidewalk if there are less than 40 units to require sidewalks on at least one side of all residential roads for all future developments.*

The current City of Vaughan Policy is set out in “*The City of Vaughan, Policy Manual*”, Policy No. 09.1.06, Engineering and Public Works, Development/Engineering Re: Sidewalks In New Subdivisions (hereinafter referred to as “SPM”, **Appendix #4**). The present policy requires one sidewalk on a residential street where there are between 40 and 100 units tributary to the sidewalk route. The City of Vaughan staff, at the request of Council, conducted a survey of 16 GTA municipalities and concluded that Vaughan Policy is below the industry standard in this respect. Thirteen of the sixteen municipalities surveyed require at least one sidewalk on all local residential roads except cul-de-sac, regardless of the number of units on the street. The three exceptions were:

1. City of Brampton - requires a sidewalk where there are between 25-50 units fronting the street;
2. Town of Caledon -relates need for sidewalk to average annual daily traffic on street; and
3. City of Burlington - similar to the City of Vaughan, but has a lower threshold of 30 units.

(Refer to page’s 7-10 of “SPM” **Appendix #4**)

The Mayor’s Task Force on Community Safety & Security, chaired by Julian Fantino (submitted to Council September 18, 2006) also recommended (on page 26 thereof, **Appendix #5**) the implementation of a policy requiring sidewalks on all residential streets to ensure the safety of pedestrians.

The “SPM” identifies the estimated costs by the developer associated with constructing sidewalk and its inherent maintenance costs by the City, however it should be mentioned that these costs are not the driving force in deciding whether or not sidewalk should be installed in these scenarios.

The task force strongly believes that pedestrian safety should trump these financial considerations. The goal is to encourage more pedestrian movement and to ensure that all pedestrians, and in particular, the vulnerable members of our community such as children,

the elderly, the disabled and parents with *children in strollers should be able to walk their neighbourhood and feel safe. The current policy is not consistent with this goal.*

2. **Pedestrian Charter:** *That the City of Vaughan adopt a Pedestrian Charter similar to those in other major jurisdictions with the objective of creating healthy, efficient and sustainable communities where people choose to walk.*

The Task Force established that, unlike many other large municipalities, the City of Vaughan does not yet have a Pedestrian Charter. The City of Toronto Pedestrian Charter, which is very similar to most pedestrian charters in other municipal and regional jurisdictions, has been identified as a good model by the PSSTF.

A Pedestrian Charter for the City of Vaughan will promote a culture of walking by ensuring that pedestrian facilities of all types are comprehensively integrated into transportation planning within the City. A copy of the City of Toronto's Pedestrian Charter is included in **Appendix #6**.

3. **Pavement Markings:** *That the City of Vaughan develop a policy to incorporate enhanced pavement markings and lighting at existing and future signalized intersections, with a focus on areas with high pedestrian exposure.*

City Staff indicated that the City has 60 signalized intersections for which they are responsible. The PSSTF is recommending that the City investigate and audit the incorporation of enhanced pavement markings and lighting at existing and future signalized intersections under the jurisdiction of the City of Vaughan and partner with the Region for Regional signalized intersections.

The primary purpose of crosswalk markings is to guide pedestrians to the most appropriate crossing location and to advise drivers where to stop for pedestrians.

Zebra markings are an example of enhanced pavement markings. The Region confirmed that it has two pilot projects for zebra markings; Kipling Avenue and Highway #7 in Woodbridge and one at Yonge Street and Gamble Road in Richmond Hill. According to the Pedestrian Safety Initiatives report (**Appendix #3**), zebra markings increase the crosswalk marking from 7% of the crosswalk area to 40% which increases the conspicuity and visibility of the pedestrian crosswalk area for pedestrians and drivers at all times of the day. (Figure 8 and 9, **Appendix #3**).

On January 10, 2011 an email was sent on behalf of the PSSTF to the Mayor and Vaughan Regional Councillors requesting their support of the Region of York's January 12, 2011 Report entitled "Pedestrian Safety Initiatives".

The Region of York has developed a five year program to install zebra markings at all signalized intersections with priority for areas where there is high pedestrian exposure.

RECOMMENDATIONS # 4- 6 (DESIGN)

4. **Signalization:** *That the City partner with the Region of York and MTO to explore the use of "no right on red" at signalized intersections, where it may be beneficial;*

Right-turn-on-red prohibition.

The use of right-turn-on-red prohibitions as a pedestrian safety tool at signalized intersections is not recommended without the application of sound engineering principles as the utilization of "no" right on red may not have the positive effects they are intended to have. What may work at one intersection may not at another and each intersection must be reviewed on an individual basis.

It is recognized that York Region and the City of Vaughan are experiencing very high levels of traffic congestion, delays and increased travel times on Regional and City roads caused in part, by ineffective transit, too many single-occupant vehicles and road network improvements that lag behind development.

The restrictive nature of this prohibition requires very specific circumstances and justification which can only be determined through the engineering review of each unique application.

In accordance with Ontario Transportation Manual (OTM) (Book 5, July 2001) the right-turn-on-red prohibition may be implemented and the corresponding signs may be used in the following situations:

Bullet points below are referenced from the Ontario Traffic Manual (OTM) Book 5 July 2001:

- If there is evidence through observation and /or related collision experience, that many drivers are not stopping for a red signal prior to making a right or left turn, as required by the Ontario Highway Traffic Act;
- If a multi-phase traffic signal operation is used to control right turns and/or left turns independently;
- If there is evidence of a statistically significant large number of vehicle/pedestrian-accidents which cannot be reduced by other methods previously tried; or
- Where there is recurring high volume of pedestrians crossing at defined times of the day in which case a time-of-day restriction could be used.

The improper and overuse of this prohibition without endorsement by an engineering review will lead to unintended consequences. It is likely that the unintended consequences will become more problematic than the original issue being addressed. For example:

- Increased traffic queues, congestion and travel times on an already congested City and Regional road network;
- Increased traffic infiltration and associated increased risk to vulnerable road users in an adjacent residential area by motorists trying to by-pass the restriction;
- Motorists, frustrated at being denied entrance to the intersection on a red light may be less likely to yield to pedestrians when turning right on a green light;
- Traffic by passing the turn restriction by cutting through commercial properties, such as gas stations located at the corner of an intersection;
- Motorists simply ignoring the restriction if they do not perceive any risk in ignoring the prohibition. (Such as unrestricted visibility of approaching traffic stream, no police visible in the area and no bikes or pedestrians waiting to cross); and,
- Frustration with the lack of police enforcement of the restriction due to prioritized resources.

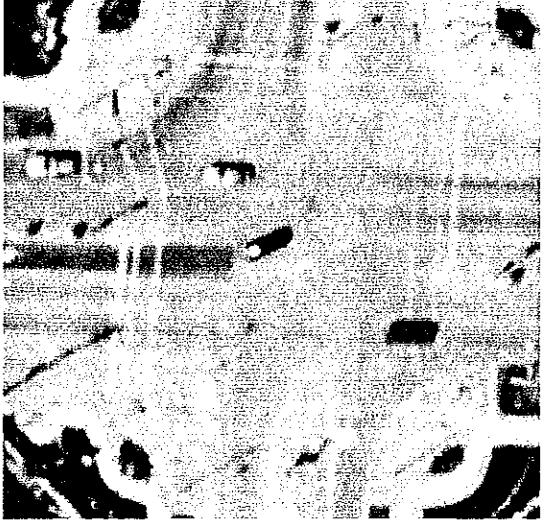
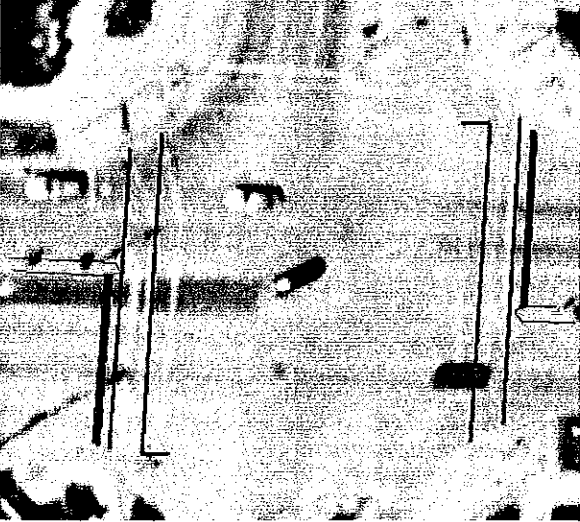
An additional suggestion for improvements to signalization is that enhanced pedestrian activation devices (push button) be incorporated at signalized intersections such as a "WAIT" light.

5. **Intersection Design Improvements:** *That the City of Vaughan in collaboration with the Region of York (where required), audit all intersection infrastructure for opportunities to improve pedestrian safety and that a prioritized list for the planning and programming of future infrastructure remediation that enhances pedestrian safety be prepared in order to identify budget requirements and securing of funds;*


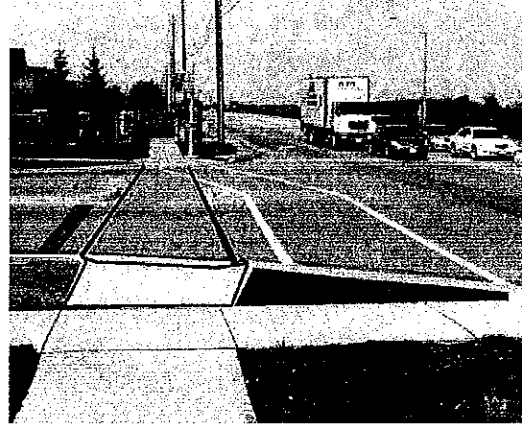
A potential safety risk exists when a pedestrian is not afforded a straight-across alignment of a crosswalk or a pedestrian needs to cross where the sidewalk infrastructure does not exist where it should, thus causing the pedestrian(s) to make a change in their travel path to remain within the designated crosswalk.

The PSSTF identified some examples of local and collector road crossings that presented opportunities for improvement for the safe crossing of pedestrians. These examples are considered a small representation a larger group of potential examples. The PSSTF feels that it is imperative to audit all similar crossings.


