

# Child- and Youth-friendly Land-use and Transport Planning Guidelines

Richard Gilbert

Centre for Sustainable Transportation

(In April 2006, the Centre moved from Toronto, Canada, to the University of Winnipeg)

Presentation at a Congressional Briefing on the topic

'Healthy Communities for Young and Old:  
How Transit and Better Community Design  
Help the Most Vulnerable Generations'

organized by the  
Environmental and Energy Study Institute  
and held at

2167 Rayburn House Office Building, Capitol Hill, Washington DC  
May 1, 2006, 1:30-3:00 p.m.



## Former Bogotà (Colombia) mayor Enrique Peñalosa:

“One common measure for how clean a mountain stream is to look for trout. If you find the trout, the habitat is healthy.

“It's the same way with children in a city.  
**Children are a kind of indicator species.**

“If we can build a successful city for children we will have a successful city for all people.”

Source: Susan Ives, ‘The Politics of Happiness’ (based on a conversation with Enrique Peñalosa), in *Land & People*, Fall 2002

## Why develop Child- and Youth-friendly Land-use and Transport Planning Guidelines?

- Concern about the health impacts of transport on children and youth, when travelling and when not travelling (Dr. Frumkin)
- Concern that **the number of journeys made by young people in automobiles has been increasing dramatically.**
- For example, on school-days in the Toronto region, 11-15 year-olds made **83% more such trips per capita in 2001 than in 1986**. Car trips by adults increased by 4% during the same period (TTS Survey).
- 55% of the young people's new trips by car **replaced trips to and from school done by walking, bicycling or transit**. 45% were new trips, mostly for after-school activities.
- Nevertheless, in 2001, on school-days young people were still making **a fifth or all transit trips and half of walking and bicycling trips**.
- U.S. data (National Household Travel Survey) suggest that young people make **even more car trips at weekends than on school-days**.

## The Guidelines

- The next 10 slides show, for reference only, the **seven categories of Guidelines** that were developed and **all 27 Guidelines**.
- Then, the rationale for **some of the Guidelines** will be elaborated.
- Finally, **current and proposed actions** with respect to the Guidelines will be set out.

# Seven guideline categories

- Putting children and youth first
- Providing for children and youth as pedestrians
- Providing for children and youth as cyclists
- Providing for children and youth as transit users
- Concerning school buses
- Concerning children and youth in automobiles
- Reducing transport's adverse impacts on children and youth

## Putting children and youth first

- Guideline 1. In transport and land-use planning, the needs of **children and youth should receive as much priority** as the needs of people of other ages and the requirements of business.
- Guideline 2. Within each municipality **designate a staff member** (and perhaps also a council member) as responsible for bringing a children's perspective to transport and land-use planning issues.
- Guideline 3. As may be appropriate, establish or adapt one or more **forums for children and youth** to provide input as to the application of these guidelines.

## Providing for children and youth as pedestrians 1

- Guideline 4. Identify where children and youth want to go or need to go and, to the extent possible, provide ways of getting there by foot.
- Guideline 5. Explore pedestrian routes used or to be used by children to ensure that they are as usable by them as possible.
- Guideline 6. Explore pedestrian routes to be used by children to ensure that they are as safe for them as possible.

## Providing for children and youth as pedestrians 2

- Guideline 7. For younger children, arrange **walking buses** and other means of supervision.
- Guideline 8. **Separate sidewalks used by children and youth** from heavily trafficked roads, particularly where traffic moves slowly or vehicles are stationary with engines idling for long periods.
- Guideline 9. Ensure that sidewalks are always **cleared of snow**.

## Providing for children and youth as cyclists 1

Guideline 10. For older children and youth, ensure that destinations that cannot be a walk away are no more than **a bicycle ride away.**

Guideline 11. For younger children, ensure that **sidewalks are suitable** for their tricycles and bicycles.

Guideline 12. For destinations to be reached by bicycle, provide **separate bicycle paths**, or install bicycle lanes on regular roads.

## Providing for children and youth as cyclists 2

Guideline 13. Ensure that bicycle riders are well provided for at **intersections** and have sufficient priority for forward movement.

Guideline 14. At destinations, provide secure, convenient **bicycle parking**.

