

# STRUCTURAL BUILDING COMPONENTS MAGAZINE

January/February 2005

## SUPPLEMENTAL SUPPORT DOCS:

More information can be found under the [Support Docs Section: January/February 2005](#).

### Transporting Trusses: Size, Weight & Reducible Load Issues (Part 2 of 3) by Sean D. Shields

Let's begin with a brief review of key concepts from the [introductory article in this series](#). Within the issue of transporting the manufactured materials of the structural building components industry from plant to construction site, two federal agencies have jurisdiction: the Federal Highway Administration (FHWA) and National Motor Carrier Safety Administration (NMCSA). These two agencies have been given specific authority to establish regulations governing the operation of commercial motor vehicles on both the Interstate System (approximately 43,000 miles) and the National Highway System (an additional 120,000 miles). In addition, federal law stipulates that all roads providing "reasonable access" to these systems are also governed by the same standards. As a result, most states have adopted standards that mirror the federal regulations.

The FHWA sets size and weight limits allowable for commercial transport, which includes non-reducible oversize load requirements, whereas the NMCSA approves rules that pertain to cargo securement. This article will address those issues pertaining to the FHWA, including vehicle weight and size limits, and subsequent state agencies with jurisdiction



**MOST STATES HAVE SET THEIR ALLOWABLE TRAILER LENGTH LIMIT AT 48'. SINCE THE TYPICAL ROLL-OFF TRAILER STARTS AT 42', IF YOU FIND YOURSELF EXPANDING IT BEYOND SIX FEET TO ACCOMMODATE YOUR LOAD, YOU WILL LIKELY NEED AN APPROPRIATE STATE PERMIT.**

over permitting of commercial vehicles. In addition, three case examples are provided to give you a sense of the many differences between states with regards to this issue.

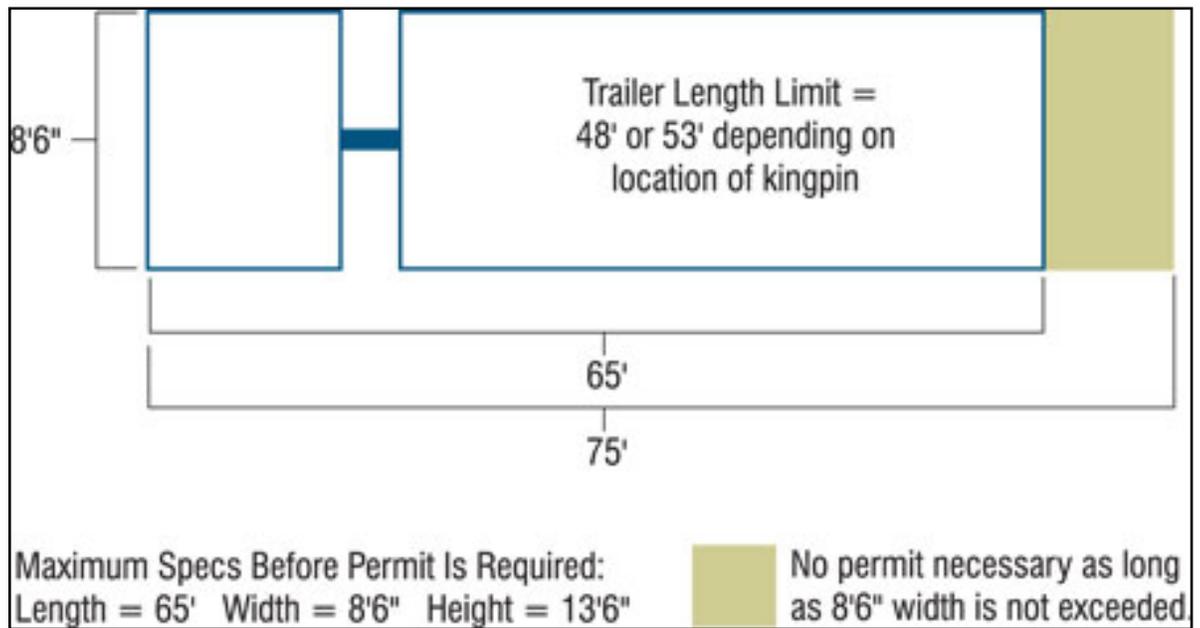


FIGURE 1. FLORIDA CASE STUDY

## VEHICLE WEIGHT LAWS

Exceeding overall vehicle weight limits will likely not be a regular problem for most component manufacturers. Given the nature of many of the products you transport—for example, the amount of empty space between truss web members—it would be difficult to reach established upper limits. However, it may be possible if you are using a

