

Making Roads Right for Ride-hailing

With smart planning, policies, taxes and regulations, the introduction of ride-hailing provides BC the unique opportunity to transform communities, making roads safer and more attractive to people walking and cycling while more effectively accommodating transit, taxis, goods delivery and other transportation innovations, such as automated vehicles. Experience elsewhere indicates that taking a regulation-only approach has often resulted in more congested streets¹, decreases in transit and cycling use, and ride-hailing vehicles blocking bus & bike lanes.

In addition to regulations to minimize the impact of ride-hailing on safety, transit, cycling and walking, initial financing from the ride-hailing industry and an on-going tax on ride-hailing should fund the implementation, operation and enforcement of:

- Pick up/drop off zones;
- Protected bike lanes;
- Transit lanes and priority measures; and
- Sidewalk and streetscape improvements.



REIMAGINING OUR STREETS

Re-allocate road space as automated, connected, electric, & shared vehicles become real

City of Vancouver²

Ride-hailing is a rapidly evolving part of a sustainable transportation portfolio requiring rigorous and integrated planning and approval processes. This will help ride-hailing to experience the same success as other forms of shared mobility including car and bike sharing. It will have the short-term benefit of making our communities healthier, safer and more affordable while over

¹ R Clewlow, G Mishra, UC Davis, Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States https://itspubs.ucdavis.edu/wp-content/themes/ucdavis/pubs/download_pdf.php?id=2752

² <http://council.vancouver.ca/20161214/documents/cfsc4presentation.pdf>

the long term, BC can position itself as a leader in automated vehicles and other transportation innovations.



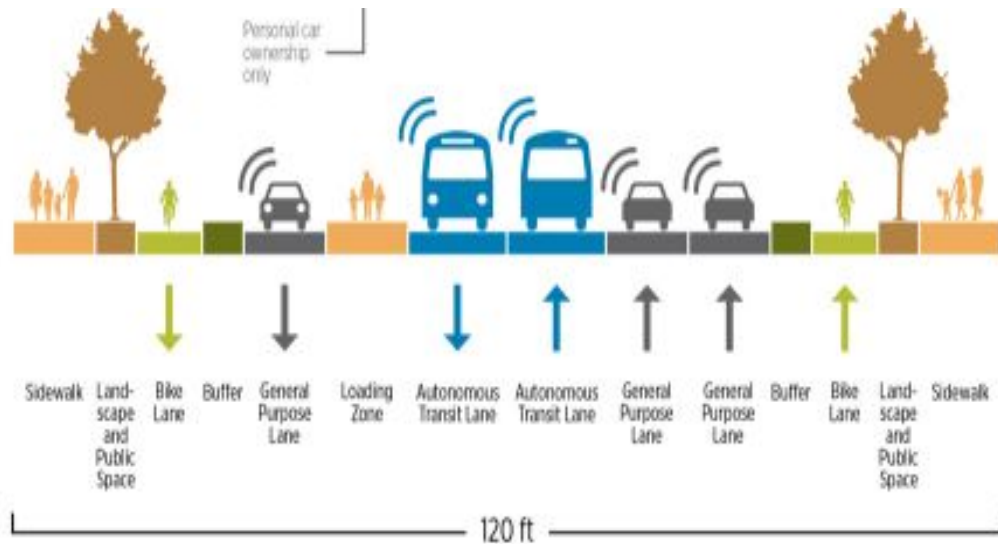
Lyft³

Other measures, that will ensure that ride-hailing reduces congestion and is safe and environmentally beneficial, include:

- Mandate or incentivize the use of small, lighter vehicles that take up less road space, are more fuel efficient and are less likely to seriously injure people walking and cycling
- Ensure that pedicabs, tandem bicycles & electric Low Speed Vehicles (LSV) can be used for ride-hailing
- Mandate pedestrian and cycling collision avoidance systems
- Enforce zero tolerance for distracted driving and stopping in bus and bike lanes
- Enact a safer passing law, increased penalties for dooring, blanket speed limits under 50km/h and other Motor Vehicle Act updates
- Fine the ride-hailing companies for driver infractions to incentivize them to find solutions to prevent infractions.
- Incentivize use of ride-hailing as a complement to, rather than a replacement for, public transit
- Establish distance-based insurance & mobility pricing for ride-hailing

