

ADVISORY COMMITTEE ON  
UNDERRIDE PROTECTION (ACUP)  
Statement of Concurrence / Non-Concurrence

Voting Member Name	Dan Horvath
Voting Member Organization	American Trucking Associations
Stakeholder Representation	Motor Carriers

As a voting member and full participant of ACUP, I hereby acknowledge that I have reviewed the ACUP Final Report and make the following declaration regarding the Report:

1. Concur with the Final Report as written

Voting Member Signature \_\_\_\_\_ Date: \_\_\_\_\_

2. Concur with the Final Report as written with the following exception(s): (Fully explain the areas of exception below, providing specific page number if appropriate. Submission of additional pages is permitted.)

Voting Member Signature Dan Horvath Date: 6/27/24

Except as otherwise noted, I do NOT concur with the majority report included in the final report, and have outlined in the attached document my reasons why. I concur ONLY with section II, Minority report as drafted.

3. Non-Concur with the Final Report as written. Letter of Dissent must be provided.

Voting Member Signature \_\_\_\_\_ Date: \_\_\_\_\_

I, Dan Horvath, representing Motor Carriers on the Advisory Committee on Underride Protection (ACUP), do not concur with certain provisions of the *final majority report* dated June 18, 2024, submitted to the U.S. Secretary of Transportation.<sup>1</sup> While there are certain provisions in the final report I agree with (including both *majority* and *minority* reports), I have included an outline of my dissent below.

As a primary matter, the definition of “consensus” was debated numerous times throughout the initial ACUP meetings, and a narrowly passed motion defined consensus as “51%” voting in favor of a motion. Because of this artificial definition of “consensus,” the majority report is not in any meaningful sense a true reflection of the “consensus advice” of the Committee that the ACUP Charter demanded of the group. Instead, the bulk of that report simply represents the views of a bare majority of the Committee. The ACUP charter limited membership to “no more than 20 members.” However, throughout the ACUP meetings, many committee slots were left vacant, including a law enforcement representative with valuable safety expertise, with the maximum number of members never exceeding 18 members. During committee votes in which all 18 members were present, any motion introduced required a mere 9-10 members, depending on attendance, to vote in favor of a motion to pass. While I recognize these votes reflect recommendations to the Secretary, rather than a solidified plan of action, I urge the Secretary and his staff to strongly consider *both* the majority and minority views included in this report when reviewing the recommendations. The minority report outlines several motions that passed with meaningful consensus approval rather than bare majorities.

Opposition to Motions Passed:

***Motion #2: NHTSA should withdraw its previously submitted ANPRM or reissue a revised ANPRM and cost-benefit analysis that acknowledges and accommodates critiques made by commenters that the cost-benefit approach taken artificially constrained the number of lives saved and also failed to account for cost-savings (such as fuel efficiency gains provided by side underride guards). Motion passed 7 to 6 with 4 abstaining.***

I oppose the recommendation that NHTSA’s ANPRM should be withdrawn. The ANPRM presented a cost-benefit analysis indicating a net-negative benefit of \$1 Billion if side underride guards are mandated. While I recognize several members of the ACUP disputed NHTSA’s cost-benefit analysis and I fundamentally support efforts to ensure accuracy in any cost-benefit analysis, I do not support a “withdrawal” of the ANPRM as this will only further delay any meaningful action related to side underride guards. Unfortunately, seven ACUP committee members disagreed with this assessment and requested NHTSA start from scratch. During this discussion, I raised the fact that an ANPRM is *advance* notice. Any disputes to the cost-benefit analysis therefore should have been conveyed during the public comment process, and NHTSA would have the opportunity to respond to those concerns in a Supplemental Notice of Proposed Rulemaking or Notice of Proposed Rulemaking. I urged ACUP members that a withdrawal of the ANPRM would seriously delay the rulemaking process, as compared to addressing data discrepancies during the rulemaking process. For these reasons, I oppose the motion.

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<sup>1</sup> Note: ACUP majority report was submitted to ACUP members on June 18, 2024 as a final document, however, minor typographical errors were made thereafter. All references in this non-concurrence submission are referring to the original June 18, 2024 report.

