

Bike to the Future

Backgrounder on Urban Speed Limits

Submitted to the Highway Traffic Board

Introduction to Bike to the Future

This is the first time that Bike to the Future has made a presentation to the Highway Traffic Board. In addition to addressing the matter before you at this hearing, we want to give you some background on our organization, and our perspective on speed limits in general.

Bike to the Future was incorporated in 2007. Our mission is to encourage more Manitobans to cycle more often, and to encourage government authorities to do what is necessary to make that happen. We have more than 780 members and more than 1,600 subscribers to our email news letter. On an average summer day this year, some 13,000 Winnipeggers commuted to work by bicycle. That figure is up 64 per cent since we began bicycle counts in 2007. Nearly all cyclists are car owners, or have parents who own cars.

Unfortunately, at least four Manitoban died when struck by motor vehicles while riding on their bicycles in 2012.

In 2012, Bike to the Future adopted a Cyclists Bill of Rights, which states in part:

Whereas cycling is in the public interest because it promotes fitness and reduces health care costs; it reduces congestion on the roads; it reduces emissions into the environment; and cycling facilities cost less than infrastructure for motor vehicles;

Whereas cyclists are vulnerable when they travel among motorized vehicles;

Whereas cyclists are citizens and taxpayers with the same rights, privileges and obligations as motorists;

Therefore, be it recognized that cyclists have a right to:

...

- Communities designed to encourage cycling, with a cycling network that provides safe and convenient routes to all destinations

...

- Legislation, Regulations, policies funding and law enforcement to support these rights

Benefits of lower speed limits

Basic laws of physics dictate that doubling a vehicle's speed quadruples both the stopping distance and the kinetic energy that it delivers when it hits something. Driver response times further increase stopping distances.

Reducing speed limits has many benefits to society as a whole.

1. Reduced number of accidents
2. Reduced severity of injury from accidents
3. Reduced consumption of gasoline, which in turn benefits our economy, results in fewer carbon emissions, and better air quality
4. A more walkable, liveable city with a higher quality of life.
5. A healthier population, as more citizens will choose to walk and bicycle reducing costs to our health care system, and reducing wear and tear on infrastructure
6. More children walking or cycling to school, reducing the "school taxi" duties on parents, reducing time for parents to get to work, reducing traffic congestion near schools, and improving child safety
7. Enhanced social equality. Poorer children are five times more likely to be killed on the roads than their well-to-do schoolmates. . Poor children are more exposed to being hit by vehicles than wealthier children riding in cars because:
 - a. A higher proportion of lower income families live beside main roads with fast traffic.
 - b. 67% of the poorest households have no access to a car compared to 6% of the richest

On June 6, 2012, Bike to the Future made presentations to the Manitoba Legislative Committee studying Bill 3 (Speed limits in school zones). Bill 3 amended the Highway Traffic Act to allow for reduced speed limits in the immediate vicinity of schools. Bike to the Future recommended that reduced speed limit zones be broader than just around the school, so as to include walking and biking routes routes to schools.

Bike to the Future believes that Manitoba should require a default speed limit on urban residential streets of 30 kilometres per hour unless otherwise posted.

Winnipeg Regional Health Authority comments on speed limits

Dr. Lynne Warda of the Winnipeg Regional Health Authority's Injury Prevention Program also made a presentation on Bill 3 on June 6, 2012. She informed the Legislative Committee that:

"Speed accounts for about 25 per cent of all fatal collisions and 15 per cent of serious injury collisions in Manitoba. In the past 10 years, almost 8,000 pedestrians and cyclists have been involved in motor vehicle collisions, including almost 170 deaths. In 2010, there were 399 pedestrians killed or injured in traffic collisions. Of these, 14 were killed and 32 were seriously injured. Thirty-one per cent of pedestrian victims were children and youth 19 years and under. At the Children's Hospital Emergency Department we see approximately 140 pedestrian and cyclist injuries every year with about a third having moderate to severe injuries, and 15 per cent requiring hospitalization.

“Speed reduction is a key strategy for reducing the risk of injury for pedestrians and cyclists. Child pedestrian injuries are more frequent on roads with higher posted speed limits. The risk of fatal injury for pedestrians of all ages increases dramatically at speeds greater than 30 kilometres an hour as you have heard and you see in the handout. ...

