

**HO TRACK SCALE
HOSKINS MOUND SULPHUR PLANT
CLUTE, TEXAS**

BY JIM WILLIAMS

THE MODELLING PROCESS

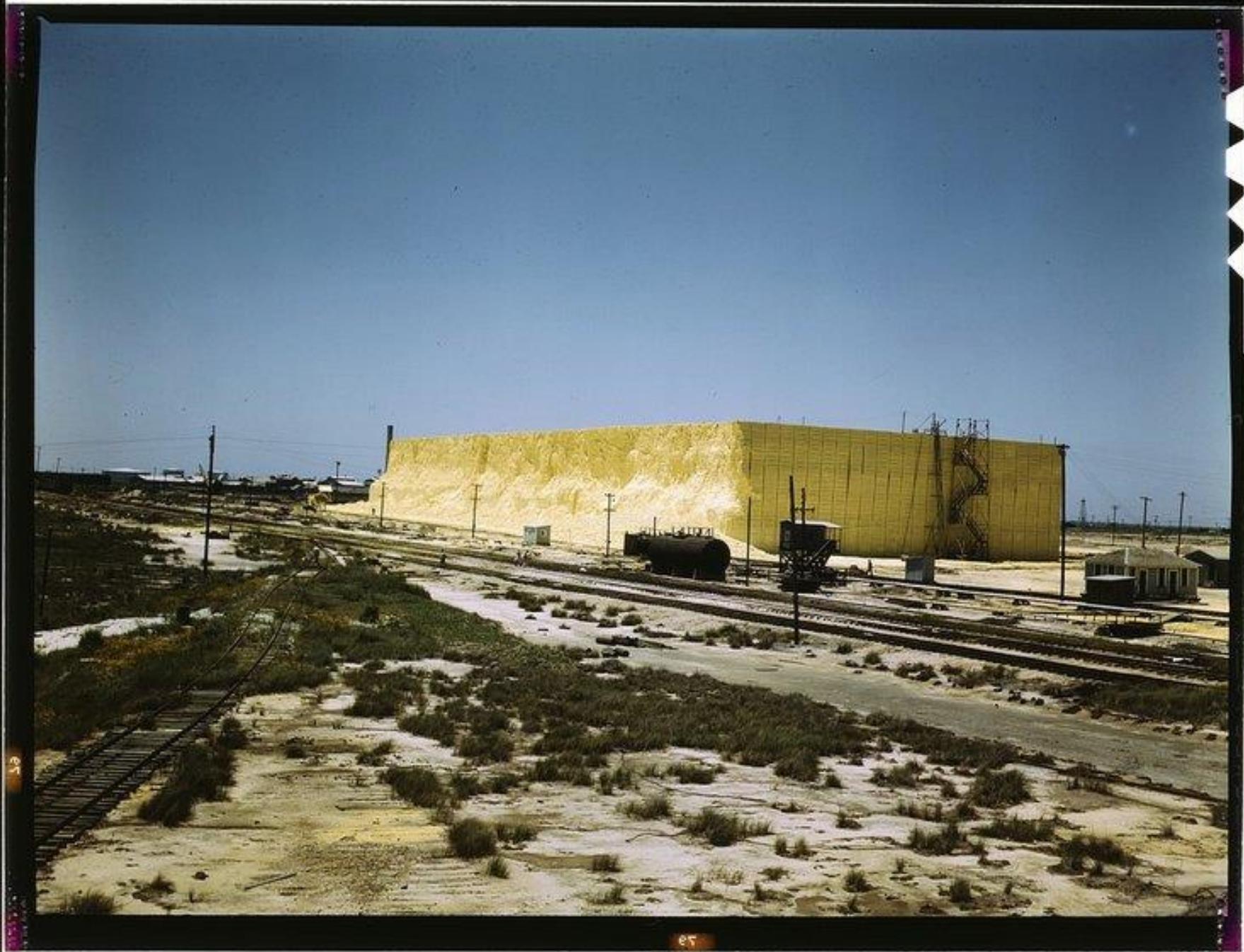
- 1. THE PROTOTYPE**
- 2. SCALE DRAWINGS**
- 3. CONSTRUCTION**
- 4. INSTALLATION**
- 5. WEATHERING & FINAL DETAILS**

**Sulphur was
mined at
Hoskins from
1923 to 1955.**

**Sulphur is
extracted in
liquid form
then cooled
into large
blocks (Frasch
process).**

**Pictured is one
of the sulphur
blocks at
Hoskins
Mound, circa
1943.**

LOC photo



**Sulphur was
broken up
from the large
blocks then
loaded into
boxcars and
hoppers.**

**Hoskins
Mound circa
1943.**

LOC photo



OWI 28899-D

**Sulphur being
loading into
boxcars at
Hoskins
Mound.**

circa 1943.

