

# Creating Artwork for Decals



Bob's Photo

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# Creating Artwork for Decals

If you are reading this somewhere besides the meet at which it was presented, be aware that there is a demonstration component not included in this file.

This file will be posted to:

[prototopics.blogspot.com](http://prototopics.blogspot.com)

# Creating Artwork for Decals

Why go to the trouble of creating artwork and decals when they already exist?

*For me* (your reasons may vary), after building several resin kits, I noticed that the distinctive characters used on the prototypes were markedly different from the lettering included in the kits, including style, size, spacing, etc. It struck me as odd that we worry about counting rivets, yet something as noticeable and distinctive as lettering was an afterthought. One of my first experiences was the Sunshine Seaboard Air Line 1932 ARA box car...



Slogan not wide enough

ROUTE OF THE  
*Silver Meteor*  
SEABOARD  
7353  
CAPT. 100000  
LD.LMT 124300  
LT. WT. 2700  
FN-3-45  
Transport 715  
29

Note the gap!

Kit decal characters bear little resemblance to prototype

**Model**

# Kit decal characters bear little resemblance to prototype

ROUTE OF THE  
*Silver Meteor*  
SEA BOARD  
17144  
CAPY 100000  
LDLMT122900  
LT WT 46100 JAX11-57

SEA BOARD RAILROAD  
THROUGH THE HEART OF THE SOUTH  
EEW 10-0 H12-5  
EW 8-5 H13-6  
I L 40-6  
I W 8-0  
I H 9-4  
CUFT  
B-6 13

Door stencils  
absent in  
kit decals

Prototype

SAL

6-0 DOOR

# Prototype



# Variety!

Each railroad had its own unique characters. Railroads didn't use "off-the-shelf" fonts ("fonts" did not exist except for printing and typography). The characters were used to create stencils that were overlaid on the car side (or locomotive, caboose, tender, etc.) to be used for the application of paint.



# Variety!

**2**

**2**

**2**

**2**

**2**

**2**

NH

L&N

PRR

NP

MEC

PM

**2**

**2**

**2**

**2**

**2**

MILW

RF&P

NYCS

ATSF

Southern

**2**

**2**

**2**

**2**

2

2

B&O

Soo

SP

CNW

TNR\*

AGP\*\*

# Variety!

**2**

**2**

**2**

**2**

**2**

**2**

NH

L&N

PRR

NP

MEC

PM

**2**

**2**

**2**

**2**

**2**

MILW

RF&P

NYCS

ATSF

Southern

**2**

**2**

**2**

**2**

2

2

B&O

Soo

SP

CNW

TNR\*

AGP\*\*

\* Times New Roman

\*\* Adobe Garamond Pro

# Creating Artwork for Decals

Getting started - what is needed?

- Software
- Training
- Reference Material
- Printing



# Creating Artwork for Decals

Getting started - what is needed?

- **Software**

- Bézier
  - Adobe Illustrator
  - Corel Draw
  - CAD (many CAD programs can draw using Bézier curves or *paths*)
- Raster
  - Photoshop
  - Simple paint and draw applications (these are usually not Bézier apps due to the computer horsepower and complexity needed to run them)
- Training
- Reference Material
- Printing

# Bézier vs. Raster

Bézier curves are used to create and model smooth curves that can be scaled to any degree with no degradation. Raster graphics are comprised of bits/pixels that degrade as they are scaled upwards. As such, they are not ideal for instances where drawing detail is paramount.



**Vector (Bézier curves)**



**vs. Raster (pixels)**

# Creating Artwork for Decals

Getting started - what is needed?

- Software
- **Training**
  - Community colleges (student software discount!)
  - Arts centers
  - Community learning classes
  - Self (such as Adobe's *Classroom in a Book* series, *For Dummies* series, Peach Pit press, [lynda.com](http://lynda.com), etc.)
- Reference Material
- Printing



# Creating Artwork for Decals

Getting started - what is needed?

- Software
- Training
- **Reference Material**
  - Photos
  - Drawings
  - Sketches/Tracings
- Printing

