

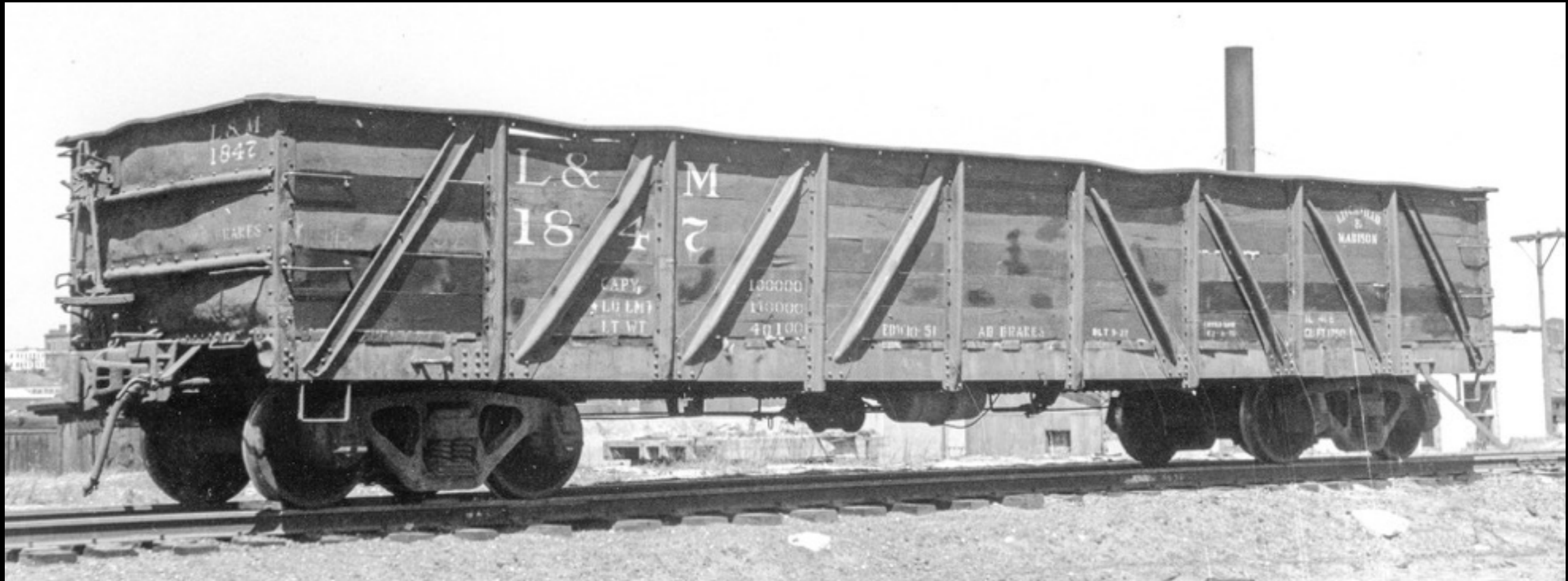
# Freight Car Project

Ted Culotta

St. Louis RPM  
Collinsville, IL  
26-27 July 2019

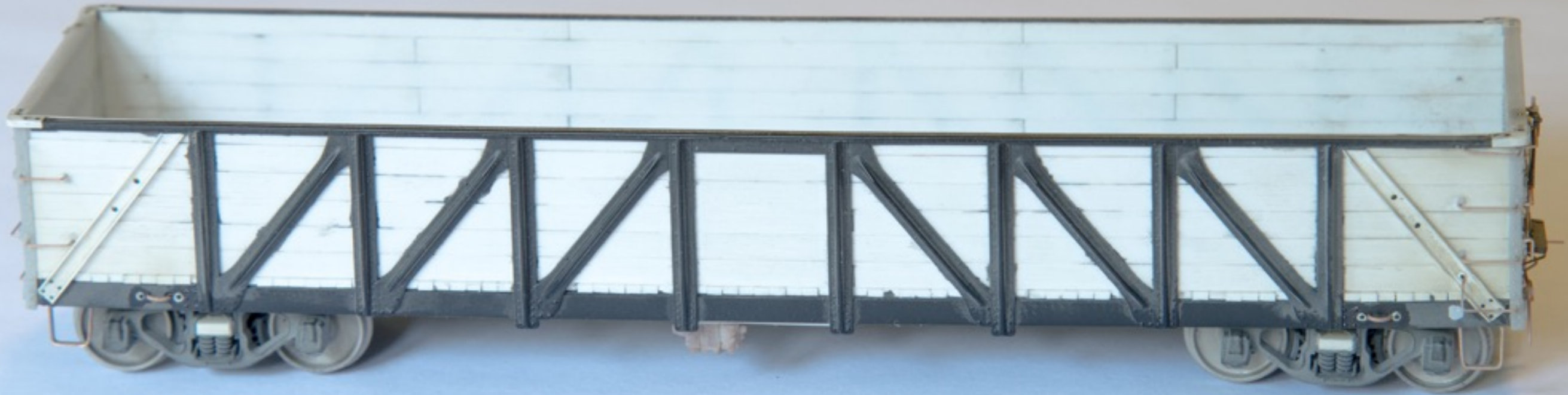
This will be posted to [prototopics.blogspot.com](http://prototopics.blogspot.com)

# A brief recap of last year's project



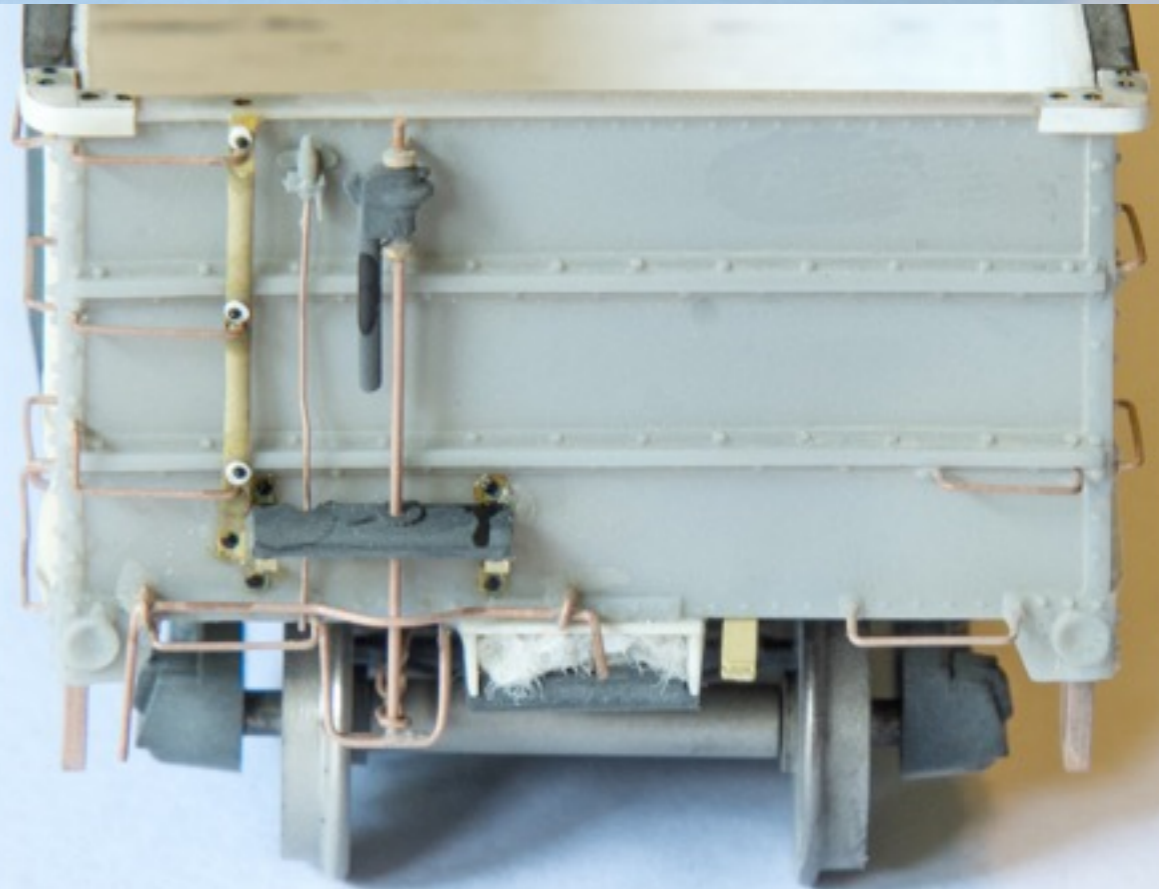
Litchfield & Madison 1701-series Gondola