LOC photo

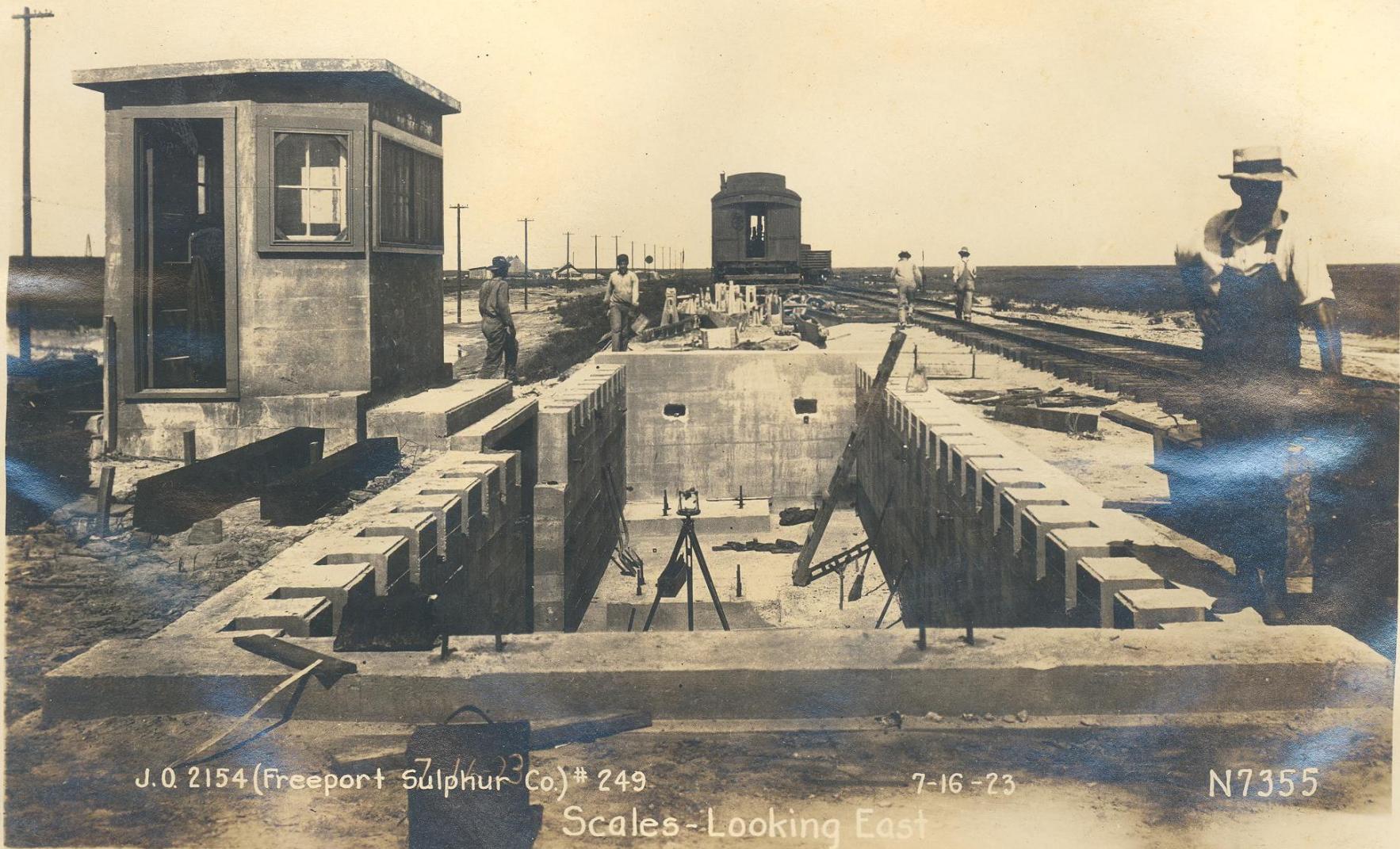


Need to know
how much the
loads
weighed so a
scale was
added.

Scale under
construction
at Hoskins
Mound.

