

THE MILWAUKEE ROAD HORIZONTAL RIBBED BOX CARS

by
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Throughout the history of railroads each railroad strove for a particular identity to distinguish itself from its competitors. Some did it through advertising or logos such as "Phoebe Snow", lightening stripes or warbonnet paint schemes. Some did it with recognizable types of equipment such as Belpaire or Wooten fireboxes, high hood diesels, Zephyrs and turbines. Still others did it with such things as company designed and built round roof boxcars, battleship gondolas and electrics. This article is about one of these latter "design" trademarks. It is about what is surely one of the most recognizable and longest surviving such trademarks: the Milwaukee Road horizontal ribbed box cars.

Though it had emerged from bankruptcy only a few years earlier, on January 25, 1930 the Chicago, Milwaukee, St. Paul and Pacific Railroad, popularly known as the Milwaukee Road, opened new car shops in Milwaukee, Wisconsin's industrial Menominee River Valley a few miles south and west of downtown. As the shops became established they began to create new car designs. In time this huge shop would produce not only freight cars but also all classes of Milwaukee rolling stock, passenger cars, steam locomotives and even a few one of a kind diesel designs.

In the 1934, the West Milwaukee Shops (as they became known) produced a 40' composite car with a "wagontop" roof, the first of the Milwaukee's all-welded freight cars. However, the horizontal ribbed box cars did not appear until 1937 when the West Milwaukee Shops produced the XA class of 50' box cars. These were numbered 13500-13999 and had a

50'6" inside length, a 9'2" inside width and a 10'4" inside height. The 14'6" door opening was covered with double Youngstown doors. The horizontal ribs provided increased carbody strength at the same time they provided unobstructed lading areas inside the car.

The design was used again in September 1938 on passenger cars for the "Hiawatha" of 1939. The rib design of these cars was carried over to the tender of the F-7 class 4-6-4 locomotive used on this famous train. Excellent color photos of the ribbed tender with distance shots of the cars can be found in Don Ball's book "America's Colorful Railroads" (published by Reed Books, 1978) on pages 140 and 142.

The new trademark had taken root and in 1939 horizontal ribbed bay window cabooses and single door 40' boxcars were added to the list. Production of the 40' boxcars continued through 1949. In all there were 12 lots of differing sizes of the single door 40' boxes and 4 lots of the 40' double door automobile cars.

Between 1937 and 1947, 8 lots of 50' cars were built. These included single door and double door cars as well as several with doors in the end for handling automobiles. There was even one lot of "express" cars fitted with steam and signal lines and riding on passenger car trucks. These cars had the additional unique feature of being 50' 7" long, but with only 8' 9" height inside!

The Milwaukee continued producing rolling stock in this design into 1951; the last horizontal ribbed cabooses (#02065-02114) were rolled out the door in that year.

MILW 13631 West Milwaukee Shops photo of the very first lot of horizontal rib cars built—the 50' automobile cars of 1937. This example has full length ribs, the 5/5 Dreadnaught end, lumber door and a Hutchins roof. (Milwaukee Road collection; courtesy Milwaukee Public Library).



Production amounts and numbering of boxcars placed in broad general groups are as follows:

Car Type	Car Numbers	# Built
40' Single Door	18000-28539	10540
40' Double Door	6500-7099, 9000-9499	1100
50' Single Door	50000-50474, 50500-50999	975
50' Express	925-949	25
50' Double Door	13500-13999, 14000-14249, 15500-15749	1000

Naturally, with a production history as long as that of the horizontal ribbed cars, many detail changes were made along the way producing a number of versions of each type. Indeed, with the Milwaukee Road these detail differences become especially significant for the modeler.