Guideline 15. Encourage the carriage of **very young children on bicycles**, in appropriate seats or attachments.

## Providing for children and youth as transit users

- Guideline 16. Ensure that every part of a transit system is safe and **welcoming to a child**, and affordable.
- Guideline 17. **Avoid transfers** by routing vehicles where children want to and need to go; make transfers easy where necessary.
- Guideline 18. **Keep fares for children low**, so as to encourage their use of transit systems, with or without supervision.
- Guideline 19. Examine every aspect of the system from the **perspective of a parent with a child in a stroller**, and make adjustments to meet such a traveller's needs.

## Concerning school buses

Guideline 20. Reduce the time children spend in school buses to a  
**maximum of no more than 40 minutes** per day.

## Concerning children and youth in automobiles

- Guideline 21. Where destinations cannot be reached by foot, bicycle or transit, ensure nevertheless that they are as near as possible to **reduce in-car time**.
- Guideline 22. When children must travel in vehicles, act to **avoid poor in-vehicle air quality**.
- Guideline 23. **Drive slowly**, to be safe and to facilitate an interest in the passing show.

## Reducing transport's adverse impacts on children and youth

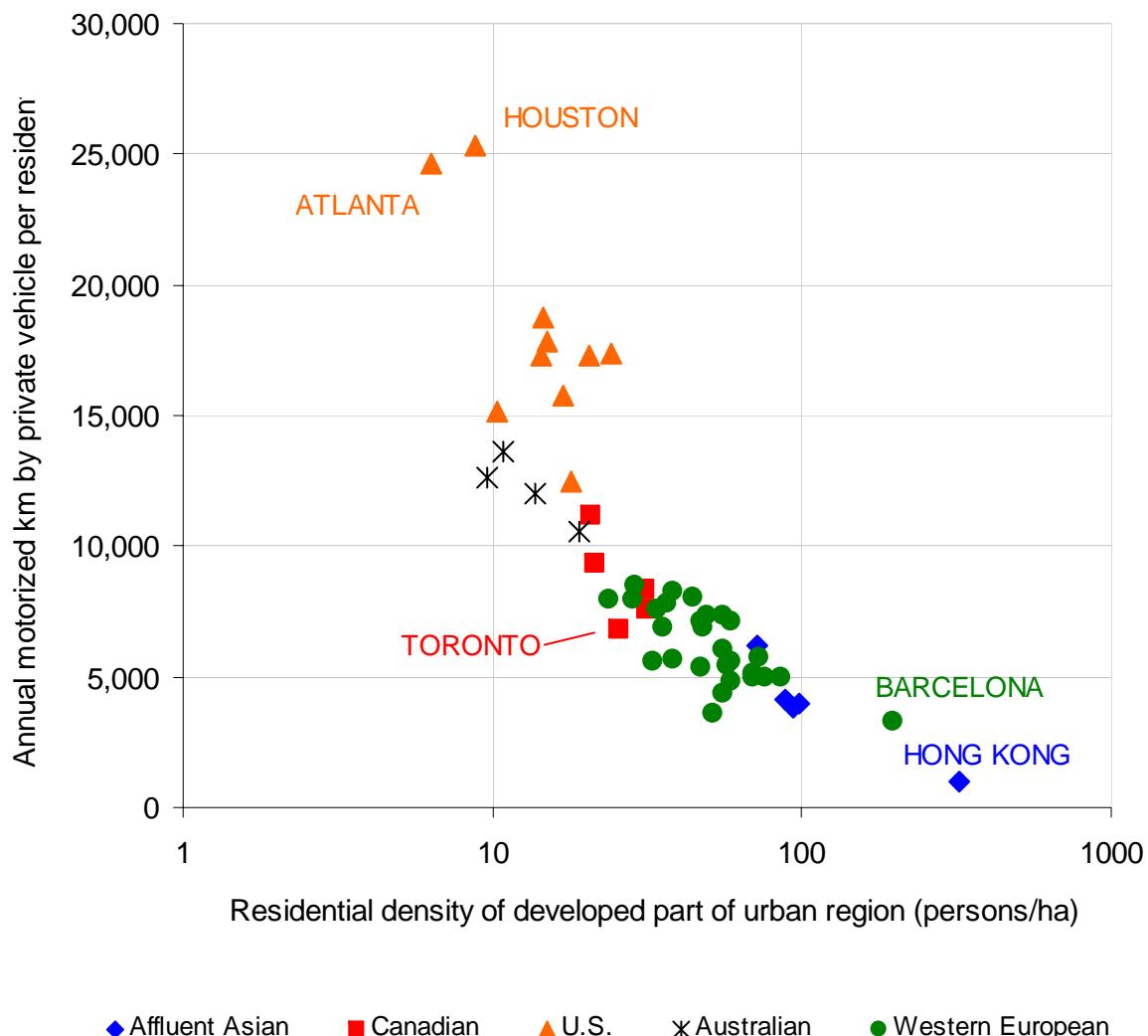
Guideline 24. Take all possible steps to **reduce amounts of road traffic** generally.