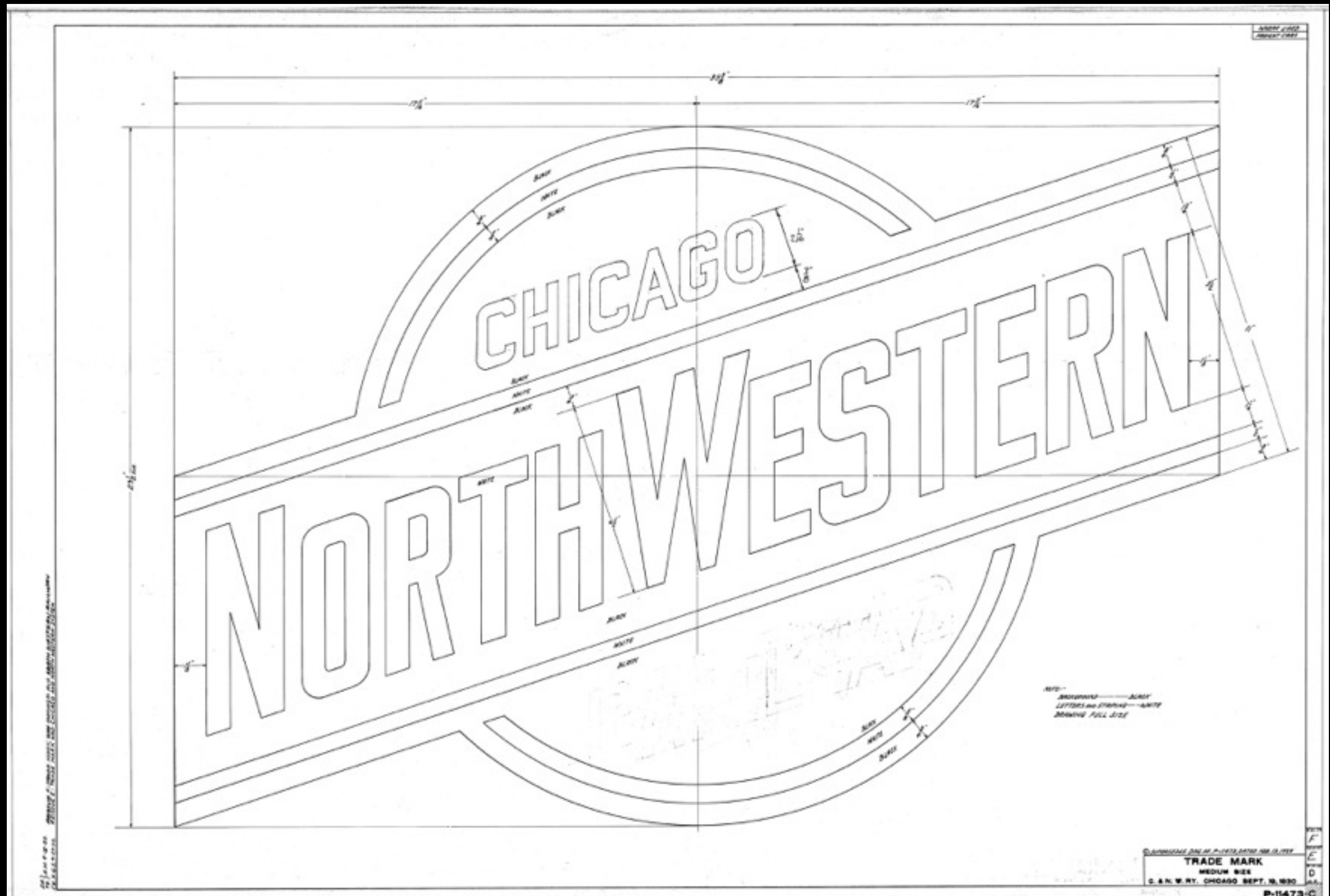
# Photos

Ideally, should be large, crystal clear, with even lighting. Builder's photos are ideal. Darkroom prints are better than digital prints.



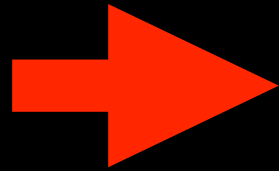
# Drawings

Drawings of characters or emblems are, as one would expect, highly valuable



# Corporate Materials

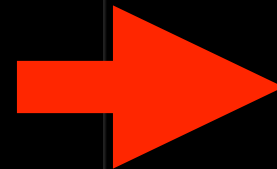
Company letterhead, marketing or promotional materials, etc., can be excellent sources for graphics to use for creation of artwork





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The graphic above is an actual decal intended to be affixed to the globe of a gravity feed gasoline pump

# Creating Artwork for Decals

Getting started - what is needed?

- Software
- Training
- Reference Material
- **Printing**
  - Quantity
  - Quality
  - Cost (directly related to the two previous bullets)
  - Providers



# Creating Artwork for Decals

Getting started - what is needed?

- Software
- Training
- Reference Material
- **Printing**
  - Quantity
  - Quality
  - Cost (directly related to the two previous bullets)
  - Providers
    - **Print at home** (inkjet or laser) Ghost White
    - **Commercial Printers**
      - Cartograf
      - PDC
      - Microscale



# Prepping to Draw

- Scan - at highest resolution possible (may require multiple images). If you have an image already skip to next step
- Square up (Perspective Crop)
- Save image
- Open image in Illustrator (or your drawing app)
- Set up as template using layers
- Create drawing layer
- Draw

From this.....