7-16-1923

BCHM photo

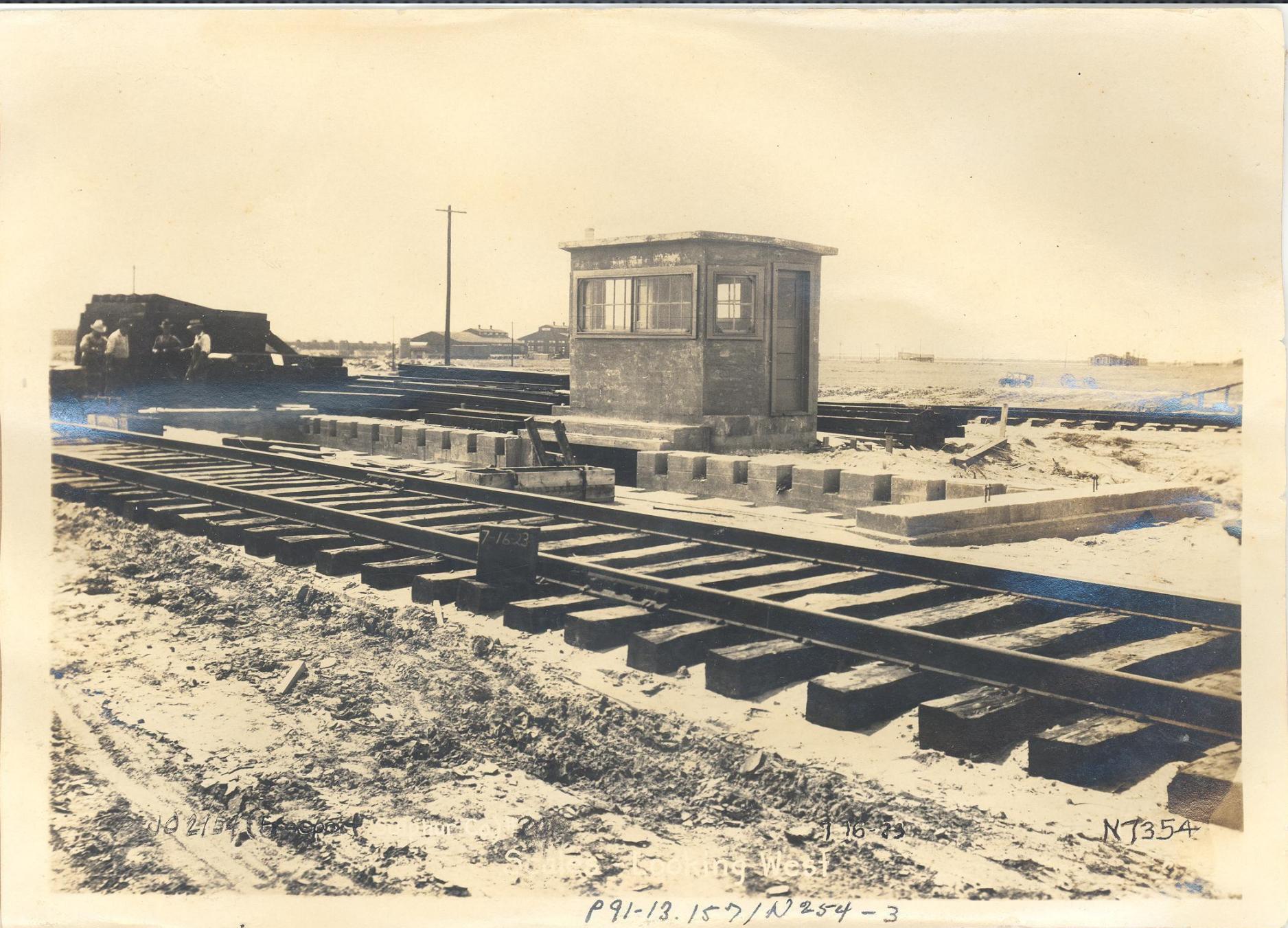


P 91-13-159/N254-6

**Track scale
under
construction
at Hoskins.
Note the lack
of ballast.**

7-16-1923

BCHM photo

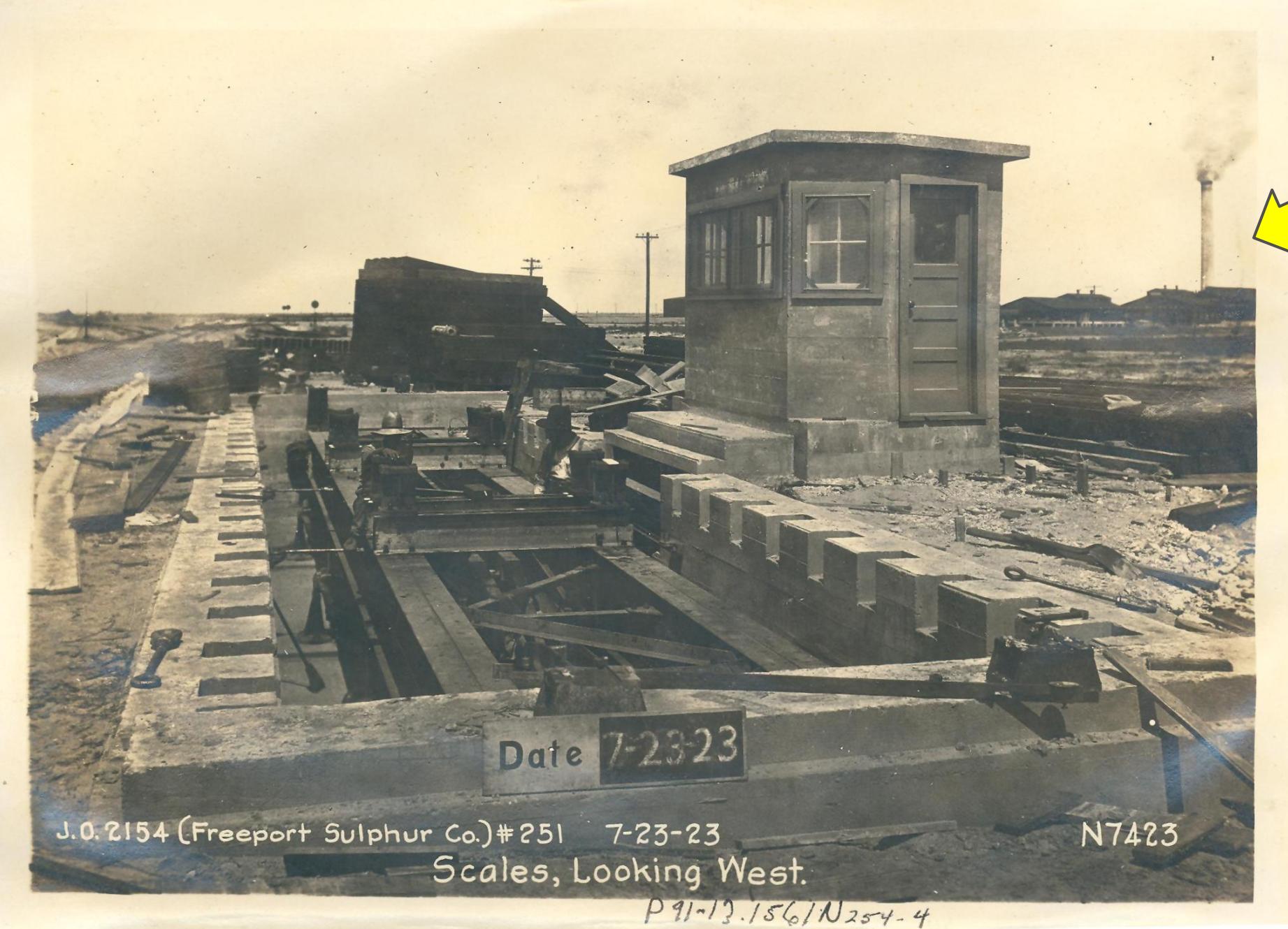


Scale under construction at Hoskins.

Knife edge fulcrum is being installed

7-23-1923

BCHM photo



plant

**Prototype
example,
Milwaukee Road
RR, live rail on
the left.**

**Model Railroader
photo**



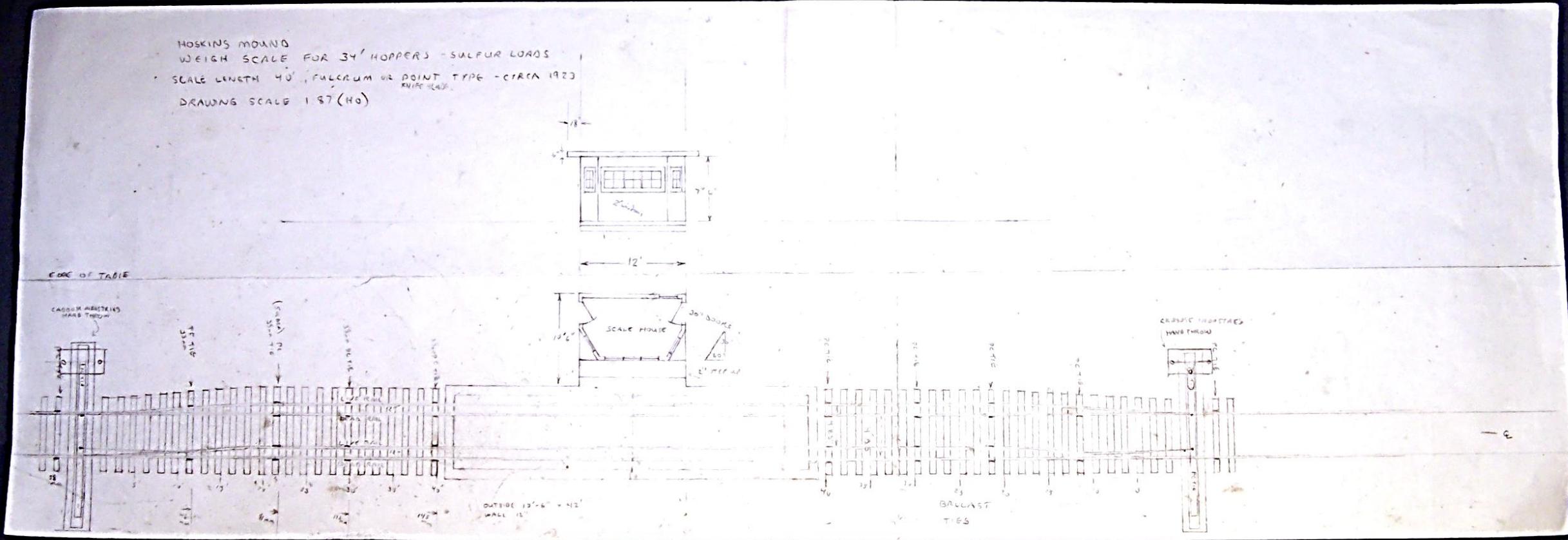
Gordon Odegard

The live rails on this Milwaukee Road scale have protective sheet-metal coverings over the rail bases. Dead and live rails have different colors.

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HO Scale drawing of scale track and building.



Weigh scale is for 40' freight cars (hoppers, gondolas, box cars).

