

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


<b>Voting Member Name</b>	John Freiler
<b>Voting Member Organization</b>	Truck Trailer Manufacturers Association
<b>Stakeholder Representation</b>	Trailer Manufacturers

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  Date: 27JUN2024

See attached file "JF ACUP Lost Opportunities – Final".

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

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

## ***Lost Opportunities***

***Executive summary:*** *The ACUP Majority Report is a slanted report leaving out vital information and pushing only one view despite the charter’s call for “consensus”. There was some consensus around conducting more studies which do merit consideration, as is reflected in the Minority Report and this document, but the committee is deeply divided and unable to produce significant work.*

### **On the Majority Report’s “Advice and Recommendations to the Secretary”:**

While the goals of the advisory committee were laudable, we failed to accomplish them in major part because of one simple thing: the definition of “consensus”. It should be no surprise to people that there were contentious issues with differing viewpoints and with a properly formed committee, these issues could be hammered out and possibly some real progress on preventing underride deaths could have been reached. Alas, a slight majority elected to forgo this hopeful possibility and rammed through a definition of “consensus” as being a bare majority. At that point, communication largely broke down and very little real progress has been made.

The majority report attempts to justify the abandonment of real consensus recommendations by noting that they broke no laws. It was never held that what the majority did was illegal, simply that it was bad for the committee and made it more difficult for us to meet our mandate, to actually improve safety on the nation’s roadways.

The final report is essentially anti-trucking and anti-DOT overall. I have rated the various motions made about what to include in the report by the degree of support: number of “Yes” votes divided by the total number of members present. Many of the recommendations didn’t even have 50% of the committee’s support due to abstentions. (For example, the motion to ask DOT to suspend the SUG rulemaking got 7 votes in support, 6 votes against and 4 abstentions, resulting support is 7 in favor out of 17 total votes resulting in 41% support.)

I would strongly recommend that the Secretary of Transportation or anyone else reading this report consult this list. The motions with 100% support should be the highest priority with the others above 80% support represents actual consensus. The rest of the recommendations, especially those below 70% should be considered one-sided. While there are a few good ideas that failed to gain true consensus, the vast majority of the low-support recommendations were fueled by ignorance of industry, safety, regulations, and the regulatory process. Quite a few of the information requests of DOT seem to have been little more than fishing expeditions, looking into materials over 25-year-old data and internal deliberative work.<sup>1</sup>

For example, the Majority Report falsely claims in discussion of side guards that Industry says most trips weigh-out<sup>2</sup> when the fact is that we claim that weight displacement is significant. Indeed, TTMA has referenced that 30% of trips are at or near weigh-out conditions which is the actual figure from size &

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<sup>1</sup> Majority Report p9 5<sup>th</sup>, 6<sup>th</sup>, & 7<sup>th</sup> bullet points.

<sup>2</sup> Majority Report Page 3 “DOT research has found that ‘most long haul truck shipments cube out before they weigh out’, despite protestations from industry saying otherwise”.

weight studies<sup>3</sup>. The majority proceeds as if that figure is zero in brushing aside all matters of freight displacement and the additional load-miles that will be necessarily added to our nation's roadways and the accidents and consequent deaths from all causes that those load-miles will create.

Broadly, the recommendations with consensus are to conduct further studies, improve data collection, and focus on rulemaking that can reduce accidents from all sort of collisions: conspicuity improvements, and automatic braking and other driver assistance technology.

Oddly, I find a number of recommendations that achieved high levels of consensus were left out of the Majority report<sup>4</sup>. Whether this was due to intentional distortion or simple oversight, I cannot say with certainty, but I find it troubling that frequent points raised by industry resulting in recommendations to include a study of railroad crossings issues and a study of how collision mitigation technologies will reduce risk (see footnotes 9 & 11) were excluded despite getting unanimous support from the committee.

**The motions below are sorted by support percentage and then meeting date.** Foot notes tag each motion to their place in the 06.18.2024 version of the Majority Report.

100%, 3-13: A recommendation that NHTSA must expeditiously complete Heavy Vehicle Automatic Emergency Brake Rulemaking for all classes of CMVs (RIN 2127-AM36)<sup>5</sup>.