³ Perkins + Will, Nelson\Nygaard & Lyft

<https://www.fastcodesign.com/90143465/how-lyft-would-redesign-one-of-l-a-s-busiest-streets>



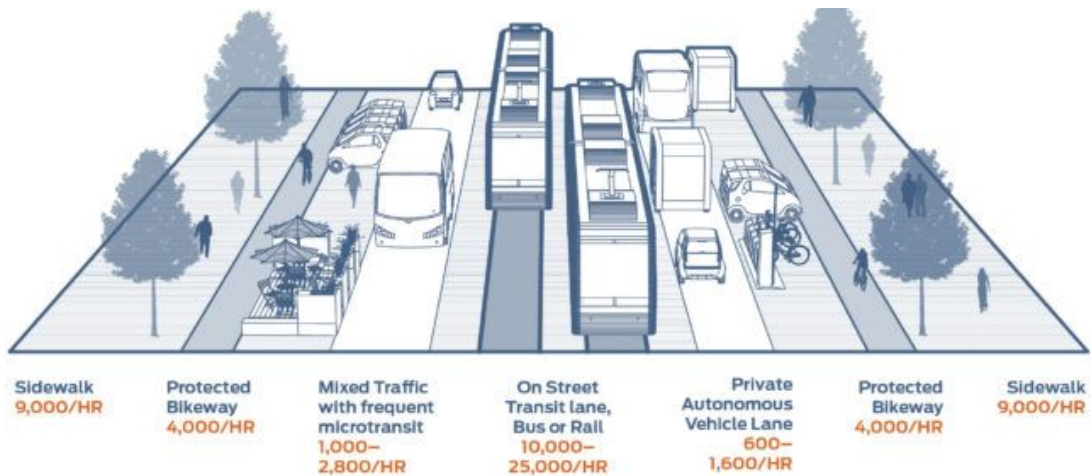
Transforming our Streets

Visions of streets from disparate interests, including ride-hailing companies, public health professionals, automotive companies, high tech companies, urban planners, transportation engineers, road safety experts and cycling advocates tend to converge around several measures:

- Drop off and loading zones
- Protected bike lanes
- Less road space allocated to motor vehicles
- Reduced on-street parking
- Safer crossings for pedestrians
- Transit/automated vehicle lanes
- A higher quality of public space
- Mobility pricing
- Integration with long distance commuter-focused rapid transit

While, in principle, ride-hailing companies tend to support these improvements, so far, there are no plans or resources to actually make this vision of the future a reality.

Rebuilding BC streets to safely and efficiently accommodate ride-hailing now, and automated vehicles in the future, will require a substantial investment. Unless more funding is found, it would also take decades. A tax on ride-hailing, and/or other financial contributions from the ride-hailing industry, could dramatically accelerate this transformation.



NACTO⁴

Starting with Small Pilot Projects

New transportation measures often take decades to become viable on a large scale. For example, with bike sharing, the first attempt was in 1965 in Amsterdam but it was not until 2005 when a large scale system was successfully implemented in Lyon⁵. And even now, new ideas are being tested in cities around the world. With ride-hailing there is potential for it to be part of an integrated sustainable mobility system, but many traffic, safety, economic and community issues need to be resolved. Starting with a few pilot projects in limited areas of a large city with a small number of vehicles or in a smaller community would enable the testing of innovative measures and allow for the adaption of streets in the operating area prior to system start-up. Once problems have been resolved, ride-hailing could then be rolled out in more areas on a larger scale.

New York City Ride-hailing and Taxi Fees - A Path to Road Pricing

The recently approved New York City ride-hailing and taxi fees could reduce near-term congestion from ride-hailing and provide a path forward to broader congestion or road pricing.

