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**VANCOUVER AREA
CYCLING
COALITION**

Metro Vancouver's Cycling Advocates



January 23, 2012

The Honourable Denis Lebel
Minister of Transport, Infrastructure and Communities

Transport Canada
Place de Ville
Tower C, 29th Floor
330 Sparks Street
Mail Stop: XA
Ottawa, Ontario
K1A 0N5

Dear Mr. Lebel:

Re: Truck underrun legislation.

The Vancouver Area Cycling Coalition (VACC) is a non-profit society whose staff and more than 1,000 members work to improve conditions for cycling in Metro Vancouver, British Columbia, Canada.

In January 2008 the VACC wrote to your Ministry to express support for Member of Parliament (MP) Olivia Chow's petition asking for side guards (underrun protection) to be made mandatory on trucks in Canada. This followed a recommendation by the Regional Coroner for Toronto to investigate causes of cyclists' deaths. The Regional Coroner for Toronto concluded that trucks and other heavy vehicles were involved in 37% of crashes leading to the death of a cyclist. The study of cyclists deaths in BC over the period 1986 to 1995 prepared by the British Columbia Coroner shows that in 34% of the cases a cyclist died as a result of a collision with a truck or other heavy vehicle – a disproportionate fraction. This latter analysis also shows that bicycle helmets offer only limited protection in accidents with trucks, especially when the cyclist is pulled under the wheels of the truck or the trailer.



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The Ministry responded that these safe guards – mandatory in Europe for over 30 years – would not be effective in Canada due to different road & weather conditions, and would put Canadian trucks at a competitive disadvantage. These arguments are difficult to understand in light of the fact that most fatalities occur in urban centres and that numerous European studies have shown that closed (solid) side-guards give between 4-7% fuel efficiency. The latter is likely to be even higher for long-haul Canadian truckers.

Three years later, after yet another tragic accident involving a pregnant young woman in Toronto, Ms. Chow has tabled a private members bill (C-344) that once again asks that side guards be made mandatory. The VACC requests that the Minister support this bill in order to save the lives of cyclists and pedestrians, to reduce truck fuel costs and to help the environment.

Please find below supporting documentation with references to research and further data.

Sincerely,

Tess Kitchen
President, Vancouver Area Cycling Coalition

Cc:

Olivia Chow, NDP
Pierre Poilievre Codere, NPD Transportation Critic
Elizabeth May, Leader, Green Party of Canada
Blair Lekstrom, BC Minister of Transportation

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Overview of Underrun protection on trucks, trailers and other heavy vehicles

State of Affairs in Canada at this moment

Olivia Chow MP intervened in the House of Commons on 9 May 2007 with the following statement:

“Mr. Speaker, summer is upon us and many Canadians are cycling. Unfortunately, every year some cyclists die under the wheels of large trucks. In fact, large vehicles are involved in 37% of collisions resulting in cyclist fatalities.

I have hundreds of names on a petition calling on the Government of Canada to introduce a regulation under the Motor Vehicle Safety Act requiring side under-run guards for large trucks and trailers to prevent cyclists and pedestrians from being pulled under the wheels of these vehicles and to harmonize Canadian vehicle safety standards with ECE Regulation No. 73 which requires side guards on all trucks and trailers in Europe.”¹

This statement is the follow-up on a petition that was started in Toronto after two collisions involving trucks in 2006. In May 2006, the petitions were presented to Olivia Chow, asking Parliament to make legislation towards side under-run guards on trucks and trailers. There is a strong recommendation by the Ontario Coroner, already made in the late 1990s, that points to this issue with trucks.²

The 37% share of large vehicles in bicycle fatalities that Ms. Chow mentions is based on the Toronto analysis. It is roughly in line with the findings in BC: from the 65 fatalities reported by the coroner over the period 1986-1995, in 21 case a truck was involved, and in one case a bus, which means that in 34% of the accidents a large vehicle was involved.³

¹ Hansard for May 9, 2007: <http://www2.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&Parl=39&Ses=1&DocId=2924200#SOBQ-2068603>

² <http://biketoronto.ca/topic/show/540.htm> ; Lucas, W. 1998, *A Report on Cycling Fatalities in Toronto 1986-1996: Recommendations for Reducing Cycling Injuries and Death*. Toronto: City of Toronto]

³ Office of the Chief Coroner British Columbia, Canada: *Deaths Of Cyclists in British Columbia*, n.d.



