

Putting Together an Era Prototypical Freight Car Fleet



What is this Clinic?

- **It's a collection of historical information, research methods and resources that can be used to help make your freight car fleet more prototypical to the era that you are modeling, whether it be a period, a decade, a year, or a specific month.**
- **It is not a guide to the breakdown of freight cars your railroad would have in its fleet or see on its home rails.**
- **It is not a guide on how to be a "rivet counter".**
- **Although I model September/October 1956, this has something for everybody.**
- **Most importantly, it is not me telling you that you are "doing it wrong". If you are having fun, you are doing it right!**

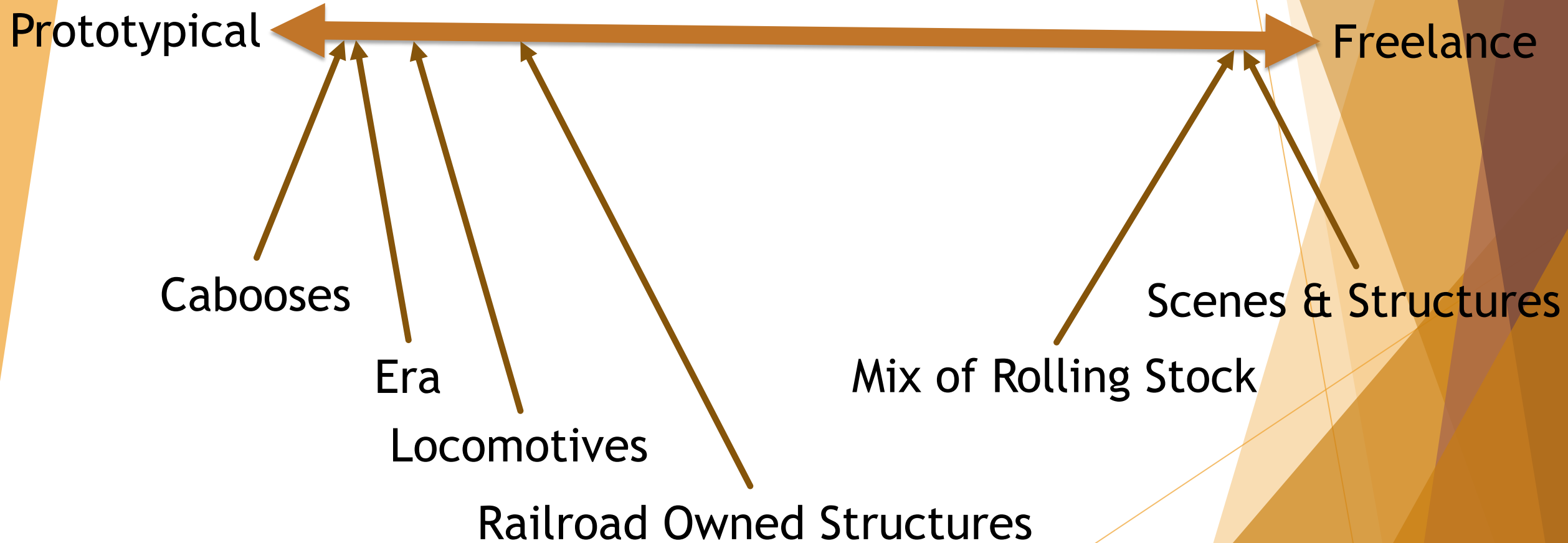
So..... What brought this on?



I sure have a lot of
USRA freight cars!!



Proud to be a “Proto-Freelancer”



Why an era prototypical freight car fleet?

- **Helps to tell the story of the era of your layout**
- **Focus your efforts (time)**
- **Help control the model railroad budget**
- **Better appreciation of freight car designs and the variation in your own fleet**
- **Better understanding of railroading in general**
- **It's fun!**

Let's Start with the Freight Car

Every freight car always has the month and year it was built stenciled on the side.

- This will start with the letters “BLT” followed by month and year in a MM-YY format.



NEW 5-50

BLT 5-50

Cars that have not yet been serviced or reweighed will often have a “NEW” date in addition to the BLT date.

In addition, the last service date is stenciled on the car.

- Service/reweigh dates are often preceded by the code for the service shop location.
- Friction bearing repack dates are typically preceded by “RPKD”.



