



Western Pacific Railroad Maintenance-of-Way Cars



Celebrating 100 Years of
the Feather River Route



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Celebrating 25 Years of
Presenting & Preserving the
legacy of the Western
Pacific Railroad.



Modeling a Maintenance-of-Way Combination Gondola-Flat Car

- **Maintenance-of-Way, Company Service cars or Roadway car, all are about the same.**
- These are railroad cars that have outlived their revenue service days and are reused by the railroads to keep cost down. These cars in many cases are older rolling stock that have been set-aside or replaced by newer equipment.
- These cars allow the railroad to move and store almost anything that involves maintenance to the right of way, grade crossings, bridge's and other railroad facilities.
- Older freight cars are easily adapted to the MOW fleet, especially if it's continuing in a similar job like an older tank car to move water or fuel, former coal car turned into a ballast car. Most all of this equipment in most cases are painted into a special color to differentiate the cars from revenue service and are renumbered.

- Models of the Western Pacific Railroad have been produced by various manufacturers over the years, however there have not been very many maintenance-of-way models manufactured and the models that you may be able to find are in other railroad names.
- There were a few brass models for Union Pacific available, however the selection was limited.
- While I am not a Master Model Railroader, I have been modeling for a number of years. This is my first attempt to create a prototype model.

- I started modeling maintenance-of-way equipment a number of years ago only to find that most were just a manufacturer's standard box car or flat car painted gray and re-lettered for generic MOW service.
- I started to research Western Pacific maintenance-of-way equipment for a presentation that I was giving at the Feather River Rail Society's annual WPRR Historic Convention in Salt Lake City in April of 2018. This led me to modeling a group of WP MOW cars.
- This is the first in a series of cars that I will be modeling over time and I hope to be able to share more of my modeling equipment as I get them completed.
- When I started this project, the tail was before the dog, I should have done more research prior to starting the project, as I found more information when I was in the middle of producing this car.