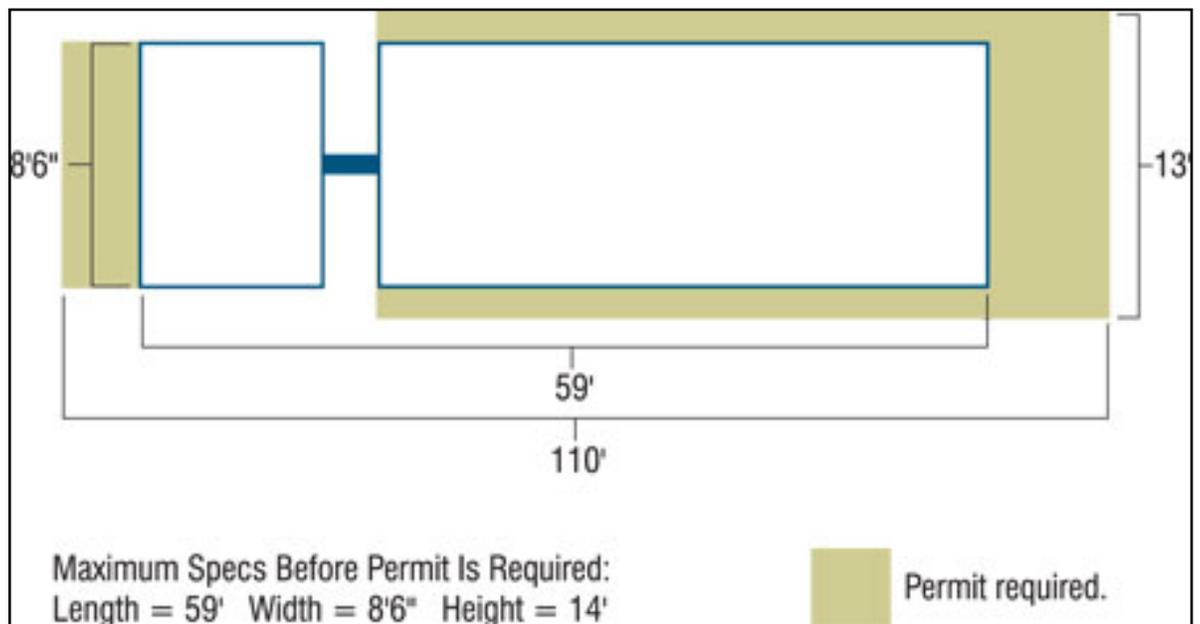


FIGURE 2. TEXAS CASE STUDY

truck-tractor power unit with a crane, and are hauling a full load of oversized trusses. Whatever the case, it is important to be aware of the standard and how it may fluctuate regionally.

The federal rules established by the FHWA under Title 23 of the Code of Federal Regulations (CFR), section 658, define maximum and minimum standards under which individual states have authority to pass additional regulations. In instances where states' laws are given "grandfather" protection, as in overall trailer lengths, the federal rules are more lenient. However, in