For that “ultimate” contest model, reweigh dates and repack dates happen at specific intervals. Interval is based off era and type of car.

Don't forget about your tank cars!



Dates when safety valves and tank were last tested

Caution: Most manufacturers create one graphic and use it for every car

Also of interest: Tank cars do not get reweighed

...but I model a later era!



All of the car's history is documented in the "Consolidated Stencil" also known as the "Lube Plate"

- Build date
- Journal bearing lube date
- Brake test date

Consolidated Stencils

- The Association of American Railroads (AAR) began a program for consolidated stencils in 1972, applicable only to new or rebuilt freight cars.
- **Mandatory Requirement (July 1974):** The Federal Railroad Administration (FRA) mandated that all freight cars begin having the new consolidated stencils applied. These were typically large, two-panel, white-on-black designs.
- **Inspection Data Eliminated (January 1, 1982):** The FRA eliminated the requirement for periodic inspection dates, leading to a modified, standardized, and smaller three-panel arrangement that only contained COT&S (Cleaning, Oiling, Testing, and Stenciling of the air brakes), lubrication, and IDT (Inspection Due Date) information. This format was standard from 1982 to October 2017.
- **Requirement Dropped (November 2017):** The AAR removed the requirement for the display of consolidated stencils entirely. Since then, new or repainted cars generally no longer feature the stencils.

...speaking of labels

What's that thing?



ACI labels were the railroad industry's solution to answer the question "Where the heck is that freight car?"

ACI Label History

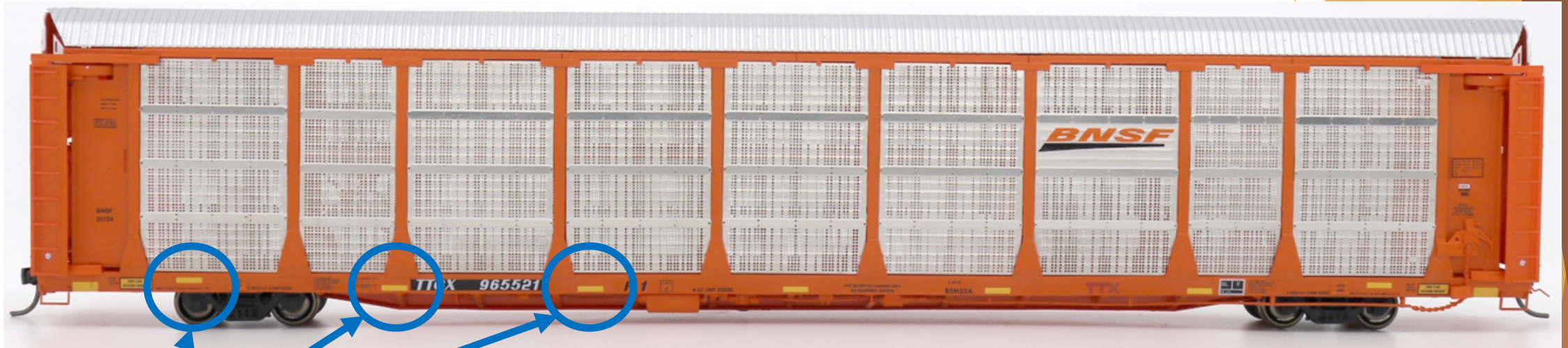
- First used on the Boston & Maine in 1961
- By 1964, there were 50,000 freight cars with an ACI label
- ACI labels were required on all freight cars starting in 1967
- By 1970, 86% of all freight cars had an ACI label
- System was dropped in 1977

...and what's with the yellow dot?



“U-1” dots were required on all freight cars with 33” wheels beginning in March 1978. This was in response to a major wheel manufacturing flaw. Cars with a yellow dot in a black square have had their wheels inspected. Cars with a white dot in a black square need to have the wheels replaced.