# Litchfield & Madison Gondola



## Updates & Modifications

- Re-detailed sides
- New floor boards
- Resin ends
- Modified trucks
- Several scratchbuilt details



# Litchfield & Madison Gondola



New floor boards

- Started at center and worked towards the ends

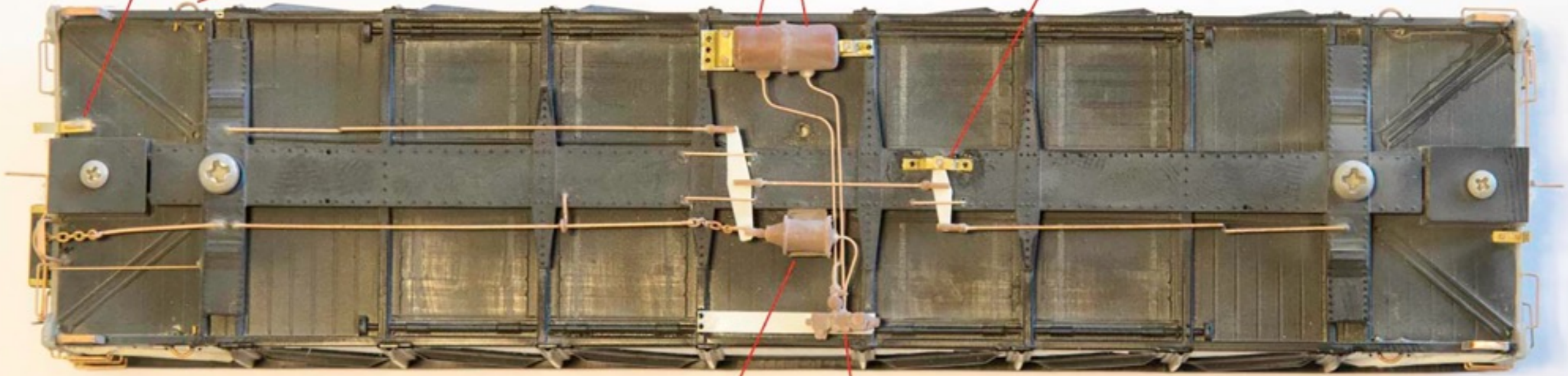
# Litchfield & Madison Gondola

Yarmouth Angle Cock Bracket  
(1 at each end)

Towing Loop  
(4 in total)