***Motion #5: NHTSA should complete a new side impact guard cost-benefit analysis and rulemaking that counts previously omitted underride victim categories, including pedestrians, bicyclists, and motorcyclists. Motion passed 12 to 5.***

In comments I co-authored on behalf of the American Trucking Associations in response to NHTSA's ANPRM, I highlighted numerous operational requirements for commercial vehicles that side underride protection designs will need to meet. Side underride crashes involving vehicles and vulnerable road users (VRU), such as pedestrians and cyclists, are both serious issues, however, they present very different engineering challenges. The DOT's research through Volpe has shown that addressing side underride crashes involving VRU via lateral protection devices (LPD) would use very different designs. Volpe's research has shown that LPD designs, which only need to withstand 450 pounds of force, could address pedestrian and cyclist underrides. While vehicular underride protection could also address VRU underride, LPD would likely offer a significantly better cost-benefit for addressing these types of underride crashes. The designs for LPD weigh less and need to withstand less forceful impacts, meaning they can have more flexibility in design and implementation, which offers promise for meeting operational requirements. Importantly, LPD can be *targeted* to cities and locations where pedestrian and cyclist underride are more prevalent, in turn reducing use cases and vehicle designs which present challenges for side underride protection. NHTSA should consider solutions to vehicular and VRU side underride separately to determine whether there are more cost-effective ways to address those involving VRU than vehicle-specific designs.

***Motion #9: To require all new semitrailers, and single-unit trucks that have crash-incompatible open space(s) along the side(s) to be equipped with side guards capable of preventing injurious passenger compartment intrusion (PCI) when struck by a midsize vehicle at any angle, at any location, and at any closing speed up to and including 40 mph. Motion passed 8 to 6 with 3 abstentions.***

I oppose the recommendation to require all new semitrailers and single-unit trucks to include side guards, as numerous operational requirements and unintended consequences associated with the equipment have not been addressed and therefore a mandate of side underride guards would be premature. As I outlined in comments filed on behalf of the American Trucking Associations in response to NHTSA's 2023 ANPRM, the methods available to mitigate the consequences of side underride crashes involving commercial vehicle trailers are extremely limited. As NHTSA noted in the analysis provided in their ANPRM, only one product is commercially available and has only been tested on crashes involving speeds up to 40 mph. Other designs are either in development or have no public testing data on which to base an analysis to determine effectiveness at scale and for various crash types. NHTSA correctly focused only on products that are available and have public cost and crash test data for analysis. NHTSA also correctly applied this data, as it would be inappropriate to make assumptions about performance beyond what testing has shown. Furthermore, NHTSA's estimate that current commercially available designs for vehicular side underride protection could prevent 17 fatalities and 69 serious injuries involving cars annually is reasonable based on the data available.

NHTSA should recognize the need for additional testing of underride guards to determine feasibility and unintended consequences in a real-world setting. Closed-course testing has shown that side underride guards can successfully stop a passenger vehicle traveling up to 40 mph from penetrating perpendicularly underneath the side of a stationary 53-foot dry van

trailer—one of many configurations of commercial vehicles—within a controlled test environment. However, that testing has not been replicated to demonstrate the impacts of a realistic highway scenario—with factors including both vehicles moving at highway speeds, a moving truck or tractor-trailer, other traffic present, the impact at different points on the trailer, and/or the crash occurring at a non-perpendicular angle. For example, although a side underride guard may successfully prevent a passenger vehicle from going underneath a trailer in some scenarios, the passenger vehicle may instead deflect off the trailer and strike other vehicles. The engineering challenge of mitigating a side underride event differs significantly from a rear underride event, and NHTSA should not make assumptions about side underride guard performance based on rear underride guard performance. Rear underride guards are 8 feet wide, have been standard for nearly 70 years, and are designed to address a specific and common type of crash scenario. Side underride guards are approximately 40 feet long and would be subjected to a wide variety of crash scenarios but have only limited testing data to show utility in one specific scenario. NHTSA should neither ignore these potentially dangerous scenarios nor move forward with a side underride guard mandate that attempts to solve a problem with an unproven solution with a high potential for unintended consequences.