Model Examples









The Real Car



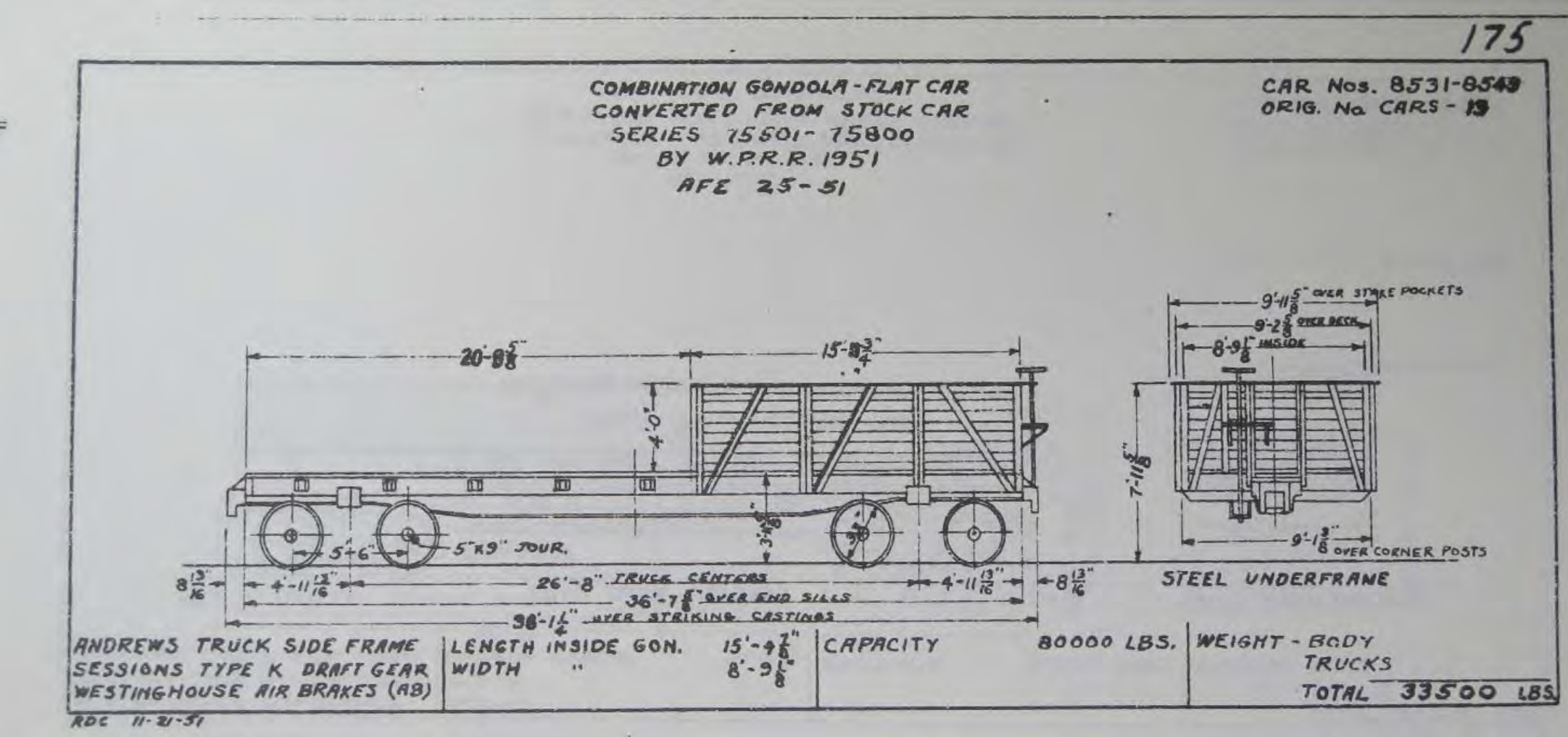


Starting the Project



- I selected the Combination Gon-Flat car, as it appealed to me and looked like a good candidate for a Kit-Bashed – Scratch building project.
- Tichy Train Group flat car kit number 4021 was selected at the starting point for this model. It was the right size for a 40 foot car.
- The original WP car was converted from a series 75501-75800 stock car, by W.P.R.R. in 1952.
- After starting on this model, I found a drawing of the car in a reproduction of the *Maintenance of Way Equipment, Western Pacific Railroad Co.* drawing book that was originally produced by the WP Office of the Chief Mechanical Officer, Sacramento, Calif.
- Page 175 gave the overall measurements of the car and how it was envisioned to look by the engineers that designed it.

Maintenance of Way Equipment, Western Pacific Railroad Co. Page 175

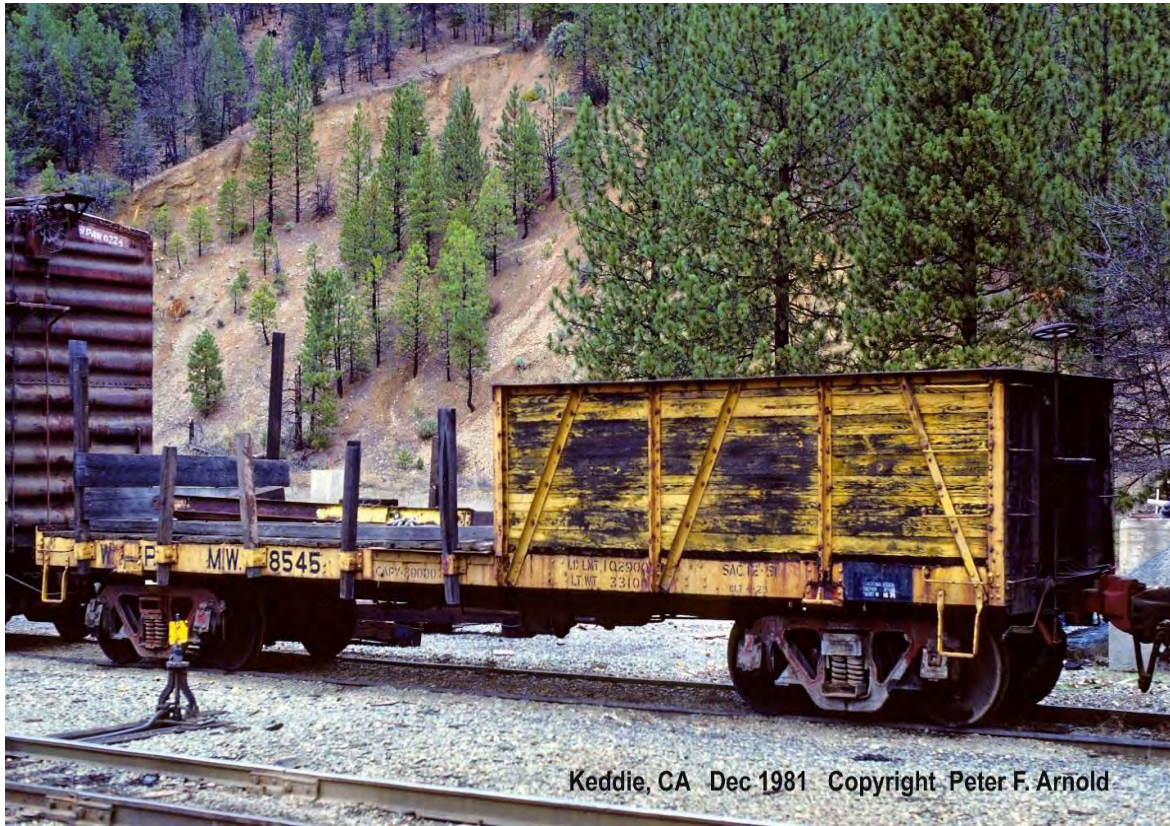


The WP MW 8545 at the Western Pacific Railroad Museum in Portola, Ca. May 6, 2018



Photos from Peter Arnold

I used these photos from Peter Arnold's collection for the basis of the model.