Left a truck with open, right one with closed under-run protection. Closed underrun protection increases safety and can save up to 8% in fuel consumption.

Deadly mix.

Monash University Accident Research Centre has published a report on frontal, side and rear underrun protection for trucks, so the issue is widely recognized. What is clear in the case of underrun protection is that not only bicyclists benefit from this protection. They observe that fatalities for both bicyclists and motorcyclists due to the lack of underrun protection are disproportionately high.⁴ There is sufficient evidence to be gathered from various countries to support mandatory side guards on trucks and trailers.

Accidents between trucks and bicycles and other unprotected traffic participants such as pedestrians and motorcyclists lead more often than other accidents on the road to the death of the hit party. Mass, size, and weight are all factors in the deathly outcome, as is the design of the truck with trailer itself. Accidents are likely to occur when a truck passes a cyclists, or when a truck turns right at an intersection. For truck drivers these accidents can be very traumatic. Sometimes the driver even does not know he has driven over, and killed, someone with his truck.

⁴ John Lambert & Georg Rechnitzer, 2002, Report No. 194, p50; <http://www.monash.edu.au/muarc/reports/muarc194.pdf>. In urban areas in The Netherlands, deaths due to accidents with a truck involved are most likely to be cyclists and pedestrians (SWOV 1999, report R-99-31, *De veiligheid van vrachtauto's*, p.52.).



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Right-turn accidents can be prevented by installing blind spot mirrors, as is mandatory in the European Community (EC) since 2005. However, the effectiveness of these mirrors depends on the use by the driver, and the prevention of these accidents is equally a responsibility of the cyclist. But the damage caused by both right-turn accidents as well as accidents resulting from a truck passing a cyclist, or other traffic participants, can be reduced by equipping the truck with some form of underrun protection which prevents other participants from falling under the truck and being crushed by the wheels. Underrun protection gives significant protection for pedestrians, cyclists and motor cyclists, and even cars.

In Europe, as of 1995 ECE regulation 73 requires that all trucks and trailers have **open** underrun protection. This ECE directive was issued by the United Nations Economic Commission for Europe, and applies to all new trucks in Europe since 1995, not only for the European Community. For the EC, Directive 89/297/EEG prescribes open underrun protection. Belgium is active in making closed protection mandatory under this regulation.

According to road safety organizations such as 3VO in the Netherlands, **closed** side guards give more protection, and should be preferred. Added advantage is that closed guards improve aerodynamics, reducing fuel consumption, and also reduces spray when it is raining.

Some observations

1 Collisions between trucks and cyclists are generally of two categories: the truck driver did not see the cyclist (or other person) in his blind spot. Or, while passing – too close, or because of some erratic behaviour of the cyclist – the cyclist is dragged under the wheels. In Europe the under-run measures were initiated Europe-wide under a UN commission and not under the EC flag. With the amount of trade between the European countries, it would have been pointless to only have the EC members under such a regulation.

2 Bicycle helmets. The BC Coroner's study mentioned earlier advised making helmet use mandatory for all cyclists in BC. Over the period 1986 to 1995 this study reported 65 casualties. The publicly available ICBC statistics over the period 1995 to 2005 give a total of 67 cyclists killed. 15 of these fatalities were cyclists wearing a helmet where the cause of death is given as 'head injury' (13 cyclists in this segment died of fatal injuries in other parts of the body). Apparently we have to look for other measures to bring down the number of bicycle fatalities in traffic. Further research into the circumstances of these accidents is clearly indicated.