

WHO DRIVES WHOM? DRIVERLESS CAR PILOT PROJECT TO HIT THE ROAD IN ONTARIO IN 2016

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Remember when cars were either manual or automatic? That choice will seem a quaint one in coming years as manufacturers and technology companies race to put driverless cars on the road. While fully autonomous vehicles may still seem like science fiction, the technology is just around the corner, and in some cases already here: Google's self-driving test car has racked up 1.3 million miles of test driving on real roads since 2012. Auto manufacturers are also incorporating the technology into their own vehicles. Honda announced it will introduce driverless cars in Japan by 2020. Daimler has developed a driverless freight truck that has already been successfully tested in Nevada and Germany. And in October 2015, auto manufacturer Tesla gave its existing cars semi-autonomous capabilities through a software update.^[1]

Ontario drivers can expect to see this technology on the road starting as early as January 2016. Ontario has approved a pilot project to permit companies to test automated vehicles ("AVs") on public roads between January 1, 2016 and January 1, 2026. Ontario's pilot project presents an opportunity for developers around the world to test their AVs in Canada's unique driving conditions.

While AVs are expected to eventually reduce accidents dramatically, the technology is still in its early days. Ontario's enabling regulation for the AV pilot project therefore contains several restrictions to ensure that the project runs safely.

The province has set out the requirements for participation in the pilot project in Regulation 306/15 (the "Regulation"). This bulletin provides a snapshot of what prospective participants need to know.

What does the Regulation apply to?

The Regulation applies to the operation of an AV, the person that drives an AV and the owner of an AV.

An AV is defined by the Regulation as a motor vehicle with a system that performs dynamic driving tasks with limited human assistance and operates at driving automation Level 3 (conditional automation), 4 (high automation) or 5 (full automation).² The Ministry of Transportation further describes an AV as a driverless or self-driving car that is capable of detecting the surrounding environment using artificial intelligence, sensors

and GPS coordinates.

For comparison, most AVs being tested in the US fall short of full automation. Google's car (the most automated) likely only qualifies as "high automation", while technology being tested by manufacturers such as Tesla is based more on Advanced Driver Assistance Systems technology that would likely qualify as "conditional automation."

Who may participate?

There are two classes of owners of AVs that may apply to the Registrar for approval to participate in the pilot project: (1) owners of vehicles that were originally manufactured as AVs and (2) owners of vehicles that were converted into AVs.

For vehicles that are originally manufactured as AVs, the owner must be the company that manufactured the vehicle. The owner must also be authorized under the *Motor Vehicle Safety Act* (Canada) to apply a national safety mark to the vehicle or be registered as a foreign manufacturer under that Act.

For vehicles that were converted into AVs, the owner must be the person that converted the vehicle. This ownership class is restricted to original manufacturers of AVs, technology companies, academic or research institutions, or manufacturers of components used in automated driving systems. The owner must satisfy the Registrar of Motor Vehicles that it has the expertise to properly convert vehicles into AVs.

What may the Registrar of Motor Vehicles consider when reviewing an application?

The Registrar may approve an application if it is satisfied that the AV meets the safety requirements described below. The Regulation provides the Registrar with broad discretion to impose additional requirements with which an owner must comply to ensure that testing is conducted safely and in accordance with the law. The Registrar may refuse an application if it is not satisfied that the testing will be conducted safely.

The Registrar has authority to revoke a previous approval if it believes that the application contained inaccurate or materially incomplete information. An application may also be revoked if the owner to whom the approval was issued ceases to meet the participation requirements set out in the Regulation or the testing fails to meet the conditions set out in the approval.

What are the required safety functions for participating vehicles?

An eligible AV must always have a driver that monitors the vehicle's operation and remains in the driver's seat at all times. In addition, eligibility for the pilot project is restricted to vehicles that have (1) an easily accessible mechanism that engages and disengages the automated driving system; (2) a system that alerts the driver if a failure of the automated driving system is engaged and either (i) requires the driver to take over all dynamic

driving tasks or (ii) causes the vehicle to safely move out of traffic and come to a complete stop; and (3) a mechanism that allows the driver to take over all dynamic driving tasks. Participating vehicles must also comply with SAE Standard J3016^[3], the *Motor Vehicle Safety Act* (Canada) and the *Motor Vehicle Safety Regulations*.

What is a participant required to report in the event of an accident?

An owner must notify the Registrar within 10 days of a collision. The notice must include information about the vehicles involved, persons involved, location of the collision, the cause of the collision, details about any personal injury or damage, and any other relevant information.

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1 Searching "Tesla Autopilot" on YouTube produces dozens of videos of incredulous drivers zipping from point A to point B hands (and feet) free

2 This automation scale is similar to the U.S. Department of Transportation's National Highway Traffic Safety Administration ("NHTSA") scale, which contains 4 levels ranging from no automation (level 0) to full automation (level 5).

3 Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems, online: SAE International <http://standards.sae.org/j3016_201401/>.

A Cautionary Note

The foregoing provides only an overview and does not constitute legal advice. Readers are cautioned against making any decisions based on this material alone. Rather, specific legal advice should be obtained.

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