But Uber thinks congestion pricing could end up being a boon to business. That's because Albany is considering a steep discount on fees for shared rides à la UberPool. One version of the proposal, which hasn't been finalized, would charge passengers an extra \$2.50 on taxi trips in Manhattan below 96th street, \$2.75 for private rides booked through ride-hailing companies like Uber and with black cars, and \$0.75 on shared or "pooled" trips, according to a source familiar with the negotiations.⁶

"Uber supports the agreement between the Governor and the Legislature to target a

⁴ Blueprint for Autonomous Urbanize, NACTO, Fall 2017
https://nacto.org/wp-content/uploads/2017/11/BAU_Mod1_raster-sm.pdf

⁵ The Global Bike-Share Boom/ An Interactive History, CityLab,
<https://www.citylab.com/city-makers-connections/bike-share/>

⁶ <https://qz.com/1240817/uber-thinks-congestion-pricing-will-be-great-for-its-uberpool-business/>

per-trip fee on Manhattan riders where there is convenient access to public transit, and to adopt a first-in-the-nation tax discount on shared trips," an Uber spokesperson said. "We will continue to advocate for the adoption of a comprehensive congestion pricing plan that is applied to all vehicles because it is the best way to fully fund mass transit and reduce traffic in the central business district."⁷

"We support the meaningful first step that the Governor, Senate and Assembly has taken to address congestion and transit needs in the City of New York, especially incentivizing shared rides," a Lyft spokesperson said. "However, congestion will not be fully addressed until the Governor and Legislature enact a comprehensive plan that also addresses all commercial vehicles and the real issue driving congestion: personal vehicles."⁸

Mr. Cuomo and some congestion pricing advocates have sought to cast the new surcharge on for-hire vehicles as a first step toward congestion pricing, which would reduce car congestion and establish a long-term revenue source for public transportation.⁹

Chicago Ride-hailing Tax

Chicago has ride-hailing taxes and fees that generated US \$58.6 million in 2016 and are expected to generate \$85.2 million in 2017. They are planning to increase the tax from 52¢ per ride to 67¢, in 2018, and to 72¢, in 2019.¹⁰ Chicago intends to use this revenue to fund transit although they have not specified what initiatives it will fund.

The Need for Infrastructure Improvements to Complement Regulations

Based on experience with ride-hailing in other cities and existing services, including parcel and goods delivery and taxi service, our roads are not designed to allow for safe and efficient stopping while minimizing other negative impacts on road users. As such, while regulations and their enforcement are critical, they are not sufficient to meet the BC Government's road safety, environmental and transportation goals.

Enforcement of regulations, while essential, is expensive for governments. The resulting penalties are costly for ride-hailing drivers who already suffer from low pay. A better solution, for greater compliance with regulations, is better road design, with protected bike lanes, where vehicles cannot obstruct cyclists, and safe, convenient passenger drop off/pick up zones.

⁷ <http://www.thedrive.com/news/19855/uber-lyft-taxi-rides-into-manhattan-get-slapped-with-new-surcharge>

⁸ Ibid.

⁹ <https://www.nytimes.com/2018/03/31/nyregion/congestion-pricing-new-york.html>

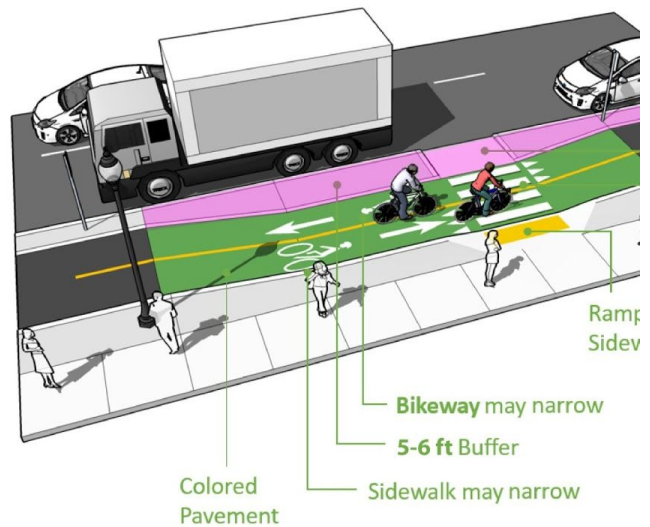
¹⁰

<https://www.dnainfo.com/chicago/20171017/wicker-park/new-tax-on-uber-lyft-would-pay-for-cta-improvements-rahm-says>

LOADING/PICK-UP & DROP-OFF ZONE

As curbside demand increases, are cities ready to remove parking for AV pick-up/drop-off or TNC pick-up/drop-off zones? Bike lanes should come first, and rideshare services may be permitted to load/unload only in designated spaces (geo-fencing), helping to improve traffic flow.