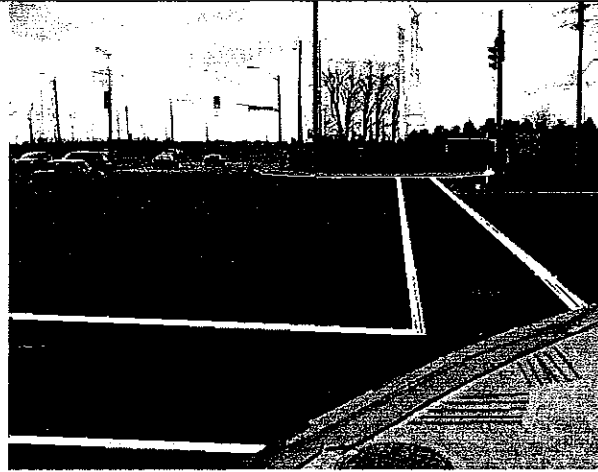
Example 1: Alignment of Pedestrian Crosswalk at intersection

Existing Intersection	Proposed re-design of the crossing
	
<p>The northbound and southbound pedestrian has to make a crossing path alignment change after crossing the curb lane of traffic which contributes to a longer crossing distance.</p>	<p>A solution is to cut back the divisional islands and relocate the traffic signal poles which would allow the crosswalk to be straightened and also shorten the overall crossing distance.</p>

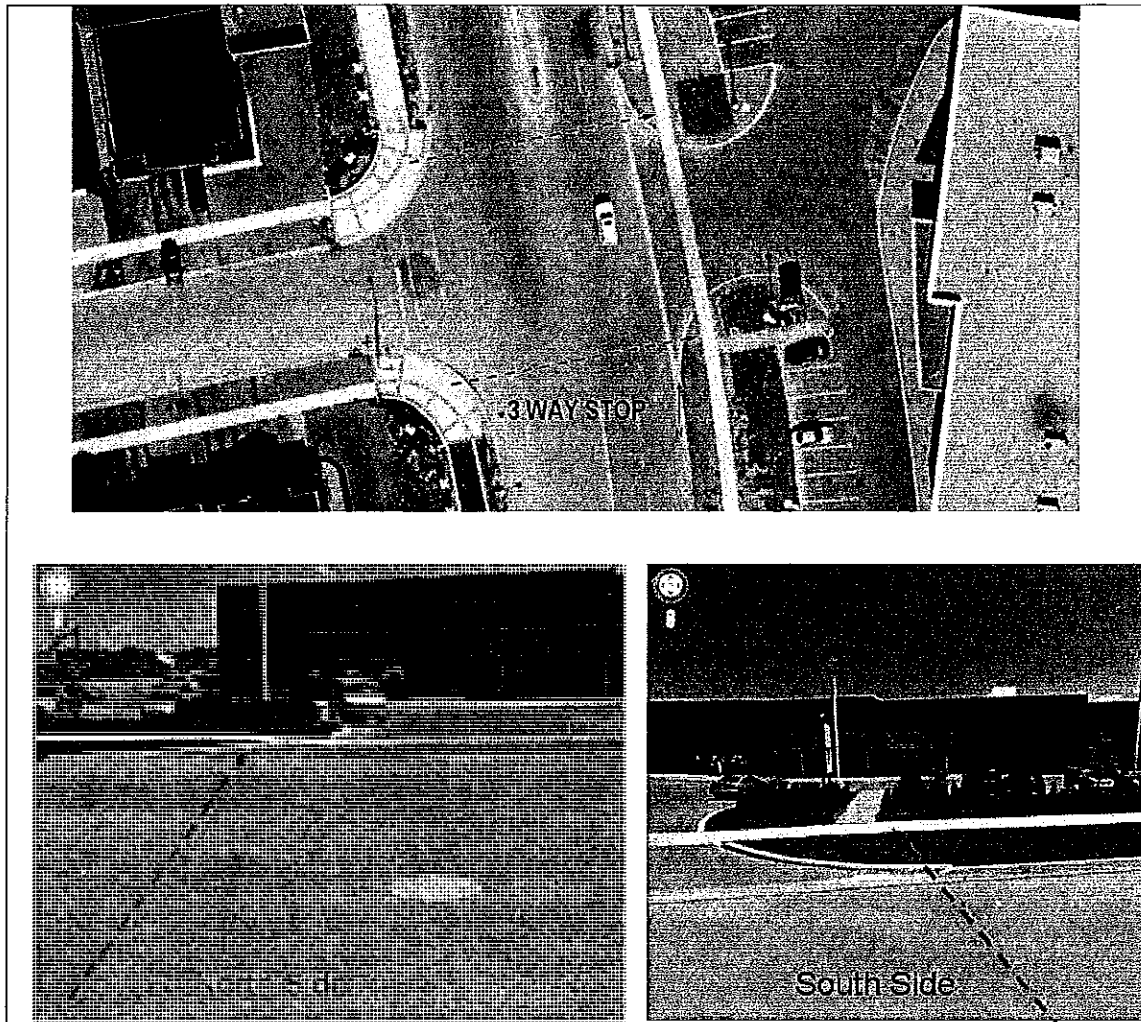
Example 2: Alignment of Pedestrian Crosswalk at intersection

Existing crossing	Proposed re-design of the crossing
	
<p>Although the sidewalks are in alignment on either side of the road, the pedestrian crossing has to make a major alignment change at the half-way point.</p> <p>How would a visually impaired pedestrian safely cross here?</p>	<p>The proposed design requires the island to be cut back (shortened so it does not extend as far into the intersection) in order to allow straight-line pavement markings for the pedestrian crossing which aligns with the existing sidewalks on either side of the intersection.</p> <p>This design would make this crossing safer for all pedestrians especially the visually-impaired.</p>

Example 3: Alignment of Pedestrian Crosswalk at intersection

Existing crossing	Proposed re-design of the crossing
	
<p>A pedestrian wishing to cross from the East to the West side would first have to cross against the light to get to the east-west crosswalk and cross the path of a vehicle turning right to head north.</p> <p><i>Who would have the right of way?</i> How would a visually impaired or vulnerable pedestrian cross this intersection safely?</p>	<p>A better design that would reduce the pedestrian / vehicle conflict would have been to cut back the divisional island on the north leg of the intersection and moved the crosswalk further north. The loss of 1.5 car lengths of storage could be made up by extending the southbound left turn lane further north. Moving the East side North-South crosswalk further east would also improve the crossing interface at this corner.</p>

Example 4: Missing Sidewalk infrastructure.

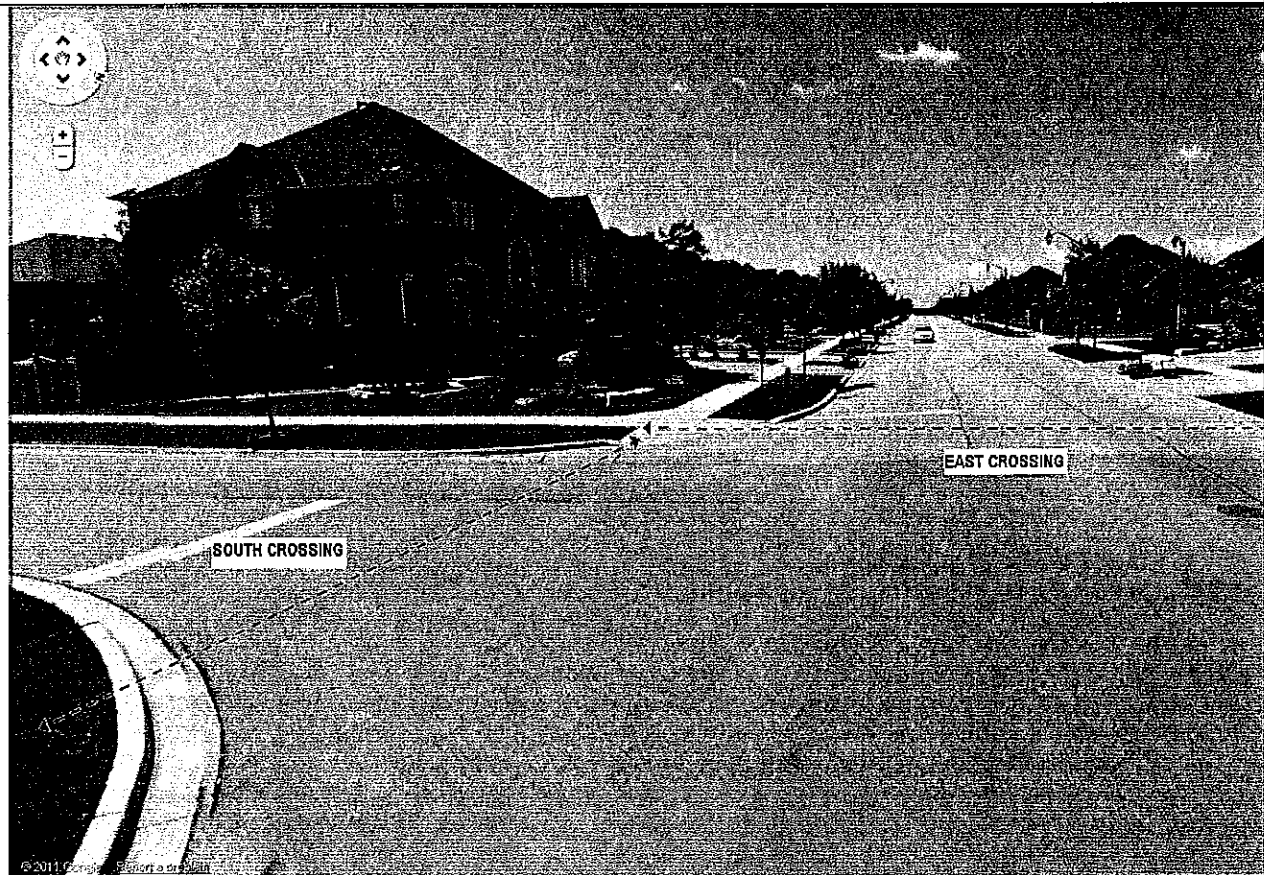


Pedestrians crossing from the concrete sidewalk on the west side of the street, cross onto the driveway apron of an industrial/commercial building. On the north side pedestrians and vehicles will encounter each other as the vehicle attempts to turn north to exit the parking area with the possibility of a collision. Similarly on the south side a potential hazard exists for pedestrians crossing onto either the driveway apron or onto the boulevard.

Example 5: Missing Sidewalk infrastructure.



Identifies a similar scenario in an existing subdivision where pedestrians are required to cross a controlled intersection onto the opposite side of the road where they are not received by a similar sidewalk pad creating an unsafe condition.



Improvement to this particular intersection would require physical alteration of either the west side or east side, however infrastructure alterations to the east side only would achieve the desired result, and therefore be more cost effective.

Improving these scenarios would require physical alterations to the existing curb, sidewalk, and asphalt driveway apron and sodded boulevards. In an effort to mitigate retrofit costs to the City, a greater onus on the review of development on Regional and Municipal roads in accordance with municipal standards should be emphasized.

RECOMMENDATION # 6-7 (EDUCATION)

6. Education:

That the City of Vaughan continue to partner with the Region of York, York Regional Police and the Province with a view to expanding and enhancing existing educational programs and messages. Examples include:

- Provide Pedestrian Safety education programs to retirement homes, high schools and elementary schools;
- Add educational pamphlets in utility bills;
- Engage the local media to get the messages out;
- Advertise safety inside the local transit buses; and,
- Target young children and their parents.

The education of street safety is a collective responsibility. Education plays a vital role in ensuring our streets are safe for pedestrians, cyclists and motorists. According to York Regional Police (presentation to PSSTF on December 2, 2010), the improvement of safety on our streets will follow.

Traffic safety is built on the combination of Engineering, Enforcement, and Education (the 3 "E's"). The harmony and continual improvement of these three critical areas form the foundation of road safety. York Regional Police have a number of educational initiatives including: "Community Safety Village", "Cross Smart" and the ABC program. Active steps have been taken to improve road safety. PSSTF suggests that these programs focus on the specific age demographics to continue their success. This approach will ensure the most effective means of educating the public on steps that they can take to improve not only their safety but the safety of others. Targeting individual groups and determining the most effective techniques is vital to educating the public on their roles as citizens to ensure that our streets are safe to walk, ride or drive.

Important strides have been made over the last few years to improve and revise ways of educating the public on their role in street safety.