THE MODELLING PROCESS

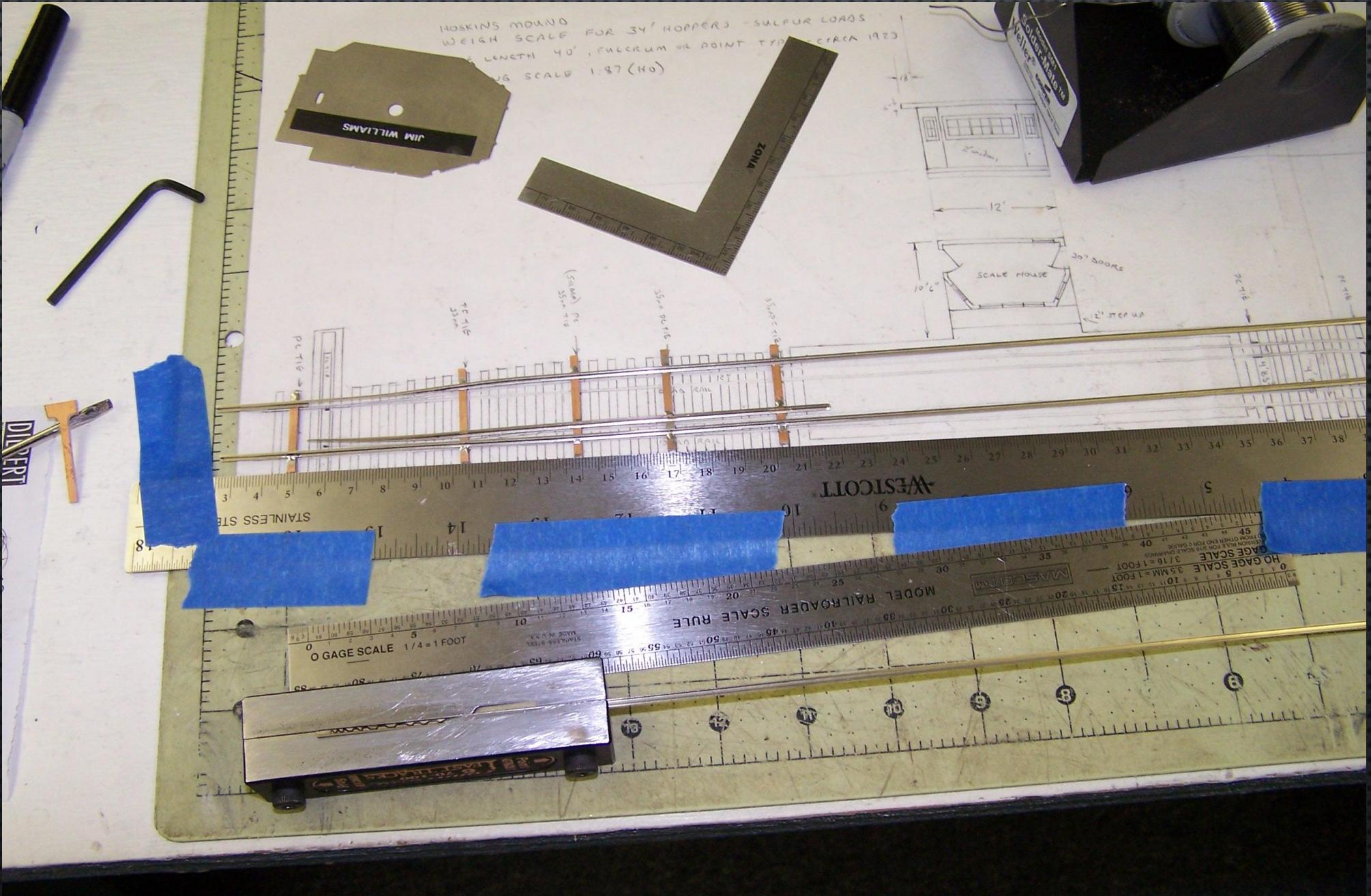
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Create
switch
points using
Fast Tracks
jigs.

**Switch
points are
soldered to
PC ties.**

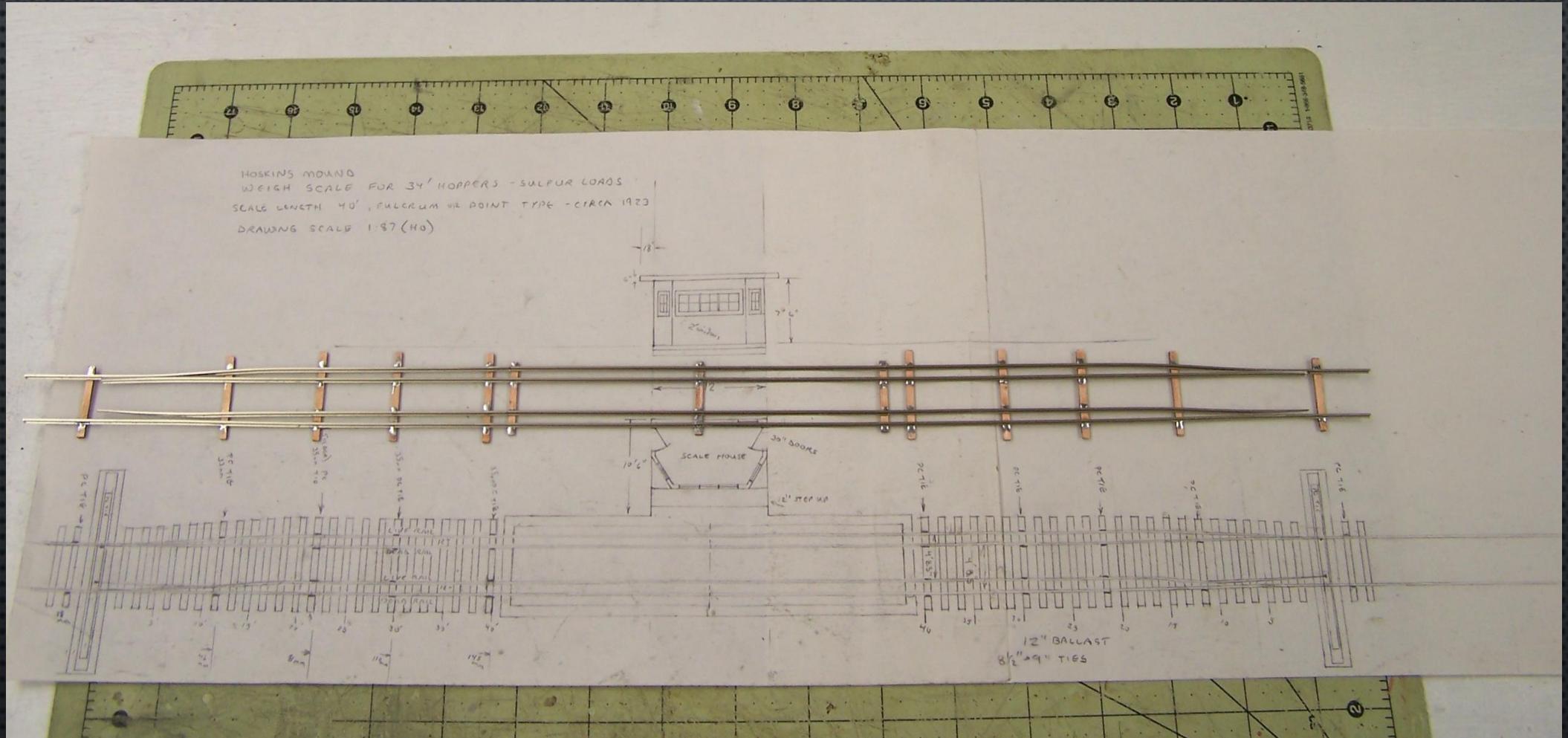
**Use ruler to
keep PC
ties in line.**

Code 83 rail.