Alta Planning and Design



Blocking Bike and Bus Lanes

Even now, taxis and delivery vehicles often illegally block bike, bus and traffic lanes, thus slowing bus service, putting people who cycle at risk and causing congestion. Without building proper loading zones and protected bike lanes, prior to the introduction of ride-hailing, these safety issues will get much worse.

Uber and Lyft Issues in San Francisco

In San Francisco, “swarms of Uber and Lyft vehicles swing in and out of Valencia’s painted bike lanes every day, putting bicyclists in harm’s way.”¹¹ Citizen observers found that “From 6 to 7 P.M., on just one side of the street, 53 cars blocked the bike lane, forcing 205 bikes to swerve into fast-moving traffic.”¹² In response, human chain protests have been organized with people blocking vehicles from entering the bike lanes on Valencia.¹³ While protected bike lanes are being proposed, it could take years to complete them.



Photo: Audrey Nieh

Also in response to this blocking of bike lanes, in an Uber drivers’ forum, people made the following comments in support of designated passenger zones¹⁴:

¹¹ <http://www.sfexaminer.com/uber-lyft-swarm-valencia-bike-lanes-supervisors-demand-barriers/>

¹² <https://www.sierraclub.org/sierra/we-are-traffic>

¹³ <http://hoodline.com/2017/05/traffic-safety-advocates-form-human-chain-to-protect-tenderloin-bike-lane>

¹⁴ UberPeople.net,

- Then create drop off locations. Where else are we supposed to drop them off?
- There also should be designated TNC pickup/dropoff spots all over the city. Anything to help traffic flow and decrease idling Uber and Lyft cars.
- If the board of Supes [Supervisors] wants to represent the people in their district, why don't they act to provide safe zones for us to load and unload passengers?

Pick up/drop off Zone Pilot - San Francisco

In response to the congestion and safety problems experienced in San Francisco, the City reached a deal with Uber and Lyft on a pick up/drop off zone pilot that includes¹⁵:

- converting some parking spaces into legal pick up/drop off zones with painted curbs;
- installing geofencing to electronically ban drivers from using certain locations and help users to locate pick up/drop off zones;
- requiring data, such as anonymized trip details, from Uber and Lyft to ensure compliance

Unacceptable safety problems must be avoided in BC by building safe passenger loading zones, protected bike lanes and transit lanes prior to the introduction of ride-hailing in a community. Also worth considering is areas where drivers can safety park while waiting for ride requests. This could help decrease distracted driving.

Smaller Vehicles

Mandating and incentivizing the use of smaller ride-hailing, taxi and delivery vehicles is key to reducing the negative impact on the environment, traffic and the safety of vulnerable road-users. Such vehicles include pedicabs, tandem bicycles, microcars and subcompact, economy and compact cars.

Lightweight smaller vehicles reduce the:

- width needed for passenger and loading zones, leaving more width for bike and bus lanes and wider sidewalks
- length needed for passenger and loading zones, leaving more street space for other purposes including on-street parking
- energy required, thus decreasing GHG emissions, battery size and charging time
- risk to people walking and cycling
- space needed while moving or queuing, reducing congestion and the amount of road space needed
- cost of ownership and operation, allowing those with lower incomes to participate and reducing cost to businesses

Pedal-Powered and Electric-Assist Vehicles

Pedicabs, tandem bicycles and other lightweight, pedal-powered or electric-assist vehicles should be allowed as ride-hailing vehicles. Such vehicles would be safe, convenient and affordable for service in compact urban areas.