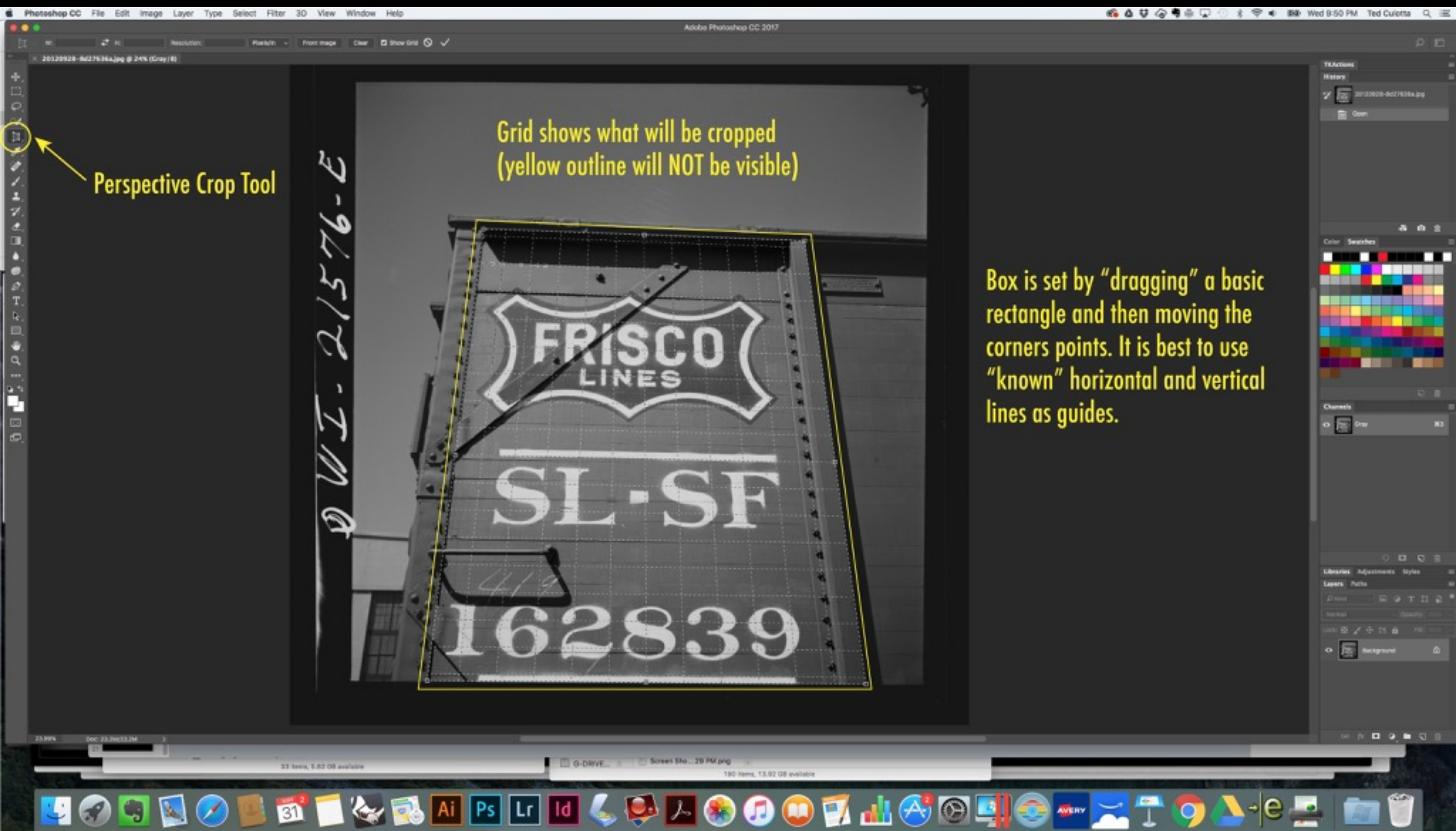
Q W I - 21576-E





To this.....