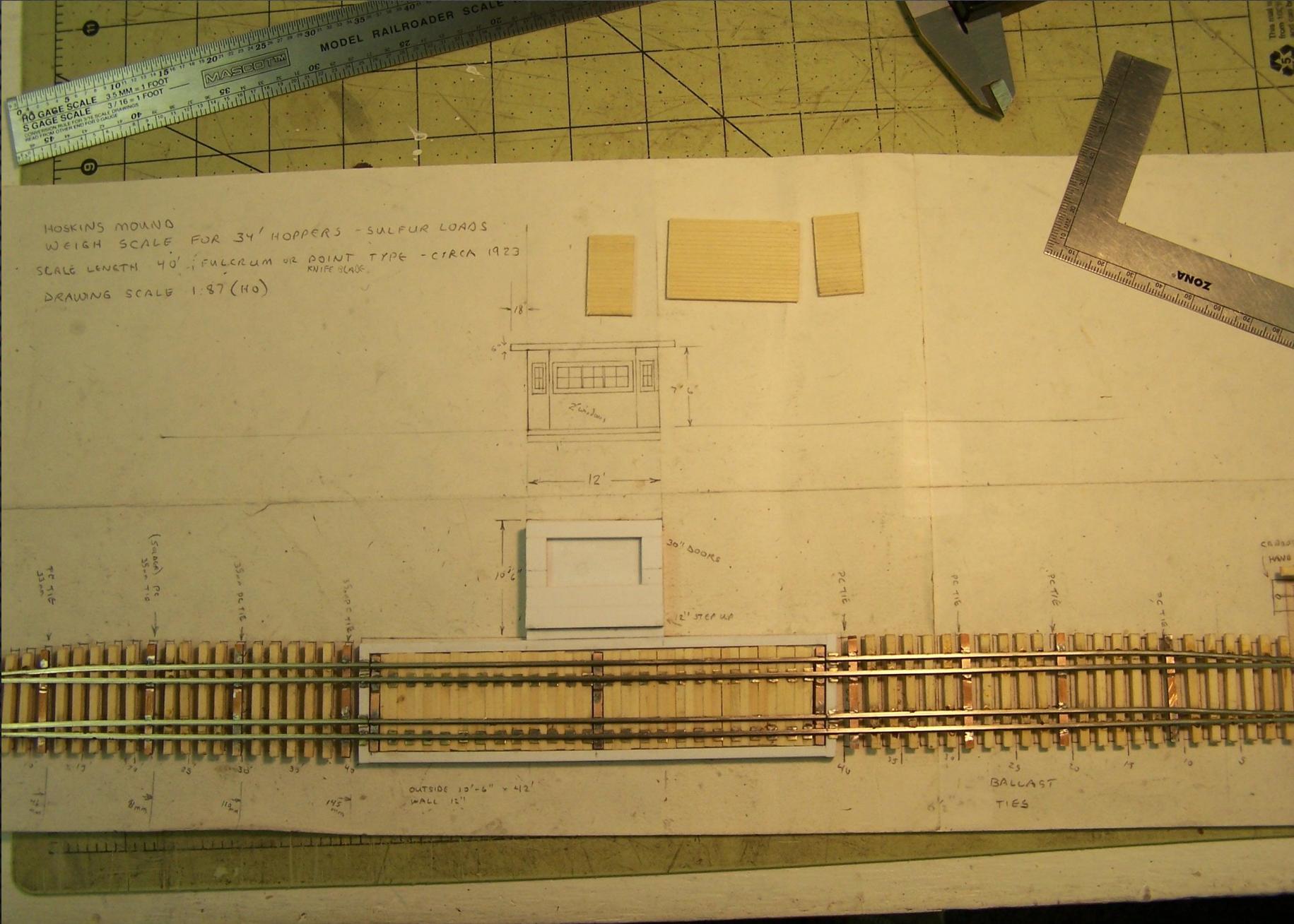
Use a scale drawing of weight scale, including ties, rails, pit, scale house, and switch points as a template.

Gauntlet track rails are 12" apart.



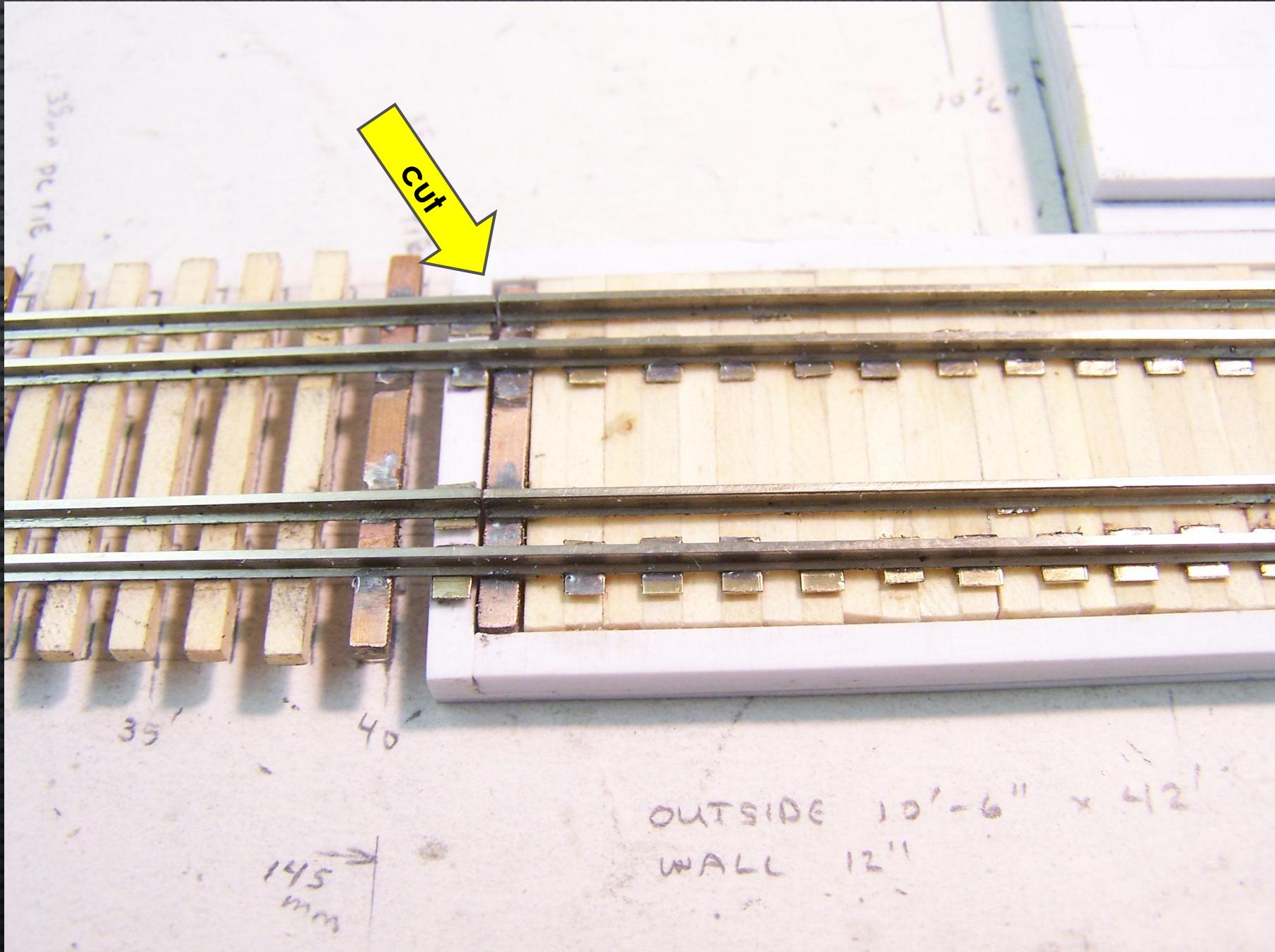
**Wood ties
are glued
to rails with
Pliobond
adhesive.**

**Scale pit
concrete
walls and
scale house
foundation
are added.**



The dead rails rest on metal plates.