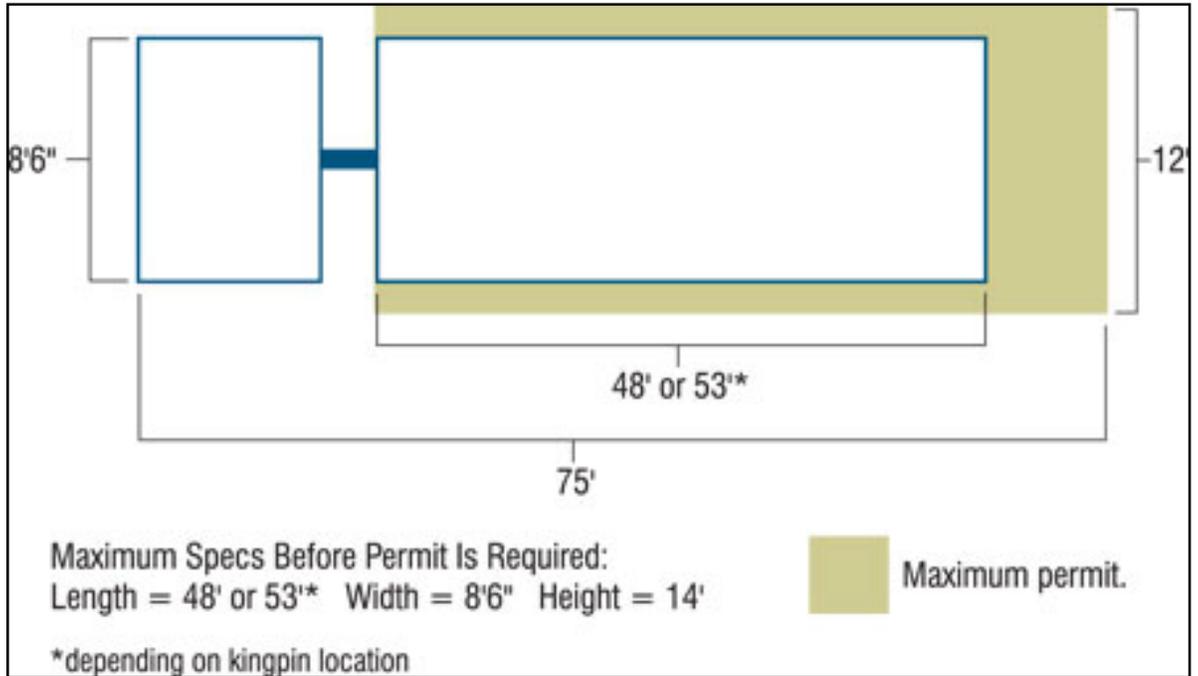


FIGURE 3. CALIFORNIA CASE STUDY



STACKING DIFFERENT SIZED AND SHAPED TRUSSES, EITHER ON TOP OF EACH OTHER OR ARRANGED ON THE BED OF THE TRAILER, IS ALLOWED UNDER NON-REDUCIBLE OVERSIZE PERMITS, AS LONG AS THE STACKING DOES NOT CONTRIBUTE TO THE OVERSIZE INFRACTION.

other instances, such as vehicle weight or width, the federal laws are more stringent. In general, most states have enacted rules similar to those established by these federal agencies. In addition, even though states are given authority over enacting laws governing the roadways that are not part of the National Highway System, most states maintain standards similar to those enacted on the federal level for most roadways.

Maximum federal weight limits are 20,000 lbs per vehicle axle, with a gross vehicle weight limit of 80,000 lbs. In

addition, the FHWA established a bridge exception formula in 1975 to reduce the risk of possible damage to expensive highway bridges. Again, in general you will most likely not have to worry about this formula given the nature of the product you transport. However, in instances where you may be approaching overall vehicle weight limits, the bridge exception formula prompts equal



**IN THE CASE OF OVERHANGS, EITHER OR THE FRONT, REAR OR SIDE OF THE VEHICLE, MOST STATES REQUIRE PLACEMENT OF FLAGGING AND OTHER CAUTIONARY SIGNAGE ON THE OUTERMOST EDGE OF THE MATERIAL.**



**REQUIREMENTS FOR ESCORT VEHICLES VARY BY STATE. IN GENERAL, MOST PERMITS AT THE TIME OF ISSUANCE WILL INDICATE IF, AND HOW MANY, ESCORT VEHICLES ARE REQUIRED FOR THAT PARTICULAR LOAD.**

distribution of load over the length of the trailer. States have largely adopted these same weight restrictions.

## VEHICLE LENGTH, WIDTH & HEIGHT LAWS

Federal law establishes an overall vehicle width of 8' 6" (102"). However, this width limitation does not include devices such as mirrors or handholds that promote the safe and efficient operation of the vehicle. There is no federal standard for total vehicle height, which includes the height of the cargo being transported.

However, most states have established limits that range from 13' 6" to 14' 6". This height limit corresponds to the typical height of overpasses. If you are transporting goods along a route void of an overpass, it may be quite simple to obtain an appropriate state over-height permit.

Under federal law, there are no limitations on overall truck length. However, states are prohibited from imposing trailer length limits less than 48'. At the time this law was passed, states were allowed to "grandfather" the standard they already had in place. Not surprisingly, most states did not have a limit in place, and have subsequently set their allowable trailer length limit at 48'. For a complete list of allowable trailer limits see [Support Docs](#). Since the typical roll-off trailer starts at 42', if you find yourself expanding it beyond six feet to accommodate your load, you will likely need an appropriate state permit.

## "NON-REDUCIBLE" LOAD

Many states have passed laws outlining the criteria for oversize, non-reducible loads. For review, a non-reducible load is defined as any material being transported that cannot be, by its nature, reduced in length, width or height. As it translates to transporting wood trusses, a 60' truss, as part of the overall cargo inventory, cannot be reduced in length or width (except in the case of a removable cap) and would qualify for an oversize, non-reducible load permit.

Unfortunately, practically every state has its own oversize load regulations and permitting processes. To give you a sense of the variance, following are three case examples.

## FLORIDA

In Florida, the overall length, including tractor and trailer, is limited to 65', and depending on the location of the king-pin (where the trailer hooks to the power unit), the trailer length is limited to either 48' or 53'. The vehicle width limit is 8' 6" and the overall height, including cargo, is 13' 6".

The only exception to this rectangular area of space you can exceed without a permit pertains to length. In Title 23 of the Florida State Statutes, under chapter 316.515, section 7(c), "truck tractor-semitrailer combination vehicles transporting...objects of a structural nature that cannot be readily dismembered when operating in the daytime, excluding Saturdays, Sundays, and holidays and when the vehicle and load do not exceed 75' when proper flags are displayed." In other words, your overall vehicle length can be 10' longer when hauling trusses or wall panels without a permit, as long as you don't exceed the 8' 6" width limit. (See Figure 1.)