100%, 3-13: A recommendation that NHTSA conduct a study to research how the survivability rate of rear underride crashes will change with increased passenger vehicle adoption of Automatic Emergency Braking at currently tested speeds (35 mph) as well as highway speeds (up to 65 mph).<sup>6</sup>

100%, 3-13: A recommendation that DOT should continue research into Enhanced Rear Signaling Systems that could help better prevent rear underride crashes.<sup>7</sup>

100%, 3-13: A recommendation that DOT conduct research into efficacious methods of reducing Distracted Driving such as flashing lamps.<sup>8</sup>

100%, 5-22: DOT should work with FRA to examine potential impacts the installation of SUGs would have during highway grade crossings and make such review public.<sup>9</sup>

100%, 5-22: To further GAO recommendation #1 regarding improvements to Model Minimum Uniform Crash Criteria, NHTSA should take additional steps to include both vehicle-related side underride crashes and Vulnerable Road Users in reporting fatalities related to side underride guard crashes.<sup>10</sup>

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<sup>3</sup> "...weigh-in-motion data for 3-S2s indicate that over 70 percent operate at 70,000 pounds gross vehicle weight or less." (Comprehensive Truck Size and Weight Limits Study, November 2013, Modal Shift Analysis, p8.)

<sup>4</sup> The Majority Report has been undergoing revisions once the Minority Report started pointing out deficiencies. I have made every effort to correct these updates as the report has been changed.

<sup>5</sup> Majority Report, p7 2<sup>nd</sup> bullet point.

<sup>6</sup> Majority Report, p8 1<sup>st</sup> bullet point.

<sup>7</sup> Majority Report, p8 3<sup>rd</sup> bullet point.

<sup>8</sup> Majority Report, p8 5<sup>th</sup> bullet point.

<sup>9</sup> Excluded from original Majority Report, inserted on p8 9<sup>th</sup> bullet point.

<sup>10</sup> Excluded from Majority Report.

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100%, 5-22: NHTSA should investigate the potential for collision mitigation technologies for light and heavy-duty vehicles to prevent or reduce the risk associated with side underride crashes.<sup>11</sup>

100%, 5-22: The ACUP shall recommend that DOT disseminate educational material in addition to the existing brochure for law enforcement to help them identify and record side underride crashes.<sup>12</sup>

100%, 5-22: The ACUP include a page showing each members concurrence or non-concurrence with the final report as well as allowing each member to make a statement on the final report to be included as an appendix.<sup>13</sup>

94%, 3-13: A recommendation that NHTSA should additionally require Single Unit Trucks to adhere to conspicuity requirements.<sup>14</sup>

94%, 4-24: The department should conduct a study of conspicuity tape in service. This study focuses on actual rates of compliance with the regulated minimum reflectivity requirements, the ability of enforcement personnel to accurately and adequately enforce these requirements, and make recommendations on how to reduce the most common forms of non-compliance found.<sup>15</sup>

93%, 3-13: A recommendation that FMCSA work with State law enforcement and other stakeholders to emphasize education and the need to issue RIG violation citations and encourage maximum fines for violations affecting safety.<sup>16</sup>

88%, 3-13: The ACUP should recommend that DOT research the efficacy of high visibility ID lamps that illuminate the rear of a CMV to assist with potential Clearance Lamp rulemaking for all CMVs<sup>17</sup>

87%, 5-22: The ACUP shall recommend in its report that NHTSA request that the DOTs Volpe Center evaluate the effectiveness of a side underride guard to determine if their effectiveness is similar or greater than Lateral Protection Devices in mitigating the severity of pedestrian, cyclist and motorcyclist fatalities.<sup>18</sup>

87%, 5-22: The ACUP shall recommend in its report that NHTSA create a field in the FARS system to determine if an underride crash occurred involving a large truck and a pedestrian/cyclist.<sup>19</sup>

81%, 3-13: that pursuant to the IJJA, within five years of implementing (V)<sup>20</sup>, the Secretary shall review and update FMVSS 223/224 standards in response to advancements in technology<sup>21</sup>

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<sup>11</sup> Excluded from original Majority Report, inserted on p9 1<sup>st</sup> bullet point.

<sup>12</sup> Excluded from original Majority Report, inserted on p9 3<sup>rd</sup> bullet point.

<sup>13</sup> Majority Report, p10 1<sup>st</sup> bullet point.

<sup>14</sup> Majority Report, p7 4<sup>th</sup> bullet point. The addition of “tape” was not approved by the ACUP.

<sup>15</sup> Majority Report, p8 6<sup>th</sup> bullet point.

<sup>16</sup> Majority Report, p9 4<sup>th</sup> bullet point.

<sup>17</sup> Majority Report, p8 4<sup>th</sup> bullet point. The first instance of “Clearance Lamps” was “ID Lamps” on the approved version.

<sup>18</sup> Majority Report, p8 8<sup>th</sup> bullet point.

<sup>19</sup> Majority Report, p7 8<sup>th</sup> bullet point.

<sup>20</sup> See 59% from 3-13

<sup>21</sup> Majority Report, p6 6<sup>th</sup> bullet point.