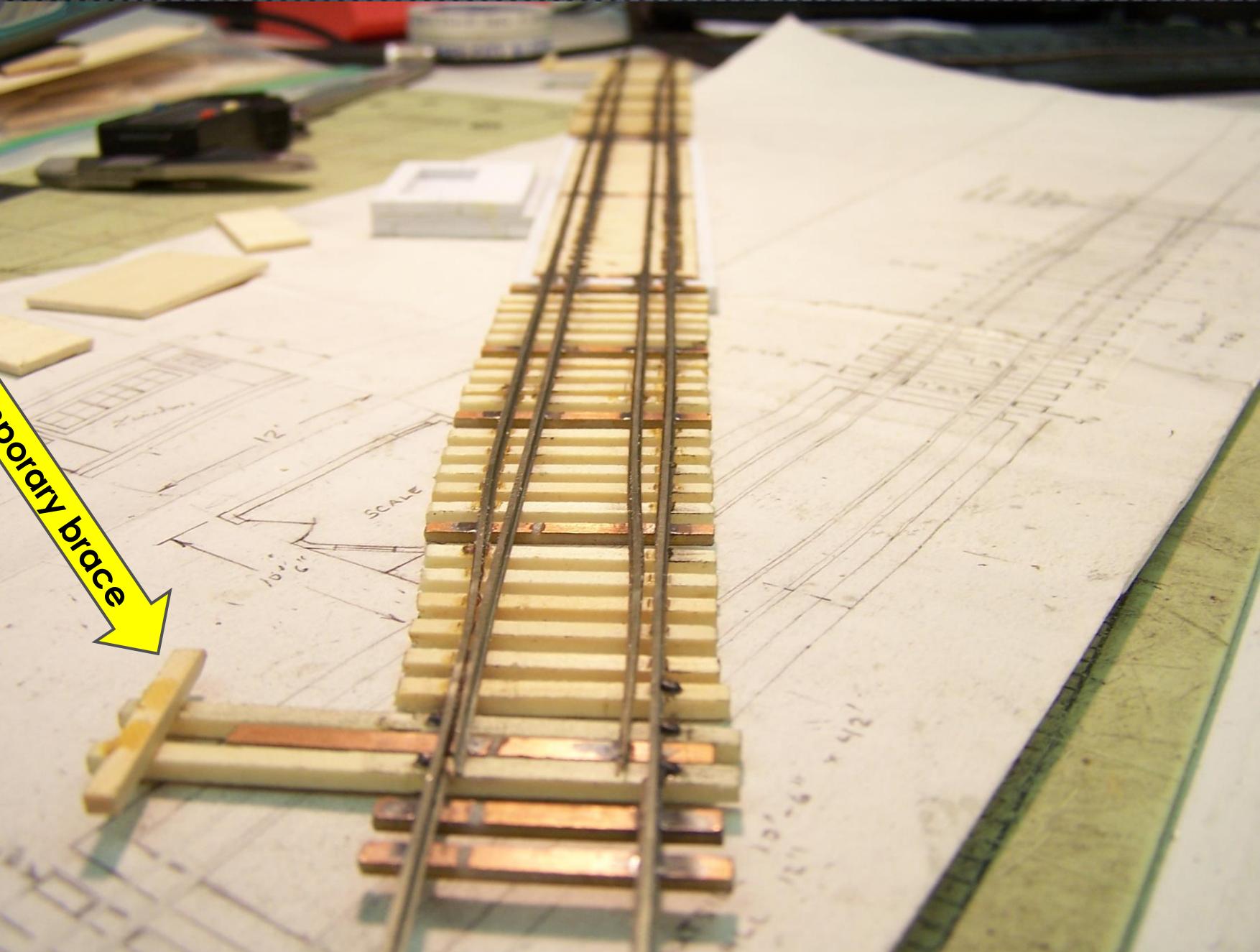
Note the live rails are cut at the inside edge of the pit so the railcar is supported by the fulcrum.



Live rail
dead rail

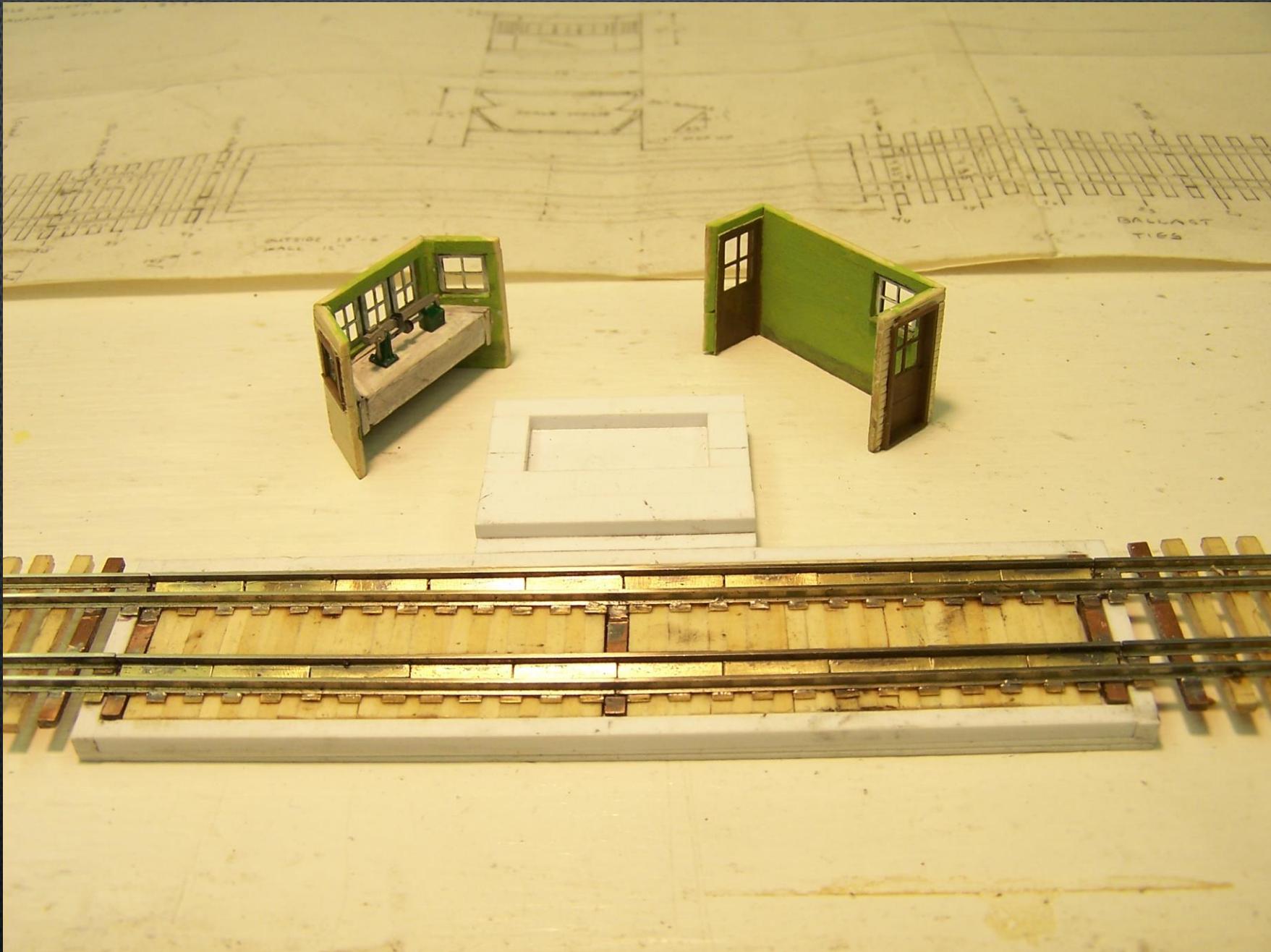
Points are soldered to a PC tie and switch stand ties added (note track nails).