<https://uberpeople.net/threads/after-uber-lyft-swarm-valencia-bike-lanes-supervisors-demand-barriers.191378/>

¹⁵ <http://www.sfoxaminer.com/mayor-lee-strikes-deal-allow-uber-lyft-vehicles-use-sf-curb-space/>

- As they are smaller, they could be exempt from the requirement to only stop in passenger zones or they could have additional smaller passenger zones.
- To encourage their use and due to their low impact on infrastructure, they should be subject to lower or no ride-hailing fees. and taxes.
- As their lightweight and low speed is much less dangerous than heavier vehicles, they should be exempt from any requirement to have collision avoidance systems.

Low-Speed Vehicles (LSV)

The vast majority of ride-hailing trips are within urban areas making them good candidates for Low-Speed Vehicles (LSV). LSVs are small, lightweight, electric vehicles, such as golf carts, that are currently limited to 32 km/h in BC. They can be recharged using standard household electrical outlets, so they can be widely used without waiting for expensive charging stations to be built. As is the case with pedicabs, they require shorter and narrower loading zones and are thus easier to accommodate on streets.

BC needs to:

- Standardize regulations for LSVs across BC
- Allow municipalities to set blanket speed limits below 30 km/h
- Refine ICBC's regulations for LSVs to ensure that they are practical
- Expand Clean Energy Vehicle (CEV) rebates to include the purchase and upgrading of LSVs to meet ICBC regulations

Safety Issues

The BC Road Safety Strategy states that while fatalities among occupants of motor vehicles has been declining over the last decade, walking and cycling fatalities, due to motor vehicle crashes, have not. As ride-hailing will be a new transportation service for BC, the ride-hailing regulations should be consistent with the Road Safety Strategy and its goal of zero fatalities and serious injuries. The introduction of ride-hailing is an ideal opportunity to ensure that it is safe for people cycling and walking.

One of the key measures to improve safety is reducing motor vehicle distance traveled through mode shift.

The British Columbia Road Safety Strategy 2015 states:

These smart modes of transportation include walking, cycling and public transport. By reducing private car use, these other travel modes reduce the motor vehicle crash rate, encourage healthy physical activity and reduce greenhouse gas emissions and our carbon footprint.

However, one of the main concerns regarding ride-hailing is an increase in motor vehicle trips and a decrease in safer transit, walking and cycling trips. As 49% to 61% of ride-hailing trips would have been made by walking, biking, transit or not made at all¹⁶, it is likely that ride-hailing increases vehicle kilometres travelled¹⁷. Any increase in motor vehicle crashes would increase ICBC rates, congestion and healthcare costs.

¹⁶ R Clewlow et al, Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States, page 26

¹⁷ https://itspubs.ucdavis.edu/wp-content/themes/ucdavis/pubs/download_pdf.php?id=2752, page 2.

While there is a lack of good data regarding ride-hailing, partially due to the reluctance of operators to release data, there is some evidence of safety issues, including Uber drivers involved in more fatal crashes than taxis¹⁸ and tires not being well maintained¹⁹.

The results have been mixed regarding the potential of ride-hailing to reduce drunk driving²⁰. Studies have shown a reduction of drunk driving in some, but not all, cities following the introduction of ride-hailing. However, one report found no correlation between the introduction of ride-hailing and the number of overall or drunk-driving traffic fatalities²¹.

Safety Measures

We urge the Government to make cycling and walking safety a top priority when drafting ride-hailing rules and regulations. As the BC Road Safety Strategy has adopted the Safe Systems approach, these regulations should address safe road users, safe vehicles and safe speeds. As ride-hailing vehicles are likely to be driven a significantly greater number of kilometres than other vehicles, improvements in vehicle and driver safety will have a greater impact. Possible safety related regulations for ride-hailing include:

- mandating collision avoidance systems;
- mandating or strongly encouraging the use of safer vehicles, including small cars and minivans;
- banning or limiting the use of vehicles that are more dangerous to people cycling, walking and driving, including SUVs, light-duty trucks and full-sized vans; and
- mandating or encouraging the use of vehicle sliding doors (as in the new taxi design for New York City).