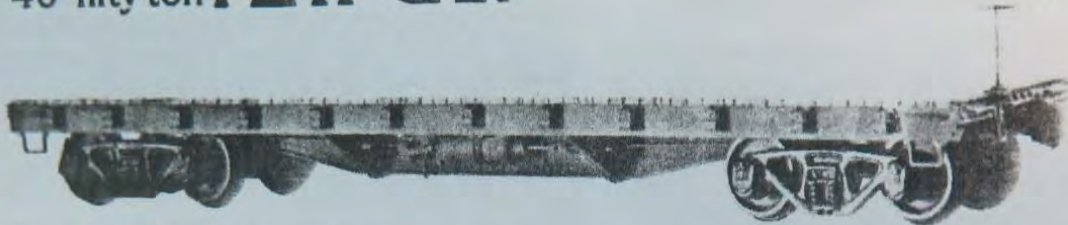
Keddie, CA Dec 1981 Copyright Peter F. Arnold



Keddie, CA June 1979 Copyright Peter F. Arnold

Building the Tichy kit as the instruction indicate, getting the basic car built....

40' fifty ton **FLAT CAR** Kit #4021



circa 1928 to present

PROTOTYPE HISTORY

The prototype for this 40' fifty ton flat car was built in 1928 by American Car and Foundry for the Nashville, Chattanooga and St. Louis Railroad. Designated ARA Class FM, ("ordinary flatcar for general service") it is typical of the 50 ton capacity, riveted construction "workhorse" of the railroads. This car type is easily identified by the straight side sills and deep fishbelly underframe. Since this car was so common, it is correct to letter it for almost any railroad.

It's use is obvious — loads can range from lumber to tanks and heavy machinery: in fact, almost any load that can be transported un-protected or under tarps, and too large or awkward for house car loading.

This kit is unique in that it features complete prototypically correct underbody and brake gear detail. This is a common feature of our kits, as it adds a great deal of "up-close" eye level realism, especially as more layouts are being built at higher levels.

The added feature is that *you* know the finished model is an accurate scale miniature reproduction, and you will have a greater sense of how freight cars are designed and built.

SO — let's get to work!

PLEASE READ BEFORE ASSEMBLY.

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The Basic Body of the Flat Car