Temporary brace added at end of longer ties.



**Weight scale
house is
created using
commercial
board siding,
scale balance
sits on a shelf,
doors, and
windows.**

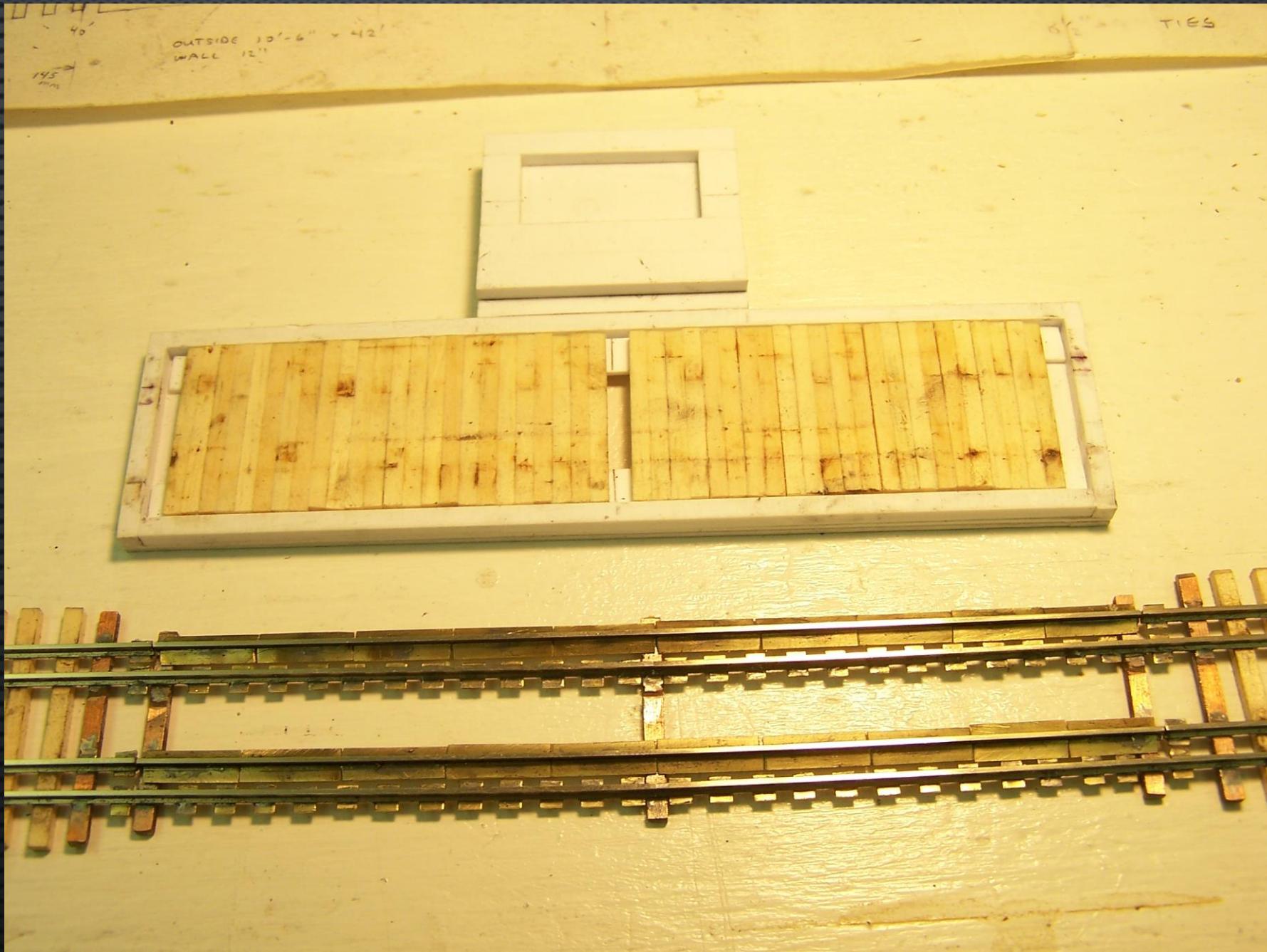
**Note the metal
covers on the
live rails.**



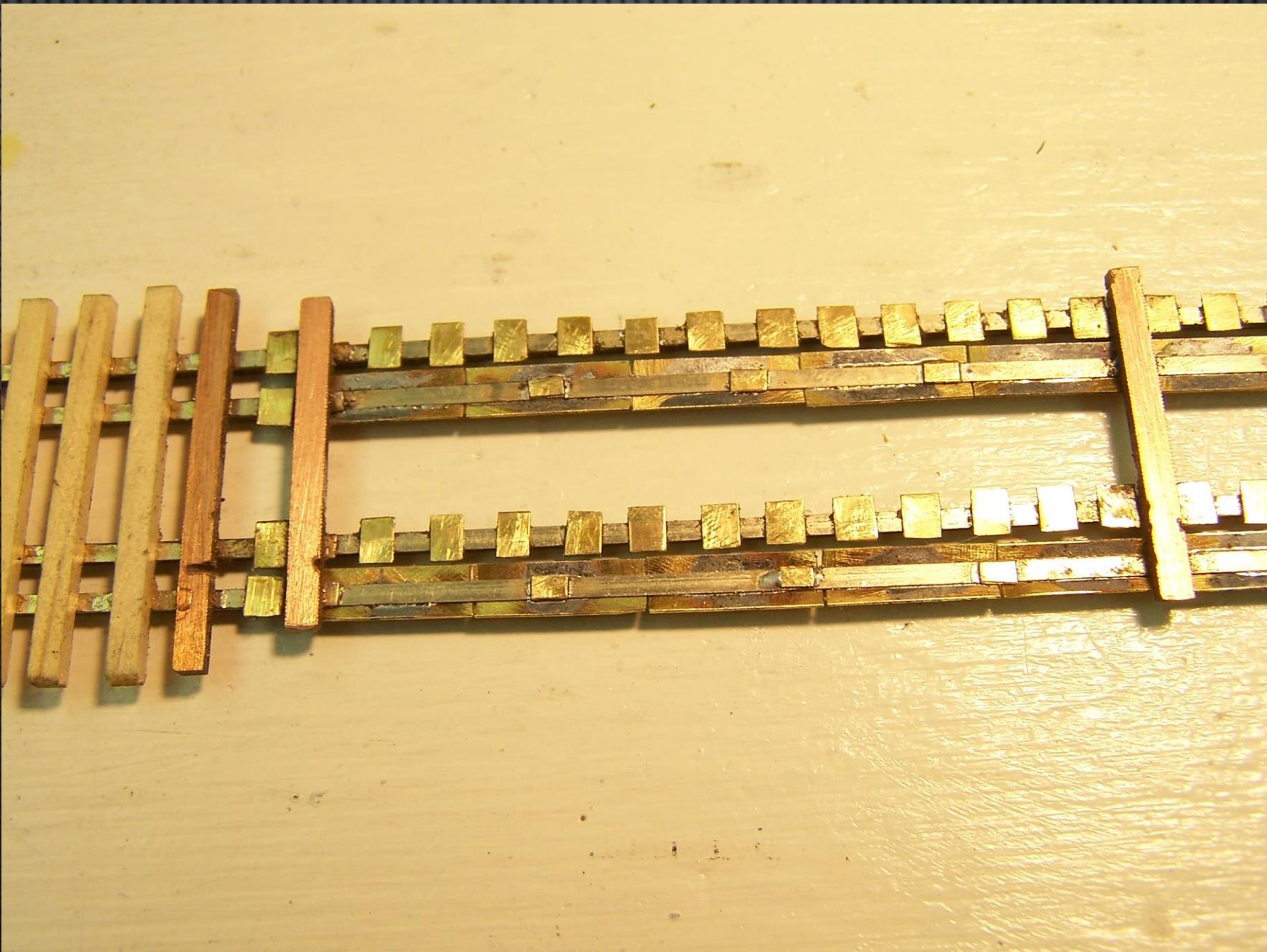
**Modelers putty
will be added
to fill in gaps at
corners of the
building walls.**



