Commercial Autonomous Vehicle Operations Bill

Currently, transportation network companies (TNCs) are testing autonomous vehicles (AVs) and providing free rides on public roads within Minnesota without an existing regulatory framework to guide their deployment and ensure the safety of Minnesotans. This bill would prohibit the commercial operation of AVs[1] until an advisory board completes a study and a permit process for commercial AV operators is established by the Commissioner of Transportation. Below is an overview of the bill.

Advisory Board Composition

The Commercial Autonomous Vehicle Operations Labor and Small Business Impact Advisory Board would consist of the following members:

- Commissioner of Transportation or a designee
- Commissioner of Public Safety or a designee
- Commissioner of Commerce or a designee
- Attorney General or a designee
- One representative from the driver workforce in the private sector
- One representative from the driver workforce in the public sector
- One rideshare driver
- One representative from the disability rights community
- One representative from a municipal government
- One representative from a consumer rights advocacy group
- One representative from an autonomous vehicle company

Study

The advisory board would work with an independent research institution with expertise in rideshare labor economics to study commercial AV operations and evaluate their potential for deployment in Minnesota. The study must include, at a minimum:

1. the short- and long-term effects of commercial AV operations on rideshare and commercial drivers and workforce displacement projections;
2. economic impacts on TNC drivers;
3. reemployment pathways for displaced rideshare and commercial drivers;
4. economic displacement impacts on businesses that serve rideshare and commercial drivers;
5. financial impacts on Minnesota, including reduced tax revenue;
6. accessible offerings and supports for people with disabilities;

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[1] This bill would cover any autonomous vehicles that meet the SAE International's definitions for levels 3, 4, or 5 for driving automation.

7. legal liability in the event of collisions;
8. algorithmic management, including requiring public notifications for changes to algorithms that could impact how AVs interact with pedestrians and other vehicles;
9. financial and infrastructure impacts on cities and the state;
10. potential for interference with first responders;
11. evaluation of AVs' ability to navigate city streets;
12. assessment of congestion impacts; and
13. certification process not overseen by the AV industry

Public Comment

The advisory board would hold public hearings to obtain testimony from rideshare and commercial drivers and members of the public. The board must accept public comment for at least 30 days after releasing preliminary findings.

Recommendations

The advisory board would publish a final report no later than February 1, 2027 on the Department of Transportation's website. The report would, at a minimum, include (1) recommendations to the Commissioner of Transportation on whether commercial AV operations should be allowed in Minnesota and (2) potential requirements for the permit process.

Permit Process

The Commissioner of Transportation would develop a permit process for commercial AV operations based on the study and recommendations of the advisory board. The process would include an evaluation of every permit applicant by the advisory board.

For each region that an applicant seeks to operate, the advisory board must evaluate the same issues that the board assessed in the study, specifically #2 through #12 in the list above. Based on the evaluation results, the advisory board would provide a nonbinding recommendation to the Commissioner whether or not to approve the application.

Human Safety Operator

The commercial AV operations permit must require the presence of a human safety operator whenever passengers or goods are being transported. The safety operator must have the ability to monitor the vehicles' performance and intervene if necessary, including manually controlling the AV or shutting off the vehicle. AV and human operators must adhere to all applicable local, state, and federal requirements.
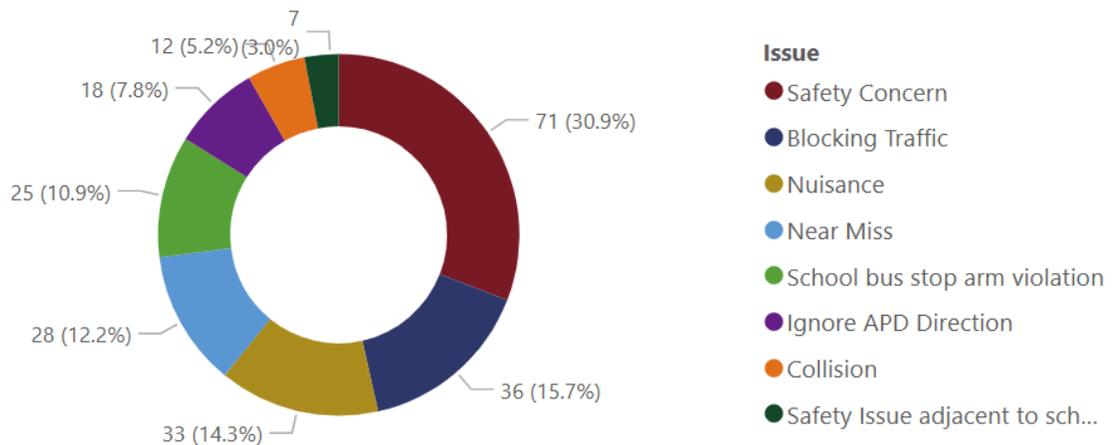
Concerns with AV Safety Data

