



January 9, 2023

U.S. Department of Transportation
National Highway Traffic Safety Administration
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Request for Comment, Safety Research Portfolio
Docket: NHTSA-2022-0091-0001

To Whom It May Concern:

As co-chairs of VERITY Now, a coalition striving to achieve equity in vehicle safety, we appreciate the opportunity to provide comment on the NHTSA Female Crash Test Safety Research Plan November 2022. Thank you for inviting comments on the on the Agency's research priorities, research goals, and additional research gaps/needs the public may believe NHTSA should be addressing. Docket 2022-0091 contains important insights into the research process, and VERITY applauds NHTSA's efforts to ensure that vehicles are safer.

However, NHTSA's research plan fails to achieve all it could to fulfill the Agency's mission – making our roads safer by saving lives and preventing injury – because it fails to hold its research plan accountable by defining proper prioritization and timelines. Any plan that lacks these proactive elements will fail to rid our current system of deadly gender bias, and allow this inequality to persist in crash testing. Instead, NHTSA's plan contains some research that is supplemental to the goal of updating biased tests and deploying life-saving technology, rather than foundational, and fails to assign timelines – making sure that any research is conducted in a way that saves the most lives and prevents the most injury. In addition, the plan does not outline an endpoint to the research, or define which research is necessary for a federal agency to engage in, versus private parties such as OEMs, or describe specifically how the research will be made relevant to the Agency's safety mission.

Without a plan that rewards efforts that make citizens safer, creates equality, and does so with timeliness and accountability, we are left with a research wish list – in some places, with too little attachment to the Agency's mission -- rather than a results-oriented timeline, attached to reasonable policy outcomes. We do not deny that some of the research proposed would be interesting to pursue, or ask that NHTSA cease all research, but rather that the agency rationalize NHTSA's approach to research in a way that saves the most lives, prevents the most injury on our roads, and does so in a way that is fair to all citizens, regardless of their race, gender, or other immutable characteristics. In other words, fulfill its most important charge to keep people safe.

1. The priority of NHTSA’s research should be to save the most lives and prevent the most injury; prioritizing research that adopts equal testing and advanced technologies to redress inequalities in the current testing regime exactly fits that goal.

The world’s most advanced crash test dummy cannot save one life if it is not deployed, and the best crash tests cannot be equitable if they are not adopted for all. The U.S. House Appropriations Committee recognized this when it placed this language in its FY2022 Appropriations report: “...Within eighteen months of enactment of this Act, the Committee directs NHTSA to issue the long overdue New Car Assessment Program (NCAP) proposed rule that adopts the most technologically advanced safety equipment, including the most advanced anthropomorphic test dummies...”¹

In a recent *NBC News* story on this issue, the U.S. Department of Transportation (DOT) said “gender disparities are unacceptable and the approval process has taken too long.”² This wasn’t the first time DOT identified the problem. The department cited correction of gender bias as one of its “Opportunities to Simultaneously Address Safety, Equity and Climate” in its own National Roadway Safety Strategy.

In addition, the White House Office of Management and Budget recognized the role that research has in redressing inequity in its July 22, 2022 [Memorandum](#) on Multi-Agency Research and Development Priorities for the FY 2024 Budget. “Equity should be the touchstone for all of these [research and development] investments,” it said, and the memo further prioritized “actionable and equitable measurements of program outcomes[.]”³

These policymakers understand that the government invests the public’s money in research and development to improve American’s lives. As this Administration has said in multiple policy directives, those improvements should be guided by equity. This Administration recognizes that it is past time to redress inequalities such as those found in the current crash test regime.⁴ The current regime, for instance, fails to test for females in all of the same tests where males are tested in the government’s 5-star safety ratings. In addition, despite years of research, the new generation of biofidelic⁵ dummies spearheaded by NHTSA – the ‘5G’ of crash test dummy technology, with [NHTSA-acknowledged](#) “improved design” – has not been federalized in the U.S., although this technology is available elsewhere.

¹(2022, March 31). *Fiscal Year 2022*. House Committee on Appropriations. <https://appropriations.house.gov/transparency/fiscal-year-2022>

²NBCUniversal News Group. (2022, May 11). *High-tech female crash test dummies could improve car safety. why aren't they in use?* NBCNews.com. <https://www.nbcnews.com/nightly-news/video/high-tech-female-crash-test-dummies-could-improve-car-safety-why-aren-t-they-in-use-139818053702>

³Shalanda D. Young, “Multi-Agency Research and Development Priorities for the FY 2024 Budget,” (July 22, 2022). [M-22-15 \(whitehouse.gov\)](#).