**Sub
assemblies,
scale pit and
building
foundations
and rails**



**Bottom side
view showing
metal bits**



**Beginning to
paint sub-
assemblies.**

**Brown stain on
ties, concrete
color on
building,
brown trim on
windows and
doors.**



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This where the scale will be added, on the loading track of the Sulphur plant.



Rails and sub road bed are removed.

Shift workers arriving by dedicated passenger cars.



Test fitting assembly.

Note the additional support braces for the switch stands.



The switch stands are held to the ties with 2x56 bolts and nuts.

Note the PC ties have insulating cuts in them.

Solder rail connections and add jumper wires as needed.

Connect LED lights inside scale house.



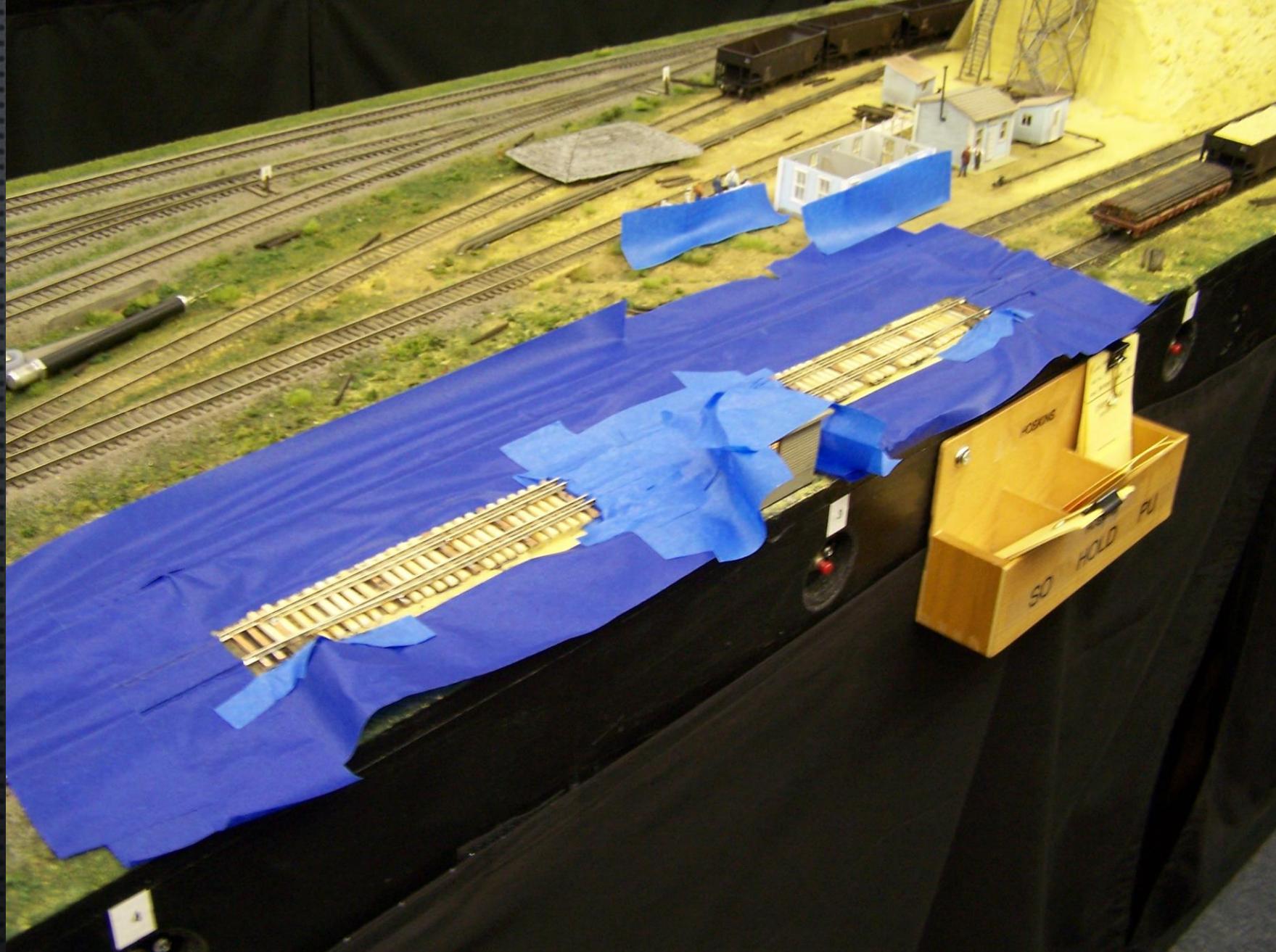
Caboose Industries 202S ground throw

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**Prepare to
paint rails and
ties with
acrylic rail
brown (used
air brush).**

**Note the
Sulphur block
in the back
ground.**



After painting rails & ties, add ballast.

Ballast is glued with 50/50 mix white glue and water. Alcohol was misted on the ballast to help deal with surface tension.



Woodland Scenics fine grey ballast B1393

Use India ink & alcohol mix on the ballast to match adjacent ballast.

Add grass and weeds.

Apply rust on metal bits, and age ties with light colors.



Note the scale house interior lighting, steps to doors and miscellaneous details.

There is a 1955 calendar on the inside rear wall of the building.



Knife edge weigh scales may not be able to support the weight of a locomotive, or the locomotive acceleration with risking damage to the fulcrum. So in practice either cars were either pushed individually onto the scale (static weighing) or a series of cars pulled across the scale (weighed in motion).

The weigh scale at Hoskins is designed for the 40-50 ton freight cars, and 40' long. Hence the gauntlet track design allows the locomotive to run on the dead rail, and cars to be weighed are switched over to the gauntlet track. This requires at least one idler car between the locomotive and the first car to be weighed. The gauntlet track and scale is three cars long.

Today weigh scales are much simpler since strain gauges are used to determine the car weight.

Related articles:

Model Railroader September 2002, pg 68-71, Bill Darnaby

Model Railroader April 2009, pg 40-41, Cody Grivno

Buy versus build:

Walthers 933-3199 track scale kit

THE END