# Perspective Crop Tool in Photoshop



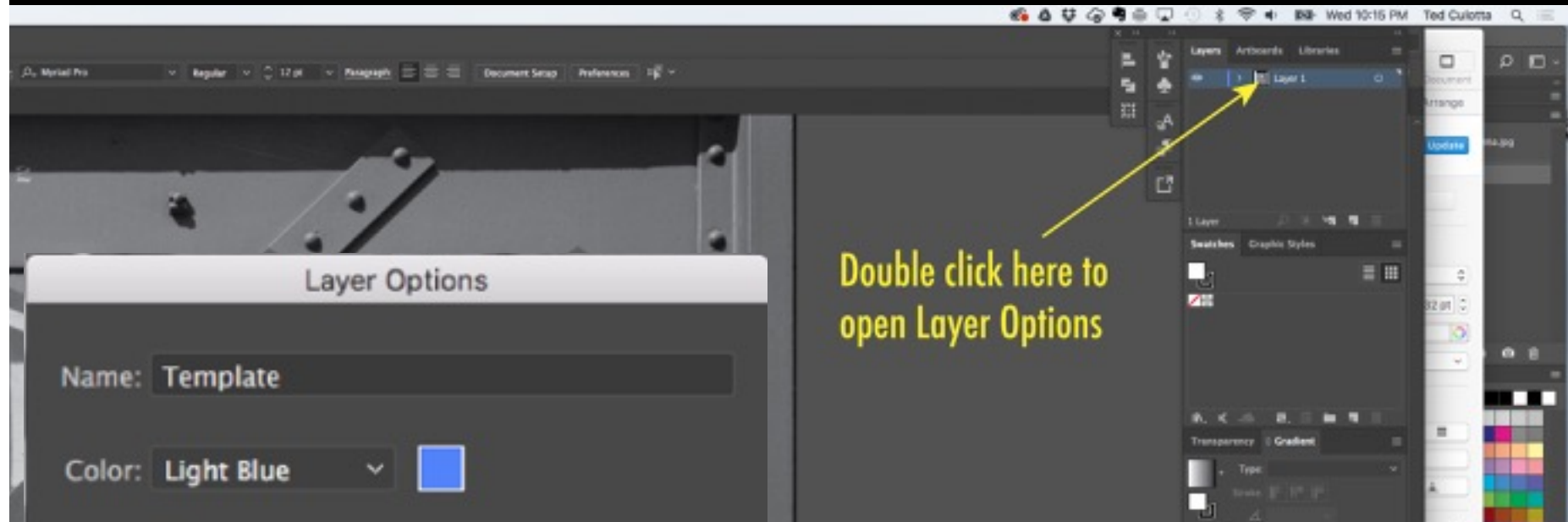
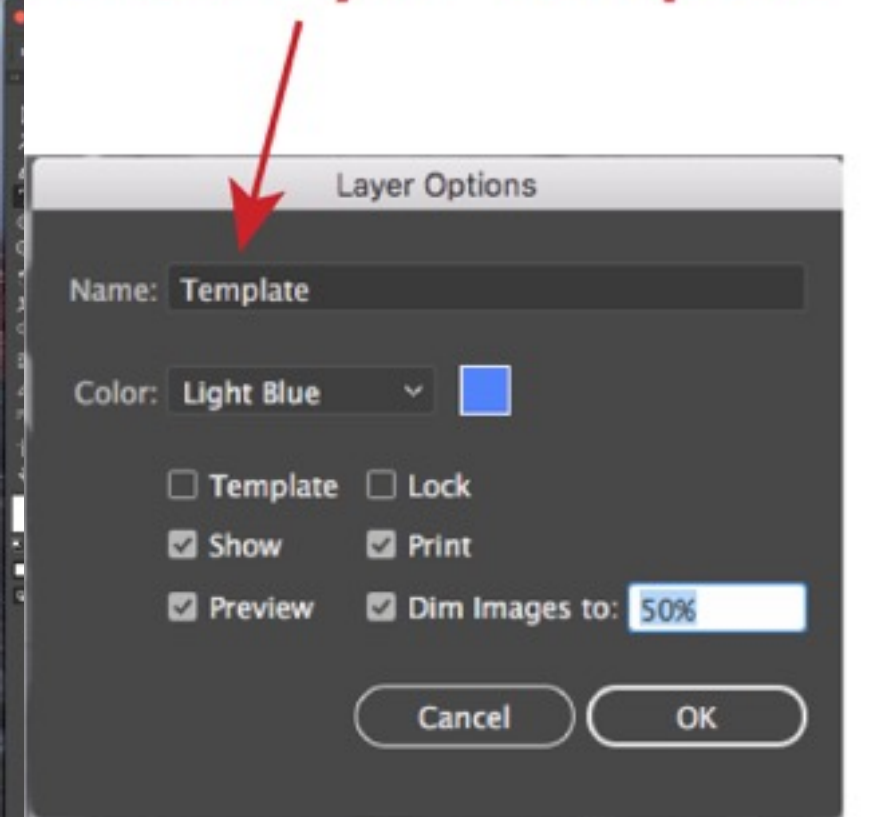


# Set Layer Options in Illustrator

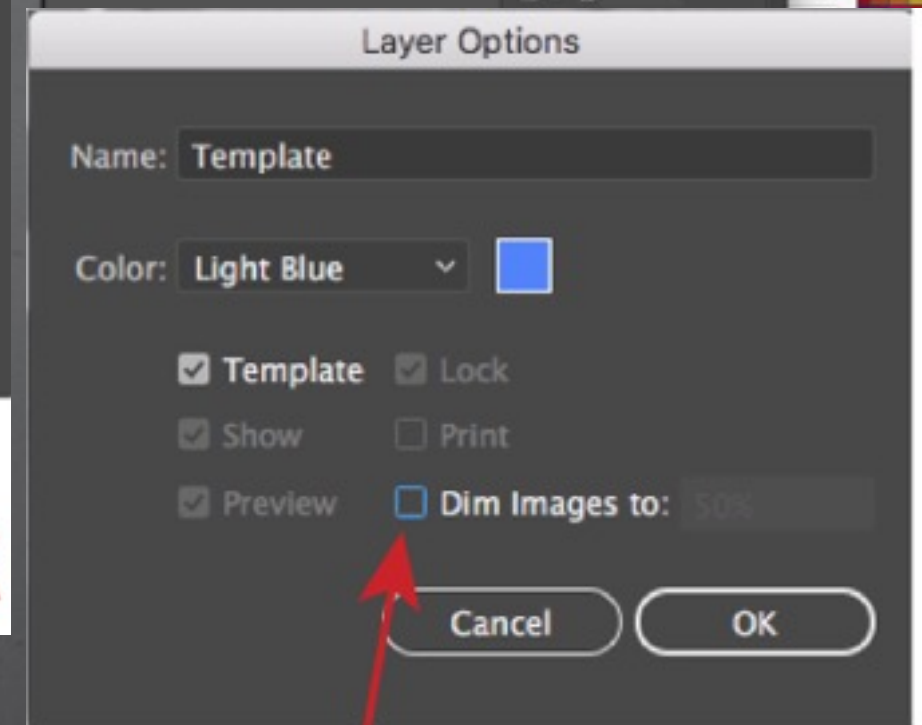


# Set Layer Options in Illustrator

Name layer "Template"