⁴ The Administration isn’t the only branch of government that is curing biases found in its jurisdiction. The recently passed Appropriations bill ([Public Law No: 117-328, passed 12/29/22](#)) fixes bias found in programs within the U.S. Bureau of Prisons and U.S. Department of Veterans Affairs.

⁵ THOR-05F Neck R&R, Biofidelity, and Durability. https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-06/Thor%2005F%20Neck%20RR%2C%20Biofidelity%20and%20Durability-%20L.Watkins_1.pdf

When it comes to equalizing testing and deploying advanced dummies, the longer we wait, the more those classes of people who have not been accounted for will die and be seriously injured who could have been saved. For instance, when it comes to women, depending on which of the multiple studies one reads, between 1-4 lives could be saved every day, and many more serious injuries could be mitigated or prevented.⁶ Every day the NHTSA-developed, female THOR-5F crash test dummy – which NHTSA has acknowledged is significantly more biofidelic than the currently used Hybrid III-5F, which was modeled on a 1970’s-era male – sits on the shelf, more women will be endangered, simply because they were born into the ‘wrong’ body. In the case of deploying crash test dummies and equalizing tests that reduce the potential for death and injury for many women, time is life.

Therefore, the research plan should be evaluated through a lens that answers these questions: Which part of this plan saves the most lives and prevents the most injuries soonest, and how can we prioritize that work? How can we prioritize research that encourages the swiftest righting of inequalities in our testing program? How can we hold ourselves accountable to goals that achieve these aims, as this Administration has outlined?

2. The research plan fails to follow Congress’ lead on prioritization and timelines; this vague and arbitrary approach frustrates this Agency’s goals of safety and this Administration’s mandates on equity.

Some of the milestones outlined in the plan seem closer to meeting these questions, while other research seems more loosely attached to policy goals at which we can only guess. For instance, two key milestones listed in the research plan may further the goal of deploying biofidelic dummies: on page 3, the research plan lists as “key milestones” “THOR-05F documentation ready for release to public,” and “WorldSID-05F documentation ready for release to public.” These are important milestones. Deployment-oriented research is aimed at “proving out” the technology by making sure crash test dummies meet biofidelity, durability, and reproducibility standards so that this new generation of NHTSA-developed technology can be deployed.

But this “proving out” research is not distinguished from the other research in the plan. Clearly, working to federalize the most advanced crash test dummy technology available and matching female and male crash tests should be at the top of the Agency’s priorities, since these actions have the ability to save more lives and prevent more injuries, and begin to redress inequalities in the crash test regime.

Unfortunately, there seems to be no prioritization of research at all. The milestones referenced above are part of a longer list of other research, which does not seem aimed at deployment. Instead, much of the other research seems focused on questions that might be good to know for some future policy decisions, but are not aimed at finishing work on the female-oriented crash test dummies in order to

⁶ “Vulnerability of Female Drivers Involved in Motor Vehicle Crashes: An Analysis of US Population at Risk.” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222446/>; Gudmundur F. Ulfarsson, Fred L. Mannering, “Differences in male and female injury severities in sport-utility vehicle, minivan, pickup and passenger car accidents,” *Accident Analysis & Prevention* 36 (2); pp. 135-147, 2004; Moran, Stephan G, et al., “Injury Rates among Restrained Drivers in Motor Vehicle Collisions: The Role of Body Habitus.” *The Journal of Trauma: Injury, Infection, and Critical Care* 52(6): p 1116-1120, June 2002; Brian O’Neill, “Preventing Passenger Vehicle Occupant Injuries by Vehicle Design—A Historical Perspective from IIHS,” *Traffic Injury Prevention*, 10:2, 113-126. National Health Statistics Report. <https://www.cdc.gov/nchs/data/nhsr/nhsr122-508.pdf>

make them available for the marketplace adoption in the U.S. as soon as possible, or ensuring male and female dummies are tested in all of the same positions.