The Region of York, York Regional Police, and the Province and have either created or partnered on the following initiatives:

- National Public Works Week Family Day Fun
- Operation Cross Smart
- Secure your Future - Wear Your Seatbelt

- Project E.R.A.S.E. (Eliminate Racing Activity on Streets Everywhere)
- Operation Disqualified
- Operation Winter Blitz
- Impaired Driving Countermeasures (R.I.D.E.)
- Drug Recognition Expert Program
- Safe Roads. Your Call 9-1-1
- Commercial Motor Vehicle Safety
- Cycle Smart
- Road, Rail and Community Safety Day
- The P.A.R.T.Y. (Prevent Alcohol and Risk Related Trauma in Youth) Program
- Operation ABC – Always Be Careful
- Operation Stay Focused

The Ministry of Transportation (MTO) has the following initiatives in the GTA:

- S.T.E.P. U.P. (Safety Tips for Educating Pedestrians in an Urban Population), which includes a presentation and information cards.
- Promoting pedestrian safety was included as theme for activities for the 2009-2011 Safety Challenges (sponsored by MTO).
- MTO partnered with the Ontario Physical and Health Education Association to develop cross-curriculum resources for teachers to incorporate road safety education into their lesson plans for students from kindergarten to grade 12. The materials are designed to educate children and teenagers about road safety, promote behavioural change and offer students the life-skills they need to be safe pedestrians, passengers, cyclists, and drivers. Every Ontario school board, secondary school and elementary school received these resources in the fall of 2009. The resources are also available online at www.ontarioroadsafety.ca.

Events like these provide the ability for staff to interact and communicate with the public. In doing so it becomes clear that public campaigns are an effective means of communicating the message of public safety to a wide variety of age groups.

The York Regional Police have recently developed a video entitled “Cross Smart.” This media presentation provides an effective way of educating children, teens and adults by visually demonstrating the proper way of crossing a street. Visual media seems to have a greater impact on the younger population; for the most part because it provides concise and recurring themes, as well as situations to which the younger population can relate. By exploring more effective media outlets such as radio or television, and incorporating public campaigns through popular radio stations and public service announcements, these safety tips become a part of our every day psyche. Along with the continuing efforts by the York Regional Police to build upon the messages of various media outlets, it becomes a collaborative effort which is the ultimate goal in ensuring that our streets are safe for everyone.

7. **Education:**

That the City of Vaughan inform community groups of the availability of Provincial government funding for road safety initiatives.

The Ministry of Transportation (MTO) has created the Road Safety Challenge (RSC) which provides funding to help achieve its goal of engaging the participation of road safety groups and community members to work together to make Ontario's roads safer.

Now in its 15th year, the 2011 RSC is sponsored by the Ministry of Transportation and remains a community-driven event. The Challenge raises awareness of road safety issues at the local level through special activities that address local and provincial concerns. Communities are challenged to help reduce collision-related deaths and injuries.

The RSC provides an opportunity for public agencies to form partnerships and alliances with community groups and the private sector to raise awareness of road safety issues. In many cases, it lays the groundwork to continue this working relationship throughout the year. Refer to the "Road Safety Challenge *Information Package*" **Appendix #7**.

By coordinating the resources of various levels of government and stakeholders working in harmony, the message regarding street safety can be effectively delivered and retained. Street Safety is everyone's responsibility and success in this endeavour ultimately relies on continued collaboration in the development and execution of new and existing public campaigns.

7.0 Conclusion

The PSSTF would like to thank the City of Vaughan for making the necessary resources and expert staff available for the development of the recommendations and ultimately this report. The PSSTF is optimistic that the recommendations presented through this report will be taken into consideration by Vaughan City Council in an effort to help reduce pedestrian injuries and fatalities on the streets and sidewalks across the City of Vaughan.

8.0 Appendices

Appendix #1	York Regional Police Summary of Road Safety Presentation
Appendix #2	Work Breakdown Structure
Appendix #3	Region of York Report No. 1 of the Transportation Services Committee Regional Council Meeting of January 27, 2011
Appendix #4	City of Vaughan Sidewalk Policy Manual
Appendix #5	Mayor's Task Force on Safety and Security Submission to the City of Vaughan Council, dated September 18, 2006
Appendix #6	Draft of City of Toronto Pedestrian Charter
Appendix #7	Road Safety Challenge Information Package

Appendix #1

York Regional Police – Summary of Road Safety Presentation

E. Bottos, Dec. 16, 2010

SUMMARY OF YORK REGION POLICE PRESENTATION OF DECEMBER 2, 2010

THEME - Road Safety is a shared responsibility of Police/Region and Citizen

STATISTICS- York Region 1,020,196 residents
2000 pedestrians per day at some York Region intersections
2009- 19,248 collision reports

Traffic Safety is built on the 3 E's – Engineering, Enforcement, Education

1. ENGINEERING- responsibility of transportation and works
-police participate in the road planning process
2. ENFORCEMENT-benefits are deterrence and increased sense of safety
 - (i) New Legislation- Bill 203- Stunt driving (50km over)
Bill 126- Graduated licensing
Bill 118- Cell Phone ban
Bill 41- Speed limiting devices on cars
 - (ii) Change behavior through
 - Fines
 - Insurance increases
 - Demerit points
 - Vehicle impound
 - *Insurance of license
 - Criminal Changes (can restrict future travel)

Ex.	20 +	3 points	\$95.00
	30+	4 points	\$220.00
	40+		\$295.00
	50 +		\$10,000- suspension- vehicle impounded

STATS ON ENFORCEMENT

2009- 13% of fatal collisions involve alcohol

Stopped 130,000 Vehicles

1,655 Breath Tests

62 12hr suspensions

55 3 day suspensions

2010 To Date – 254 arrests- many originate from 911 calls

2009- 65,634 speeding tickets
 64,000 stop sign violations
 2,003 running red /amber light
 1712 careless driving charges

3. EDUCATION-

(a) Community Safety Village – Stouffville

- Designed to train children on road safety
- Village of streets, cars and children drive cars through the village obeying the rules of the road
- 35,000 children per year attend
- also has a cycle smart program and helmet and bike safety program

(b) ABC Program- in schools- May/June Sept/Oct

- Grade 1 program for Grade 1 students
2009, 6,000 students attended
- Grade 3 Bike Safety on the roads
2009, 3,000 students attended
- Pedestrian Safety Program
15,000 Students attended

(c) ERASE –Targets street racing

- For high school students
- Power point presentation
- Very dramatic
- Bring in damaged vehicles

(d) CROSS SMART- Program that was rebranded last year

- Each week in the maple division and King City they pick a cross smart location and target it at peak congestion times.
- 415 charges laid in Vaughan alone this year to date
- 1885 warnings to motorist and pedestrians
- 1403 tickets issued since June 25, 2010, more to motorists than pedestrians

(e) Partner with other Community Groups

- Road Watch
- MADD
- St. John Ambulance
- City of Vaughan
- It Starts With You- Min of Trans

SUGGESTIONS- Start Road Watch Committee

STATISTICS

1. Children and Seniors most vulnerable pedestrians
40% of pedestrian incidents involve people under 16 and over 64%
2. Pedestrians who are struck are most likely to be running onto the roadway or crossing at an intersection without the right of way when struck.
3. Most common drivers error- speeding and failure to yield right of way
4. 2009- 6 pedestrian deaths
5 seriously injured pedestrians
2010- 10 pedestrian deaths
5. Left Turn -- 2.6 times more likely to kill a pedestrian when making a left turn than a right turn
6. More fatalities likely by 21-34 year old male drivers

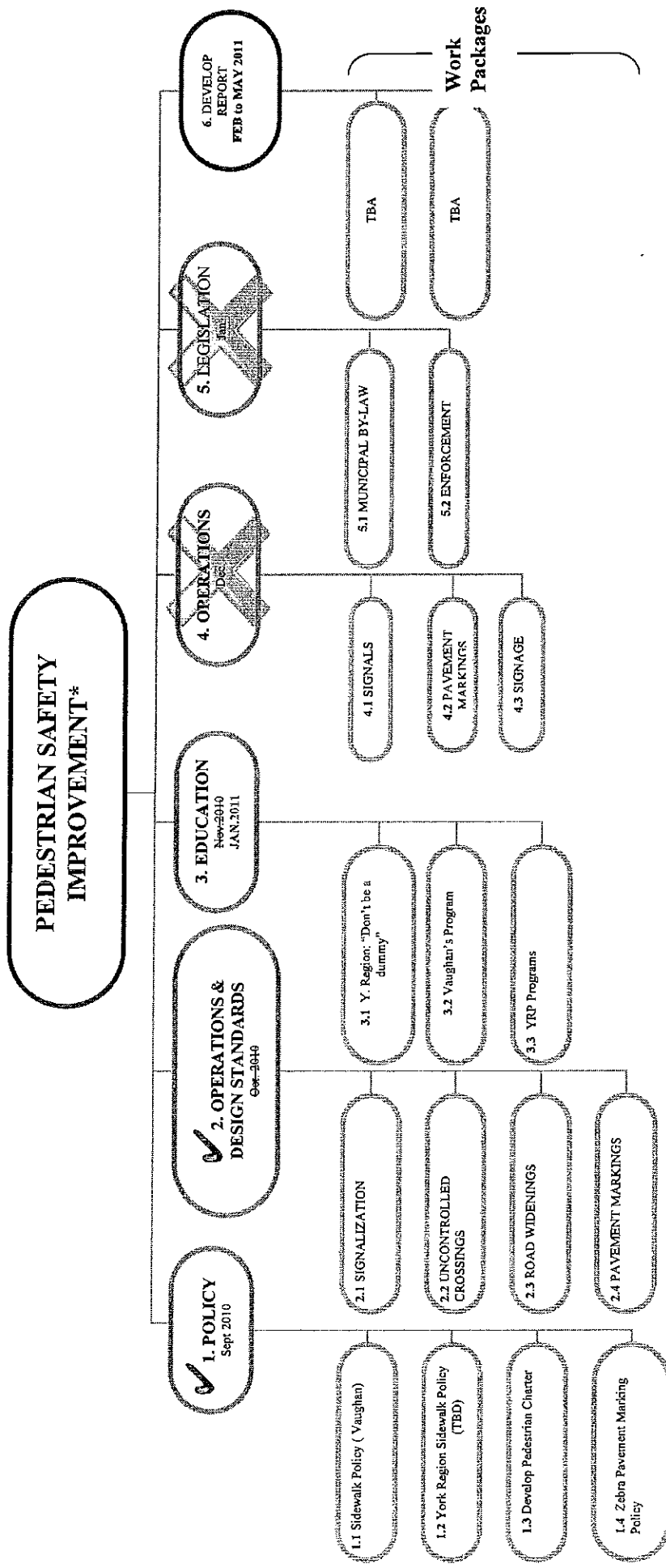
Appendix #2

Work Breakdown Structure

Task Force Progress: March 2011

Work Breakdown Structure

Scope Baseline: Provide recommendations in order to improve pedestrian and street safety.



Deliverables:
Are the recommendations that are the outputs from each work package or scheduled topic for discussion

- Define activities
- Sequence activities
- Est. activity resources
- Develop a schedule

- **Execute and control schedule**

MTG	Date	Original Scheduled Discussion	Actual Discussion
1	June 2010		<ul style="list-style-type: none"> • Introduction meeting
2	July 2010		<ul style="list-style-type: none"> • Selection of chair • Request for recommendations for improvement/challenges from members
3	Aug 2010		<ul style="list-style-type: none"> • Review and prioritize recommendations for future discussions • Develop Work Breakdown Structure (WBS)
4	Sept 2010	POLICY	<ul style="list-style-type: none"> • Review WBS • Review first item "Policy" from WBS
5	Oct 2010	DESIGN	<ul style="list-style-type: none"> • Policy Recommendations: 4
6	Nov 2010	DESIGN	<ul style="list-style-type: none"> • Design Recommendations: 0 • Items deferred to next meeting
7	Dec 2010	EDUCATION	<ul style="list-style-type: none"> • Design Recommendations: 4 • Education Recommendations received • Balance of Education deferred
8	Jan 2011	OPERATIONS	<ul style="list-style-type: none"> • Delete OPERATIONS and or LEGISLATION from schedule • Education Recommendations: 1 • A list of Programs that the Region of York, York Region School Board and the York Regional Police currently have, is required. These initiatives will be listed in the report.
9	Feb 2011	LEGISLATION	<ul style="list-style-type: none"> • Review all recommendations (Policy, Design and Education) and start drafting the report
10	Mar 2011	(Report)	
11	April 2011	(Report)	
12	May 2011	(Report)	
13	June 2011		Submit report!!

