
 <p>Office of Structures <i>Guidelines and Procedures</i> Memorandum</p>	INSPECTION
	Number: <p style="text-align: center;">D-97-47(4)</p>
	Date: <p style="text-align: center;">08-10-2018</p>
Structural Load Ratings	Approval: 

All highway bridges in Maryland shall be load rated for both inventory and operating stress levels. As a minimum for ratings performed by SHA staff, all ratings shall be performed by a load rating engineer and checked by another engineer with experience in load ratings. The load rating engineer shall be a graduate engineer. The engineer checking the rating shall be a graduate engineer and be PE eligible. The Division Chief in charge of the load rating program shall be a Professional Engineer.

As a minimum for ratings performed by an engineering consultant firm, all ratings shall be performed by a load rating engineer and checked by another engineer with experience in load ratings. The load rating engineer shall be a graduate engineer. The engineer checking the rating shall be a professional engineer licensed in Maryland. P.E. Stamped load rating calculations and supporting data shall be submitted to the Deputy Director, Office of Structures – Remedial and Inspection Engineering for review and documentation.

For new bridges, the load rating shall be performed when the final design is complete. The load rating shall appear on the advertised plans. This load rating shall be revised, if necessary following construction of the bridge, to account for any changes to the structure as the result of addendums, red line revisions and as-built revisions. The rating methodology to be used for rating a new bridge shall be consistent with the design methodology used in the design of that bridge. Since all new bridges designed after October 2007 are required to be designed by the AASHTO Load and Resistance Factor Design (LRFD) method, all bridges designed by this methodology shall therefore be rated using the AASHTO Load and Resistance Factor Rating (LRFR) method.

For existing bridges which are undergoing a major rehabilitation and not designed by LRFD method, the load rating or re-rating shall utilize the Load Factor Rating (LFR) method. The only exception to this is for timber and masonry bridges, which shall continue to be rated using the Allowable Stress Rating (ASR) method.

All ratings, both in house and by Consultants, shall be performed using the LARS program. If the LARS program is not capable of providing an accurate rating, then a request to utilize another program shall be submitted in writing to the SHA Division Chief in charge of load ratings or the County/Local Agency Program Manager. All final load rating computer files shall be submitted to SHA Division Chief in charge of load ratings for storage.

For SHA bridges, a re-evaluation of the current bridge load ratings shall be done for all bridge inspections that result in an Engineering Request. (An Engineering Request is a request made by a field inspector to have a structural engineer perform a field inspection of a bridge element(s). The requests are usually associated with deleterious changes to a bridge element(s) since the last inspection.) This re-evaluation may necessitate new bridge load ratings being established. This evaluation must be documented for each Engineering Request and shall include the date of the evaluation, who performed and checked the evaluation, and the reasons behind the decision to perform a new load rating or not. Any required load rating shall be given a “P” priority, shall be completed within 6 months of receipt, and rated utilizing the Load Factor Rating (LRF) method. (The Structural Inspection and Remedial Engineering Division uses a job priority scale consisting of E, P, A, B, C, and D with