Guideline 25. In urban areas, post and enforce **much lower speed limits**.

Guideline 26. Use low-emission rather than regular diesel vehicles for urban transit or, where possible, **electric vehicles**.

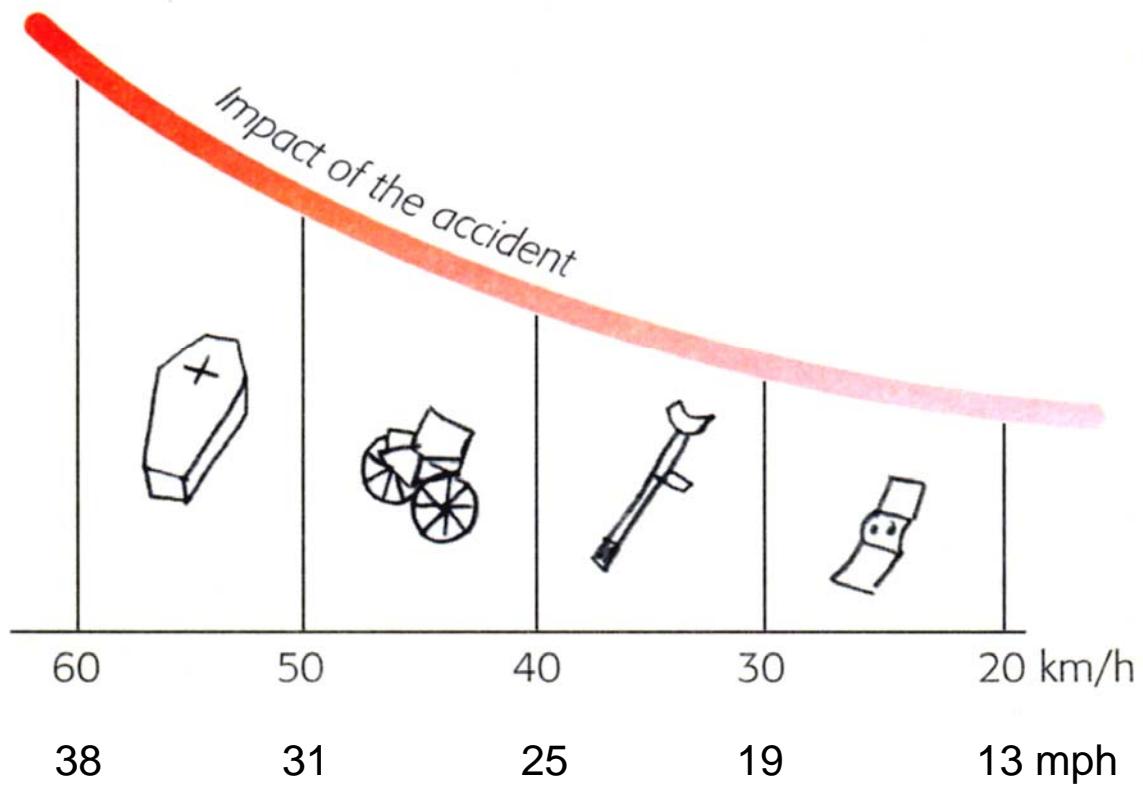
Guideline 27. Where possible, encourage **use of rail for freight**, and use of electric vehicles, including hybrid vehicles, where road freight must be used.

