



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

July 21, 2017

CIRCULAR LETTER 2017-16

LOAD RATINGS FOR LOCAL PUBLIC AGENCY STRUCTURES

COUNTY ENGINEERS / SUPERINTENDENTS OF HIGHWAYS
MUNICIPAL ENGINEERS / DIRECTORS OF PUBLIC WORKS / MAYORS
METROPOLITAN PLANNING ORGANIZATIONS – DIRECTORS
TOWNSHIP HIGHWAY COMMISSIONERS
CONSULTING ENGINEERS

The purpose of this Circular Letter is to provide information regarding the new requirements for providing load ratings to the Department for Local Public Agency (LPA) structures greater than 20.0 feet in length. This applies to all new construction, rehabilitation, and resurfacing projects, as well as for repairs affecting a structure's load capacity.

The Bureau of Bridges and Structures (BBS) originally notified LPAs of this requirement in Bureau of Local Roads Circular Letters (CL) 2016-10 "NBIS Metric 13 – Load Rating Procedures," dated April 15, 2016. CL 2016-11 "NBIS Metric 13 – Load Ratings – AASHTOWare Training," CL 2017-01 "AASHTOWare Bridge Rating Software," and CL 2017-05 "Bridge Load Ratings - AASHTOWare Training" provided additional information and available resources regarding this initiative.

With the issuance of the updated Structural Services Manual, dated June, 2017, via the National Bridge Inventory System (NBIS) subscription service on June 30, 2017 and CL 2017-15 "Updated Structural Services Manual," the BBS has provided notional loads and configurations for posting and routine permit vehicles for use in the analysis and load rating of LPA structures.

BACKGROUND

The FHWA now requires that all new structures have a load rating analysis performed. In addition, and in conjunction with this, the long-term goal of the Department is to have an up-to-date bridge information system, providing a more accurate depiction of the load carrying capacity of all structures. This will facilitate quicker analysis of permits using the ITAP (Illinois Transportation Automated Permit) system, not only for structures on the State highway system, but also for those on the local highway system.

Automatically assigned load ratings were no longer accepted in the Illinois Structures Information System (ISIS), effective July 1, 2017.

LOAD RATING REQUIREMENTS

When work is performed on a structure, it is reasonable and appropriate to expect to know the effect the work will have, and to know the resulting load carrying capacity.

Therefore, any construction on a LPA structure greater than 20.0 feet (NBIS length) affecting the load carrying capacity of the structure will require a load rating submittal to the BBS. This includes not only new structures, but also rehabilitations, repairs, resurfacings, and roadway re-profiling projects where the fill height over a structure is modified. Minor repairs not affecting the load carrying capacity, such as pavement patching, bearing replacement, and expansion joint repair will not require a submittal.

The preferred analysis software for the load rating is AASHTOWareBrR, which is available for use by load raters for analysis of structures in the State of Illinois as provided in CL 2017-01 "AASHTOWare Bridge Rating Software." In order to be compatible with the ITAP, AASHTOWareBrR should be used whenever possible; there are some structure types, such as three-sided precast concrete structures and complex structures, which cannot currently be modeled on AASHTOWareBrR.

LOAD RATING SUBMITTALS

Submittals of load ratings for LPA structures will be documented on form IDOT BBS 2795 (Structure Load Rating Summary). The SLRS, analysis file, and structural plans shall be emailed to DOT.Bridge.Ratings@illinois.gov. Please include the structure number (SN) in the subject line of the email.

This submittal is normally provided at the completion of design, and again before opening the structure if structural modifications are made during construction affecting the load carrying capacity of the structure. For precast structures, the submittal must be made during construction, providing the shop drawings and the plan and profile sheet, in addition to the other submittal requirements noted above.

Load rating information will be entered into the ISIS when received for new structures. Information for load ratings for structure modifications will be entered at the completion of the work. It is therefore necessary the BBS be notified when the work is complete. Structures which have load posting restrictions or require special inspections require official BBS notification of the removal of these requirements before the structure is opened to traffic.

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AASHTOWARE LIBRARIES

The BBS is developing a load ratings website, which will contain libraries for structural shapes, parapets and railings, and notional load rating and permit vehicles. Additional information will be provided when the website is operational.

RESURFACINGS, PARTIAL REHABILITATION, OR REPAIR

A submittal is required when the scope of the project is resurfacing, or rehabilitation, or repair entailing only a portion of the structure, such as repair or rehabilitation of deteriorated timber piles. If the owner or consultant has the load rating analysis in their files, the consultant may review and use the file information, updating the file as necessary. At this time, the Department is not releasing our analysis files outside the Department.

If such analysis files are not available, it is possible in some cases the BBS has already modeled the structure. The BBS' Local Bridge Unit (LBU) should be contacted early in the scoping phase to determine if the LBU has previously modeled the structure and will be able to provide assistance, or perform the analysis, and prepare the SLRS for the project scope.

SUBSCRIPTION SERVICES

We recommend signing up for the BBS and NBIS subscription services. Information for joining these subscription services is contained in CL 2017-15.

Questions regarding this circular letter may be directed to the Local Policy and Technology Unit by telephone at (217) 785-5048 or by email at DOT.LocalPolicy@illinois.gov.

Sincerely,



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JK/tw

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