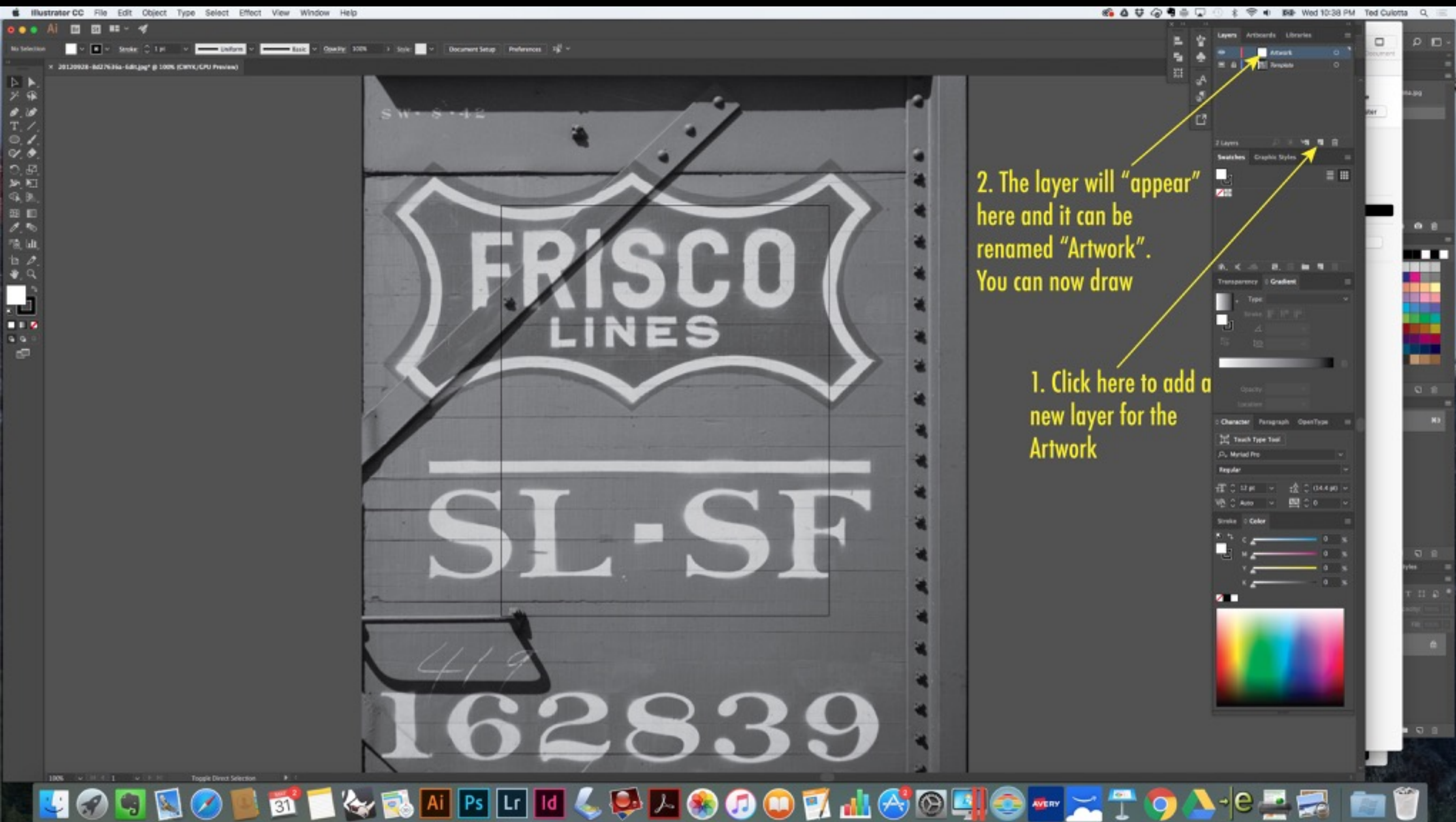
Check "Template" box



Uncheck "Dim Images"



