



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

MEMORANDUM TO: Project Engineers  
Project Design Engineers

FROM: B. C. Hanks, P. E.  
State Structures Engineer

DATE: June 15, 2023

SUBJECT: LOAD RATING FOR EMERGENCY VEHICLES

Effective with the October 2023 letting, the Load and Resistance Factor Ratings (LRFR) for all new structures shall include the Fixing America's Surface Transportation (FAST) Act's two emergency vehicles (EV), EV2 and EV3, which are defined in the [FHWA Memorandum](#) dated November 3, 2016.

LRFR for EVs shall be performed for all applicable strength and service limit states. The LRFR limit states and load factors shall be as shown in [Figure 6-134](#). For a schematic of the EV configurations see [Figure 6-146](#) or [Figure 6-147](#). Include EVs in the LRFR summary plan sheet.

The Design Manual and Design Manual Figures have been updated and are available on the Structures Management Unit website.

BCH/AAI/ldm

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