Rule #1 – Don't Drive Into the Side of a Train

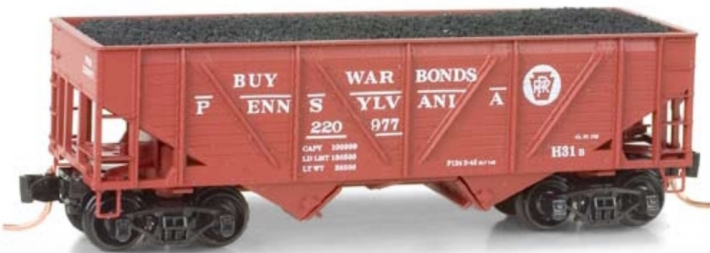
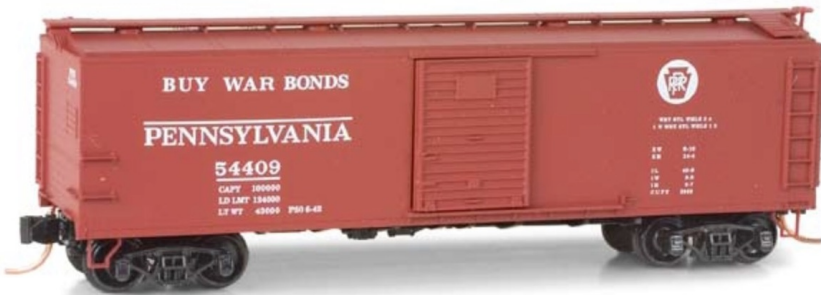
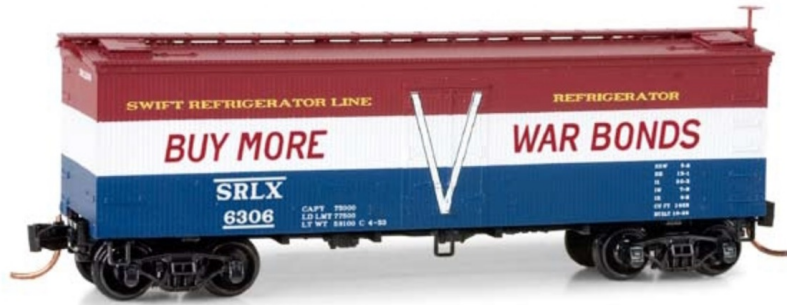


FRA Safety stripes were first required in 2005. Railroads had 15 years to apply them to all freight cars.

Stop!!! What about the brakes?

- K brakes were first introduced by Westinghouse in 1869
- AB brakes were mandated on all new freight cars built after September 1933
- K brakes were restricted from interchange service beginning in 1953
- Note that the restriction was on interchange service. "Captured" rolling stock such as cabooses and MOW could still use K-brakes.
- Running boards (roof walks) were banned on all new freight cars beginning October, 1966
- Lowered brake wheels were required on all new freight cars beginning January, 1967
- All running boards were initially to be removed by April 1st, 1974, but that requirement was delayed to December 31, 1983

“Buy War Bonds” Cars



- Freight cars advertising war bonds did not linger on after the end of World War II
- The railroads did not want reminders of the war when the soldiers returned home
- Several railroads such as the Pennsylvania began repainting their war bonds cars after victory in Europe

MMMMMM.... Butter!



Those colorful billboard freight cars advertising dairy products, meats, and beer were banned effective January 1, 1937

In addition, freight cars with wood underframes (requiring truss rods) were banned from interchange in 1941

Hmmm. This seems pretty easy!

At this point, you may be thinking that this is pretty easy and straight forward. No research required!!

I wonder how accurate I'd be if I just followed these rules?