Mandating Collision Avoidance Systems

Ride-hailing vehicles should have automatic collision avoidance systems that significantly reduce the likelihood and severity of crashes with people cycling and walking. Such systems typically scan the street for people walking and cycling and brake or take other measures to avoid crashes. Some vehicles even have exterior airbags to lessen the severity of injuries should a crash with a cyclist or pedestrian be unavoidable.

The BC Road Safety Strategy states “Today, safe vehicles not only protect vehicle occupants, but protect all road users – even those outside of motor vehicles.”

Crash avoidance systems prevent collisions with other motor vehicles making the streets safer for everyone. They also reduce costs related to insurance, vehicle repair, health care and traffic congestion -- a real win-win for everyone including the BC Government, ride-hailing drivers and the ride-hailing companies.

Requiring collision avoidance systems for ride-hailing vehicles would increase awareness and expand the market for such systems thus hastening their adoption for other vehicles as well.

¹⁸ <https://www.injuryclaimnyclaw.com/blog/safe-ridesharing-really/>

¹⁹ <https://www.entrepreneur.com/article/277917>

²⁰ <https://www.nytimes.com/2017/04/07/business/uber-drunk-driving-prevention.html>

²¹ <https://academic.oup.com/aje/article/184/3/192/2195589/Uber-and-Metropolitan-Traffic-Fatalities-in-the>

Ensuring Vehicles are As Safe As Possible for Cyclists and Pedestrians

Light truck vehicles (LTV), which includes vans, pickup trucks and SUVs, pose a significantly greater risk to pedestrians and cyclists. These vehicles should not be allowed as ride-hailing vehicles, except when they are equipped and approved to carry wheelchairs.

The Provincial Health Officer's Annual Report *Where the Rubber Meets the Road: Reducing the Impact of Motor Vehicle Crashes on Health and Well-being in BC* states "Research also suggests that the large weight and size of SUVs and light trucks increases the risk of injury to other road users involved in MVCs."²²

Researchers at the University of Michigan's Transportation Research Institute have concluded that a pedestrian hit by an LTV is more than three times more likely to be killed than one hit by a car – less due to the vehicle's greater mass than due to its height and the design of its front end. A pedestrian hit by a passenger car will, with luck (a relative term), be struck in the legs and sent over the hood. An LTV will probably strike a pedestrian with its blunt hood – for adults, at the level of the torso, home of the vital organs; for kids, the level of the head. The LTV will then knock 65% of adults and 93% of children to the ground, where they have a good chance of being run over.²³ As well, headlights are higher on an LTV and more likely to blind other drivers and only 2 out of 38 SUV models tested had a rating of good or better²⁴.



Large SUVs and pickups also can make it hard for drivers to see children and even short adults

Preventing Dooring

Dooring (the illegal hitting of a cyclist by opening a car door) is one of the leading causes of cycling injuries. The ride-hailing regulations should include rules prohibiting dropping off passengers in areas where they could door cyclists. They must stop only in approved pickup and drop off zones that are designed to eliminate the possibility of dooring. Drivers must be trained to look for cyclists before opening their door and passengers should be informed to look for cyclists before opening their doors (possibly by including stickers on the doors). Narrower

²² Page 144

<https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/annual-reports/reducing-motor-vehicle-crashes-bc.pdf>

²³ <http://www.theglobeandmail.com/opinion/why-the-suv-mentality-needs-to-change/article27172486/>

²⁴

<http://www.iihs.org/iihs/news/desktopnews/more-than-half-of-midsize-suv-headlights-tested-rate-marginal-or-poor>

vehicles also reduce the risk of dooring. If the vehicle has a back seat, it should have four doors instead of two as two-door vehicles tend to have longer doors. Ride-hailing firms should be fined and held partially liable for doorings. This will encourage them to educate drivers and take other measures to eliminate dooring.

Mandating Driver Safety Training

Drivers of ride-hailing vehicles should have comprehensive training and testing on how to drive safely and respectfully near people who are cycling. The comprehensive training should also include an on-road cycling training course for drivers to become aware of safe driving requirements from the cyclist's perspective.