Reservoirs

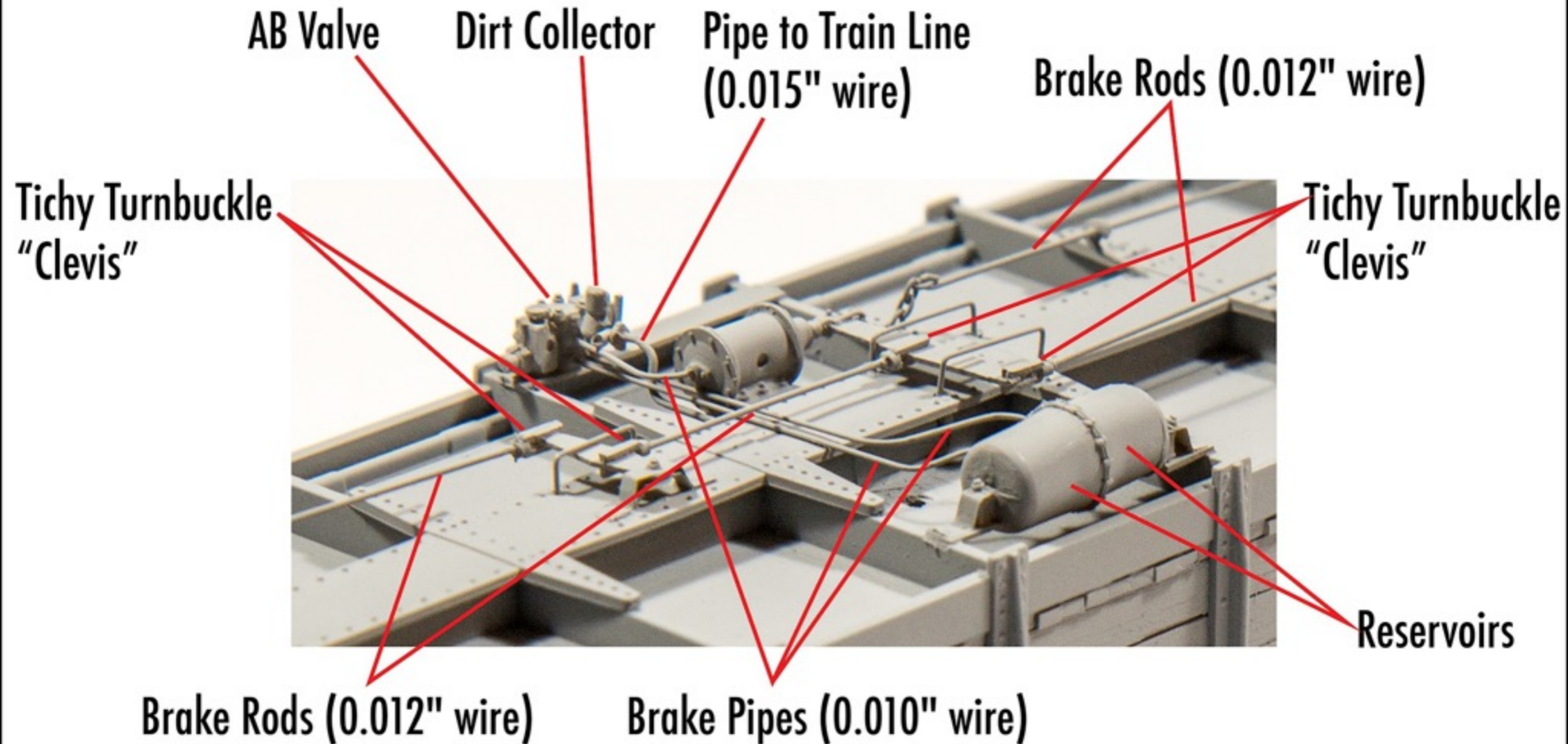
Dead Lever Bracket



Cylinder

AB Valve

# Litchfield & Madison Gondola



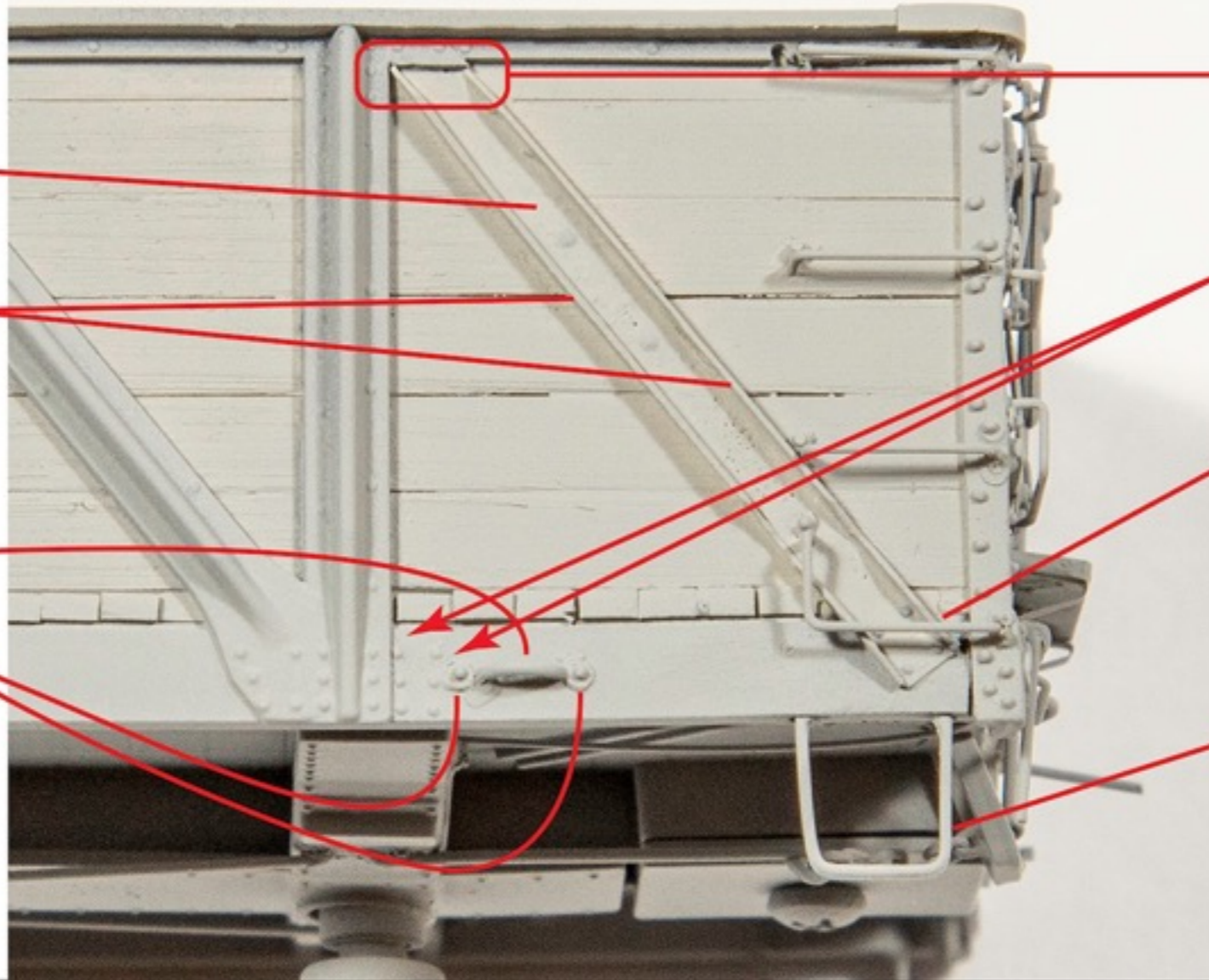
# Litchfield & Madison Gondola

## Corner Brace

- 6" (HO scale) wide  
0.005" styrene
