

City Hall  
453 West 12<sup>th</sup> Ave  
Vancouver, BC V5Y 1V4

Dear Mayor Stewart and Council,

Vancouver Coastal Health's public health team was delighted to learn that City Council is considering a Safer Slower Streets 30 km/h Residential Street Pilot. We would like to offer our support for this motion. Innovations like this pilot keep Vancouver moving toward its Transportation 2040 Vision Zero goals and cement Vancouver as a leader in road safety across Canada.

Vision Zero calls on us to design holistic road systems that acknowledge human fallibility and nevertheless protect against fatalities and serious injuries. This Safe System approach includes four areas of work: safe roads, safe road users, safe vehicles, and safe speeds. The first three pillars often draw attention, but the role of speed is frequently underemphasized.

However, the scientific literature is very clear: speed is always a factor in collisions and injuries. Speed has a direct relationship with stopping time and distance;<sup>1</sup> higher speeds reduce information available to drivers.<sup>2</sup> Speed is also directly linked to force applied during a collision, which reduces the severity of injury and damage. When vehicles travel at lower speeds, they are less likely to crash.<sup>3,4,5</sup> When a crash does occur at a lower speed, the individuals involved have better survival and injury rates than their counterparts in higher speed crashes.<sup>3,4,5</sup>

This is especially critical for vulnerable road users like pedestrians and cyclists. Vulnerable road users in BC incur substantially higher rates of injury per distance travelled than drivers and vehicle passengers.<sup>6</sup> While vehicle occupant injuries have reduced significantly over the past decade, fatality rates and hospitalization rates in cyclists have increased.<sup>6</sup> Pedestrian hospitalization rates and fatality rates have minimally improved.<sup>6</sup> However, other jurisdictions demonstrate that there is much we can do to reduce these rates.

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<sup>1</sup> Global Road Safety Partnership. Speed management: A road safety manual for decision-makers and practitioners. Geneva: 2008.

<sup>2</sup> Roge J, Pebayle T, Lambilliotte E, Spitzenstetter F, Giselbrecht D, Muzet A. Influence of age, speed and duration of monotonous driving task in traffic on the driver's useful visual field. Vision research. 2004;44(23):2737-44.

<sup>3</sup> Elvik R. The Power Model of the relationship between speed and road safety. Oslo: 2009 October 2009. Report No.: 978-82-480-1001-2.

<sup>4</sup> Elvik R. A re-parameterisation of the Power Model of the relationship between the speed of traffic and the number of accidents and accident victims. Accid Anal Prev. 2013;50:854-60.

<sup>5</sup> Elvik R, Christensen P, Amundsen A. Speed and road accidents: An evaluation of the Power Model. Oslo: 2004 December 2004. Report No.: 0802-0175.

<sup>6</sup> Office of the Provincial Health Officer. Where the Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC. Victoria, BC: 2016.

Vision Zero best practice guidelines for speed limits suggest 30 km/h speed limits for roadways where there is a high degree of mixing between vehicles and vulnerable road users.<sup>7</sup> As Councillor Fry's and Councillor Carr's motion described, the rationale for this guideline is the substantial difference in serious injuries for vulnerable road users in collisions at 30 km/h vs 50 km/h.<sup>8,9</sup>

A robust body of evidence demonstrates that lower speed limits are effective at lowering speeds traveled, and the effects are stronger if matched with enforcement or self-explaining roads.<sup>8,10,11,12,13</sup>

Setting speed limits to 30 km/h on local streets has demonstrated reductions of serious injuries and fatalities from 25-65%.<sup>14</sup> "Neighbourhood 30"<sup>15</sup> has been adopted in hundreds of cities around the world, particularly in Europe; neighbourhood 30 km/h zones were also recommended by the Provincial Health Officer in his 2016 road safety report.

Evidence also suggests that lower neighbourhood speed limits can also have important indirect effects – making active transportation more attractive by increasing a sense of safety and improving the aesthetic experience.<sup>14</sup> This in turn supports physical activity and social connection, and can improve air quality by reducing emissions. Safeguarding vulnerable road users can enhance community participation of all ages and abilities, especially for non-drivers like children and many seniors.

We support component (A) of the motion for advocacy to the province for amendments to the Motor Vehicle Act to reduce default speed limits. We suggest that the current level of evidence in road safety literature is sufficient to justify the reduction of all Vancouver local streets (non-collector, non-arterial) to 30 km/h. However, we recognize that given current provincial legislation, the cost of broader implementation of 30 km/h may be prohibitive, and a pilot may provide local evidence to support broader provincial policy change. We strongly recommend that such a pilot is designed with a sufficient scope to enable robust analysis that demonstrates the value of such policy.

Finally, this pilot is an excellent opportunity to generate a broader public conversation around speed. Research demonstrates that the general population systematically underestimates the relationship

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<sup>7</sup> Wramborg P. A new approach to a safe and sustainable road structure and street design for urban areas. Proceedings of the Road Safety on Four Continents Conference; 2005: Conference Sponsor.

<sup>8</sup> Elvik R. Speed limits, enforcement, and health consequences. Annual review of public health. 2012;33:225-38.

<sup>9</sup> Kröyer HRG. Is 30 km/h a 'safe' speed? Injury severity of pedestrians struck by a vehicle and the relation to travel speed and age. IATSS Research. 2015;39(1):42-50.

<sup>10</sup> Elvik R. Speed and Road Safety Synthesis of Evidence from Evaluation Studies. Transportation Research Record: Journal of the Transportation Research Board. 2005.

<sup>11</sup> Elvik R. A restatement of the case for speed limits. Transport Policy. 2010;17(3):196-204.

<sup>12</sup> Joint Transport Research Centre. Speed Management. European Conference of Ministers of Transport: Organisation for Economic Co-operation and Development; 2006.

<sup>13</sup> European Road Safety Observatory. Speed and Speed Management. 2015.

<sup>14</sup> Cairns J, Warren J, Garthwaite K, Greig G, Bamba C. Go slow: an umbrella review of the effects of 20 mph zones and limits on health and health inequalities. Journal of public health. 2015;37(3):515-

<sup>15</sup> Also called "20 is plenty" in locations using miles per hour (MPH)

between speed and risk of injurious collisions, while overestimating the additional travel time associated with slower speeds. Transforming the public dialogue to focus on the wide-ranging benefits of slower speeds is critical to developing the most vibrant, safe, and healthy city possible. Please let us know if there is any further information or assistance we can provide in moving this initiative forward.

Sincerely,

A handwritten signature in black ink, appearing to read "Emily Newhouse". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Emily Newhouse, MD, MPH, FRCPC  
Medical Health Officer, Vancouver  
Vancouver Coastal Health