## How car travel varies with gross residential density, 52 urban affluent regions, 1995 (note log scale for density)



Source: Kenworthy J,  
Laube F, *The Millennium  
Cities Data-base for  
Sustainable Transport*,  
Union Internationale des  
transports publics  
(UITP), Brussels,  
Belgium, 2001

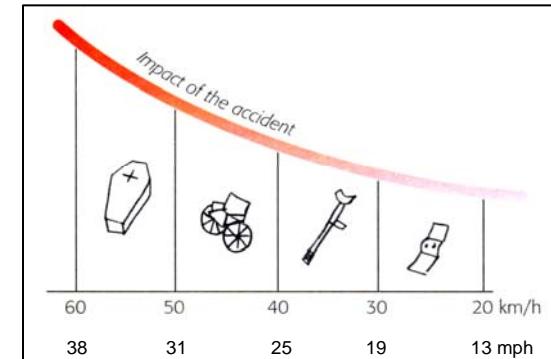
## Schematic relationship between vehicle speed and accident severity



Source: European Commission, Directorate-General for the Environment, *Kids on the Move*, Office for Official Publications of the European Communities, Luxembourg, 2002

## Traffic speed limits in Europe, and Ontario (kilometres/hour)

	Residential areas	Traffic calming zones	School areas	Pedestrian streets	Fast urban roads
Austria	10	30, 40		6	
Denmark	30	30	30	30	60, 70, 80
Finland	20, 30, 40	30, 40	30, 40		60, 70
Germany		6, 30	30	6	60, 70
Greece	30	20, 30			70, 80
Netherlands	30	30	30		70
Portugal					
Spain					
Sweden	30	30	30	30	70
UK	32	32	32		64, 96
Hungary	20, 30	20, 30			60, 70, 80
Iceland	50	30			60, 70
Latvia	20		30, 40		
Lithuania	50	40			60
Norway	30, 40	30	30		60, 70
Romania	30				60
Slovakia	20, 30	20, 30		40	60, 80
Slovenia		20, 30, 40	40		
Switzerland	20	30			60, 70
<b>Ontario</b>	<b>40, 50</b>	<b>30, 40</b>	<b>40</b>		<b>60, 70</b>

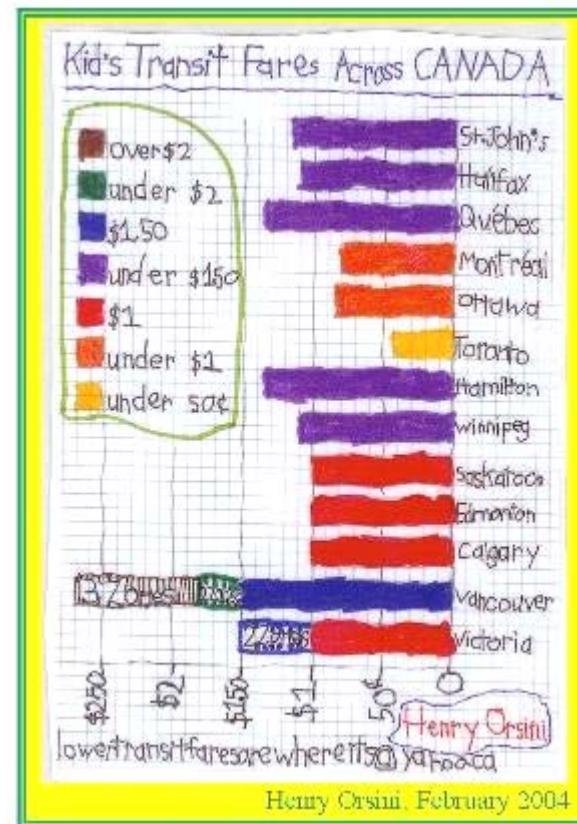


Source: Draskóczy M,  
Mocsári T, *Present Speeds  
and Speed Management  
Methods in Europe*, VTT,  
Finland, November 1997.

km/h	mph
10.....6	
20.....13	
30.....19	
40.....25	
50.....31	
60.....38	
70.....44	

## Transit use by children and youth

- Teenagers, in particular, can be major users of transit, but are often not welcome on transit systems for fear of rowdiness, vandalism, and unsafe behaviour.
- Younger children, even as young as 7 years, are capable of using transit, but **the age at which young people are allowed to use transit has been increasing.**
- Family transit use is a good introduction, but some systems discourage this by charging children adult fares.
- Transit use when young may be more likely to result in transit use as an adult



## Transit use by parents with very young children

What should NOT happen



What  
should  
happen



## Providing for children and youth as transit users

Guideline 16. Ensure that every part of a transit system is safe and **welcoming to a child**, and affordable.