1. **Collision data is only a small part of the picture**

Many of Waymo's safety claims are based on the number of crashes its vehicles have been involved in. Some of the best data sources available to the public also follow this convention, such as NHTSA incident report data.

However, reports of AV-related incidents collected by the City of Austin, illustrated below, show that collisions account for only 5.22% of the total.

Incidents by Type

- Safety Concern — 71 (30.9%)
- Blocking Traffic — 36 (15.7%)
- Nuisance — 33 (14.3%)
- Near Miss — 28 (12.2%)
- School bus stop arm violation — 25 (10.9%)
- Ignore APD Direction — 18 (7.8%)
- Collision — 12 (5.2%)
- Safety Issue adjacent to sch... — 7 (3.0%)

Source: City of Austin

Non-collision incidents like those documented in the chart above are likely to cause harm to people without involving any collision. For example, when power went out due to a fire at a power station in San Francisco in December 2025, Waymo vehicles stalled unexpectedly 1,593 times, sometimes blocking vital intersections for up to 15 minutes. 64 Waymo vehicles were moved by Waymo staff or tow trucks, and 2 were moved by first responders. Bystanders filmed videos showing fire trucks trapped in the gridlock. During the incident, 911 dispatchers spent up to 53 minutes on hold while trying to contact Waymo for help.

Waymo is currently being investigated by the National Transportation Safety Board due to repeated incidents of passing school buses with their stop signals engaged. In Austin, journalists found 24 such incidents recorded on school district bus cameras, including incidents that occurred after Waymo said it had fixed the problem through a software update. The NTSB is also investigating an incident where a Waymo vehicle struck a child near a school in Santa Monica.

Henry Liu, a professor of engineering at the University of Michigan who studies transportation innovation, has said "In like 95% of situations where a disengagement or accident happens with autonomous vehicles, it's a very regular, routine situation for humans. … These are not challenging situations whatsoever."

David Kidd, VP for vehicle research at the Insurance Institute of Highway Safety, said, "Some people call these situations edge cases, but I see them as evidence of how humans are very adept at improvising behind the wheel. We can adjust our behavior and manage it. We don't necessarily see that from autonomous vehicles, or at least not reliably."

2. **Experts say there is not enough data to prove Waymo's crash record**

Waymo executives have said their fleet offers "a ten-fold reduction in serious injury or worse crashes."

However, Henry Liu, a professor of engineering at the University of Michigan, stated, "We have seen many reports from autonomous vehicle developers, and it looks like the numbers are very good and promising. . . But I haven't seen any unbiased, transparent analysis on autonomous vehicle safety. We don't have the raw data." Liu also noted that Waymo's record is overwhelmingly based on driving on city streets rather than freeways, which should result in fewer serious accidents due to lower speed.

Matthew Raifman, a senior researcher at UC Berkeley's Safe Transportation Research and Education Center, pointed out that when looking at the record of fatal crashes per miles driven (which is more reliably reported than serious injuries), Waymo's record is actually worse than the human driver average.

However, driving fatalities are so rare that it will take more time before AV safety statistics become reliable. Carnegie Mellon professor Phillip Koopman estimates (on slide 14) that 2 billion miles need to be driven to assess safety comparisons, whereas Waymo has driven 127 million miles as of January 2026.