- 75%, 3-13: Committee recommends that NHTSA conduct comprehensive research on U.S. underride crash characteristics, including the frequency of 30 percent overlap crashes. include photos as much as possible. <sup>22</sup>
- 71%, 4-24: 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.<sup>23</sup>
- 69%, 3-13: A recommendation that FMCSA should issue stronger conspicuity requirements, at minimum, a requirement to maintain and replace conspicuity tape every 5 years.<sup>24</sup>
- 65%, 4-24: NHTSA should issue an Advanced Notice of Proposed Rulemaking on Front Impact Guards.<sup>25</sup>
- 65%, 4-24: NHTSA may harmonize with global front override regulations, including UNECE-93 and any revisions to it, in order to provide improved motor vehicle safety, as indicated in Section 24211 of the IJIA:
- The Secretary shall cooperate, to the maximum extent practicable, with foreign governments, nongovernmental stakeholder groups, the motor vehicle industry, and consumer groups with respect to global harmonization of vehicle regulations as a means for improving motor vehicle safety. (IJIA, p. 397, <https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf>)<sup>26</sup>*
- 65%, 4-24<sup>27</sup>: 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. <sup>28</sup>
- 60%, 3-13: The ACUP should recommend in its report to congress that congress regulate single unit trucks (SUTs) with the same rear impact guard standards that currently only apply to semitrailers.<sup>29</sup>
- 60%, 3-13: A recommendation NHTSA expeditiously conduct rear impact guard testing at “highway speeds” (up to 65 mph) as IJIA already directed NHTSA to do (Sec 23011 (b)(2)(A,B) and publish the results within 2 years. <sup>30</sup>
- 60%, 5-22: NHTSA should assess risks associated with deflection into adjacent lanes associate with partial offset rear crashes as well as side underride crashes and make results public.<sup>31</sup>

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<sup>22</sup> Majority Report, p8 2<sup>nd</sup> bullet point. Photo note missing.

<sup>23</sup> Majority Report, p6 1<sup>st</sup> bullet point.

<sup>24</sup> Majority Report, p7 3<sup>rd</sup> bullet point.

<sup>25</sup> Majority Report, p7 5<sup>th</sup> bullet point.

<sup>26</sup> Majority Report, p7 6<sup>th</sup> bullet point.

<sup>27</sup> Referred to as “Motion 9”: see 53% from 4-24.

<sup>28</sup> Majority Report, p6 3<sup>rd</sup> bullet point.

<sup>29</sup> Majority Report, p7 1<sup>st</sup> bullet point. “Congress” changed to NHTSA in Majority Report.

<sup>30</sup> Majority Report, p7 7<sup>th</sup> bullet point.

<sup>31</sup> Majority Report, p8 7<sup>th</sup> bullet point.

- 59%, 3-13<sup>32</sup>: Recommendation that the 2022 RIG Rule should be amended to require that all new trailers meet the TOUGHGUARD test protocol or equivalent<sup>33</sup>
- 53%, 4-24: ACUP affirms that NHTSA, per the Modernizing Regulatory Review Executive Memo and corresponding guidance, must fully account for regulatory benefits that are difficult or impossible to quantify when conducting rulemaking analysis.<sup>34</sup>
- 53%, 4-24: To require the side guards referenced in motions 9 & 10 above<sup>35</sup> to also prevent a vulnerable road user (VRU) from passing underneath the guarded vehicle in an interaction with the side of the vehicle.<sup>36</sup>
- 53%, 3-13: The ACUP should include in its congressional report a recommendation that all trailers manufactured between 1998 to the current time that do not have ToughGuard awarded rear impact guards should be retrofitted with crash proven reinforcement device(s). These reinforcement devices, at minimum, should be tested and proven to mitigate PCI and create crash compatibility consistent with a ToughGuard awarded rear impact guard when attached to a minimally compliant FMVSS 223 rear impact guard. <sup>37</sup>
- 47%, 4-24<sup>38</sup>: 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.<sup>39</sup>
- 47%, 3-13: The ACUP should include in its Report to Congress a fact-based history of underride crashes.
- 47%, 5-22: The ACUP shall recommend in its report that DOT explore the need for Federal weight limit weight-based exemption for side underride guards. <sup>40</sup>
- 41%, 4-24: 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).<sup>41</sup>

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<sup>32</sup> Motion V. from 3-13. See 81% from 3-13

<sup>33</sup> Majority Report, p6 5<sup>th</sup> bullet point.

<sup>34</sup> Majority Report, p9 8<sup>th</sup> bullet point.