- Flanges 0.030" wide  
0.005" styrene strip

## Towing Loops

- 0.015" wire
- "Mounts" = 0.7mm  
discs from 0.005"  
styrene plus rivets  
harvested from  
Athearn snowplow



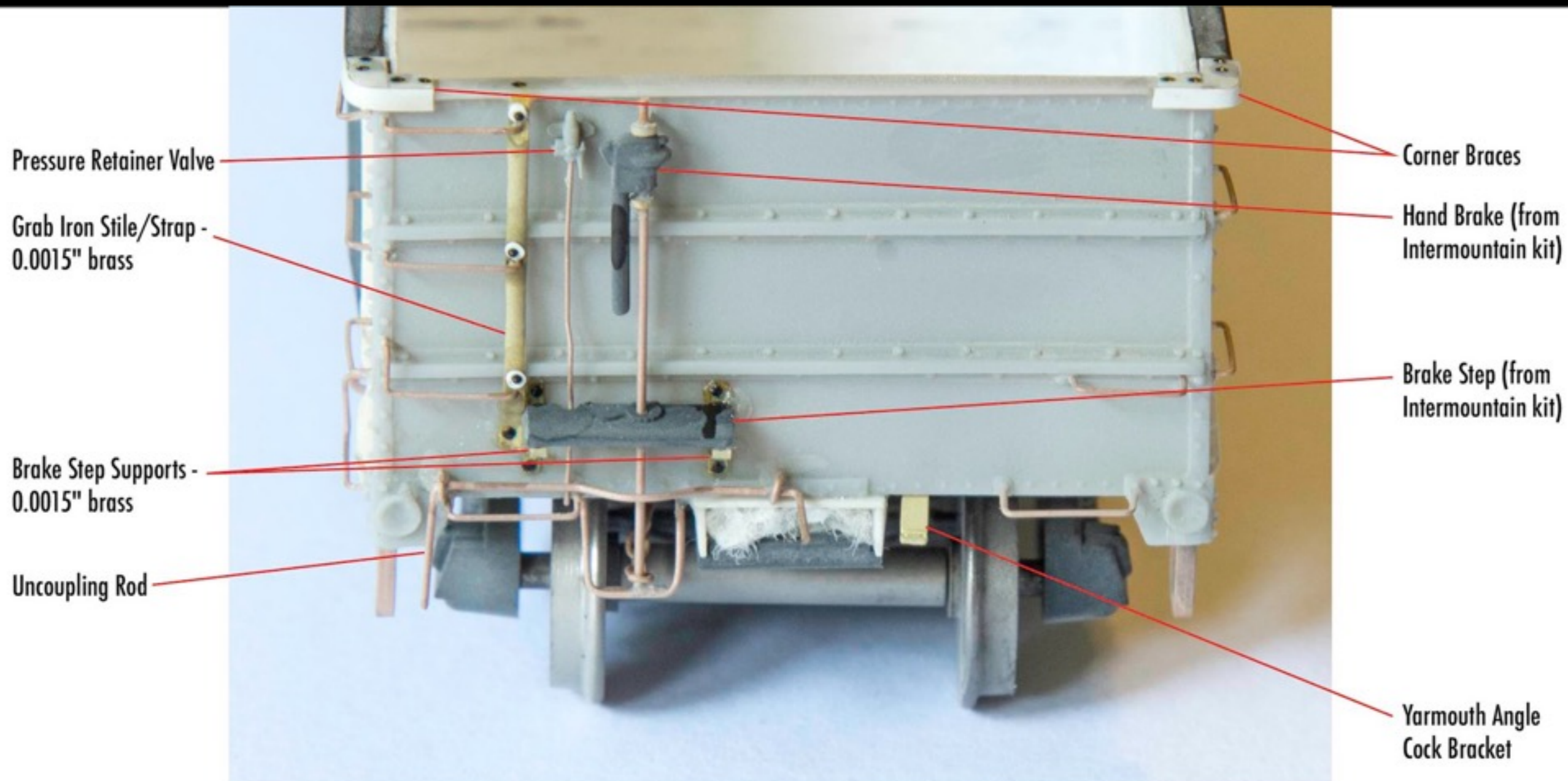
The brace should actually extend all the way "up"