David Kidd, VP for vehicle research at the Insurance Institute of Highway Safety also argued that while Waymo's reports show growing evidence of safety, its research needs to be replicated by independent researchers, preferably with a different source of data.

Kidd said, "It's important to replicate findings with the same data, but it's stronger if you do it with different data. That's one of the challenges right now. You might trust that a company is giving you all the data they have, but there's always going to be a naysayer out there claiming that the company curated it. Waymo is between a rock and a hard place, because it's a very competitive industry and companies don't want to share their data. In my view, the government should step

in to enable independent analysis in a centralized location. That would include total miles traveled, which Waymo's competitors haven't shared really at all."

Safety and testing data for automated vehicles has generally been provided voluntarily by the companies who would profit from their deployment. The Owner-Operator Independent Drivers Association, which represents the interests of small businesses in the trucking industry, has asked NHTSA to make it mandatory that AV companies participate in monitored testing programs. NHTSA declined to make this change, arguing that it was outside the scope of the initiative.

3. **As driving algorithms change, safety will change too**

Another problem with automated driving systems is that software updates can have unpredictable results, and may change the safety profile of a particular AV.

Professor Liu, from the University of Michigan, asked "whether it makes sense to compare the autonomous vehicle safety record from version 1.0 to 3.0 to the human safety record. I don't really think that's a fair comparison."

Phil Koopman, an emeritus engineering professor at Carnegie Mellon, said "You have no idea if next Tuesday all of a sudden it'll be a death machine because of bad software," he said, suggesting that the companies should "reset the odometer" for incident data following major updates.

For example, Waymo has said it updated its vehicles to drive more aggressively in 2025 to avoid blocking traffic. Pedestrians and bystanders have observed Waymo vehicles rolling through stop signs, making illegal U-turns, driving close to pedestrians in crosswalks, and failing to signal before changing lanes.

March 20, 2026

Dear Chair Tabke and Members,

On behalf of the undersigned organizations representing workers, consumers, and communities across Minnesota, we write to express our support for legislation that takes a thoughtful and responsible approach to the deployment of commercial autonomous vehicles in our state. Specifically, we support HF4216.

Minnesota's Legislature has long been known as a thoughtful policymaking body that carefully considers the long-term impacts of major technological and economic changes. The introduction of commercial autonomous vehicle fleets onto Minnesota's public roads is precisely the kind of issue that deserves careful study and meaningful public input before decisions are made.

Across the country, communities are grappling with the real-world consequences of autonomous vehicle deployments. Cities have experienced controversies related to public safety incidents, interference with emergency responders, and concerns about the economic displacement of workers who rely on driving jobs. These developments demonstrate that autonomous vehicle deployment raises complex questions about safety, infrastructure, workforce impacts, and public accountability.

Minnesota should learn from these experiences rather than rush ahead without a clear understanding of the implications.

Legislation such as the HF4216 proposal reflects a responsible approach. This proposal recognizes that policymakers need reliable information before granting broad authorization for companies to operate automated fleets on our roads. This bill emphasizes independent study, public transparency, and meaningful engagement with the people most affected by this technology.

This approach is consistent with Minnesota values. Our state has always prioritized working people, public safety, and the integrity of our shared infrastructure. Autonomous vehicle fleets would operate on roads built and maintained by Minnesota taxpayers and could significantly reshape transportation, employment, and local economies.

While technological innovation can bring benefits, policymaking should not be driven by the timeline of corporate market entry or by the presence of well-funded lobbying efforts. The fact that large technology companies have recently shown interest in operating in Minnesota does not create an obligation for the state to rush forward without careful consideration.

Minnesota is simply not ready for large-scale commercial autonomous vehicle deployment today — nor should we feel pressured to become ready simply because companies have hired lobbyists to push for rapid authorization.

Instead, the Legislature should ensure that any future framework for autonomous vehicles is built on independent research, transparent public input, and a clear understanding of the impacts on workers, safety, infrastructure, and communities.