Updates to the Motor Vehicle Act

While a comprehensive review and update of the Motor Vehicle Act²⁵ is badly needed to reduce conflicts and improve the safety of people cycling and walking, there are several specific improvements that should be in place prior to the introduction of ride-hailing:

- Legal definitions of bicycle lanes and separated cycling facilities to enable enforcement for driving in, stopping in or blocking bike lanes
- Stronger penalties for dooring cyclists, including increase fine from \$81 to \$368
- Safer passing law, to discourage drivers from passing too closely, forcing cyclists to move closer to parked cars thus increasing their risk of injury from opening car doors
- Allowing municipalities to specify blanket speed limits below 50 km/h. This improves the safety of people cycling and walking and enables the use of electric Low-Speed Vehicles (LSV) for ride-hailing and personal use.

Zero Tolerance for Distracted, Drunk, Aggressive or Careless Driving

Drivers who have a record of distracted, drunk, aggressive or careless driving should not be allowed to operate a ride-hailing vehicle. Any distracted, drunk, aggressive or careless driving should result in the immediate suspension of a driver's ride-hailing licence.

Zero Tolerance for Stopping in or Blocking Bicycle Lanes

The blocking of bicycle lanes by motor vehicles can be very dangerous for people cycling, as it may force them either into the road with motor vehicle traffic or onto sidewalks. Ride-hailing regulations should include zero tolerance for stopping in bike lanes. Infractions should result in large fines or suspension of the driver's ride-hailing licence.

Citizen video and photo evidence

While members of the public can submit video and photo evidence for MVA and bylaw violations, the process needs to be made simpler and then widely promoted to help significantly decrease MVA and traffic bylaw infractions.

Encouraging and Enabling a Culture of Safety

The ride-hailing industry currently operates as a service connecting passengers to vehicle drivers and, as such, attempts to limit its responsibility for the safe operation of ride-hailing vehicles. With much of the responsibility for safety in the hands of individual drivers, problems and solutions can be ignored by ride-hailing companies.

²⁵ Modernizing the Motor Vehicle Act, Road Safety Law Reform Group of BC, https://bikehub.ca/sites/default/files/modernizing_the_bc_motor_vehicle_act.pdf

However, as often these companies plan to operate automated fleets at some point in the future, the responsibility for safe vehicle operation will solely rest with them and the suppliers of the vehicles. These companies will need to adopt a culture of safety to be successful and responsible operators of automated vehicles. Policies that encourage, incentivize or mandate safety improvements will encourage innovative safety measures and cultivate a culture of safety.

Ride-hailing companies should be fined for each:

- collision that a ride-hailing vehicle is involved in (increased amounts more severity of the crash);
- Motor Vehicle Act violation that a ride-hailing driver receives; and
- Traffic violation for illegally stopping in a bike, bus or traffic lane that a ride-hailing driver receives.

Individual drivers may be tempted to take chances that, at least in the short term, will seem to be worth the risk as tickets and crashes may happen infrequently. Ride-hailing companies dispatching a large number of vehicles, on the other hand, would experience these much more frequently and would have a strong financial incentive to take measures to improve safety and thus minimize these costs.

Other Measures

In addition, measures that should be considered include:

Bike Racks

Ride-hailing services should encourage drivers to carry bike racks. Adding bike racks would increase the customer base for drivers and would encourage more people to cycle. Currently, Uber offers this in Seattle and Portland.

Electric Vehicles

While not a safety measure, encouraging or requiring the use of electric vehicles for ride-hailing would reduce the pollution levels for everyone. The necessary vehicle recharging could encourage drivers to take more breaks potentially resulting in fewer fatigue related collisions.

Resources

Blueprint for Autonomous Urbanize, NACTO, Fall 2017

https://nacto.org/wp-content/uploads/2017/11/BAU_Mod1_raster-sm.pdf

Contact

info@bccc.bc.ca

Thanks to the Real Estate Foundation of BC
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Transportation Forward in BC initiative.