89.2%

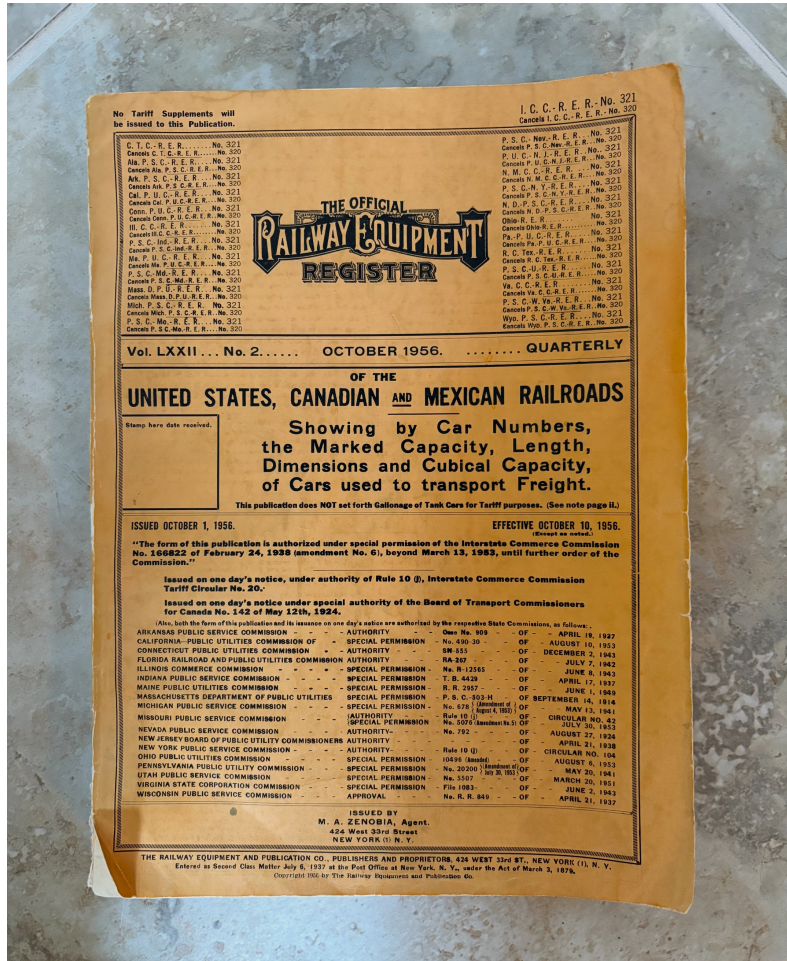
I model September/October of 1956 and after going through most of my fleet, 10.8% of my cars were “improper to era” using only these rules.

Of the 1,419 freight cars I’ve reviewed, I found 1,266 to be “keepers”.

56 of the 153 incorrect cars were USRA cars, including 22 out of my 24 USRA composite gondolas

In addition, 18 of my REA GACX reefer cars that were lettered for a railroad lease were found to be era incorrect.

Let's get into some research



- The first step in almost any freight car research begins with The Official Railway Equipment Register (ORER).
- The ORER is a quarterly publication that started in July, 1887 and continues to today.
- It is a listing of every piece of freight equipment used in interchange in North America. It includes railroad owned equipment, along with both leased and privately owned equipment.
- Can find originals or reproductions on E-Bay, Etsy, and train shows. Some editions also available on CD from Westerfield. There are also a few available for free downloads online.

Finding What You are Looking For



Reporting marks show that this car is owned by URTX (Union Refrigerator)

It is NOT listed under the Dubuque section of the ORER

The ORER is organized by freight car **owner**. This is important! All research begins with the reporting marks. Do not use the names in the freight car stenciling.

In the case above, you would look under the URTX section of the ORER for car number 63016.

Organization of the ORER

The information that is contained in the ORER is submitted by the car owners. As a result, not every owner's section is set up the same.

Regardless of car owner, you want to look for the number series that a freight car was contained in. For example. I might have a CNW boxcar that is numbered 80606. When I look at my ORER, I see the CNW had a steel boxcar series numbered 80252 to 81450. My car is in that series.



A Few Things to Watch For

- Many owners' sections are listed in order of car number.
 - Car numbers are grouped together by series. The meaning of a car series varies by railroad or owner. In some cases, every car in that series is the same. In other cases, there may be design differences within a number series that don't impact the basic ORER dimension/capacity information.
- Some sections are listed by car type and then within number series within the car type.
- There are also notes on some of the cars that can provide you additional information. This can be especially helpful in some cases where the car has specialized equipment for dedicated loads.
- Some railroads include additional information such as car class designation that makes further research **MUCH** easier. (Pennsy gets the gold star award!!)

Basic Things to Check by Car Type

Boxcars

- Inside car length (a 40-foot boxcar is 40 feet long on the inside)
- Door width (beware of double door boxcars with one door welded shut)

Covered Hoppers

- Capacity (in cubic feet)

Hoppers

- Length
- Capacity (in pounds)

Gondolas

- Length

Basic Things to Check by Car Type (cont.)

Tank Cars

- Capacity (gallons) (be prepared for some round-off)

Refrigerator Cars

- Outside length
- Door width

Stock Cars

- Inside length
- Door width

All Freight Cars – Construction

- Composite cars (wood and steel) can be designated in different ways. The ORER may show this simply as “Composite” or it may show as “Steel Underframe”

OK. Now what?