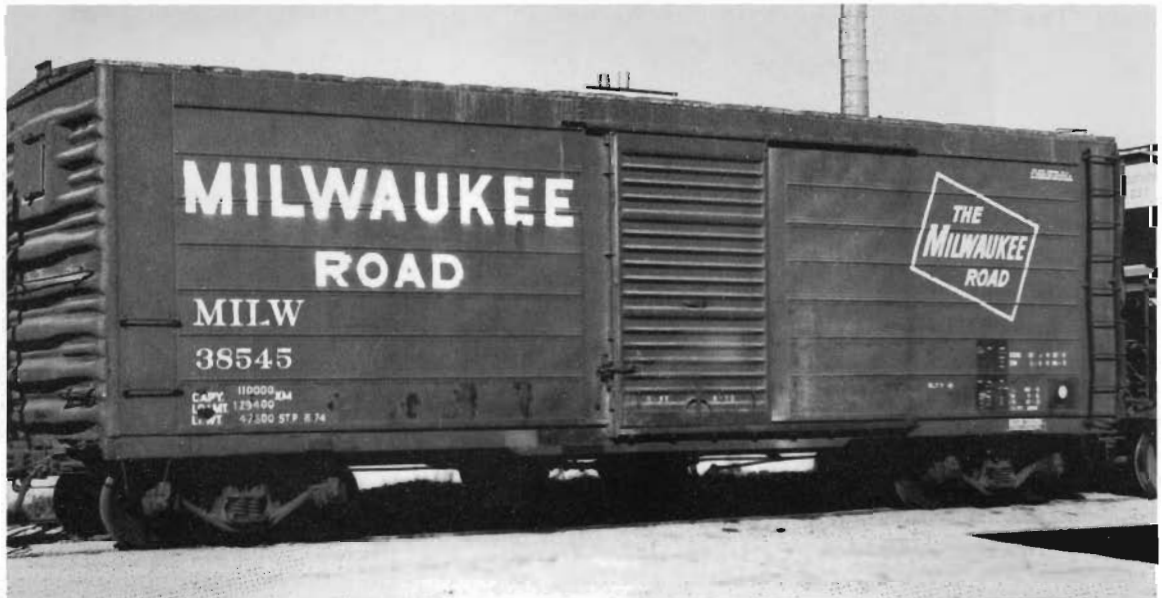
To gain some perspective on the richness of these changes it is necessary to understand the rather

unconventional way that the West Milwaukee Shops constructed these cars. The railroad used prefabricated subassemblies on its car production lines. The roof assembly came complete with its running boards, hand grabs and end fascia already welded in place. The end subassembly included the interior sheathing and corner side sheets with all ladders, grab irons and brake appliances in place. The tops of the ends were flat rather than peaked in order to mate with the roof subassembly. Because of its construction the roof needed no car body parts to support its individual panels. This maximized the internal capacity while minimizing the tare (tare weight). The use of subassembly construction permitted design changes and innovations to go on for each subassembly more or less independently. Over a period of years the resultant cars might have similar sides but ends and roofs of differing design. Given that The Milwaukee used 3 different roof manufacturers, 2 different end designs and 3 different sides, the number of possible variations was enormous!

MILW 34587. An original production version of the 40' box, this 10'6" car was photographed in March 1971 outside Camden, AL. Note the full length ribs, Camel door, 8-run ladder and Dreadnaught 5/5 end. (H.W. Ameling collection.)



MILW 38545. A typical post-war 40' box car with standard length ribs, Youngstown door, Intermediate Dreadnaught ends with a lumber door. Photographed in the late '70's in Enola, PA. (H. W. Ameling collection.)



The original 40' single door box had an inside height of 10' 6" with a capacity of 3898 cubic feet. In 1942 the inside height was increased to 10' 9" yielding a 4136 cubic foot capacity. This may seem like a relatively minor change but the increased height was just enough to require 9-rung ladders on the sides rather than the original 8-rung ladders. This is a feature often missed in the drawings found in model magazines. The original cars were made with standard Dreadnaught end, Hutchins roofs and so-called full length ribs. On these cars the side ribs extended the entire length of the car and behind the ladders to the weld line of the end. The doors were 6' wide and were supplied by either Superior, Camel or Creco.

The first lot of 50' cars (#13000-13499) also had full length ribs and similar roofs and ends. However, the doors were supplied by Youngstown.

wide panel at both ends of the side sheet. The result was that the ribs ended at the ladders rather than extending behind them. These became known as the standard length ribs. During this same period the Milwaukee Road began using what is called, by some, the 4/4 Intermediate Dreadnaught end. Though these two changes did not first occur at the same time they occurred together in about 60% of the 40' cars produced. These changes were also made in 50' cars but since the bulk of them were made prior to 1944, only about 500 of the 2000 built had both standard length ribs and 4/4 ends. My records indicate that all 1000 50' single door cars have the original 5/5 Dreadnaught even though the last lot of 500 were built with standard length ribs. Finally, in this '44 to '45 period the use of Camel and Creco doors was abandoned. The railroad shifted to the exclusive use of Superior or Youngstown doors.