It would make sense for research associated with equalizing the crash tests used for males and females (such as the driver's position tests in NCAP) and new technology deployment be first in line for consideration for Agency time, money, and talent. Crash tests can only test equally if they are performed equally, and advanced dummies can only save lives if they are deployed. But even with the laudable milestones focused on publishing the specifications of THOR-05F and WorldSID, the report's lack of prioritization – and clear statement that research should be aimed at adoption of tests and equipment that resolves inequalities – makes us concerned about whether research will aid NHTSA's mission or not.

In addition, there are no timelines mentioned in the research plan regarding these milestones. While the [Fall 2022 Regulatory Agenda](#) mentions a THOR-05F Part 372 rulemaking to commence in May 2023 – a rulemaking that would describe specifications for that dummy – it is concerning that this rulemaking is not mentioned in the research plan. Timelines are not mentioned in other elements of the research plan, either. And in some places, concrete, policy-linked reasons for pursuing certain research are simply not present.

The importance of clear definition of prioritization and timelines can be found elsewhere in law related to NHTSA's deployment of safety technologies. For instance, 49 U.S.C. Sec. 32310, which describes the shape a NHTSA New Car Assessment Program (NCAP) roadmap should take, refers to "key milestones" as "including the anticipated start of an action, completion of an action...". Without clearly defined research actions, measured by timelines and prioritized according to this Administration's directives, the Agency cannot hold itself accountable for using its research powers to advance the Agency's safety mission.

Indeed, vague research plans with arbitrary lists can even hurt the advancement of safety, because they can be used as an excuse by those who want to delay – waiting to make a policy decision after just one more study, and one more, and another, no matter whether the research in question is geared toward saving lives and preventing injury or not. In the case of resolving inequities in the crash test regime, since we know that solutions are available to fix the issue now, and we know that delay means more fatality and injury, the issue literally risks being researched to death. The importance of NHTSA providing a clearly defined research plan outlining prioritization and timelines of the deployment of equitable crash tests and advanced testing technology cannot be overstated.

In addition, prioritizing timely deployment of lifesaving, equitable solutions – such as new tests and technology – has other benefits as well. For instance, federalizing the first significantly biofidelic female dummies – technology that NHTSA has been researching and developing for over ten years – will incentivize the larger marketplace to invest in creating more equitable solutions to mitigate damage from vehicle crashes. The sooner the government can show the marketplace that investment in equity is rewarded, the sooner the innovation multiplying effect will stimulate the development of more equity solutions in the marketplace.

Surely rewarding this type of innovation is exactly what the White House Office of Management and Budget was referring to in the section of its memorandum titled "Innovating for equity" in which it admonished agencies to "operationalize the Administration's whole-of-government effort to advance

equity for all, including at the program level, including the deployment of scientific research and technological advances to drive equitable outcomes for the American public.”⁷

3. By approaching research in a strategic way, NHTSA can help research that furthers safety, rather than risk hindering it.

There is no reason we cannot chose to prioritize safety with research, by outlining clear, timely, and equity-based plans. By emphasizing action where improvement in safety can be found, NHTSA can save the most lives and prevent the most injury. For instance, during the pandemic, the Centers for Disease Control issued recommendations on masking and social distancing, simultaneously with the research and development of vaccines. The emphasis was on action – prioritizing work that could save lives, over research that may be valuable in the longer run, but did not match the first priority of making people safer as soon as possible.

Leaving a research plan vague, failing to prioritize research that can aid implementation of immediate solutions, and failing to hold itself accountable with timelines – which seems to describe much of NHTSA’s current approach – would be tantamount to avoiding issuing any instructions in the pandemic at all until the perfection of a vaccine. Lives would have been lost needlessly with such an approach, just as they are every day we fail equalize tests and to mandate the use of biofidelic female dummies in crash testing.

It is time for NHTSA to act now. We do not object to more longer-term research being conducted, if it aids the cause of safety. Indeed, vehicle safety has always been a story of an iterative approach, where improvements are made as the benefits of new technologies were discovered. We ask that NHTSA look at its research plan through this lens, recognizing the relationship between research and decision-making, and biasing its research toward taking actions that make the roads safer, while addressing solvable inequality in the crash tests regime. The cost is far to high to fail to prioritize actions that can save lives now.

Sincerely,

Susan Molinari, Co-Chair

Beth A. Brooke, Co-Chair

⁷ Young, “Multi-Agency Research and Development Priorities for the FY 2024 Budget.”