Summary of Approved Recommendations to date:

POLICY	DESIGN	EDUCATION
<p>1.1 Sidewalk Policy:</p> <p>It is recommended that the City of Vaughan review the current policy of not requiring a sidewalk if there are less than 40 units to require sidewalks on at least one side of all residential roads</p>	<p>2.1 Signalization</p> <p>That the City of Vaughan in collaboration with the Region of York (where required), audit all the signalised intersection infrastructure for opportunities to improve pedestrian safety and that a prioritized list for the planning and programming of future infrastructure remediation be prepared in order to identify budget requirements and securing funds.;</p> <p>Examples include:</p> <ul style="list-style-type: none"> • A "WAIT" light be incorporated with the pedestrian push buttons. • 2 stage crossings at 6 lane or greater intersections. • TBA - Roger Dickinson to reword the recommendation A1 from his submission 	<p>3.1 Education</p> <p>That the City of Vaughan, Region of York and York Region Police continue to expand and enhance existing educational programs and messages.</p> <p>Examples include:</p> <ul style="list-style-type: none"> • Visit Retirement Homes, High Schools and Primary Schools with the messages and lessons on Pedestrian Safety. • Add educational pamphlets to the City of Vaughan tax bills. • Engage the local media to get the messages out. • Advertise safety inside the local transit buses. • Target young children and their parents.
<p>1.2 Pedestrian Charter:</p> <p>That the City of Vaughan adopts a Pedestrian Charter similar to those in other major jurisdictions with the objective of creating healthy, efficient and sustainable communities where people choose to walk</p>	<p>2.1 Signalization</p> <p>That the city partner with the Region of York and MTO to explore the use of "no right on red" at signalised intersections;</p>	
<p>1.3 Pavement Markings:</p> <p>That the City of Vaughan develops a policy to incorporate enhanced pavement markings and lighting at existing and future signalized intersections, with the focus on areas with high pedestrian exposure.</p>	<p>2.2 Uncontrolled Crossings</p> <p>That the City of Vaughan develop a program to identify (audit) local and collector road intersections for opportunities to improve pedestrian infrastructure; and that a prioritized list for the planning and programming of future infrastructure remediation be prepared in order to identify budget requirements and securing of funds;</p>	
	<p>Other:</p> <p>That the City identifies areas of high pedestrian traffic and employ additional signage to increase the public awareness of pedestrians. i.e. near school zones/community centres, malls or signalised intersections where higher pedestrian traffic exists.</p>	

Appendix #3

**Region of York Report No. 1
Of the Transportation Services Committee
Regional Council Meeting of January 27, 2011**

2

PEDESTRIAN SAFETY INITIATIVES

The Transportation Services Committee recommends the adoption of the recommendation contained in the following report dated January 3, 2011, from the Commissioner of Transportation Services.

1. RECOMMENDATION

It is recommended that the Regional Clerk circulate this report to the Clerks of the local municipalities.

2. PURPOSE

This report advises Regional Council of continuing efforts to improve pedestrian safety on the Regional road system.

3. BACKGROUND

York Region Transportation Services staff work collaboratively with each local Municipality and York Regional Police to improve pedestrian safety

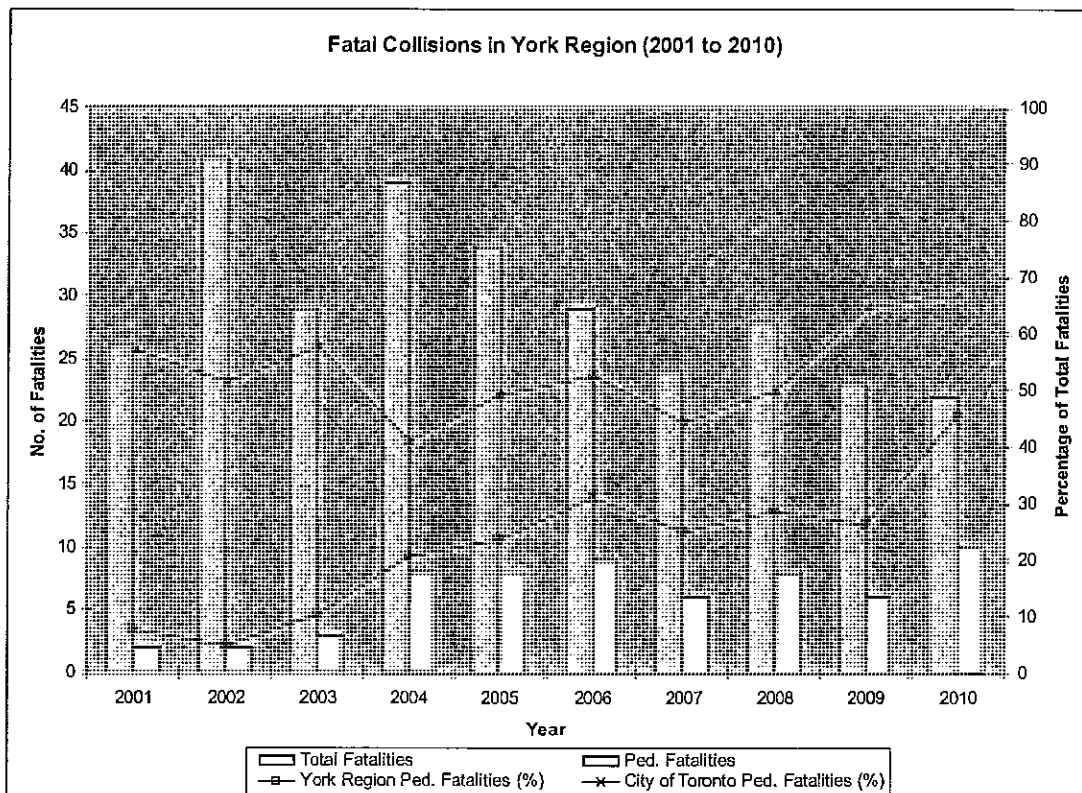
While we work collaboratively with each local municipality on project-specific pedestrian safety issues, Regional staff and York Regional Police are also currently working with the City of Vaughan on their Pedestrian/Street Safety Task Force. This Task Force reviews current policies and practices of both the City and the Region pertaining to environment and infrastructure. The Task Force will present findings to Vaughan Council as to a suggested course of action to deal with the increased number of traffic and pedestrian conflicts on roads in the City of Vaughan. In addition, York Region Transportation Services staff work closely with York Regional Police to set appropriate speed limits on Regional roads.

Collision statistics identify the need to improve pedestrian safety in York Region, as well as in other jurisdictions across the Greater Toronto Area

A review of the Region's 2001 to 2010 collision statistics shows that the number of roadway fatalities has remained relatively constant over the past 10 years. As reported in the media last winter, there was a spike in pedestrian fatalities across the Greater Toronto Area in early 2010. While such a cluster of incidents at first seems alarming, a review of past occurrences such as this indicates that such sudden spikes are random events. There are no particular factors that led to last winter's numerous pedestrian fatalities in the

Greater Toronto Area. However, an analysis of our own data does show the percentage of fatalities involving pedestrians have been on the rise in York Region over the last decade (see Figure 1).

Figure 1
2001 to 2010 Fatal Collision Statistics



The trend identified in Figure 1 is consistent with statistics from the City of Toronto, which are also shown in the figure. In fact, studies conducted by the Insurance Institute for Highway Safety (IIHS) suggest that this type of trend is mainly attributable to the following:

- a) Increases in pedestrian activity – as the Region continues to urbanize, more trips are being made on foot. The increased interaction between pedestrians and vehicles unfortunately increases the likelihood of collisions. Growing transit usage also means more people walking on our streets because transit riders are always also pedestrians.
- b) Improvements in vehicle safety – advancements in vehicle design and new technology have reduced the likelihood of fatalities for drivers and passengers. Unfortunately, there are few options to provide pedestrians with the same safety benefits.

- c) The aging population – a large proportion of pedestrian fatalities involve seniors who are more susceptible to serious injury or death in the event of a vehicle-pedestrian collision. A 2004 Transport Canada study that analyzed collision statistics over a 10-year period indicated 26.9% of male pedestrian fatalities and 38.6% of female pedestrian fatalities involved pedestrians over the age of 65. Figures 2 and 3 summarize the pedestrian fatality and injury data from the Transport Canada study.

Figure 2
 Male Pedestrian Fatalities and Injuries

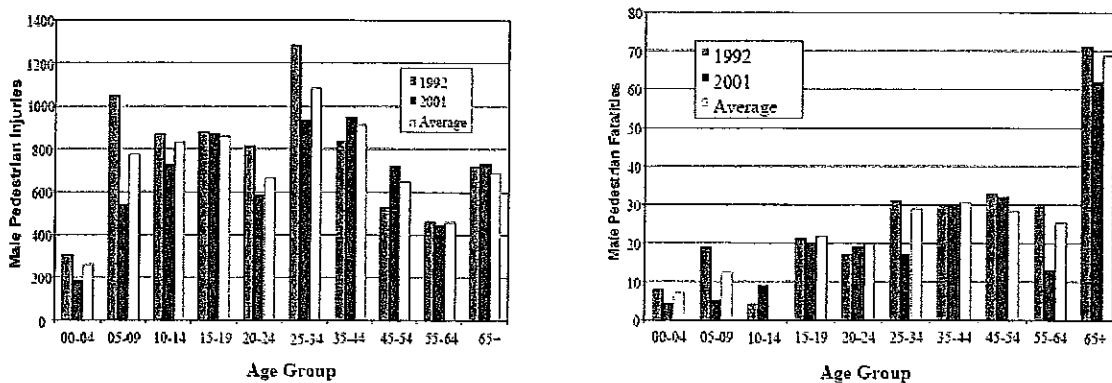
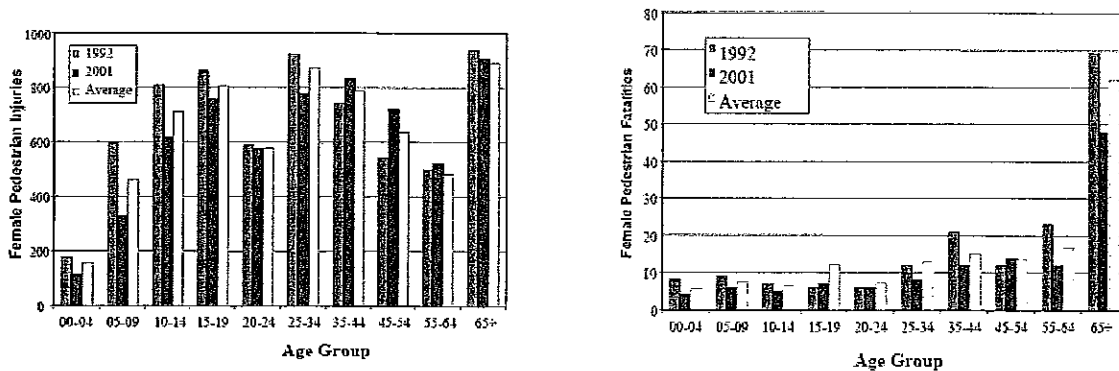


Figure 3
 Female Pedestrian Fatalities and Injuries



While the Region compares favourably to the City of Toronto, we need to be aware that as areas of the Region urbanize, we will face the common challenge of accommodating higher volumes of pedestrians and motorists as safely as possible.