Two sets of three Archer rivet decals

Custom bent bottom grab (similar grab on end, too)

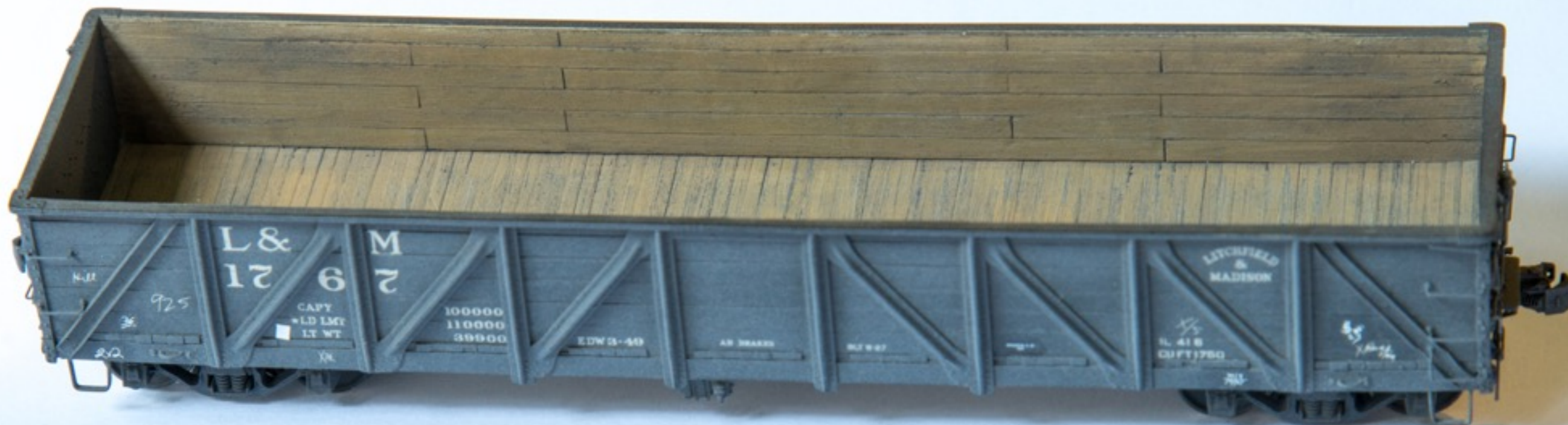
A-Line sill step

# Litchfield & Madison Gondola

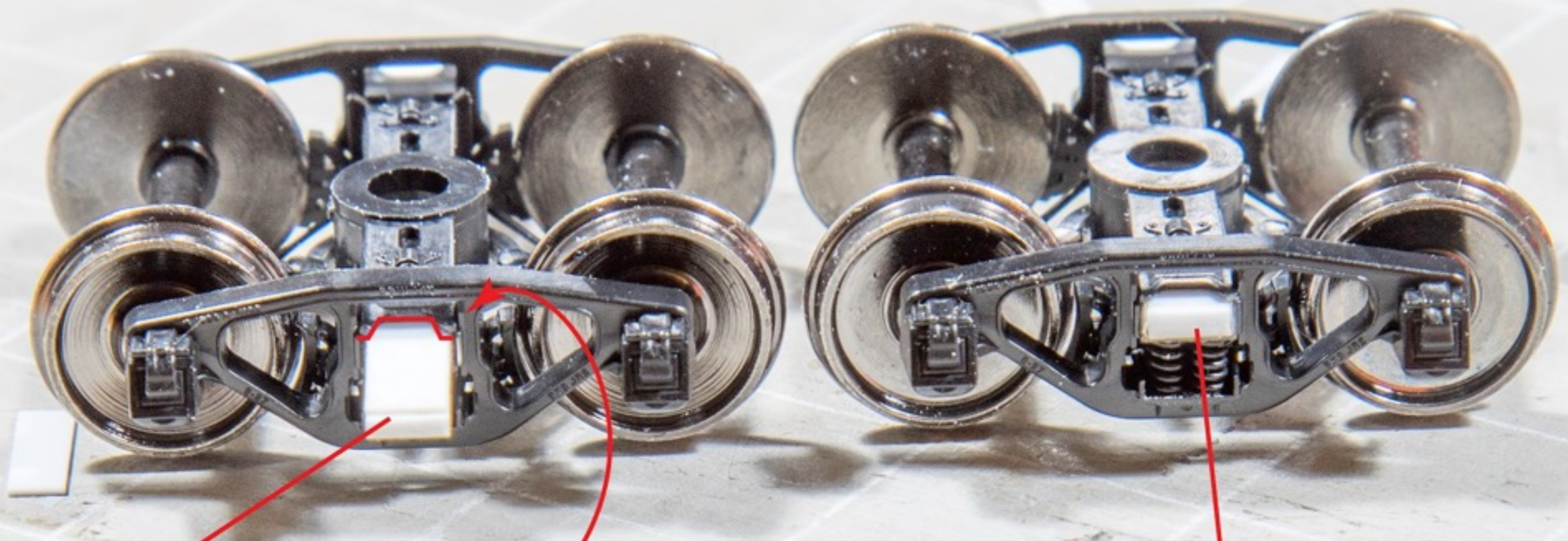




# Litchfield & Madison Gondola



# Litchfield & Madison Gondola



0.040" x 0.125" styrene



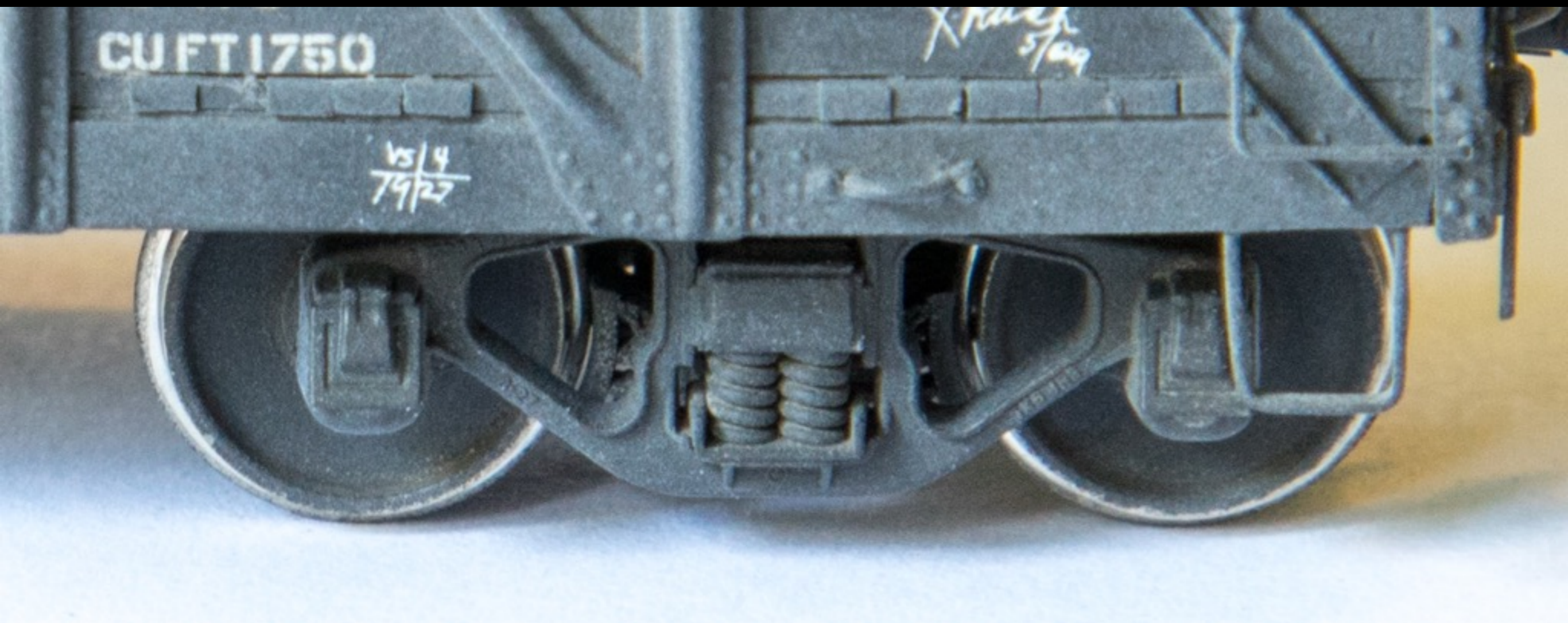
Bolster section above where styrene was inserted has a wedge shape



Insert wedge-shaped piece of 0.010" x 0.125" styrene to fill wedge area in bolster. Then add 0.005" strip that is 0.125" wide as a "cap". Finish with piece of 0.010" styrene rod

0.040" x 0.125" styrene after trimming flush with end of bolster

# Litchfield & Madison Gondola



# This year's project



AAR-inspired Steel Box & Auto Cars  
with U-section structural members

# AAR-inspired Steel Box & Auto Cars with U-section structural members



The use of U-section structural members in steel cars is as old as steel car designs, as on this PRR X25

# AAR-inspired Steel Box & Auto Cars with U-section structural members



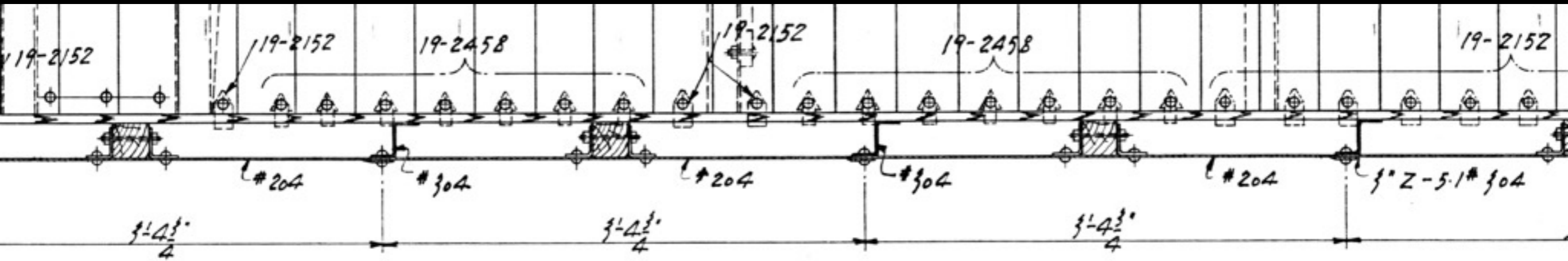
It continued in the USRA all-steel designs, such as those of the NYC System box & auto cars...

