U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

1200 New Jersey Avenue SE.
Washington, DC 20590

August 24, 2022

The Honorable Jennifer Homendy
Chair
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Chair Homendy:

We have reviewed the National Transportation Safety Board's (NTSB) April 19, 2022, report, *Bus Roadway Departure and Rollover, Pala Mesa, California, February 22, 2020*, (NTSB/HIR-22/02), and the safety recommendations to the National Highway Traffic Safety Administration (NHTSA). NHTSA's responses to the recommendations are discussed below.

NTSB Recommendation and Requested Designation:

H-21-02: Require all newly manufactured buses, other than school buses, with gross vehicle weight ratings above 10,000 pounds to meet a roof strength standard that provides maximum survival space for all seating positions and accounts for typical window dimensions.

NHTSA Action:
On December 29, 2021, NHTSA published a final rule establishing Federal Motor Vehicle Safety Standard No. 227, "Bus rollover structural integrity." NHTSA applied the standard to over-the-road buses (motorcoaches), and other buses with a gross vehicle weight rating (GVWR) greater than 26,000 pounds (except a few specialty buses). In the final rule, NHTSA presented an analysis of real-world fatality data of rollover crashes of medium-size buses (buses with GVWRs between 10,000 and 26,000 pounds) and found an absence of a safety need to apply the standard to these vehicles. NHTSA continues to monitor crash data and will take action when a safety need arises.

NHTSA requests that recommendation H-21-02 be classified as **Closed, Alternative Response.**

H-22-12: Sponsor research to determine the appropriate minimum tire tread depths necessary for the safe operation of commercial vehicles, particularly passenger-carrying vehicles. The research should include the effect on vehicle handling when different tread depths are used for tires on the steer versus the rear axles.

NHTSA Action:
According to the findings of the investigation, the carrier exhibited deficiencies in tire replacement and rotation procedures which allowed the bus to operate in service with tires that had less than the required tread depths. Additional findings included excessive speed for roadway conditions and inappropriate driver inputs during the event. The insufficient tread

depth is a violation of 49 CFR 393, specifically 393.75, which stipulates the minimum tread depth of a commercial motor vehicle tire. Tread depth standards were developed after multiple studies which led to the development and publication of 49 CFR 570.9 for vehicles with a GVWR of 10,000 pounds or less and section 570.62 for vehicles with a GVWR greater than 10,000 pounds. Findings from these early studies are cited in a subsequent Notice of Denial of Petition for Rulemaking dated January 30, 1996, in which NHTSA denied a petition by Herzlich Consulting, Inc. of Las Vegas, NV. Herzlich petitioned NHTSA to amend the tire standards to increase the tread depth for which NHTSA calls for tire replacement. A NHTSA study published in 2012, *Tire Related Factors in the Pre-Crash Phase*, (DOT HS 811 617), supports the current requirements of 2/32 inch tread depth.

As noted in the findings, this crash presents issues regarding tire inspection, repair, and replacement, coupled with excessive speed and driver error. NHTSA believes that these are the salient contributors to this event, rather than the appropriateness of existing tread depth requirements. NTSB noted that, "[B]ased on currently available research, minimum tire tread depth requirements may be insufficient to ensure adequate traction for commercial vehicles, particularly passenger-carrying vehicles, such as buses." NHTSA is not aware of such research, but invites NTSB to forward any information of relevance, and we will be pleased to review it. NHTSA will, of course, continue to monitor crashes involving vehicles with a GVWR greater than 10,000 pounds to determine if further research is warranted.

NHTSA believes that the current tread depth requirement remains a valid indicator of when to replace a tire.

NHTSA requests that recommendation H-22-12 be classified as **Closed, Acceptable Response**.

H-22-13: Revise 49 Code of Federal Regulations 570.62 based on the outcome of the research described in Safety Recommendation H-22-12.

NHTSA Action:
See response to recommendation H-22-12. NHTSA believes that the current tread depth requirement remains a valid indicator of when to replace a tire. NHTSA continues to monitor crash data and will take action when a safety need arises.

NHTSA requests that recommendation H-22-13 be classified as **Closed, Acceptable Response**.

If you have any questions, or require additional information, please contact me or Darren Hall, Governmental Affairs, Policy and Strategic Planning, at 202-650-7620.

Sincerely,

Steven S. Cliff, Ph.D.
Administrator