4. ANALYSIS AND OPTIONS

This report outlines the pedestrian safety actions taken to date by Regional Council, including those actions which are still in progress and new activities which will be put before Council for consideration during this term.

Pedestrian safety actions which have been approved by Regional Council that are currently underway are:

- Pedestrian countdown signal installations
- Increased pedestrian crossing time at traffic signals
- Public education campaigns

The activities which will be brought forward to Regional Council during this year are:

- Revised speed limit policy
- Audible pedestrian warning system pilot project on YRT/VIVA buses
- Zebra crosswalk marking installations

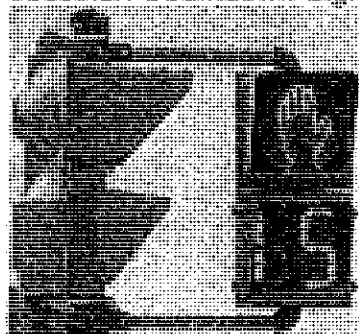
PEDESTRIAN SAFETY ACTIONS CURRENTLY UNDERWAY

Pedestrian Countdown Signal Installations

The installation of countdown signals at signalized intersections provides additional information and comfort for pedestrians

The pedestrian countdown signal is a supplement to the pedestrian signal that provides a visual indication of the time remaining to cross the street. A descending numerical countdown in seconds is provided once the “Don’t Walk” flashing red outline of a hand starts. The countdown indicates how many seconds are available for pedestrians to safely cross an intersection before the amber vehicle signal appears. The pedestrian countdown signal is shown in Figure 4.

Figure 4
Pedestrian Countdown Signal



Countdown pedestrian signals are intended to aid pedestrians in completing their crossing before they would be exposed to the danger of oncoming motor vehicles. A countdown signal can reassure a pedestrian currently in the crosswalk when the flashing Don't Walk phase appears that he or she still has time to finish crossing and does not need to panic, run to the opposite side, return to the starting side, or stop in the middle of the street.

Since 2007, pedestrian countdown signals have been installed at all new signalized intersections as well as existing signals with high volumes of pedestrians.

In 2010, the Region installed pedestrian countdown signals at 500 signalized intersections. There are approximately 200 intersections that are not currently equipped with pedestrian countdown signals. Over the next couple of years, all signalized intersections in York Region will be equipped with pedestrian countdown signals in conjunction with scheduled intersection improvements.

Increased Pedestrian Crossing Time

Providing additional pedestrian crossing time at signalized intersections will protect pedestrians in the crosswalk

When determining the overall timing and phasing at an intersection, there must be enough traffic signal green time provided to ensure pedestrians are able to cross the street safely and comfortably.

The Ontario Traffic Manual suggests the standard walking speed of 1.2 metres per second for adults or a reduced walking speed of 1.0 metre per second at other intersections which are frequently used by children, senior citizens or other persons with a limited gait. This lower walking speed helps ensure these vulnerable road users are allocated enough green time to comfortably cross the street.

Over the past year, in response to some comments from the public and as part of our signal timing optimization reviews, staff found the existing pedestrian crossing times at all signalized intersections had been based on the faster walking speed of 1.2 metres per second. This walking speed would have been used in the past on Regional roads when the emphasis on minimizing vehicular delay was a higher traffic operational priority than accommodating pedestrians. However, with Regional Council's Official Plan commitments to active transportation and emphasis on walking as an important mode of transportation, Regional staff are now using a standard walking speed of 1.0 metre per second at all signalized intersections; thereby giving more time to pedestrians to comfortably cross the street. This walking speed will provide sufficient crossing time for all pedestrians, including children, senior citizens and other persons with a limited gait.

This walking speed methodology for traffic signal timing design is emerging as a best practice for pedestrian safety and has also been adopted by the City of Ottawa, the City of Toronto and the Region of Waterloo.

Public Education Campaigns

Public education campaigns targeting children, teens and seniors are essential tools to reduce pedestrian injuries and fatalities

The Region has conducted public education campaigns to inform the public about pedestrian safety in partnership with York Region Police, Public Health and EMS. Some events have taken place at the Community Safety Village where there is a combined police and fire education classroom with working traffic signals and a fully equipped apartment where students learn to plan and execute a safe escape in case of an emergency. In 2010, the Region's public education campaigns included the Road, Rail & Community Safety Day and the National Public Works Week Family Fun Day in May and the Pedestrian Day on Main Street, Markham in August (see Figures 5 and 6). These events provide great opportunities for staff to interactively communicate with the public, especially children, regarding pedestrian safety. Along with a traffic safety brochure titled "*How to Cross the Street Safely – A Guide for Kids*" (see Attachment 1), valuable pedestrian safety tips have been provided to the public.

Figure 5
Road, Rail & Community Safety Day
Community Safety Village

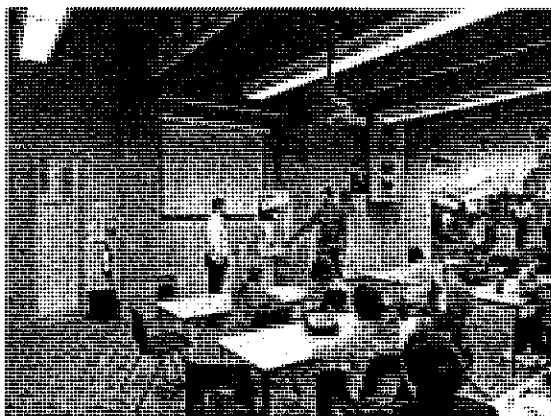


Figure 6
Pedestrian Day
Main Street Markham



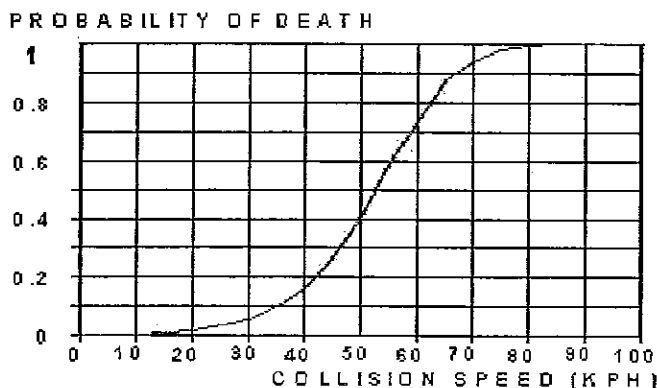
PROPOSED PEDESTRIAN SAFETY ACTIONS FOR FUTURE COUNCIL CONSIDERATION

Revised Speed Limit Policy

Vehicle speeds are directly related to the probability of pedestrian injury or death in collisions

In the case of a collision involving a vehicle with a pedestrian, the probability of pedestrian death or severe injury is directly related to the speed of the vehicle at the time of collision. Doubling a vehicle's speed results in a stopping distance four times as long and four times as much kinetic energy absorbed during an impact. As a result, a small increase in vehicle speed results in a disproportionately large increase in pedestrian fatalities. When a pedestrian is struck, the probability of death increases substantially with vehicle speed (see Figure 7).

Figure 7
The probability of pedestrian injury and death increases substantially with vehicle speed



Source: Wegman, F.C.M. & Aarts, L.T. (eds.) (2006). *Advancing sustainable safety; National Road Safety Outlook for 2005-2020. SWOV, Leidschendam.*

The proposed speed limit policy supports increased pedestrian safety

On February 3, 2010, Regional staff presented an update to the new speed limit policy to Regional Council, entitled “*Policy Update – Establishing Speed Limits on Regional Roads*”, to address different requirements for urban and rural roads in the Region. The policy proposed a method for setting speed limits that depended on the land use contained in the Official Plan, rather than the Region’s current speed limit policy of setting the speed limit at the 85th percentile speed.

The policy proposed is to use adjacent land use as a means to determine lower speed limits (60 kilometres per hour and under) in urban areas where streets are shared by motorists, cyclists, pedestrians, and transit customers, and higher speeds in rural areas that are dominated by motorists. In this approach, land use is used as an indicator of the

potential for high pedestrian and cycling activity in the area. The proposed speed limit policy can improve safety for all vulnerable road users, while providing consistency across all streets.

During 2010, in accordance with Regional Council's direction, York Region staff presented the proposed speed limit policy to each of the nine local municipalities to elicit their feedback. Staff have also received responses from York Regional Police on the proposed speed limit policy. A revised speed limit policy will be presented to Regional Council for consideration in 2011 incorporating the comments received from all nine local municipalities and York Regional Police.

Audible Pedestrian Warning System Pilot Project on YRT/VIVA Buses

A pilot project is being conducted to install Audible Pedestrian Warning System equipment on YRT/VIVA buses

Regional staff is performing a three-month pilot program of an audible pedestrian warning system on five buses in 2011.

The audible pedestrian warning system is a device on the bus that warns pedestrians that the bus is making a right or left-hand turn. When the bus begins to turn, a signal is sent from the sensors in the steering wheel. When the turning radius reaches 45 degrees, an audible warning announcement will be made. An exterior mounted speaker system is used to make the automated announcement. The pedestrian warning message is factory set to "Caution bus turning, pedestrians look both ways". The audible level is based on ambient noise sampling rate, and can be adjusted to be quieter in residential neighbourhoods.

The audible pedestrian warning system for public transit vehicles is expected to have several benefits. It reduces risk and provides advance warning for pedestrians that a bus is turning. The criteria for success of the pilot will be based on the performance and reliability of the system and will be designed to also test for community acceptance. The outcome of the pilot project will determine whether staff will recommend outfitting the entire Regional bus fleet of approximately 430 buses. Either way, the outcome of the pilot will be reported to Regional Council.

Zebra Crosswalk Marking Installations

The installation of zebra crosswalk markings at signalized intersections has reduced vehicle-pedestrian conflicts in some jurisdictions

The primary purpose of crosswalk markings is to guide pedestrians to the most appropriate crossing location and to advise drivers where to stop for pedestrians. Zebra crosswalk markings have several benefits over traditional crosswalks marked with only two parallel lines. Zebra markings increase the crosswalk marking from seven percent of

the crosswalk area using conventional parallel crosswalk line markings to forty percent of the crosswalk area. The increased coverage of the reflective pavement marking material increases the conspicuity and visibility of the pedestrian crosswalk area for both drivers and pedestrians during both day time and night time conditions (see Figures 8 and 9).