MILW 6675. A double door 40' automobile box car. The 8-rung ladder reveals that this is 10' 6" car. The older style rhomboid logo was applied to the left end of these cars because there wasn't enough room to apply "The Milwaukee Road." (C. K. Yungkurth, *Rail Date Services*.)

With the second lot of 40' cars built in 1939, The Milwaukee switched to Murphy welded double panel roofs. This unique design remained in use until the very end of horizontal ribbed car production.

It is interesting that the first cars built in 1939 had steel running boards. During the war years running boards were wooden, presumably due to steel shortages. In late 1945, steel running boards returned and were present on all future production. The author did document a 1945-built car that still retained a wooden running board in January of 1980.

During the 1944-1945 period the full length horizontal ribs were shortened leaving a flat, 20"

There was an additional variation used on the car sides, the so-called mid-rib design. It consisted of a horizontal weld line on the side sheets half way between the regular ribs (see photo of car #22171). This variation was applied only to the standard length rib cars and mostly during wartime production - the years 1944 and 1945. The probable reason for this variation was to add strength at a time the steel used for the car sides was rolled a few mils thinner to save precious material for other wartime needs.

I have attempted to include photos wherever I could show some of the variations. From even my limited presentation it is obvious that the term "horizontal rib box car" encompassed a myriad of variations.

For the modeler, there are some car number series that can be used as general guides to indicate transitions in style. It must be remembered though that there are no hard and fast rules. The large number of possible variations means that there is probably an exception to everything. The best guides are prototype photos. The 40' box cars numbered 18000 to 21187 had full length ribs with 5/5 Dreadnaught ends. Cars numbered 21188 to 23187 had standard length ribs, most with the mid-rib weld, and with a mixture of 4/4 and 5/5 ends. Cars numbered 23188 to 28539 had standard length ribs with Intermediate Dreadnaught 4/4 ends. The 40' double door cars all had standard length ribs; those

numbered 6500 to 7099 had 10' 6" interior heights and used the 5/5 Dreadnaught ends whereas the last lot, numbered 9000 to 9499, had 10' 9" interiors and used the 4/4 end. The 50' double door boxes also may be put into two groups though with considerably more diversity within the group. The original 1937-built cars (#13500-13999) had full length ribs, 10' 4" interiors, Hutchins single panel roofs, and 5/5 Dreadnaught ends. The 1947-built, 10' 9" interior cars (#14000-14249 and 15500-15749) had standard length ribs, Murphy double panel roofs and Intermediate Dreadnaught ends. Some of the cars in the latter group (#15500-15749) were fitted with Camel end doors for automobile loading. All the 50' double door cars used either Superior or Youngstown doors. →



MILW 21176 & 23055. Builders photos at the West Milwaukee Shops. At first glance the cars appear similar but a close look reveals a number of variations. These cars have different rib lengths, doors, ends, lumber doors and ladders. They are even lettered differently. Each represents the reigning design at their building date. 21176 was built in August 1940, 23055 in June 1944. (Milwaukee Road collection; courtesy of Milwaukee public library.)

MILW 22171. Photo taken on the NKP in Zanesville, OH clearly shows the "mid-rib" design. (R.C. Feld photo; collection of John C. LaRue, Jr.)



MILW 53356. A 50' 7" single door car photographed in August 1977 in N. Sioux City, S.D. (J.A. Greedy photo)



The great majority of the cars, both 40' and 50', were equipped with small "lumber doors" in the upper portion of one end. These small doors permitted the passage of long pieces of lumber that could not fit through the side doors. Such doors were not unique to the Milwaukee Road cars. They were a standard car manufacturer option. However, their widespread use on these cars adds a spotting feature.