As a guiding principle, efforts to decrease and eliminate side underride crashes should be focused on preventing the crash from occurring in the first place. Members of the ACUP agreed with this—to some extent—when discussing the need to address conspicuity reflective tape. The mitigation method proposed by the majority would force the trucking industry to expend its limited resources on unproven designs with limited potential benefits when we could instead focus efforts on proven mechanisms to reduce the likelihood of crashes occurring altogether. The transportation industry's focus should be on crash avoidance achieved by advanced driver assistance systems (ADAS), such as automatic emergency braking, as well as behavioral factors including distracted and impaired driving prevention.

The trucking industry continues to invest in these safety technologies, such as those included in ADAS – not because they are required to, but because they believe it is the right thing to do. A study conducted by the American Trucking Associations indicated that trucking companies invested \$14 Billion to bolster safety on an annual basis.<sup>2</sup>

***Motion #10: To require semitrailers, and single-unit trucks manufactured after 1998 that have crash-incompatible open space(s) along the side(s) to be equipped with side guards capable of preventing injurious passenger compartment intrusion (PCI) when struck by a midsize vehicle at any angle, at any location, and at any closing speed up to and including 40 mph. Motion passed 8 to 6 with 3 abstentions.***

I oppose the recommendation made in Motion 10, which was passed by a margin of two votes, as it demonstrates a significant lack of understanding about the effects of a retrofit requirement on the trucking industry and of the industry more broadly. Previous congressional testimony<sup>3</sup> and 2012 data reported by the Federal Highway Administration on this very topic attested to the 11.7 million registered trailers in existence.<sup>4</sup> Using this figure, equipping the 11.7 million trailers

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<sup>2</sup> <https://www.trucking.org/news-insights/new-study-underlines-trucking-industrys-commitment-safety>.

<sup>3</sup> Testimony, Under Pressure: The State of Trucking in America, Committee on Transportation and Infrastructure, House of Representatives. June 12, 2019; <https://www.congress.gov/event/116th-congress/house-event/LC64735/text>.

<sup>4</sup> <https://www.fhwa.dot.gov/policyinformation/statistics/2012/mv11.cfm>.

with a side underride guard costing approximately \$2,900<sup>5</sup> would equate to approximately \$33.9 billion spent on underride guards by the industry. When combined with the expected cost of labor in installing these guards, the mandate would exceed the industry's annual net revenue. Even if the cost of this unproven technology was phased in over a few years, it would indisputably divert a significant amount of NHTSA and industry resources away from important crash avoidance technologies – those proven to show wide-ranging benefits in all types of crashes – to focus on a singular, narrow type of crash and specific countermeasure unproven in real-world applications.

***Motion #11: To require the side guards referenced in motions 9 & 10 above to also prevent a vulnerable road user (VRU) from passing underneath the guarded vehicle in an interaction with the side of the vehicle. Motion passed 9 to 8.***

As noted above, designs for LPD to address VRU are very different from vehicular designs. NHTSA should consider solutions for addressing VRU separately to see if/how they can meet operational requirements or mitigate unintended consequences where vehicular designs may not. The different engineering requirements associated with LPD may allow more flexibility for meeting these requirements and better cost-benefit analyses than using vehicular designs to address VRU crashes.

Opposition to Miscellaneous Statements Made in Majority Report:

***Page 12-22 “ACUP’s Assessment” of Rear, Side, Front Underride Guards, Automatic Emergency Braking, and Allegations of Suppression of Underride Research Received by the ACUP.***

This section contains numerous assertions made by the authors of the majority report that do not reflect motions discussed and passed by ACUP – much less the viewpoints of all ACUP members.

Concerning the evaluation of costs of side underride protection, I believe NHTSA made reasonable estimates using uncertain data to weigh costs and benefits. The result of NHTSA's analysis is a staggering net negative annual benefit of almost \$1 billion and is a reasonable estimate of the costs that would be imposed by the requirement given operational limitations. That calculation is consistent with previous calculations that a mandate for side underride guards on *all* trailers in service would cost approximately \$33.9 billion. Injuries and fatalities related to side underride crashes are undoubtedly tragic events that the industry and DOT should work towards addressing and preventing. However, side underride guards as discussed in NHTSA's ANPRM do not appear to be effective. In addition, these cost estimates do not include numerous operational factors that have been raised by industry groups.

