

# INDIANA DEPARTMENT OF TRANSPORTATION



INTER-DEPARTMENT COMMUNICATION  
*Standards Section – Room N642*



*Writer's Direct Line  
232-6775*

May 26, 2004

## DESIGN MEMORANDUM No. 04-05 POLICY CHANGE

**TO:** All Design, Operations, District Personnel and Consultants

**FROM:** /s/ Anthony L. Uremovich  
Anthony L. Uremovich  
Design Policy Engineer  
Contract and Construction Division

**SUBJECT:** HS 25 Loading for New and Replacement Bridges

**EFFECTIVE:** Notice to Proceed with Design on or after September 1, 2004

All INDOT new and replacement bridges are to be designed for HS 25 live loads. Local Public Agency (LPA) bridges with design year average daily truck traffic (ADTT) greater than 1,000 are to be designed for HS 25 live loads. LPA bridges with an ADTT less than or equal to 1,000 may be designed for HS 25 or HS 20, whichever the LPA elects.

An HS 20 loading consists of either a truck or lane loading as shown in the AASHTO *Standard Specifications for Highway Bridges* (17<sup>th</sup> Edition), Figures 3.7.7 A and 3.7.6 B.

An HS 25 live load consists of either a truck or a lane loading. The loads for HS 25 are 25% greater than those for HS 20. The truck loading consists of axle loads of 10 kips, 40 kips, and 40 kips, placed longitudinally in the same manner as the HS 20-44 truck loading. The uniform lane loading is 800 lb/ft of load lane. The concentrated lane loading is 22.5 kips for moment and 32.5 kips for shear. See the AASHTO *Standard Specifications for Highway Bridges* (17<sup>th</sup> Edition), Section 3.7.2.

With respect to deflection, designs should comply with the AASHTO *Standard Specifications for Highway Bridges* (17<sup>th</sup> Edition) sections as follows:

Reinforced concrete	8.9 and 8.13
Prestressed concrete	9.11
Steel	10.6 (excluding 10.6.7) and 10.59

With respect to fatigue of steel members, designs should comply with the AASHTO *Standard Specifications for Highway Bridges* (17<sup>th</sup> Edition) including sections 10.3, 10.40.2.3, and 10.58. The appropriate fatigue live load is HS 20, even if the structure is being designed for HS 25 live loads. See the AASHTO *Standard Specifications for Highway Bridges* (17<sup>th</sup> Edition), Section 10.3.2.1.

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