For these reasons, we respectfully urge you to support HF4216 which establishes important guardrails and public accountability measures.

Minnesotans value thoughtful governance. By taking the time to understand this technology and its impacts before granting large technology companies access to our public roads, the Legislature can ensure that innovation serves the public interest and reflects the priorities of our communities.

Thank you for your consideration.

Sincerely,

AFSCME Council 5

Amalgamated Transit Union 1005

Minnesota AFL-CIO

SEIU - Minnesota State Council

Teamster Joint Council 32

March 23, 2026

The Honorable Jon Koznick
Co-Chair, House Committee on Transportation, Finance and Policy
658 Cedar St.
Saint Paul, Minnesota 55155

The Honorable Brad Tabke
Co-Chair, House Committee on Transportation, Finance and Policy
658 Cedar St.
Saint Paul, Minnesota 55155

RE: HF 4216 – Opposition

Dear Chairs Koznick and Tabke:

On behalf of TechNet, I write in opposition to HF 4216. TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of American innovation by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes 100 dynamic American businesses ranging from startups to the most iconic companies on the planet and represents five million employees and countless customers in the fields of information technology, artificial intelligence, e-commerce, the sharing and gig economies, advanced energy, transportation, cybersecurity, venture capital, and finance.

Safety is the top priority for TechNet and our members when it comes to the deployment of autonomous vehicles. Our members invest heavily in testing, monitoring, and compliance to ensure their vehicles meet or exceed all applicable federal safety standards. We share the Committee's commitment to protecting Minnesotans and ensuring that new technologies are introduced responsibly.

While we appreciate the intent of HF 4216 to promote safety and study the impacts of AV deployment, we are concerned that the bill would create substantial barriers to the operation of autonomous commercial vehicles in Minnesota. Rather than establishing a workable pathway for safe deployment, the bill would impose a set of requirements that, taken together, would significantly restrict deployment and function as a de facto barrier to commercial AV operations in the state.

In particular, we are concerned by the bill's requirement that a human safety operator be physically present in the vehicle, seated in the driver's seat, and able to monitor performance and intervene at all times. That requirement is inconsistent

with how this technology is designed and increasingly deployed. Autonomous commercial vehicles are intended to operate using advanced systems that perform the driving task without requiring a person to remain behind the wheel at all times, and mandating a driver-in requirement would prevent the technology from operating as designed.

We are also concerned that the bill would create an advisory board structure that is not balanced and does not provide fair representation for the industry developing this technology. The proposed advisory board includes a wide range of stakeholders, many of whom may have policy concerns about AV deployment, but provides only minimal representation for the autonomous vehicle industry itself. That matters because the advisory board is not simply advisory in the abstract; it is positioned to shape the recommendations that inform the permit framework and the state's broader approach to autonomous commercial vehicle operations. A framework of this significance should be developed through a more balanced process that includes sufficient technical, operational, and industry expertise.

In addition, the bill would create a highly discretionary permitting process layered on top of a required study and advisory board review. That kind of open-ended process creates uncertainty for companies seeking to invest in and deploy innovative technologies in Minnesota. Companies need clear, objective, and administrable rules, particularly in an emerging field where technologies are evolving quickly and where developers need to understand the standards they will be expected to meet.

TechNet and our members strongly support thoughtful, data-driven policymaking that prioritizes safety while allowing innovation to develop responsibly. We would welcome the opportunity to work collaboratively with Minnesota lawmakers to develop a framework that ensures safety, strong oversight, and accountability without imposing requirements that effectively prevent commercial autonomous vehicles from operating in the state.

For these reasons, we respectfully urge the Committee not to advance HF 4216 in its current form and instead consider alternative approaches that promote both safety and innovation in Minnesota.

Sincerely,
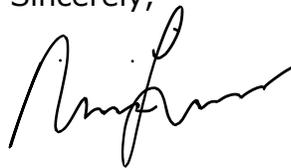
Ninia Linero
Executive Director, Illinois and the Midwest
TechNet