Guideline 17. **Avoid transfers** by routing vehicles where children want to and need to go; make transfers easy where necessary.

Guideline 18. **Keep fares for children low**, so as to encourage their use of transit systems, with or without supervision.

Guideline 19. Examine every aspect of the system from the **perspective of a parent with a child in a stroller**, and make adjustments to meet such a traveller's needs.

## Curb-side tailpipes pollute cyclists and pedestrians, particularly children

- Australian research has shown that curb-side tailpipes put 12 TIMES AS MUCH vehicle exhaust in the breathing spaces of adult pedestrians as off-side tailpipes.
- Children who are cyclists or pedestrians are typically closer to tailpipes than adults, especially if they are in strollers.
- A survey of vehicles in Toronto suggested that 68% of vehicles on the road have curb-side tailpipes.
- Manufacturers could be required to exhaust engine gases at least 1.5 metres (59 inches) from the near-side of a vehicle.

## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



## Curb-side tailpipes



**HYBRID SYNERGY DRIVE**   
**Ready to Go.**

**Tufling performance**  
Feeling smooth, responsive acceleration with surprising performance, Hybrid Synergy Drive™ delivers a uniquely enjoyable drive.

**Higher mileage**  
Extremely efficient Hybrid Synergy Drive™ pushes your gas further, while the simple act of driving it all it takes to charge the battery.

**Reduced emissions**  
Partnering a gas engine with electric power, Hybrid Synergy Drive™ cuts back CO<sub>2</sub> (Carbon Dioxide) and other exhaust emissions.

**Surprisingly silent**  
Hybrid Synergy Drive™ can even run on the electric motor only — offering a driving experience that's surprisingly quiet.

**TOYOTA**



## Providing for children and youth as pedestrians 2

- Guideline 7. For younger children, arrange **walking buses** and other means of supervision (see rear end of a bus below)
- Guideline 8. **Separate sidewalks used by children and youth** from heavily trafficked roads, particularly where traffic moves slowly or vehicles are stationary with engines idling for long periods.
- Guideline 9. Ensure that sidewalks are always **cleared of snow**.



## Children and bicycles



## Providing for children and youth as cyclists

- Guideline 10. For older children and youth, ensure that destinations that cannot be a walk away are no more than a bicycle ride away.
- Guideline 11. For younger children, ensure that sidewalks are suitable for their tricycles and bicycles.
- Guideline 12. For destinations to be reached by bicycle, provide separate bicycle paths, or install bicycle lanes on regular roads.
- Guideline 13. Ensure that bicycle riders are well provided for at intersections and have sufficient priority for forward movement.
- Guideline 14. At destinations, provide secure, convenient bicycle parking.
- Guideline 15. Encourage the carriage of very young children on bicycles, in appropriate seats or attachments.

Above all, figure out where children and youth want to go and how they want to get there

- **Require involvement** of children and youth in land-use and transport planning.
- Ensure child- and youth-friendly sidewalks, pathways, and transit.
- Provide continuous, easy routes to children's and youths' destinations.

## Next steps

- Funds are available—from the Ontario Trillium Foundation—to promote the use of the finalized Ontario *Guidelines* by Ontario municipalities.
- Some endorsement of the *Guidelines* by the Government of Ontario is also anticipated.
- Funds are expected—from the federal government's Public Health Agency of Canada—to develop versions of the *Guidelines* for each of the 10 Canadian provinces.
- Draft versions have already been prepared—with support from this Agency—for British Columbia and Nova Scotia.
- The present aim is to have one set of *Guidelines* for all Canada, but with different documents for each province, recognizing legislative and cultural differences.