Figure 8
Driver View

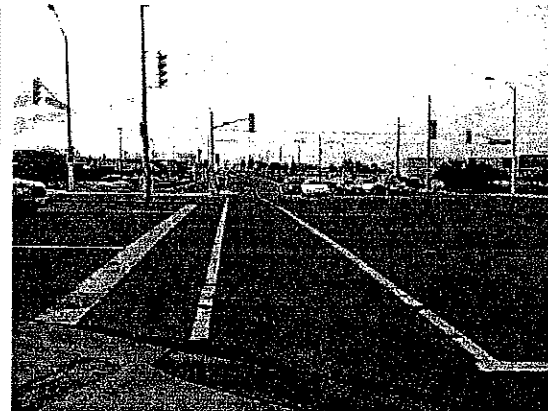


Without Zebra Crosswalk Markings

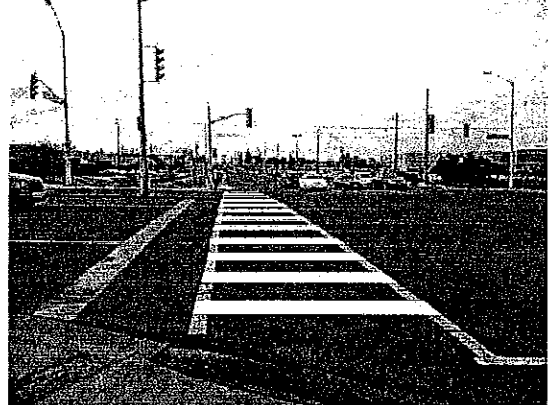


With Zebra Crosswalk Markings

Figure 9
Pedestrian View



Without Zebra Crosswalk Markings



With Zebra Crosswalk Markings

Studies from other jurisdictions have shown that zebra markings can reduce the frequency of vehicle/pedestrian collisions particularly between right turning vehicles and pedestrians within the crosswalk area. The jurisdictions who have considered zebra marking are the City of Brampton (2010), the City of Toronto (2006) and the Region of Waterloo (2008)

In February 2010, the City of Brampton adopted a report, entitled "*Pedestrian Safety Plan*" which identified zebra crosswalk markings as a valuable method of providing heightened driver awareness of pedestrian crossings and an increase of the crosswalk visibility.

In 2005, City of Toronto conducted an evaluation of zebra crossings at seven consecutive signalized intersections along both Mount Pleasant Road and Bathurst Street, to evaluate their effectiveness in reducing the frequency of motor vehicle-pedestrian conflicts and collisions through field-testing, pedestrian surveys and on-site observations. Before and after survey results indicate pedestrians felt safer, more comfortable and more visible to drivers when they cross at intersections with zebra markings. City of Toronto staff also reported pedestrians were more likely to use a zebra marked crosswalk, instead of walking outside of the marked crosswalk area. The survey suggested there is higher pedestrian level of comfort and sense of security with zebra marking crosswalks.

In September 2006, City of Toronto Council adopted the zebra crosswalk policy as the standard crosswalk marking treatment for all signalized intersections and pedestrian crossovers.

In January 2008, the Region of Waterloo also adopted a similar special crosswalk treatment policy to recommend zebra crosswalks because of their increased visibility to the driver.

York Region residents will benefit from the installation of zebra crosswalk markings

In September 2010, the first zebra crosswalk markings in York Region were installed at the intersection of Highway 7 and Kipling Avenue as a pilot project.

As part of the 2011 capital budget submission, which will be presented to Regional Council in February 2011, Regional staff are requesting \$2.5 million per year from 2011 to 2015, inclusive, to support the installation of zebra markings. If approved, the Region will install zebra markings at all signalized intersections and pedestrian signals in conjunction with road reconstruction and resurfacing projects, and new traffic control signal and pedestrian signal installations. In addition, zebra markings will be installed at all existing pedestrian signal locations and signalized intersections with a combination of high pedestrian exposure and/or history of pedestrian collisions.

5. FINANCIAL IMPLICATIONS

The financial implications of the programs outlined in this report are listed in Table 1 below:

Table 1
Pedestrian Safety Countermeasures Budget Timeline

Countermeasure	Capital Budget	Operating Budget	Approval
Pedestrian Countdown Signals	Included in existing 2010 budget	No impact	Already approved
Pedestrian Crossing Timing	No impact	Included in existing 2010 budget	Already approved
Public Education Campaign	No impact	Included in existing 2010 budget	Already approved
Proposed Speed Limit Policy	No impact	Included in 2011 budget submission	Future report
Audible Pedestrian Warning System	\$25 thousand for 5 buses	No impact	Included in 2011 budget submission
Zebra Crosswalk Markings	\$2.5 million per year 2011 to 2015	\$500 thousand per year starting in 2016	Included in 2011 Budget submission

In addition to the above, the 2011 operating budget submission includes a request for a new staff position to support improvements to the Zebra Crosswalk Marking Program. Well-maintained pavement markings provide enhanced visibility, which will help improve pedestrian safety on the Regional road network.

6. LOCAL MUNICIPAL IMPACT

There is no direct impact on the local municipalities. This report will be forwarded to each of the local municipalities for their information. Regional staff will continue to work closely with staff from the local municipalities and York Regional Police to ensure pedestrian safety initiatives continue to be a priority in York Region.

7. CONCLUSION

Pedestrians are among the most vulnerable of road users, and as discussed the percentage of fatalities involving pedestrian has been steadily increasing. In order to reduce the number of collisions involving pedestrians, and ensure pedestrians and motorists share the road safely, there are various pedestrian safety activities that have been taken by

Report No. 1 of the Transportation Services Committee
Regional Council Meeting of January 27, 2011

previous Council, or are currently underway; including public education campaigns, providing additional pedestrian crossing time, the installation of countdown signals, and the proposed speed limit policy.

New activities planned to be brought before Council include the installation of audible pedestrian warning system on YRT/VIVA buses and zebra crosswalk markings at signalized intersections. The Region will put forth continuing efforts to improve pedestrian safety on the Regional Road System.

For more information on this report, please contact Steven Kemp, Director, Traffic Management and Intelligent Transportation Systems at Ext. 5226.

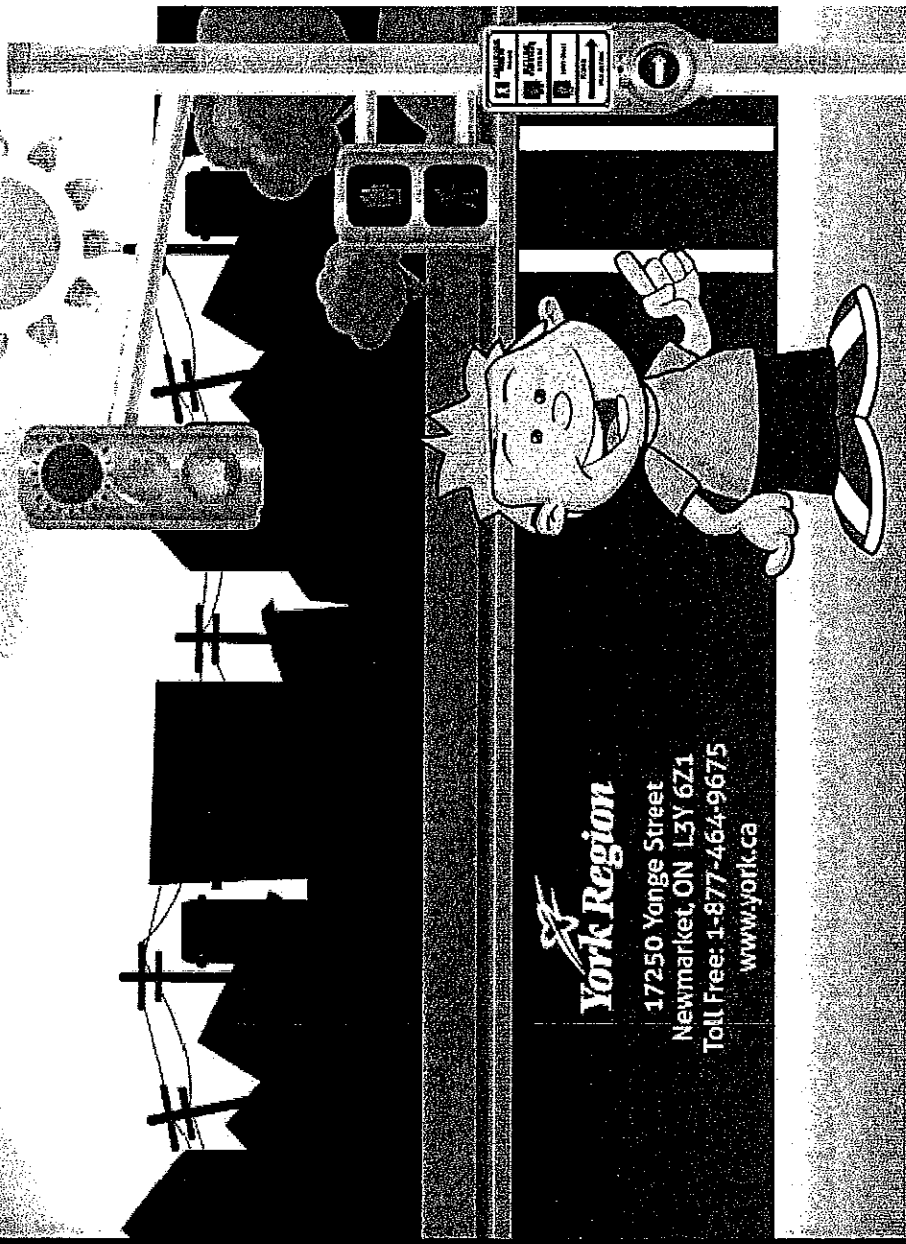
The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)



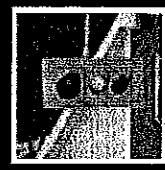
How to Cross the Street Safely

A GUIDE FOR KIDS

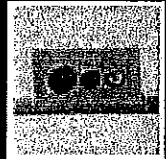


17250 Yonge Street
Newmarket, ON L3Y 6Z1
Toll Free: 1-877-464-9675
www.york.ca

Get Familiar with the Signs



RED



GREEN



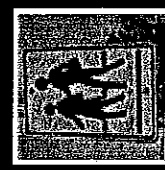
AMBER



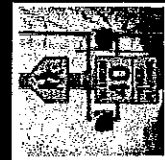
DON'T WALK



WALK



SCHOOL CROSSING



SCHOOL AREA



PEDESTRIAN AHEAD

Put your feet on the sidewalk or on the road as possible.

What About Crossing the Street?

When you cross the street at a corner with a traffic signal there are lines on the road called a **Crosswalk**.

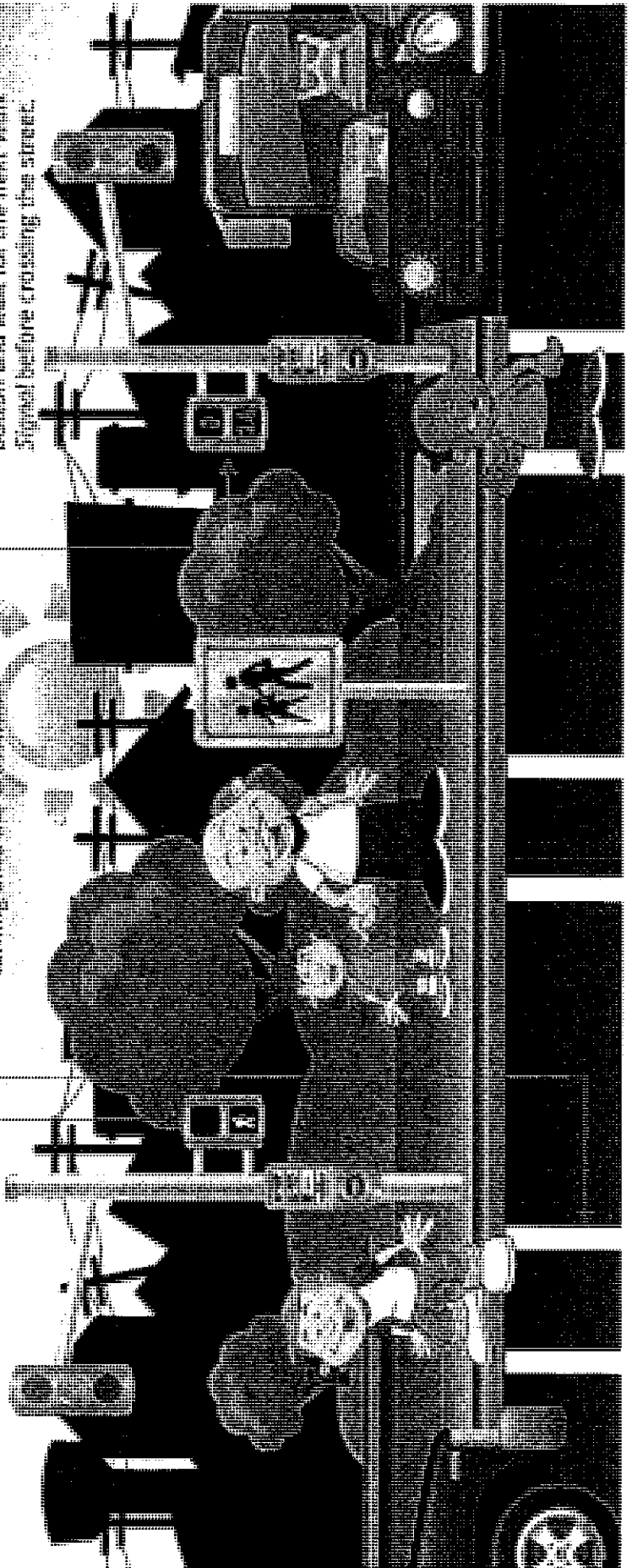
There are also special signals to tell you it is okay to cross the street.