“After 30 kilometre an hour zones were introduced in London, these zones experienced a 42 per cent reduction in fatalities. In 1988, the town of Baden, Austria reduced speeds to 30 kilometres an hour and reduced road injuries by 60 per cent. In the late 1970s, Danish residential speeds were reduced to 30 kilometres an hour and traffic calming measures were introduced. This led to a 72 per cent reduction in injuries. In 2004, the city of Helsinki reduced speed limits from 50 to 40 and from 40 to 30 kilometres an hour for an estimated 15 per cent reduction in injury costs, 15 per cent reduction in fatalities, and a savings of 5 million euros per year.”

Dr. Warda noted the impact of speed on active transportation: “Research shows that neighbourhood traffic speeds can either promote or inhibit walking and biking to school. School speed zones can be an effective strategy to increase the number of students walking and biking to school, but this effectiveness is significantly enhanced with the addition of traffic calming measures, and also the presence of crossing guards. If active transportation of children is to be promoted, we should reduce speeds and use traffic calming measures, as well as crossing guards, to maximize the impact. We are concerned that limiting speed reduction to school zones may not have the desired impact.”

International consensus to reduce urban speed limits

World-wide, there are many initiatives led by public health organizations to reduce speed limits in urbanized areas.

In April 2012, the office of the Toronto Public Health Officer released a report entitled Road to Health: Improving Walking and Cycling in Toronto. The City of Toronto Board of Health reviewed the report and recommended, among others, that the Medical Officer of Health work in collaboration with the General Manager of Transportation Services to support the increased use and safety of walking and cycling by: ... Reducing vehicle speed limits to 30 km/hr on residential streets and adopting a city-wide speed limit of 40 km/hr on all other streets, unless otherwise posted" <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.HL13.1>

In June 2012, the Chief Coroner of Ontario released a report Cycling Death Review: Road Safety is Everyone's Responsibility which also recommended reduced speeds on residential streets, including reducing speeds to 30 km/hr.

The World Health Organization

http://www.who.int/violence_injury_prevention/publications/road_traffic/en/ and the United States National Highway Traffic Safety Administration have both found that lower speed limits in urban areas improve the health of pedestrians, both in terms of the number of accidents and their severity.

In Europe, 30-kilometre-per-hour speed limits are a key component of sustainable travel policies in Denmark, Belgium, Germany the Netherlands, Norway and Sweden. In the UK, there is a popular

movement promoting “20 is plenty” (meaning 20 miles per hour) www.20splentyforuk.org.uk, www.slower-speeds.org.uk.

The European Union Transport and Tourism Committee has recommended 30-kilometre-per-hour speed limits for residential areas, with the specific goal of reducing by 60 per cent the number of children under 14 years old killed by motorists.

A study by vision scientists at Royal Holloway, University of London, found that at vehicle speeds faster than 30 km per hour, primary school age children may not be able to tell that a car is approaching in a road-crossing scenario. The studies show how a speed illusion can mean that all pedestrians and/or drivers at junctions, can underestimate the speed of faster vehicles and may, in some cases, fail to see them at all.

Adult pedestrians can make accurate judgments for vehicles traveling up to 50 miles per hour. But primary school age children become unreliable once the approach speed goes above 20 miles per hour. Slower speeds in school zones are a great idea, but low speed zones have to be big enough to allow kids to walk to school, and they should also include the other places that kids and families walk to frequently.

A Bristol city council study showed that slowing speed limits in that town from 30 miles per hour to 20 miles per hour contributed to increasing cycling and walking by 12 per cent. This added to the safety impact of the reduced speed because drivers tend to be more careful when there are more cyclists and pedestrians on the road.

Speed limits are a matter of life & death.

The likelihood of death increases exponentially with speed. Five per cent of pedestrians will be killed by a car traveling at 32 kph; 55% will be killed at 50 kph, 85% will be killed at 60 kph.

The posted speed limit further affects the perceptions of motorists’ right of way over other road users. A speed limit higher than 50 kph gives drivers reason to believe that other road users should stay out of their way in order to allow them to travel through at that speed. They are less likely to slow down when they see cyclists or pedestrians on the road. Slowing down below 60 kph could cause them to “hold up traffic”, which many drivers avoid doing, even at night, in rain, or in snow. They are more likely to optimize for “efficiency”, rather than safety, and take the risk of coming close to vulnerable road users rather than slowing down.

When they are at the wheel of a motor vehicle, Manitobans may experience some inconvenience being required to slow down in such areas, but when they are walking or biking, this is a matter of life or death.