# Create Artwork Layer in Illustrator

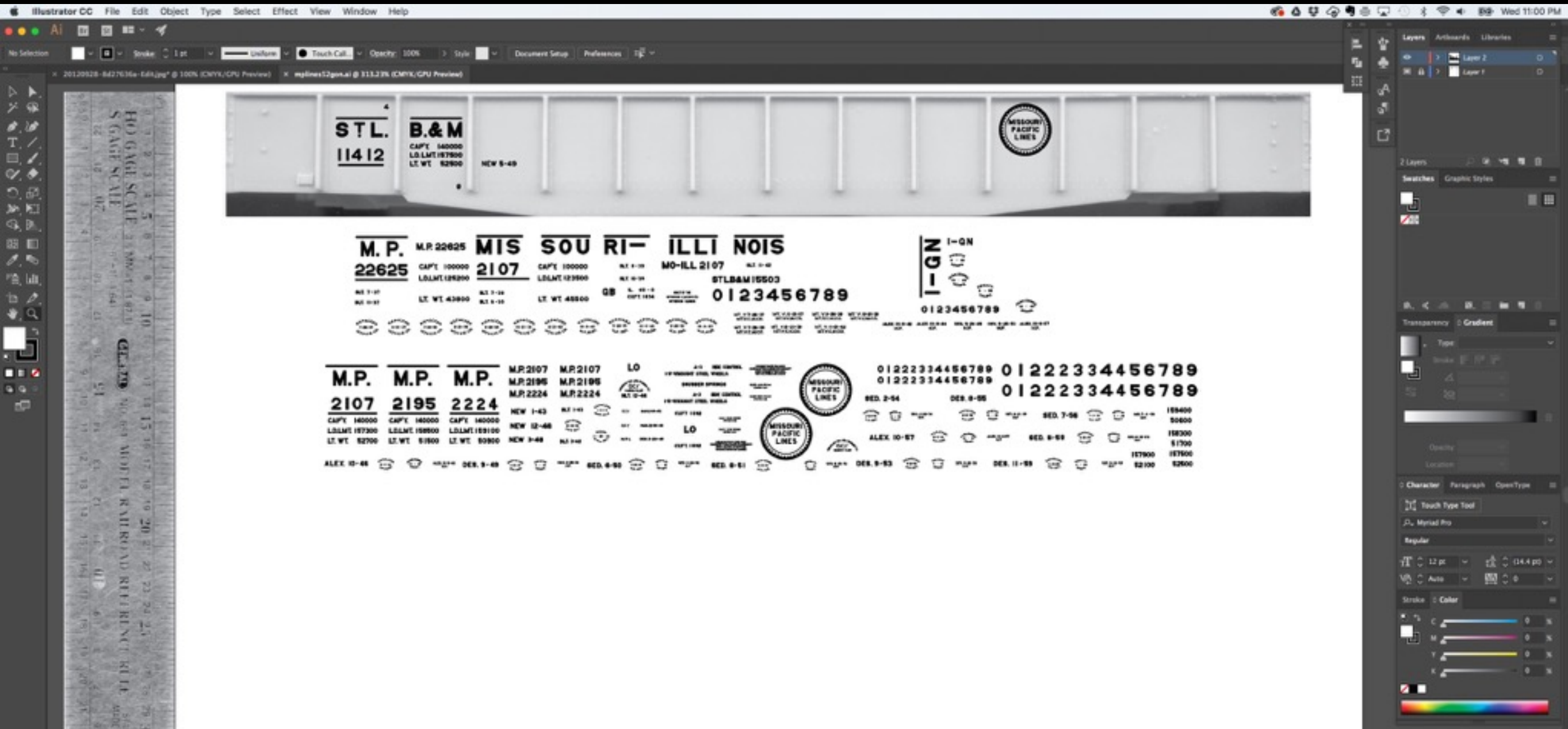


# Tools to Learn in Illustrator

- Selection (V)
- Direct Selection (A)
- Pen (P)
- Type (T)
- Knife
- Fill (X)
- Align
- Zoom (Z)
- Ellipse (L)
- Rectangle (M)
- Shift key
- Alt-Shift keys
- Object —> Transform:
  - Rotate
  - Reflect
  - Scale
- Type —> Create Outlines
- Group/Ungroup
- Object —> Arrange: Front, Forward, Backward, Back
- Object —> Compound Path —> Make
- *DO NOT* use Stroke unless you are certain you know what you are doing. It doesn't scale like other artwork.

# Tools to Learn in Illustrator

Scan model and scale ruler to aid in layout of lettering (as seen below, placed in the Template layer, on a work in progress)

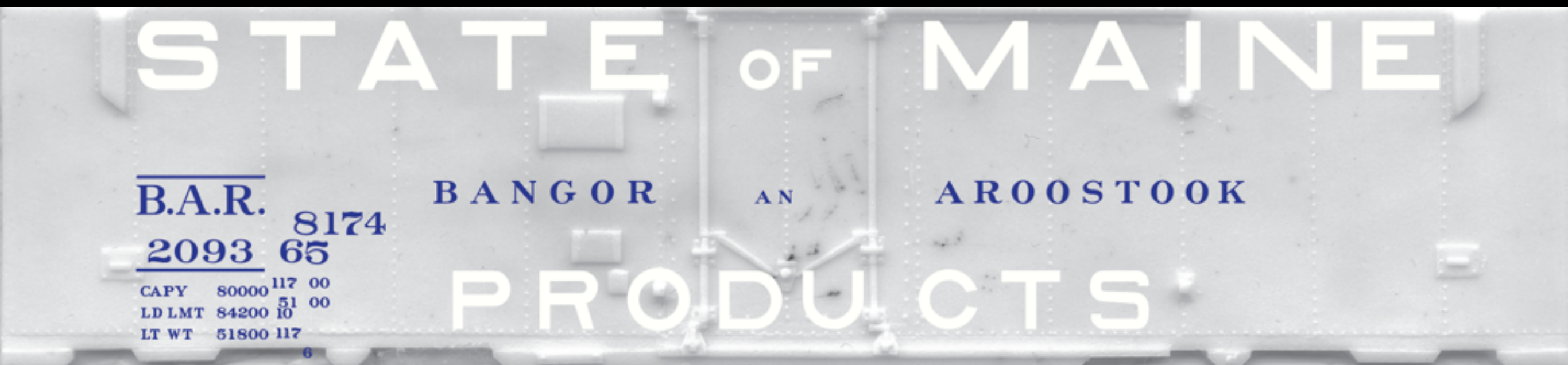




# A bit about fitting

Wherever possible, I work from a scan of the model, too, in order to make sure that the lettering I have created “fits” the model