# AAR-inspired Steel Box & Auto Cars with U-section structural members

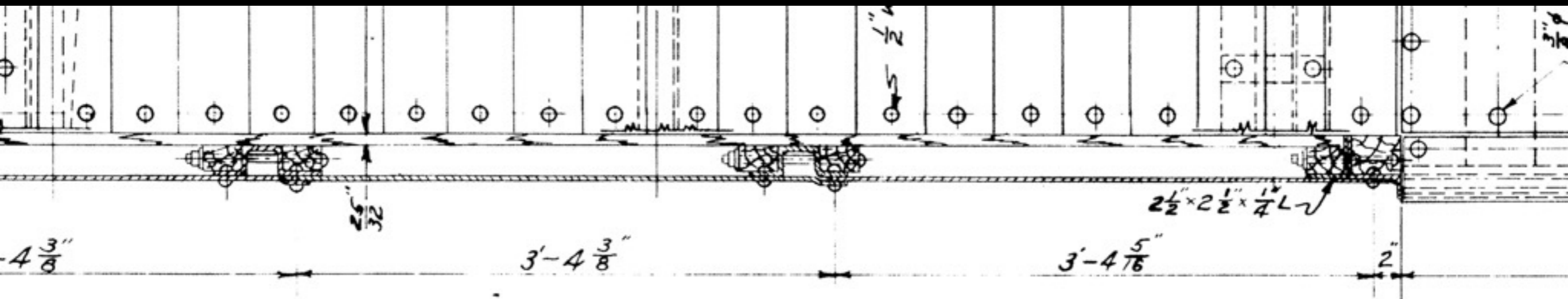


...and the ARA/X29 designs of the 1920s

# AAR-inspired Steel Box & Auto Cars with U-section structural members



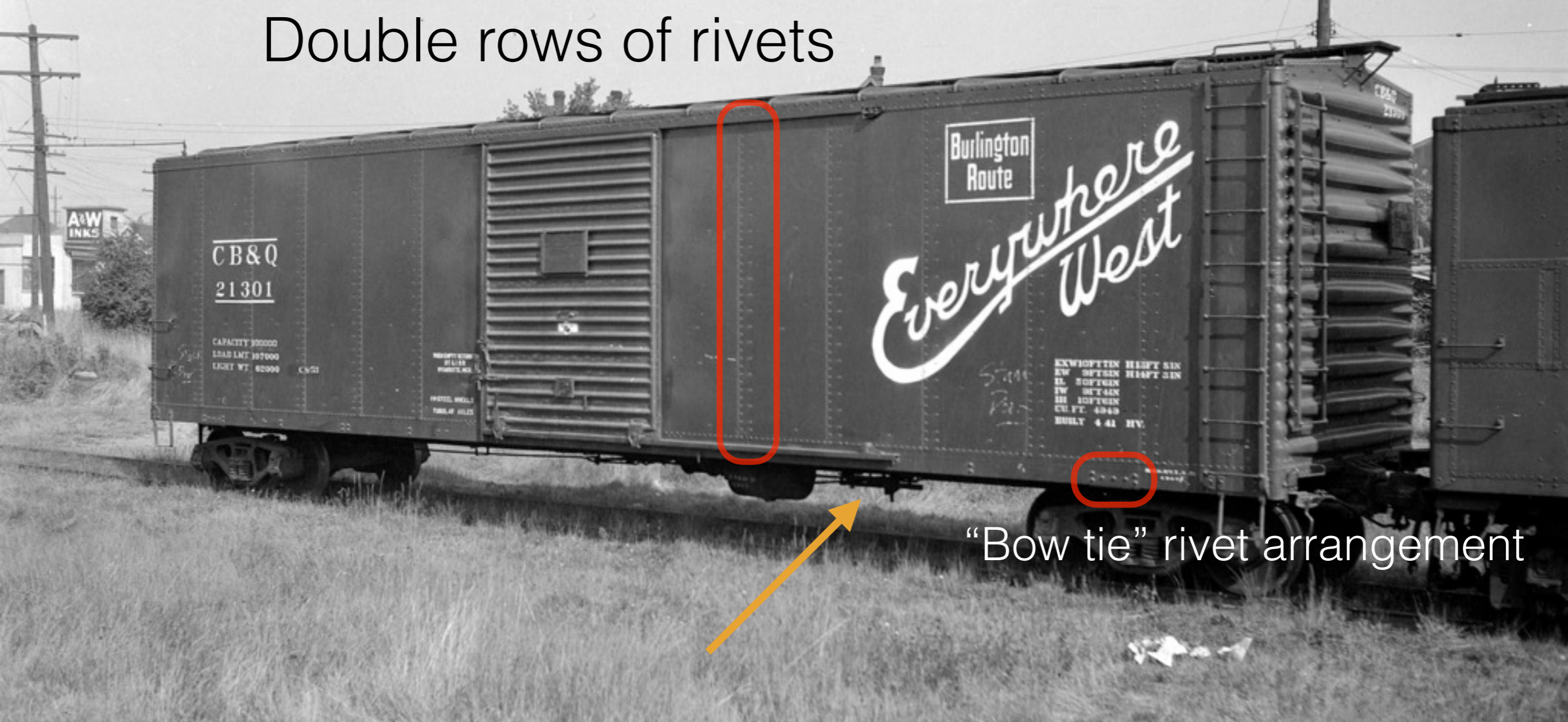
## 1932 ARA/AAR design zee members



Flanged, U-shaped members



# Double rows of rivets



“Bow tie” rivet arrangement

## Burlington 50' AAR box car

- Proto 2000 car
- “Clean” side and add Archer rivets (AR88110)
- Royal Type F Brake regulator ([Link to part on Shapeways](#))
- “Bow-tie” riveting at body bolsters
- Decals from Speedwitch



## Southern Pacific B-50-22 50' AAR box car

- Proto 2000 car
- “Clean” side and add Archer rivets
- Side sill support under door
- Decals from Speedwitch

AAR-inspired Steel Box & Auto Cars  
with U-section structural members

Other Prototypes



## Missouri-Kansas-Texas 45000-series auto car

- C&BT body
- Proto 2000 doors
- Modified sills
- or Sunshine kit



Missouri-Kansas-Texas 46000-series auto car and to the right...

- Proto 2000 car
- Modified to right of door and side sills
- 4/4 Improved Dreadnaught ends



## Southern Pacific A-50-15 auto car

- Proto 2000 car
- 4/4 Improved Dreadnaught ends
- Speedwitch doors
- Modified side sills



## CB&Q XA-16 Auto Car

- C&BT body
- Proto 2000 doors (note different widths)
- Modified sills



## Southern Pacific A-50-16 Auto Car

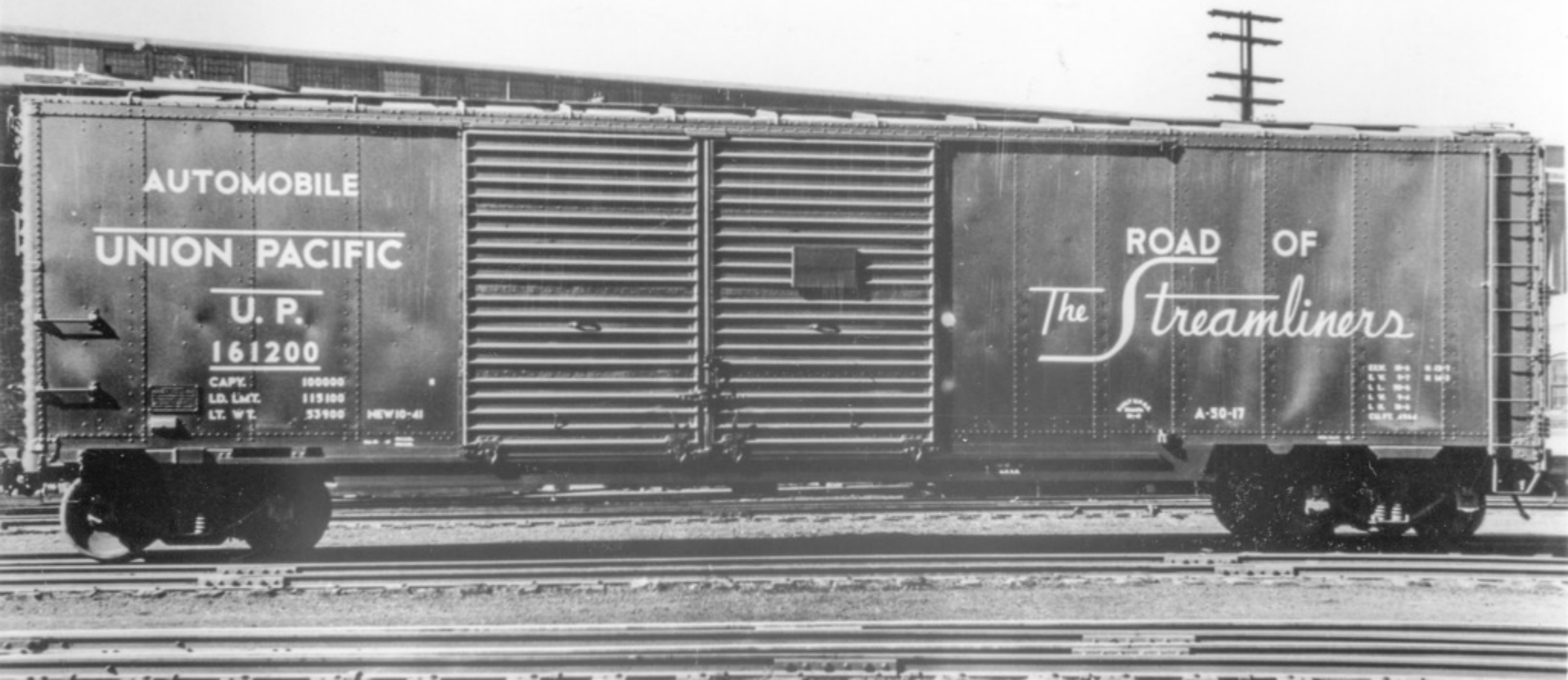
- C&BT body
- Branchline (or C&BT) doors
- Modified sills
- or Sunshine kit