<sup>35</sup> See 81% from 3-13 and 59% from 3-13.

<sup>36</sup> Majority Report, p6 4<sup>th</sup> bullet point.

<sup>37</sup> Majority Report, p6 7<sup>th</sup> bullet point.

<sup>38</sup> Motion 10 from 4-24. See 53% from 4-24.

<sup>39</sup> Majority Report, p6 2<sup>nd</sup> bullet point.

<sup>40</sup> Majority Report, p9 2<sup>nd</sup> bullet point.

<sup>41</sup> Majority Report, p5 1<sup>st</sup> bullet point.

### **On the Majority Report’s “Assessment of DOT’s Progress in Advancing Safety Regulations Relating to Underride Crashes”**

The Majority Report glosses over so much work done by the agency in the 1970’s, 80’s and 90’s with simplistic line “would not try again until 1996” and tries to implicate industry in stopping the saving of lives. However, the facts are that the rigid guards proposed at the time would themselves cause deaths of occupants due to excessive deceleration loads. Tests done in 1979 into rigid guards confirmed these findings<sup>42</sup> and the Texas Transportation Institute recommended halting rulemaking. More studies led to a 1991 proposal. At that time TTMA got ahead of the regulations and wrote a Recommended Practice describing rear impact guard loads and dimensions. That publication was kept until superseded by DOT requirements which also added an energy absorption requirement. What’s billed in the Majority Report as “weaker than the previous one by 80%” was actually the result of long and arduous study to find the right loads to save the most lives. Even today, nearly 50% of fatalities resulting from crashes into the rear of trailers have no PCI<sup>43</sup> while the Majority Report seems to presume that PCI is the be-all and end-all of safety.

The Majority Report further attacks the department claiming “a 2018 NHTSA report demonstrating effectiveness of side impact guard up to 50mph” without citation. I believe they are referring to a computer model study done to try to design a side underride guard that would deflect a lightweight vehicle at an angled crash at 50mph.<sup>44</sup> Nothing was “demonstrated” as no devices were built, nor were they actually tested. While computer models are great in helping advance engineering efforts, the real world frequently fails to live up to those models as was demonstrated with the physical crash test done at 45 MPH that failed to prevent PCI and was shown to ACUP. This matter was glossed over before being raised during the meeting and now is unfortunately absent from the Majority Report as well.

I want to end this section with praise for the DOT professionals helping this committee. They were patient and professional throughout.

### **On the Minority Report:**

While much of my comment was prepared before I had a chance to see a draft of the Minority Report, I see much the same things I point out in my letter included in the minority report, so I can support this part of the final report.

### **On the Appendices:**

These are mostly a collection of materials presented during our meetings, minutes and so forth, but the inclusion of the Quon Kwan testimony is inappropriate: When this was proposed as a potential agenda

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<sup>42</sup> Federal Motor Vehicle Safety Standards; Rear Underride Protection, 46 Fed. Reg. 2138 (January 8, 1981)

<sup>43</sup> See <https://www.nhtsa.gov/sites/nhtsa.gov/files/811652.pdf> In this 2011 NHTSA-commissioned study, by University of Michigan Transportation Institute, of TIFA data for year 2008 (ten years after rear impact guards were required to meet FMVSS 223 & 224), Tables 30 and 31 on page 44 show that more fatalities occurred in crashes with no underride, or some underride over the impacting vehicle’s hood but *not* into the windshield, than in crashes *with* windshield penetration (see the data line labeled “tractor/trailer, guard”). A later study combines 2008 and 2009 TIFA data. See <https://www.nhtsa.gov/sites/nhtsa.gov/files/811725.pdf> (see table 24 on page 36). While the combined data do not show more than half of the fatalities occurring without windshield penetration, the number is still substantial.

<sup>44</sup> DOT HS 812 522 Computer Modeling and Evaluation Of Side Underride Protective Device Designs (April 2018).

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item of one of our meetings, we were informed that this issue is currently being dealt with by the Department's office of Inspector General and that we were not to include it on our discussions. We complied with that request and no discussion of these documents was considered by the committee.

While I understand the allegations raised are serious, I feel it is inappropriate to include such documents here, they were not considered by the committee as a whole and are already the subject of an investigation.

***Moving Forward:***

If this committee is to make any future improvements, it should be reformed: anyone who served on this version of the committee should be specifically excused from consideration for the reformed committee so we can get away from the deepened divisions. Additionally, a specified figure for the meaning of "consensus" to keep a simple majority of members from simply pushing forward a one-sided view is vital if we are to bring valuable insight to the Secretary.

Signed:

*John Freiler*

ACUP member representing trailer manufacturers.