As built, the cars were all painted the Milwaukee Road version of box car red. My information is that Scalecoat II, #2013, Box Car Red is an acceptable modeling color. In an effort to get closer, some modelers prefer a 50/50 mixture of Floquil AT&SF Mineral Brown and Floquil R74 Box Car Red. In 1965 the cars went through shopping and repainting to Milwaukee Road color specification 747, Mineral Red. A perfect match for this color is Scalecoat II, #2012, Tuscan Red. Originally the cars carried "Route of the Hiawathas" lettering although some were lettered "Route of the Electrified Olympian". In the 1965 repainting, the large block "Milwaukee Road" was applied in addition to the rhomboid logo. Additionally, in 1965 a large group of 40' cars were

shopped and converted to 50' cars. This was done by cutting 40' cars in half and welding a new premanufactured 10' section in. The cars used a single 8' door and, except for the door, the car sides were indistinguishable from the original 50' single door cars. The tops however were strikingly different. The premanufactured sections had flat diagonal panels (similar to those found on American Models box cars) but on either end there was the Murphy double panel roof of the original car. A real eye catcher if you happened to be on a bridge!

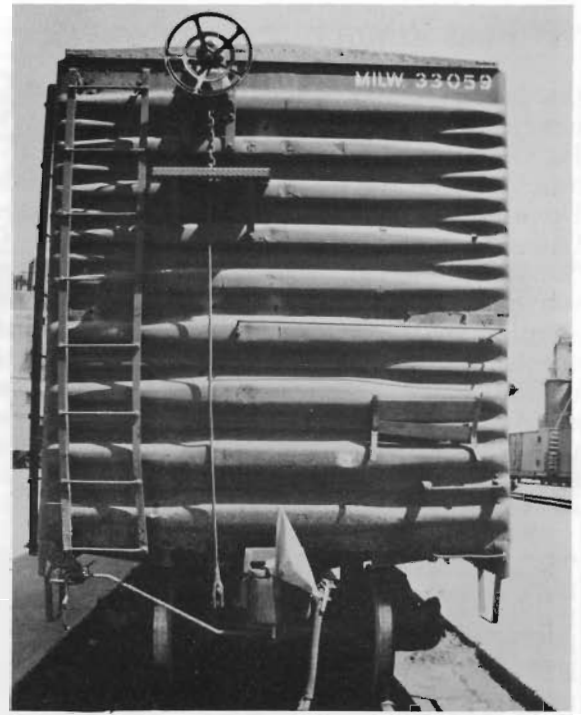
Although the horizontal ribbed cars were built only by the Milwaukee Road, their sheer number (over 13,000) made them ubiquitous. On any given day, from the '40s on, thousands of these cars were rolling in freight cars all over the country. The aforementioned "America's Colorful Railroads" has a couple of horizontal ribbed box cars in Pennsy trains shown on pages 65 and 75; virtually every railroad video of that era will show one if the camera keeps rolling after the engine has passed. No other mass produced freight car is as recognizable in a photograph!



These cars continued to be used even in later years. The Milwaukee Shops converted at least one to an insulated reefer with a plug door. Many of the cars were converted to wood chip service and a few were sold to the Western Pacific for that use. I have photos and journal entries showing heavy use of 40' cars on Milwaukee's "Beer Line", a spur that served several downtown breweries, including Joseph Schlitz (now closed), Val Blatz (also closed) and Pabst. In the late '70s when my journal entries were made most of the cars were used to haul the brewer's spent grain to sites on the Milwaukee Road where it was blended into animal feed. By this date in 1990 all of the cars have passed beyond the ICC's 40 year rule restricting their use in interchange between railroads. Thus any horizontal ribbed boxcars still in use would have to be in maintenance of way or captive home road use.

Recognized instantly as a trademark of their corporate owner, the cars were among the most noticeable in the railroad scene for a full 5 decades.

Anyone interested in these cars can find additional photos in the Milwaukee Road Collection of the Milwaukee Public Library, the Milwaukee Road Historical Association, and two recent articles in Mainline Modeler in the June and September 1988 issues.



MILW 33059. Talk about variations! This car has both styles of end on the same end. The upper half of the end in this 1981 photo is the Dreadnaught 5/5, the lower half is the Intermediate Dreadnaught 4/4. How these two got together on one car is anybody's guess. (J. A. Kindraka photo)

MILW 55230. An example of creating a 50' 6" car out of 40' car by splitting it in half and inserting a prefabricated 10' section. Rebuilt in January 1965. Note the roof line especially above the door.

(Richard Lind photo)



MILW X918031. A 1939-built full length rib car converted to M of W service and listed as a "material car". Taken in February 1976 at Council Bluffs, IA (G.R. Cockle photo; collection of John C. LaRue, Jr.)