A sustainable, liveable urban environment

The posted speed limit has an immediate impact on the walkability / bikeability of the neighbourhood. “Grid roads”, used by drivers to travel quickly through a community, are barriers to walkability / bikeability. They encourage people to get around with the protection of a motor vehicle, rather than walking from store to store, or biking in the neighbourhood. Only the most confident people will cycle or walk on grid roads, and bicycle / pedestrian traffic will decrease. It confines young people, as increasing traffic speed in a neighbourhood causes parents to be more reluctant to let their kids get around on their own.

There is a direct relationship between the walkability / bikeability of a community, and its health. Rates of obesity, diabetes, heart disease, and many other ailments are higher in communities where people spend more time traveling by motor vehicle, and less time getting around on their own power.

Every time regulators and planners bias our transportation system to favour travel by motor vehicle, they exacerbate the tendency to lifestyle choices which lead to a great deal of suffering and high medicare costs among adults and children.

Making roads safer for vulnerable users such as cyclists and pedestrians results in people being more likely to choose to cycle and walk. Walking/biking mode share is directly related to the perceived safety of a route.

Sometimes, in Winnipeg, we find ourselves following planning practices which are out of date elsewhere; practices that leading cities have tried and rejected as a result of unfavourable consequences.

In past decades, many North American cities built up “grid roads”, to allow drivers to get through town faster. These roads transited neighbourhoods, making them unfriendly to human habitation. Many cities are now redesigning those streets to serve their neighbourhoods better; making them safe, convenient, and accessible for everyone, carrying a lot of traffic, but at lower speeds.

Lowering the speed limit does not affect traffic flow at rush hour, and it imposes a minor delay at times of day when traffic is flowing freely. It allows the road to accommodate more pedestrian and cycle traffic.

Driver Compliance

In her presentation on Bill 3, Dr. Warda explained that the argument that “drivers won’t obey” is not a valid argument. “There are proven strategies that increase driver compliance and effectiveness of these zones. These include: traffic calming road modifications designed to lower speeds where the speed humps are the most effective and economical; speed zones that are greater than 200 meters in length; active enforcement; fencing parallel to the zone; specific types of signage, such as flashing lights; speed display devices; and the presence of crossing guards. A recent Calgary study summarizes the research on this and provides Calgary data for school and playground zones.”

Improved signage; flashing signs showing actual speed of vehicle; speed limits painted on the roadway; rumble strips; speed humps; raised cross-walks; narrower lanes; street bump-outs: there are many ways

to design roads so that drivers slow down. When roads through commercial and residential areas are properly designed and signed for 50 kph, we believe most drivers will have the common human decency to slow down and be careful in the presence of non-motorized traffic.

Conclusion

Bike to the Future urges the Highway Traffic Board to recognize that increasing speed limits on roads through urbanized areas will make those streets less welcoming and more dangerous for all cyclists and pedestrians, and will result in increased fatalities and serious injuries. We ask you to set speed limits based on the real needs of all the people who use the street. We request that you recognize our recommendation that 30 km/hr be the default speed limit except where otherwise posted. We request that you recognize that when motor vehicles hit pedestrians at 60 km/hr, there is an 85% chance the pedestrian will die. We request that you refrain from allowing speed limits over 50 kph on streets through commercial and residential areas, and that you order improved signage and road design to remove any confusion experienced by motor vehicle drivers.

We ask that in everything the Highway Traffic Board does, you consider and expressly state the impacts of your decisions on cyclists and pedestrians. We ask that you acknowledge that speed kills, that higher speed limits pose a danger to cyclists and pedestrians, and that they result in fewer Manitobans choosing to cycle or walk. If you believe higher speed limits in specific places are necessary, we ask that you expressly make recommendations for mitigation measures to promote cycling and walking in those places. Mitigation measures can include separated bike lanes or establishment of adjacent multi-use paths.

If the Board chooses to act on concerns about frequent changes in speed limits on any given street, we recommend that, to achieve consistency, Manitobans will be better served by applying the lower speed limit, not the higher one. If The Highway Traffic Board were to raise speed limits on roads through commercial and residential areas in the face of clear evidence of the danger to all, the Board would contribute to increased accidents and deaths, and to the negative health and environmental consequences of discouraging people from walking and cycling more.

We urge you exercise your responsibility in a way that will promote the well being of all Manitobans, and make Winnipeg a better place to live.

www.biketothefuture.org