At this point, if you are striving for an era prototypical freight car fleet, it's probably a good idea to set your "rules" or guidelines to decide what you'll want in your fleet and what doesn't belong.

My “Rules”

(A Suggestion for a Starting Point)

- Any car retired before September/October 1956 is out.
- Any car that is era correct and is prototypically correct is in.
- Any car from the future (past September/October 1956) is out.
 - Paint schemes that haven’t happened yet, as well as slogans or reporting marks that are post-October 1956 are good examples of a “car from the future.”

My “Rules” (cont.)

(A Suggestion for a Starting Point)

- A car that is not 100% accurate but is of the proper construction (all steel vs. composite) and meets the basic checks is in. I call this a “stand-in.”
 - Flat cars that require modifications such as additional weight that are inaccurate are out even if they meet the basic checks
 - When I have a prototypically accurate car AND a stand-in of the same model, the stand-in is out
- Any car from a captured fleet that never left the home road is out (unless it’s a captured car on the B&O).

**Hmmm. Something I checked
doesn't match the ORER.**

Now what should I do?



Extreme Caution!!

Rabbit Holes Ahead!!!



Time for Some Research

Groups IO is a freight car researcher's best friend. Below are some of the high-quality groups that I refer to when doing my research.

- **RealSTMFC** – Dedicated to information on steam era freight cars up to 1960
- **RailwayBullShippersGroup** - Dedicated to meat refrigerators and stock cars
- **ResinFreightCarBuilders** – Dedicated to resin freight cars but has lots of great prototype information
- **MFCL Modern Freight Cars List**
- **RailCarHistory**
- **BBFCL Baby Boomers Freight Car List** – Dedicated to freight cars operated after World War II
- There are MANY others, including groups for each railroad. Just search for what you are interested in.

Research Tips

All of the forums on Groups IO are searchable.

One of the best ways to start off is to search the car number series (from the ORER). For our CNW boxcar 80606 from earlier, I would start searching for “80252-81450”. Use that exact format (no spaces).

In cases where some of the first cars in a series were retired before your era, you may want to “round down”. For the CNW example above, you would search for “80250-81450” or maybe just “80250”

The same search approaches are also very helpful on Google

Also note that you can subscribe or unsubscribe to the postings on each group as you wish.

Other Great Websites

<http://www.nakina.net/other/report/report.html> - Alphabetical list of reporting marks along with the owners and dates of use

<https://web.archive.org/web/20190323235903/http://www.sunshinekits.com/flyersbyroad.html> - List of Sunshine Kit Models that includes a lot of freight car history in the write-ups

<https://prototopics.blogspot.com> - Lots of high-quality freight car information

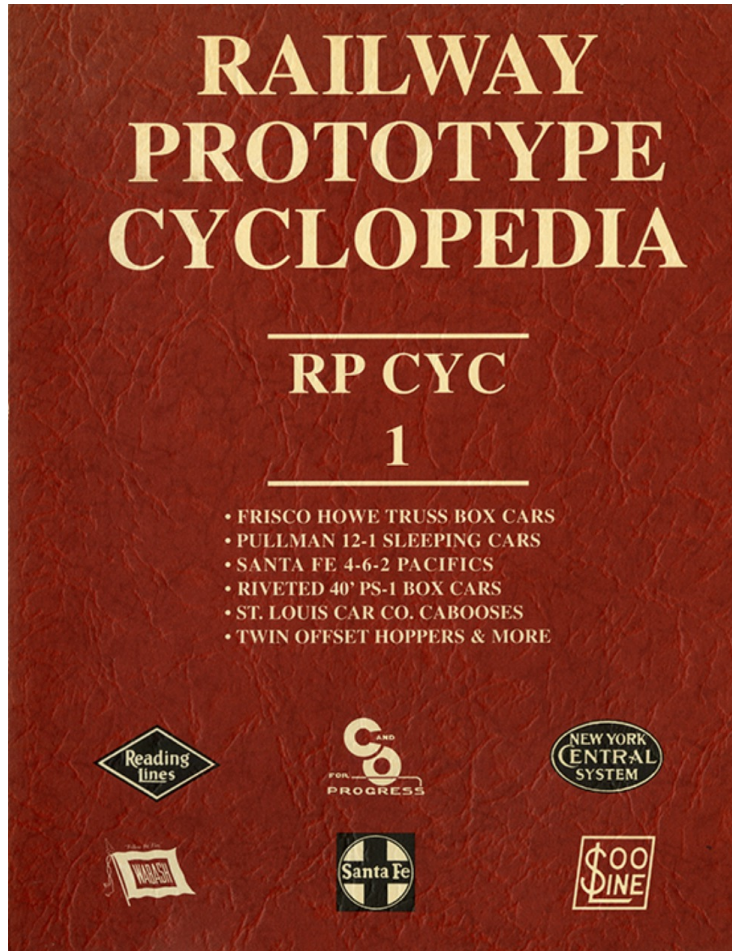
<https://modelingthesp.blogspot.com> - Tony Thompson's modeling blog. Lots of Southern Pacific, but his knowledge of freight cars is exceptional

