Common Truck Size and Weight Terms

Axle – The common axis of rotation of one or more wheels whether power driven or freely rotating, and whether in one or more segments, and regardless of the number of wheels carried thereon.

Axle Group – An assemblage of two or more consecutive axles considered together in determining their combined load effect on a bridge or pavement structure.

Class A Highway - This WI highway class includes all state trunk highways and connecting highways and those county trunk highways, town highways, and city and village streets, or portions thereof, that have not been designated as Class B highways.

Class B Highway - This WI highway class includes those county trunk highways, town highways and city and village streets, or portions thereof, which have been designated as Class B highways by local authorities. The weight limits on Class B highways are 60% of those imposed on Class A highways.

Designated Long Truck Route - There are no restrictions on overall vehicle length on these WI roadways. However, trailer length restrictions still apply on Interstates.

Equivalent Single Axle Loads (ESALs) - A means of equating various axle loads and configurations to the damage done by a number of 18,000 pound single axles with dual tires on pavements of specified strength over the design life of the pavement.

Federal Bridge Formula – A formula used determine the maximum allowable weight that any set of axles on a motor vehicle may carry on a bridge. The formula limits the weight-to-length ratio of a vehicle crossing a bridge by spreading weight over additional axles or by increasing the distance between axles.

*Calculated values reflect FHWA’s policy of rounding down when weights fall exactly between 500-pound increments. Because the Bridge Formula is designed to protect infrastructure, FHWA determined that this conservative policy is consistent with the statutory mandate.*
Gross Vehicle Weight – The weight of a vehicle plus the weight the vehicle is designed to carry.

Implement of Husbandry – Any vehicle used in the process of cultivating, harvesting, or transporting agricultural products, including crops and animals. Common implement of husbandry vehicles include tractors, trailers.

Intermodal Facility -- An intermodal facility is a place where interface occurs between transportation systems. In freight transportation these facilities most frequently accommodate the transfer of goods between rail and truck or between rail and ship.


Long Combination Vehicle (LCV) – Any tractor and double or triple trailer, or double semi-trailer combinations, excluding the STAA authorized twin 28’ allowed on the NN, with a gross vehicle weight in excess of 80,000 pounds.

National Network (NN) – The composite of the individual network of highways from each State on which vehicles authorized by the provisions of the STAA are allowed to operate.

Passenger Car Equivalents (PCEs) - The number of passenger cars that a single other vehicle is equal to.

Reasonable Access – Routes between the divided highways of four or more lanes of travel and terminals, facilities for food, fuel, repair, and rest and points of loading and unloading for household goods carriers, livestock carriers, or for the purpose of providing continuity of route.

Restricted 65-Foot Truck Route - Vehicle lengths are restricted to a maximum of 65 feet on these WI roadways.

Restricted 75-Foot Truck Route - Vehicle lengths are restricted to a maximum of 75 feet on these WI roadways.

Single-Axle – Includes all wheels whose centers may be included within two parallel transverse vertical planes 40 inches apart.

STAA – An acronym for the Surface Transportation Assistance Act.

Tandem Axles – Two consecutive axles whose centers are spaced more than 40 inches and not more than 96 inches apart.

Tire Width – The manufacturer’s width as shown on the tire or the width at the widest part of the tire excluding protective side ribs, bars, and decorations.

Tridem Axles – Three axles spaced within 9 feet or less.

Weigh-in-Motion – These devices are designed to capture and record truck axle weights and gross vehicle weights as they drive over a sensor.