Let's say the load you're transporting contains a group of 60' trusses. When combined with the tractor-trailer, the overall length would exceed the 65' restriction, and require a oversize, non-reducible load permit (actually, in Florida they call them "non-divisible loads") from the Florida Department of Transportation State Permits Office. In an effort to streamline their process, they have moved to a totally online application system located to their web site. See [Support Docs](#) for more information. These permits range from \$10 single-trip to \$250 annual blanket permits.

## TEXAS

In Texas, your load cannot exceed 8' 6" in width or 14' in height. In addition, your overall trailer length cannot exceed 59' in combination with a truck-tractor, regardless of the king-pin location. There is an additional limit on overhangs set at three feet in front and four feet off the rear of the trailer. (See Figure 2.)

If we continue to take the example of hauling a group of 60' trusses, the length, and possibly width, limits will be exceeded and require a permit. You can acquire a permit through the Texas Department of Transportation Motor Carrier Division for single trips (\$31) or 30, 60 or 90-day (up to \$120) permits. With one of these permits, the overall vehicle length can be up to 110', including up to a 25' overhang in the front and 30' overhang off the rear. A permit will also increase the width limit to up to 13'. Anything exceeding these limits requires a specialized permit. This may mean having to conduct a time-consuming pre-trip route inspection.

With regards to escort vehicles, an escort is required for loads between 110' and 125' long, or if there is greater than a 20' front or rear overhang. A front and rear escort is required for loads exceeding 125' in length. The overall length indicated on the permit includes any overhang, and the amount of the overhang must be noted on the permit.

One escort vehicle traveling behind the truck is required for all loads exceeding 14' up to 16' wide. Two escorts, one in front and one behind, are required for all loads exceeding 16' wide. Manufacturers transporting loads exceeding 20' in width must physically inspect a proposed route and certify to the Motor Carrier Division by letter or facsimile that the over-width load can safely negotiate the route.

## CALIFORNIA

In California, the vehicle width, including load, is limited to 8' 6", vehicle height is limited to 14', and, depending on the location of the king-pin, the trailer length is limited to either 48' or 53'. However in 1980, the California Legislature passed an exemption for trusses up to 12' wide. That law was repealed in 1998, but the California Department of Transportation (CalTrans) has not changed its policy and consequently will still issue a permit for up to that width. (See Figure 3.)

The difficulty in California is that wood trusses are legally considered a reducible load. In other words, CalTrans will not issue an oversize load permit for trusses that are either greater than 12' wide or cause the overall vehicle length to exceed 75'. However, there is an exception within California Vehicle Code 35414 which allows for integral structural materials between 60' and 80' in length.

In northern California, these limitations are exacerbated by the common practice of top plate truss delivery. This generally requires the use of a crane truck, the boom in travel-lock position can extend beyond the front of the vehicle, thus adding to the overall length of the vehicle. In this situation, you can deduce that:

- a truss greater than 60', and up to 80', in length can be transported under the 60' - 80' exemption
- a truss less than 50' in length will likely fit under the 75' overall allowable truck length,
- a truss that measures between 50' and 60' (depending on the length of the power-tractor and crane overhang) cannot be legally transported.

As a result, one component manufacturer has gone as far as to buy a standard truck just to haul the trusses, and then brings a crane truck by the delivery site later to lift the trusses.

## CONCLUSION

In most cases, permits are readily available when loads exceed established standards. Many of you, through the operation of your business, have participated in this permitting process. However, even with the right permit, local interpretation by law enforcement entities can still make it difficult to comply.

In response to issues component manufacturers have encountered, particularly within enforcement and reducible load permitting, the WTCA is putting together our "Guide to Loading and Transporting Wood Trusses." This document will supply strategies you can use for working with local inspection and enforcement authorities to ensure products that are transported meet legal requirements and are loaded and transported practically and efficiently.

---

[SBC HOME PAGE](#)

Copyright © 2005 by Truss Publications, Inc. All rights reserved. For permission to reprint materials from SBC Magazine, call 608/310-6706 or email [editor@sbcmag.info](mailto:editor@sbcmag.info).

The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing of structural building components to ensure growth and continuity, and to be the information conduit by staying abreast of leading-edge issues. SBC will take a leadership role on behalf of the component industry in disseminating technical and marketplace information, and will maintain advisory committees consisting of the most knowledgeable professionals in the industry. The opinions expressed in SBC are those of the authors and those quoted solely, and are not necessarily the opinions of any of the affiliated associations (SBCC, WTCA, SCDA & STCA).