http://modelingthesp.com/Pacific_Fruit_Express/PFE_Reefers_I.html - Detailed freight car information on the Pacific Fruit Express

<http://pr.railfan.net/freight/> - Pretty much every detail on the Pennsy freight car fleet than you can imagine

The various historical society websites can also be very good sources of information (varies by website)

Some Great Books



36 volume set of books that I'd consider the gold standard of freight car research

Searchable index:

https://resincarworks.com/RPCYC_Article_Index.pdf

Some Great Books (cont.)

FOCUS ON FREIGHT CARS



Volume Six: Refrigerator Cars 2

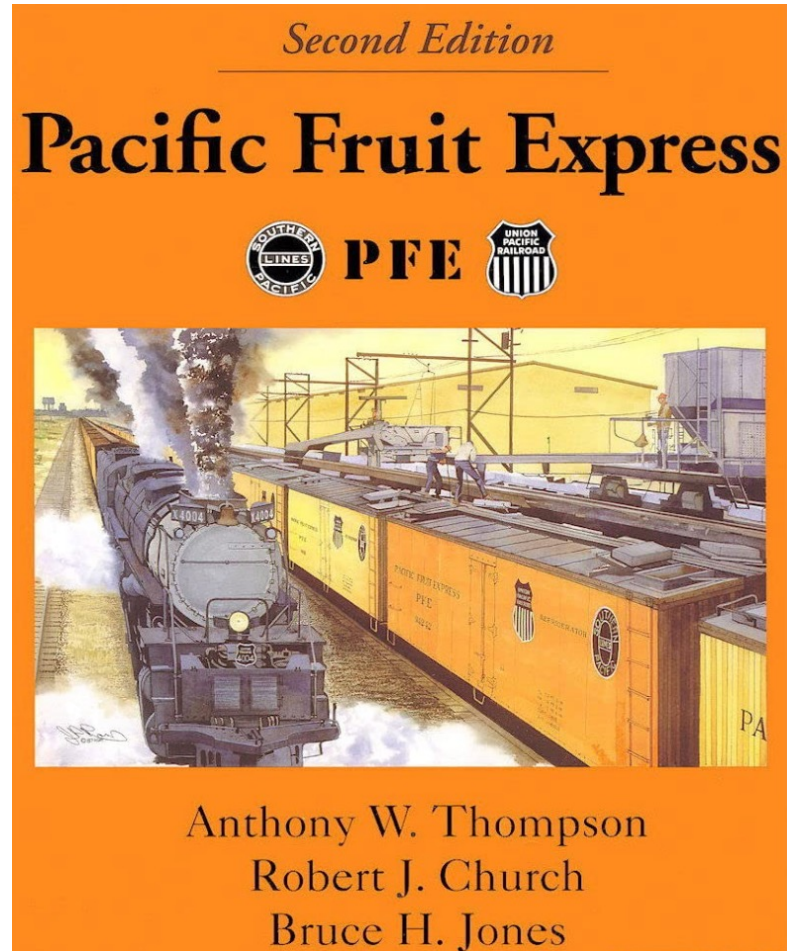
Ted Culotta

11 volume set of books by Ted Culotta. Ted is an expert's expert on freight cars.

Ted's website is:

<https://speedwitchmedia.com>

Some Great Books (cont.)



The very best book on the
Pacific Fruit Express

Thank You!