This is an actual in progress image of the lettering for a BAR insulated box car (the “State of Maine” cars.) While I want the lettering to be as faithful as possible to the prototype, I also need to be aware of the various surface features on the model and how to ensure that the lettering “fits,” too!

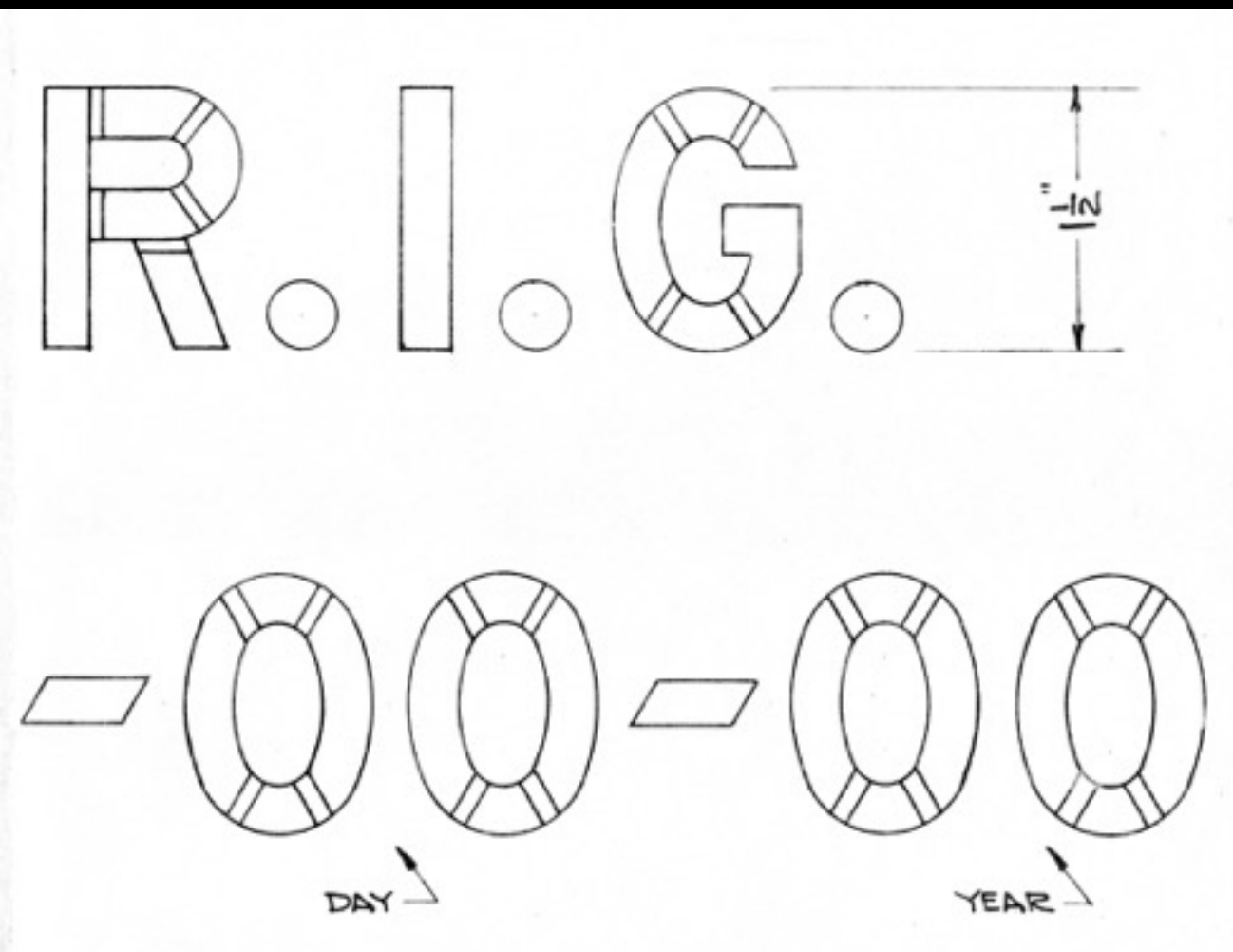


- ‘O’ in ‘PRODUCTS’ must fit around surface feature
- ‘D’ and ‘U’ in ‘PRODUCTS’ must fit between the door latching mechanism
- Second ‘E’ in ‘STATE’ must fit around a surface feature
- Reporting marks and capacity data must fit around hardware



# A note about stencils

Railroads applied stencils to the car side and then painted “through” them to apply characters. The stencils required webs or lines to be held together. These appear as “voids” when looking at the letters on a car.