The Walk Signal

has a button that you can press that will allow you to cross safely.

- Always look both ways before and while you cross the street, by looking left, right and left again to make sure no cars are coming or turning onto the crosswalk.
- Always cross when you have the Walk Signal.
- Always look both ways before and while you cross the street, by looking left, right and left again to make sure no cars are coming or turning onto the crosswalk.

- The person in charge of the hand can be seen.
- If the Walk Signal goes down, it is too late to start to cross the street. Press the Walk Signal button and wait for the next Walk Signal before crossing the street.



Appendix #4

City of Vaughan Sidewalk Policy Manual

**CITY OF VAUGHAN
POLICY MANUAL**

SECTION: ENGINEERING AND PUBLIC WORKS	POLICY NO.:09.1.06
--	---------------------------

CNL: 96.02.26(18)
AMENDED CNL: 03.06.23 (50/3)

DEPARTMENT: DEVELOPMENT / ENGINEERING	SUBJECT: SIDEWALKS - INSTALLATION IN NEW SUBDIVISIONS
--	--

At the City's Pedestrian and Cycling Master Plan Study public open house held on October 2, 2002 at the Vaughan Civic Centre, attendees commented that:

- Children should be able to walk to school but parents didn't consider it safe because of discontinuous sidewalks and high traffic speeds;
- Roads should be redesigned for multi-use; and
- Provide sidewalk connections to schools, parks, conservation areas, workplaces, community centres and shopping

School Boards

Representatives from the York Regional District and York Region Catholic School Boards reported that although they had no formal survey information, the number of students driving or being dropped off by car is reduced when public transit runs on a regular basis, and there is a public transit stop at the school. To take this one step further, there is likely a link between public transit ridership and sidewalks - we need sidewalks in place so people can get to and from transit stops - the easier the connections, the more people will use the system.

Current Sidewalk Location Policy

The function, volume and speed of traffic on a street are important considerations in determining the need for sidewalks. Where traffic volumes and speeds are high, sidewalks are necessary to ensure pedestrian safety. Sidewalks are also required where they will form part of a walkway system or pedestrian route.

To ensure consistency with respect to the location of sidewalks on City streets, Council adopted a Sidewalk Location Policy on February 26, 1996 - a copy of which is included as Attachment 1 to this report. This Policy formalizes which roads in new subdivisions require sidewalks, whether they are required on one or two sides of the street, and where they may be located within the municipal right-of-way.

The key criteria of the City's 1996 Sidewalk Location Policy are highlighted below:

1. Sidewalks are required where they will form part of a walkway system.

**CITY OF VAUGHAN
POLICY MANUAL**

SECTION: ENGINEERING AND PUBLIC WORKS	POLICY NO.:09.1.06
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CNL; 96.02.26(18)
AMENDED CNL: 03.06.23 (50/3)

DEPARTMENT: DEVELOPMENT / ENGINEERING	SUBJECT: SIDEWALKS - INSTALLATION IN NEW SUBDIVISIONS
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2. Sidewalks are required in locations where pedestrian routes connect to local amenity areas such as schools, parks, transit routes, retail areas, etc.
3. One sidewalk is required on a residential street where there are between 40 and 100 units tributary to the sidewalk route.
4. Two sidewalks are required on a residential street where there are over 100 units tributary to the sidewalk route.
5. Sidewalks are required on both sides of feeder, collector and arterial roads.
6. Sidewalks are required on one side of industrial roads.

This Policy struck a balance between the level of service that Vaughan residents expect and the fiscal demands imposed by winter snow clearing and infrastructure life cycle costs. Since its adoption, the 1996 Sidewalk Location Policy has proven beneficial to both Staff and the development industry by clarifying the requirements for sidewalks and serving to expedite the approval of development applications. One criticism of the existing policy, however, is that its application can be subjective because the requirements are based on the number of units “tributary” to a sidewalk route as opposed to units “fronting” or “serviced” by a street.

Survey Of Neighbouring Municipalities

Subsequent to Council’s request to confirm the City’s Sidewalk Location Policy, Staff conducted a telephone survey of sixteen municipalities within the Greater Toronto Area including Brampton, Mississauga and Markham to determine if Vaughan’s Policy is in line with other neighbouring municipalities. The results of this survey are highlighted on Attachment 2.

The results of the survey confirmed Vaughan’s Sidewalk Policy is consistent with all the other municipalities surveyed with respect to the requirement for sidewalks on both sides of the street for all higher order roads including feeders, collectors and arterials, and for a sidewalk on at least one side of the street where it will connect to a local community amenity area and form part of a walkway system. However, the survey revealed one key difference in relation to the requirement for sidewalks on local residential roads.

Vaughan’s Policy requires one sidewalk on a residential street including cul-de-sacs where there are between 40 and 100 units tributary to the sidewalk route. In contrast, thirteen of the municipalities surveyed require at least one sidewalk on all local residential roads except cul-de-sac regardless of the number of units on the street. The City of Brampton requires a

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sidewalk where there are between 25 and 50 units fronting onto the street. The Town of Caledon takes a slightly different approach by relating the need for a sidewalk to the Average Annual Daily Traffic on the street. The City of Burlington is similar to Vaughan in that it ties the need for a sidewalk to the number of units tributary to the pedestrian route. However, Burlington applies a lower threshold of 30 units.

The application of Vaughan's Policy would result in considerably fewer sidewalks being installed in a typical subdivision than in other municipalities. The survey of the GTA municipalities revealed that the industry standard is to have sidewalks on at least one side of local roads.

Local Road Sidewalk Policy Alternatives

Vaughan's Sidewalk Policy is consistent with many of the other municipalities in the GTA with the exception of the requirement for sidewalks on local residential roads. Based on the above, there is a technical, social, connectivity and safety rationale for changing the City's current policy to require the installation of more sidewalks on local roads in new residential subdivisions. However, since level of service is also an important consideration in establishing an appropriate policy, Staff is seeking direction from Council on the requirement for sidewalks on local residential roads. For consideration and discussion, Staff offers the following criterion alternatives:

1. Status Quo – maintain current criteria.
2. Provide one sidewalk on all local roads, crescents and cul-de-sacs with more than 40 units fronting on the street.
3. Provide one sidewalk on all local roads except crescents and cul-de-sacs with less than 40 units fronting the street.
4. Provide one sidewalk on all local roads, crescents and cul-de-sacs.
5. Provide sidewalks on both sides of local roads, and one side on crescents and cul-de-sacs.

To illustrate the impact of varying criteria, alternatives 1 to 3 are shown on Attachments 3 to 5, respectively. For comparison purposes, alternative 1 (Status Quo) is the base case. Block 39 was chosen to reflect a typical full block development.

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Financial Considerations

The financial implications associated with the operation and capital replacement of sidewalks are important considerations in establishing a sidewalk installation policy for local roads.

The initial installation of sidewalks in a new subdivision is undertaken by the developer at a cost of about \$50 to \$60 per metre. In 2000, there were approximately 720 Kilometres of sidewalk in the City. Winter maintenance (snow plowing and sanding) is currently being carried out by City forces at a cost of about \$770 per Kilometre of sidewalk per season. Concrete sidewalk generally has a life span between 25 to 40 years depending on its location and frequency of use. A City-wide program is in place to replace cracked and damaged sidewalk. In 2002, approximately 2.0 Kilometres of damaged sidewalk was replaced.

If more sidewalks are provided in new subdivisions, then the developer would incur additional cost to initially service the subdivision, and the City's annual operation and replacement costs would also increase.

Design Standards Review

In December 2001, Council endorsed the Design Standards Review Report prepared by Brook McIlroy Inc. and Totten Sims Hubicki Associates. Included in this document is a recommended 17.5 metre Local Residential Road Right-of-Way Standard that would be compatible with the proposed zoning setbacks. This Standard identifies the locations of above and below ground utilities within the municipal right-of-way including a new sidewalk location at a distance of 1.5m from the street line. The combination of the new zoning setbacks for garages and sidewalk location provides for sufficient room to park a car between the garage door and the sidewalk. Accordingly, Staff believes that these new standards will in part address some of the parking concerns that in the past have prompted requests for sidewalk deletions.

Engineering Staff has reviewed this new Local Residential Road Standard and is satisfied the proposed sidewalk offset is feasible. Once finalized, Staff will proceed to implement this new local road standard within all future Block Plan developments together with developments within Blocks 10 and 39 that currently have not progressed to the detailed design stage. In addition, Staff will make the necessary revisions, where feasible, to the other residential road standards to reflect this new sidewalk location.

Appendix #5

**Mayor's Task Force on Safety and Security
Submission to the City of Vaughan Council,
dated September 18, 2006**

RECOMMENDATION No. 6

Enhance Community Safety and Crime Prevention through environmental or urban design:

Crime and Personal Safety top the list of most important issues facing Vaughan residents according to the POLLARA Survey completed in March, 2006. Community Safety and Security concerns can be addressed, in part, through the implementation of environmental design features. While City Planners currently receive some form of training in safety design consideration, the Task Force recommends that this training be supplemented with crime prevention training and enhanced consultation with the police, with a view to incorporating additional design features in residential neighbourhoods to further address such concepts as "Eyes on the Street", improved lighting, and other burglar-proofing and safety features.

Road safety is another personal safety issue in residential subdivisions. The Task Force recommends the implementation of a policy requiring sidewalks on all residential streets to ensure the safety of pedestrians, especially young children. Reduced street widths and on-street parking on those streets with reduced widths should be reviewed with a view to ascertaining whether they are contributing factors to street congestion in residential neighbourhoods, resulting in safety issues, both vehicular and pedestrian, increased emergency response times and snow plowing and snow removal concerns.

Also, fire departments have been requesting legislation requiring the installation of sprinkler systems in all residential homes, thereby substantially reducing personal injury, death and property damage caused by fires in homes. The Task Force recommends the endorsement and support of any proposals requiring the installation of sprinkler systems in all new and retrofitted residential developments.

Appendix #6

City of Toronto Pedestrian Charter



Toronto Pedestrian Charter

Walking is the most ancient and universal form of travel. It is also an important form of exercise and recreation. Every personal trip involves walking, alone or in combination with taking public transit, driving or cycling.