Furthermore, ACUP members represented in the majority report have concluded that NHTSA's cost-benefit analysis is incorrect. While I believe their cost-benefit analysis was accurate to the extent of the information they had available, the analysis failed to include – as did the majority report submitted on behalf of ACUP – numerous operational concerns that were continually dismissed by select ACUP members. Reflecting on NHTSA's ANPRM, they acknowledge additional concerns raised by industry groups that were not addressed in the ANPRM. I reiterate

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<sup>5</sup> Cost based on discussions during ACUP meetings.

the need to consider the impacts and potential impacts on the cost-benefit analysis based on the following:

*Routing: The ACUP majority report failed to include an additional 5% estimate in vehicle miles traveled to avoid high-grade rail crossings or other roadway features that could present safety hazards if side guards are installed.*

*Docking: NHTSA's analysis of routing to avoid infrastructure that is non-conductive to side-underride guards did not account for private property. ACUP reviewed presentations that discussed "high-centering" events at loading docks. Motor carrier industry members discussed not being able to install fuel fairings due to where they are making deliveries. The ACUP majority report should have also asked NHTSA for an advanced analysis of these concerns that were often dismissed. For example, one ACUP member stated that the number of rail-truck collisions at grade crossings is minimal. On the contrary, the Federal Railroad Administration (FRA) indicated that truck-trailers accounted for 22% of crashes at these locations each year from 2019-2022. If side guards were to be required, these numbers would undoubtedly increase.*

*Maintenance: NHTSA's cost-benefit analysis factored in labor for installation but did not include ongoing maintenance costs. The ACUP majority report should have included information related to these additional maintenance costs.*

The majority report also states that Automatic Emergency Braking (AEB) represents an incomplete response "to the societal harm caused by underride crashes". This statement is misleading. It is true that the passenger car AEB rule does not include a performance test related to commercial vehicles or commercial vehicle trailers. While the performance of AEB for passenger vehicles in this scenario is not being tested, it would still be expected to provide some benefit and could prevent or mitigate a large portion of these crashes. Regarding front underride, the heavy-duty AEB rulemaking does propose a performance test in which a passenger car is slowed or stopped in front of the truck. This is the specific scenario in which a front underride crash could occur. The heavy-duty AEB rulemaking, while not final, proposes a performance requirement that would specifically and directly address this kind of underride event. NHTSA research has shown that a significant portion of vehicle crashes can be traced to human error, which could be directly addressed by ADAS technologies such as AEB.<sup>6</sup> AEB, undoubtedly, has the potential to reduce the number and severity of CMV-involved crashes including underride crashes.

Finally, the ACUP majority report incorrectly cites opinion, rather than fact, about DOT actions on underride crashes as it states that "very little has changed regarding side underride guard advancements in the last 50 years and no substantial progress has been made by DOT to prevent these horrific crashes and fatalities and injuries."<sup>7</sup> While I acknowledge that DOT's actions in the last 50 years are by no means complete, I disagree that no substantial progress has been made and in the last three years alone, DOT has taken the following actions:

- **November 9, 2021:** FMCSA published a final rule regarding rear underride guard inspection and labeling requirements, effective December 9<sup>th</sup>, 2021. The final rule

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<sup>6</sup> 82 Fed. Reg. 8391 (Jan. 25, 2017).

<sup>7</sup> Biennial Report to Congress and the Secretary of the Advisory Committee on Underride Protection (Jun. 18, 2024).

adds rear underride guards to the list of items that are required to be inspected during an annual inspection.

- **June 30, 2022:** NHTSA issued a final rule for rear underride protection in conjunction with announcing the ACUP. The final rule established strengthening standards for the rear guard. NHTSA further announced additional research on rear impact guard designs and standards to better protect occupants in passenger vehicle crashes.
- **August 2, 2022:** NHTSA and FMCSA published educational materials for state and local police officers on how to identify and record underride crashes. This action was taken to fulfill Government Accountability Office recommendations related to suggested inaccuracies in reporting underride crashes.<sup>8</sup>
- **February 2, 2023:** NHTSA published a Federal Register notice proposing revisions to the Model Minimum Uniform Crash Criteria (MMUCC) to include a definition of underride and included underride as a recommended data field to be collected. The MMUCC was subsequently updated in early January 2024.<sup>9</sup>

For the reasons outlined above, I submit this letter of non-concurrence.

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<sup>8</sup> <https://www.gao.gov/products/gao-19-264>.

<sup>9</sup> Ibid.