Note “cut” lines in the character drawing at left. The small areas in each character are intended to be left in place to “hold” the stencil together

# A note about characters

While some railroads maintained a measure of consistency, some had many variations in characters that were used contemporaneously



This lettering for an Norfolk & Western box car covers variations that were all painted within less than a decade and contain numerous differences in size and style. If you use multiple photos to supply enough fodder to create all the lettering needed for a car or project, make sure that the characters are consistent (or that you are aware of differences) across your source material.

# A good pet project example

This car is one that I found interesting and feel would be a good addition to my fleet





# The first step

I started with a good sharp photo of the subject....

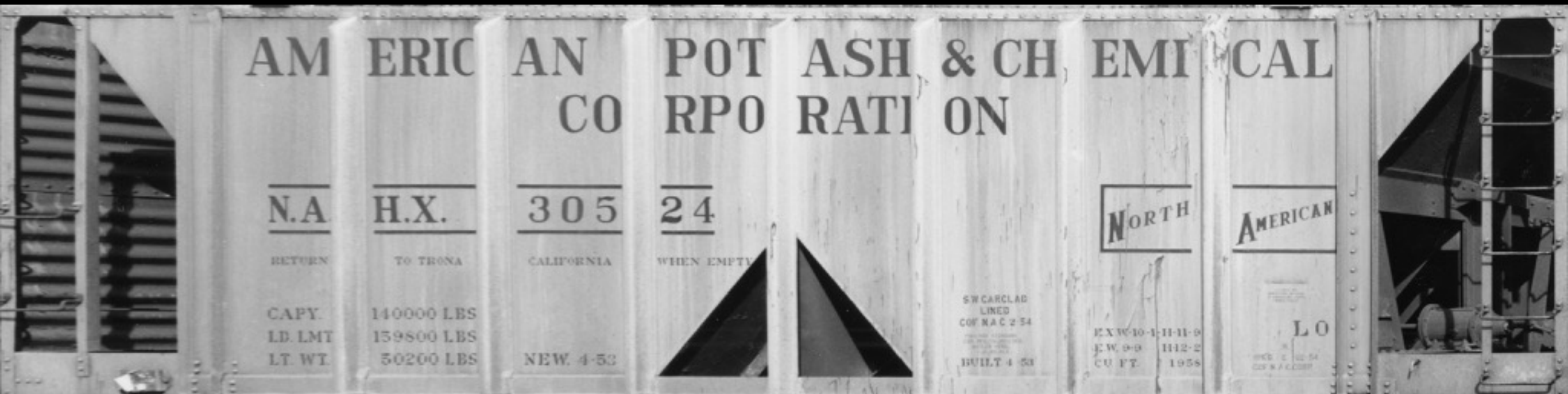


# Next

I “squared up” the photo...



...along with one other





# Then

Created and sized the artwork...



...and laid it out for printing



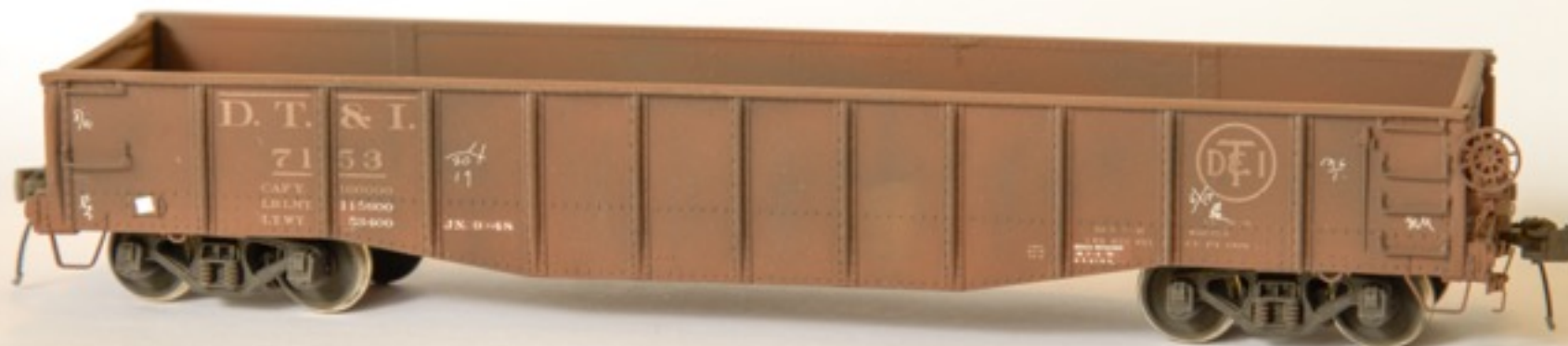




Examples of short-run decals printed by PDC. The quality is extremely high and they can be produced in quantities as small as a single sheet\*

\*8.5" x 11"





It's very satisfying and gratifying to see a model you've built that has the lettering in the correct places, in the correct sizes, in the correct styles, and knowing that you made it.

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# Tools to Learn in Illustrator



Go forth and make  
cool stuff like this