A pedestrian is a person moving from place to place, either by foot or by using an assistive mobility device. Pedestrians include residents and visitors to the city of all ages and abilities. In order to travel safely, conveniently, directly and comfortably, they require an urban environment and infrastructure designed to meet their travel needs.



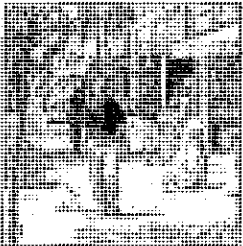
To ensure walking is a safe, comfortable and convenient mode of urban travel, the City of Toronto respects the following principles:

Accessibility

Walking is a free and direct means of accessing local goods, services, community amenities and public transit.

Environmental Sustainability

Walking relies on human power and has negligible environmental impact.



Equity

Walking is the only mode of travel that is universally affordable, and allows children and youth, and people with specific medical conditions to travel independently.

Personal and Community Safety

An environment in which people feel safe and comfortable walking increases community safety for all.

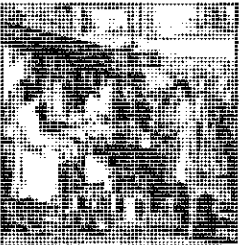


Health and Well-Being

Walking is a proven method of promoting personal health and well-being.

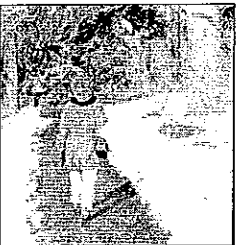
Community Cohesion and Vitality

A pedestrian-friendly environment encourages and facilitates social interaction and local economic vitality.



To create an urban environment in all parts of the city that encourages and supports walking, the City of Toronto:

- upholds the right of pedestrians of all ages and abilities to safe, convenient, direct and comfortable walking conditions;
- provides a walking environment within the public right-of-way and in public parks that encourages people to walk for travel, exercise and recreation;
- supports and encourages the planning, design and development of a walking environment in public and private spaces (both exterior and interior) that meets the travel needs of pedestrians;
- provides and maintains infrastructure that gives pedestrians safe and convenient passage while walking along and crossing streets;
- ensures that residents' access to basic community amenities and services does not depend on car ownership or public transit use;
- sets policies that reduce conflict between pedestrians and other users of the public right-of-way;
- creates walkable communities by giving high planning priority to compact, human-scale and mixed land use;
- encourages research and education on the social, economic, environmental and health benefits of walking as a form of travel, exercise and recreation;
- promotes laws and regulations that respect pedestrians' particular needs;
- advocates for improving the provincial and federal regulatory and funding frameworks that affect the City's ability to improve the pedestrian environment; and
- works with individual citizens, community groups and agencies, businesses and other levels of government to achieve these goals.



An urban environment that encourages and facilitates walking supports community health, vitality and safety. It will increase use of public transit; decrease car dependence; reduce conflict between vehicles and pedestrians; lead to cleaner air; green public space; and support green tourism. Such an environment creates opportunities for the informal social interaction that is one of the main attributes of a vibrant, liveable city.

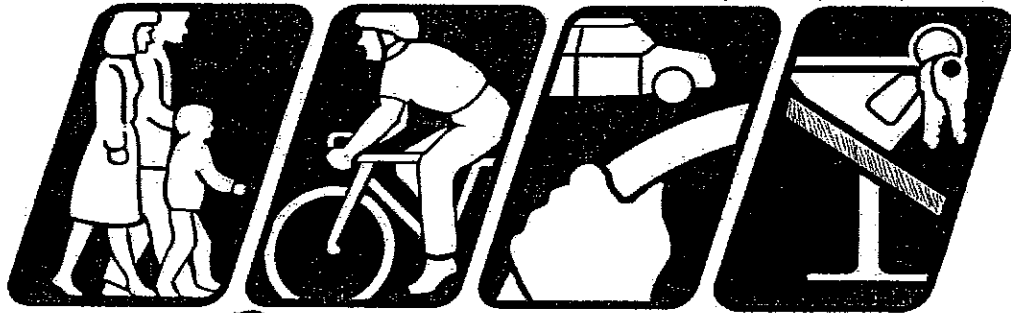


Adopted by Toronto City Council, May 21, 2002

Appendix #7

Road Safety Challenge Information Package

Road Safety



Challenge

2011 Information Package



Road Safety

It starts
with you



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OVERVIEW

The goal of the Road Safety Challenge (RSC) is to engage the participation of road safety groups and community members to work together to make Ontario's roads safer.

Now in its 15th year, the 2011 RSC is sponsored by the Ministry of Transportation and remains a community-driven event. The 2011 Road Safety Challenge begins on Wednesday, May 18th and continues until Sunday, June 12th

The Challenge raises awareness of road safety issues at the local level through special activities that address local and provincial concerns. Communities are challenged to help reduce collision-related deaths and injuries.

The RSC provides an opportunity for public agencies to form partnerships and alliances with community groups and the private sector to raise awareness of road safety issues. In many cases, it lays the groundwork to continue this working relationship throughout the year.

NEW FOR 2011

The 2011 Road Safety Challenge will emphasize several priority themes:

1. **Young/Novice Drivers**
2. **Impaired Driving**
3. **Cycling Safety**
4. **Pedestrian Safety**
5. **All Terrain Vehicle Safety**
6. **Senior Driving**
7. **Distracted Driving**
8. **Aggressive Driving (speed)**
9. **Sharing the Road with Large Vehicles**

Community teams may apply to receive funding for a maximum of two themes. Please see the details on the next page.

Heightened awareness of road safety issues and fewer collision-related injuries and deaths, have contributed to making Ontario's roads among the safest in North America. However, our work is not done.

All the application forms, guidelines and logos in this package are available by e-mail from your Regional Planner.



SUPPORT

Challenge teams approved for support will receive:

1. Funding

Challenge teams may receive funding for a maximum of two road safety themes. At least one theme must be selected from the **priority** list. A second theme may also be selected from the **priority** list or be a **locally identified** road safety theme.

Funding is based on your community population using the Ontario Municipal Directory:

- Pop. 100,000 or less - \$500/theme
- Pop over 100,000 - \$1,000/theme

The Challenge is subject to available funding and preference will be given to applications that focus their efforts on the priority themes

2. Public education materials

Available from your Regional Planner upon request.

HOW TO PARTICIPATE

Funding for Road Safety Challenge 2011 is limited. Each application must be completed in full and submitted to your Regional Planner. All applications will be evaluated based on merit and the criteria/guidelines outlined in this package (See pages 3 to 6 and Registration Forms)

Registrations must be received by the Road Safety Marketing Office no later than **Friday April 1st, 2011**

The Registration Forms and Letter of Agreement are attached (pages 8-11).

Applications must include a preliminary event plan outlining how the Challenge Team's event program will address the selected road safety themes.

MTO's Road Safety Challenge logo must be on all print material prepared by the Challenge Team. Printed material with the Challenge logo must be approved by your Regional Planner.

Ministry of Transportation funding cannot be used for refreshments or prizes.

One copy of the final report form (page 15) and a financial statement must be sent to your Regional Planner no later than **August 5th, 2011**.

Future funding proposals from your organization will not be considered if these reports are not received.



PRIORITY THEMES FOR CHALLENGE ACTIVITIES

The 2011 Road Safety Challenge will focus on several road safety themes that address causes of fatal collisions and personal injury.

In support of these themes and the Road Safety Challenge, media releases will be issued in conjunction with the campaign.

For more information, visit our website at www.ontario.ca/transportation.

Additional information on the priority themes can be obtained from your Regional Planner.

Priority Themes:

(Required to choose at least one)

1. Young / Novice Drivers

As of August 1, 2010 there are new rules for young and novice drivers:

- ◆ all drivers 21 and under must have a zero BAC level while driving and,
- ◆ Novice drivers face escalating sanctions for repeated condition violations for drivers in the Graduated Licensing System.

2. Impaired Driving

Effective December 1, 2010, individuals can have their vehicles impounded for seven days on the spot if they are caught driving with a BAC over .08 or fail to provide a breath sample; driving while under certain licence suspensions or driving without an ignition device when one is required.

3. Cycling Safety

4. Pedestrian Safety

5. All Terrain Vehicle Safety

6. Senior Driving

7. Distracted Driving

8. Aggressive Driving (Speed)

9. Sharing the Road with Large Trucks



SUGGESTED ACTIVITIES

Below is a suggested list of activities to address your road safety themes. Create an activity that focuses on at least one of the four road safety priority themes and you may also choose a second activity, which address either a priority or optional theme. Information regarding the implementation of these proposed activities can be obtained from your Regional Planner:

<ul style="list-style-type: none"> <input type="checkbox"/> Anti-street racing event <input type="checkbox"/> BAC demo with breath technician* <input type="checkbox"/> Bicycle safety rodeo* <input type="checkbox"/> Choose your ride* <input type="checkbox"/> Colouring contest <input type="checkbox"/> Construction zone safety display <input type="checkbox"/> Courtesy Is Contagious <input type="checkbox"/> Distracted driving video game challenge* <input type="checkbox"/> Driving challenge <input type="checkbox"/> Escalating sanctions awareness events, articles & materials* <input type="checkbox"/> Essay Contest <input type="checkbox"/> Establish or re-launch programs such as Operation Lookout, Campaign 911 or Road Watch* <input type="checkbox"/> First Rider programs <input type="checkbox"/> Food trayliners and placemats with road safety messaging <input type="checkbox"/> iDRIVE local launch/media event* <input type="checkbox"/> iDRIVE workshop for young drivers* <input type="checkbox"/> Impaired goggle demo* <input type="checkbox"/> Intersection safety <input type="checkbox"/> Intoxiclock demonstration* 	<ul style="list-style-type: none"> <input type="checkbox"/> Kiss 'n Ride <input type="checkbox"/> Media challenge day <input type="checkbox"/> Memorial campaign <input type="checkbox"/> Mock collision* <input type="checkbox"/> Pedestrian safety walk* <input type="checkbox"/> Rural road safety (farm vehicles) <input type="checkbox"/> Safety Fair <input type="checkbox"/> Seatbelt Deputy program <input type="checkbox"/> Seniors/mature driving seminar <input type="checkbox"/> Speed Watch <input type="checkbox"/> Speed feedback demo with radar <input type="checkbox"/> Think of Me campaign* <input type="checkbox"/> Think of Us on the Bus school bus campaign <input type="checkbox"/> Truck awareness day <input type="checkbox"/> Ultimate Mix
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*Could be used to promote a 2011 RSC priority theme.



PROMOTION

Raise awareness of the Challenge in your community by using some of the communication tools listed below that can be combined to promote your activities. Your Regional Planner can help you develop these ideas further for use in your community.

PRINT

- Letters or memos to media, businesses and service clubs.
- Fact sheets on road safety issues
- Newsletters (community and business)
- Posters
- Bill stuffers such as construction zone safety cards

ELECTRONIC

- Social Media – campaigns may include promotion through Twitter, Facebook, Youtube, blogs, etc
- Enlist local companies to post messages on their internet and intranet sites about Challenge activities taking place throughout your campaign

MEDIA

- Media advisories about upcoming events
- News releases about the Challenge and the road safety activities
- Media interviews with local experts about crash statistics and new legislative requirements
- Media event to highlight Challenge events
- Public service announcements on local road safety priorities

OTHER

- Bulletin boards in community centres, libraries and businesses
- Signs - mobile and outdoor
- Presentations to service clubs, schools and businesses
- Tours of hospital trauma rooms or rehabilitation centres
- Exhibits/displays in malls and building lobbies
- Special events to launch the Challenge or highlight a specific issue such as impaired driving
- Testimonials from crash survivors