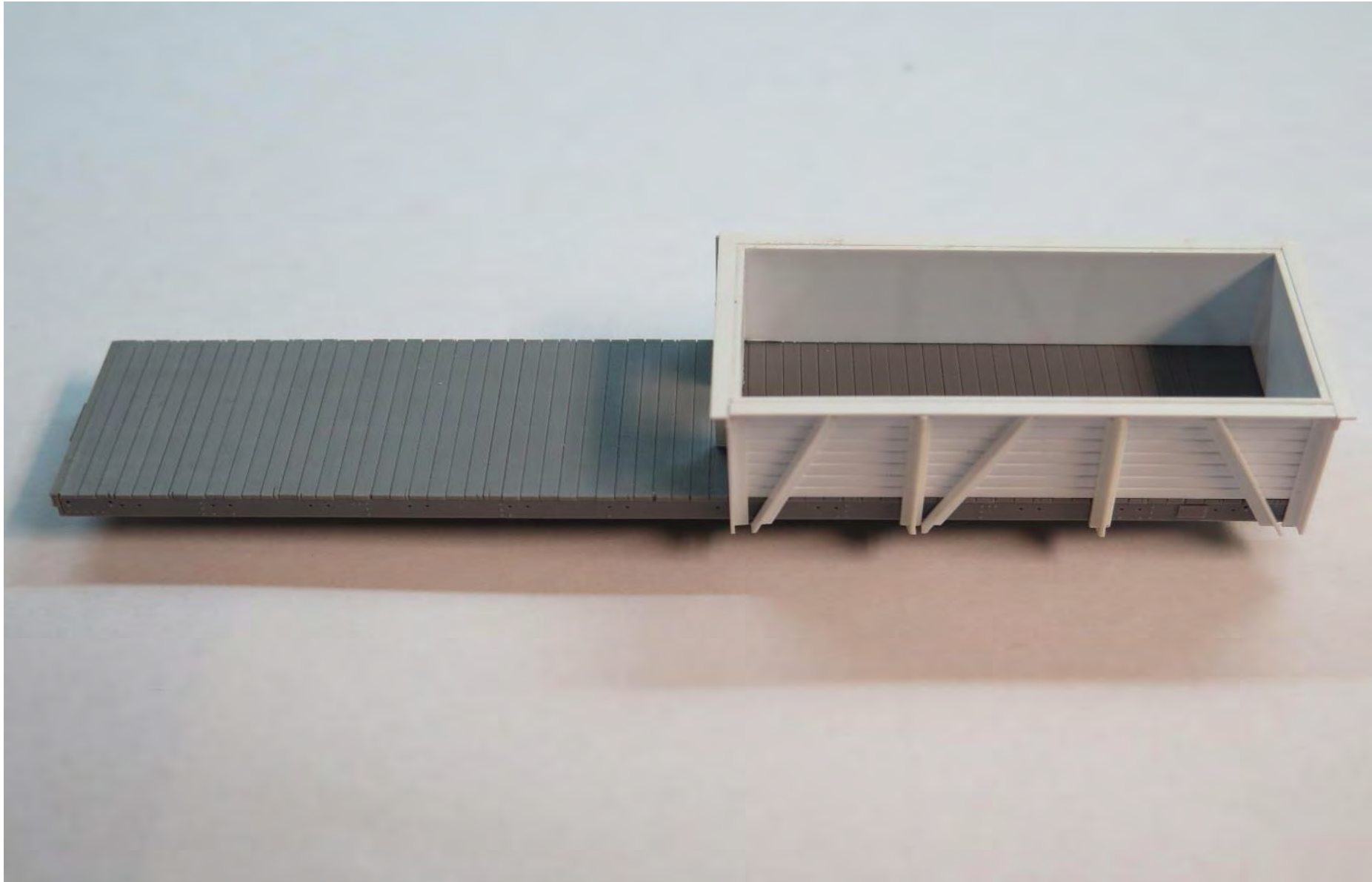
- Using Evergreen Scale Models styrene plastic to create the gondola sides and the angle iron supports.
- Using some car siding that I had laying around (I don't know the stock number), the Evergreen catalog shows two freight car sidings sheets, 1:20.3 prototype spacing 3.25" .060 " 160 to 4,04 center to center and one 1:29 prototype spacing 3.25" .060 .110 to 2,79 center to center. I used the siding to make the gondola sides.
- Then using Evergreen # 291 L angle .06" 1.5mm stock and # 763 T .073 1.85mm stock to create the supports for the car siding, I assembled the gondola measuring so that the overall angle stock would fit the Tichy flat car body.

Building the Gondola Sides



Test Fitting the Gondola to the Flat Car Body





- Creating the brake end detail, I used the original brake staff bracket, making a new mounting plate for it to move it out .03” to line it up with the ratchet plate that I moved up to the cross brace and adding the upper support made from some Evergreen flat stock I had. Using some K&M .02” .51mm brass rod stock, I extended the brake rod up to the brake wheel at the top of the gondola end.



Adding the Grab Irons



- This was my most challenging part, as I have never added this type of detail to a model in the past. As you can see in photo on previous slide, some of the grab irons are not as straight as needed, however on the finished car, they looked like the car had been used over a long period of time.
- The grab irons are Tichy # 3015 18" drop type, these grab irons were installed along the side of the car at the ends along with new A-Line #29000 Stirrup steps style A were used on each ends of the car.
- With the stake pockets in place and the grab irons on, the first coat of paint was applied. Using a flat gray primer for the first coat, and then using Tamiya XF-3 Camel Yellow for the finish coat.
- With test fitting of the couplers and the wheelsets.
- Kadee # 58 scale couplers and Kadee # 520 33" freight metal wheels were used.



- Prior to weathering the car, the decals were applied using several different Micro Scale Decals sets. The sets used were:
 - 87-212 WP Caboose black data blocks
 - 87-438 WP Feather River Box Car # 3 black numbers and letters
 - 87-491 WP 40' Wood Reefer black letters
 - 87-254 UP Maintenance of Way black letters and signs
 - 87-1012 Maintenance of Way equipment gothic letters, number and signs
 - 90022 gothic black letters and numbers

Adding Weight and Weathering



- Adding weight to the car was done by creating a stack of railroad ties (hollowed out in the middle) allowing a weight to be added to the interior of the tie stack. I then adding the details to the stake pockets and the materials on the bed of the car.
- Weathering the entire car and load, along with the wooden stakes was done with Bragdon Enterprises weathering powers.

Just before Installing the Trucks and Wheel Sets





Here is a photo of the finished car at the BAPM (Bay Area Prototype Modelers) meet in June 2018. Photo courtesy of Harry Wong, Railroad Model Craftsman.



CREDITS

- FRRS Archives
- Harry Wong (RMC)
- Peter Arnold
- Thom Anderson
- Frank Brehm
- Mike Mucklin
- Jack Palmer

Questions and Answers

- I'll do my best to answer questions on this project.
- Next year, more WPRR Maintenance-of-Way Cars