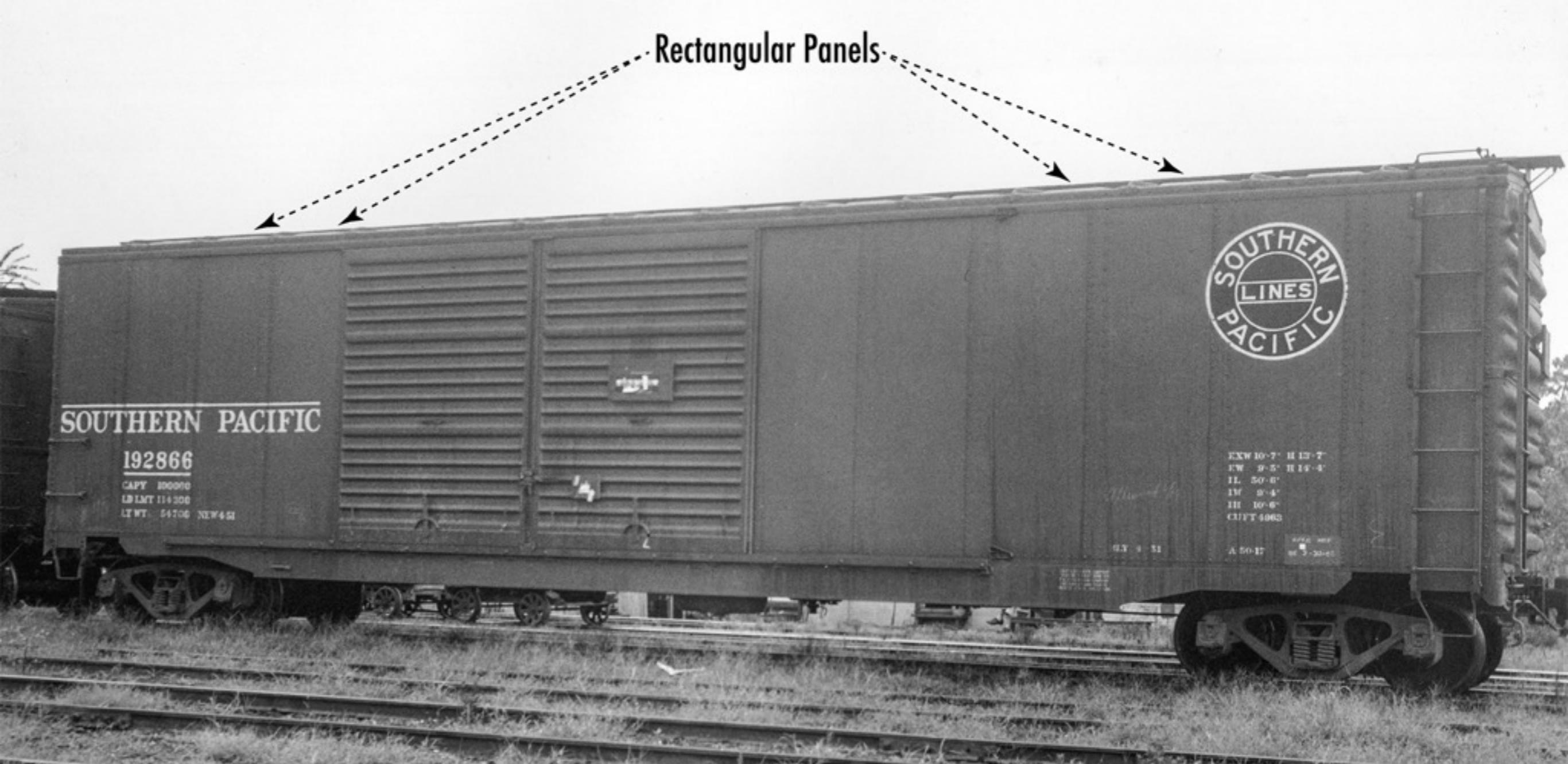
## St. Louis Southwestern auto car

- Branchline auto car with modified sills
- Speedwitch doors
- 4/4 Improved Dreadnaught ends
- Tom Madden Murphy roof



## Union Pacific

- Many classes including A-50-14, -15, -17, -19 (alternate center rivets too), -23



Rectangular Panels

SOUTHERN PACIFIC

192866

CAPY 100000  
LB LMT 114200  
LT WT 54700 NEW451



EXW 10-7" H 13-7"  
EW 9-5" H 11-4"  
IL 50-6"  
IW 9-4"  
IH 10-6"  
CIFT 4062

A 50-17

- Southern Pacific A-50-17 auto car
- Branchline auto car with modified sills
  - Speedwitch roof

