

Research Need for Bridges and Foundations Technical Advisory Group

Posted: 8/14/2026

1. Issue Identified:

Vehicle Configurations for Implements of Husbandry in Illinois

2. Summary of Problem:

Illinois structures are currently designed using AASHTO live load models that reflect typical commercial vehicle weights and configurations. An implement of husbandry is described by the Illinois Statutes as a vehicle designed exclusively for agricultural, horticultural or livestock-raising operations, including farm wagons or wagon trailers. Although these vehicles are not registered, they are used on public roads and bridges intermittently. The size and weight of IoHs have grown substantially and may produce force effects greater than those caused by registered vehicles. AASHTO provides limited guidance on how IoHs should be treated for load-rating calculations, primarily because their configurations vary by state depending on local agricultural needs. As an initial step in refining the load-rating policy for IoHs, the Illinois Department of Transportation needs to determine the practical makeup of IoH vehicle configurations used in Illinois.

3. Desired Results/Outcome:

The desired outcome is a comprehensive list of implements of husbandry used in Illinois. Details shall include vehicle name and type; manufacturer; model; gross vehicle weight (laden and unladen); number of axles; axle weights (laden and unladen); axle spacing; number of tires per axle; tire widths; number and spacing of tracks; track length, width and load distribution; gauge of each axle or track; and the approximate percentage of the overall IoH population represented by each vehicle type.