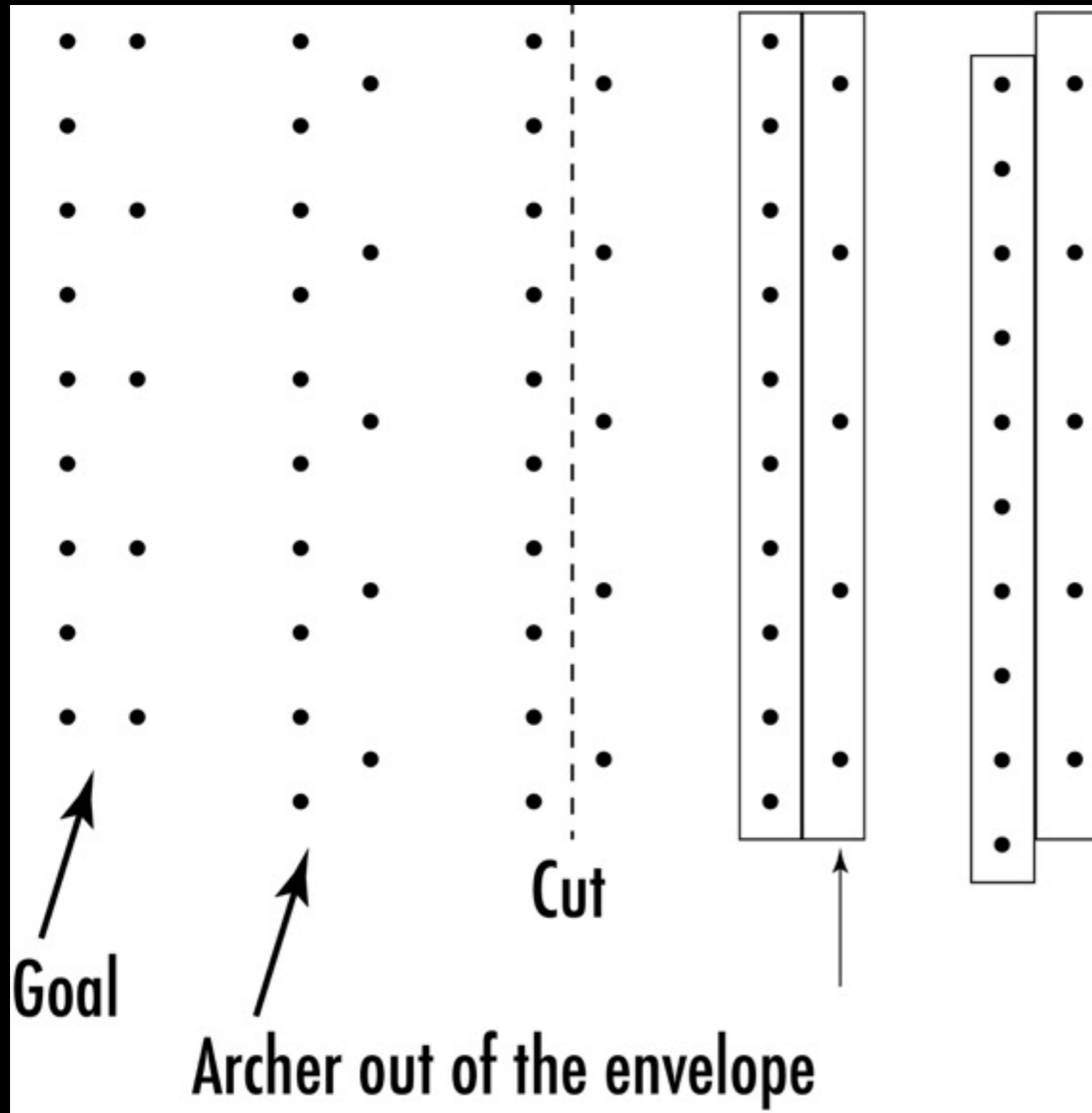


- Chicago and North Western riveted PS-1 Auto Car
- Speedwitch kit for Chicagoland RPM

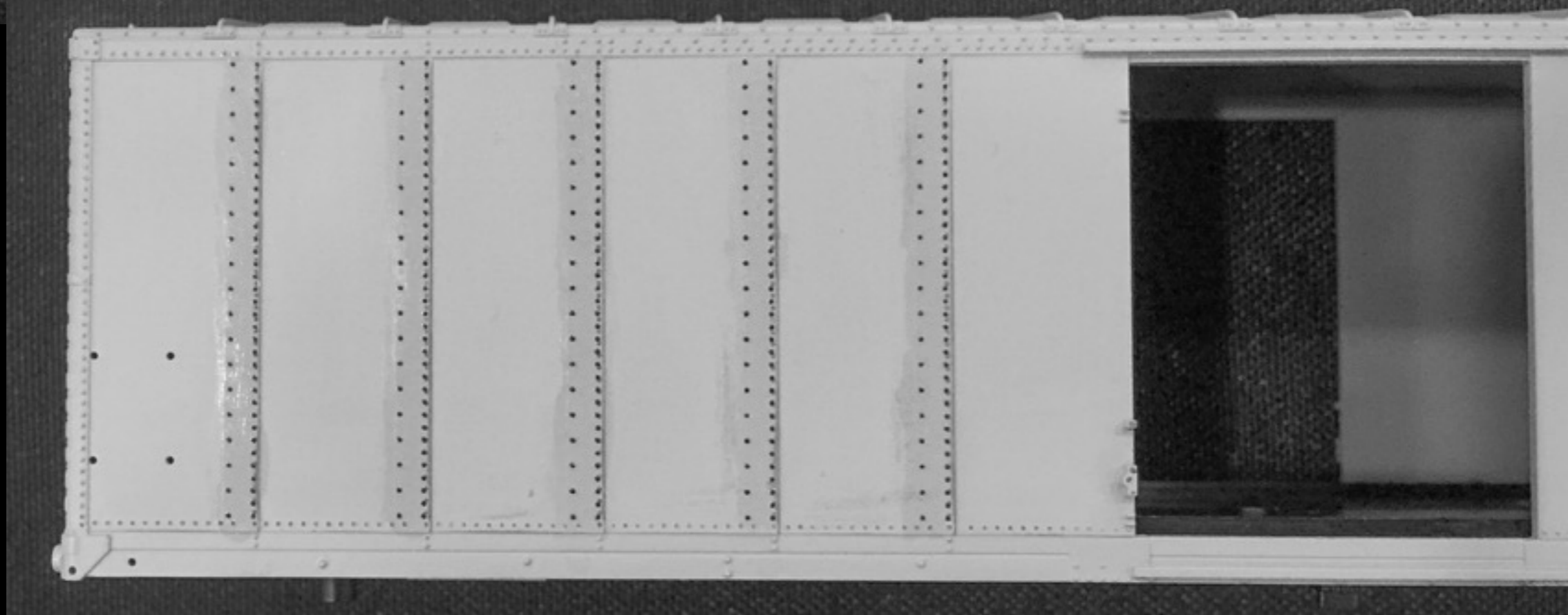
AAR-inspired Steel Box & Auto Cars  
with U-section structural members

Modeling Considerations

# Using Archer Rivets



- Are incorrectly staggered
- Can be cut as complete “rows” and then adjusted
- AR88107 (N)
- AR88108 (HO)
- AR88109 (S)
- AR88110 (O)



- Remove existing rivets
- Add Archer rivet decals



- Scratchbuilding sides with U-section side structural members
- Scribe panel lines and add Archer rivet decals

(Chicago and North Western riveted PS-1 Auto Car shown here)



# Tools & Supplies

- Calipers
- True Sander (Northwest ShortLine)
- The Chopper (Northwest ShortLine)
- A *GOOD* mitre box and saw
- RP Toolz punch and die (Go to UMM-USA, RP Toolz ([http://www.rptoolz.com/?page\\_id=170](http://www.rptoolz.com/?page_id=170)) and look around)
- “Chiseling” blades
- Saw handle and blades as well as etched scribing tools from UMM-USA (not for the mitre box)

# Resources for parts, decals, etc.

- Archer - <http://www.archertransfers.com>
- Yarmouth Model Works - <http://www.yarmouthmodelworks.com/index.php/Home/Index>
- Speedwitch - <http://speedwitchmedia.com>

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