



# High Tech and Old School Model Building

Paul Wussow and Friends in the Three Lakes Model Railroad Club



- Supporting Model Railroading and Model Railroaders Of The North Woods
- The Three Lakes Model Railroad Club (TLMRC) was established to promote the hobby of model railroading for all ages. From Thomas Tank Engine to classic Lionel we invite all gauges and scale molders to join us in our love of trains.

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In the greater Three Lakes area we have participating members with layouts under construction in Lionel, On30, S, HO, HOn3 and N gauge and a display layout with 2 scales and 2 gauges operating.







- We have members and contributors who live in 5 Regions and 7 Divisions in the US and communications with Europe, Asia, and Australia.
- Interactive Video Clinics have been given from Japan and Germany and around the US while members travel for the Government.

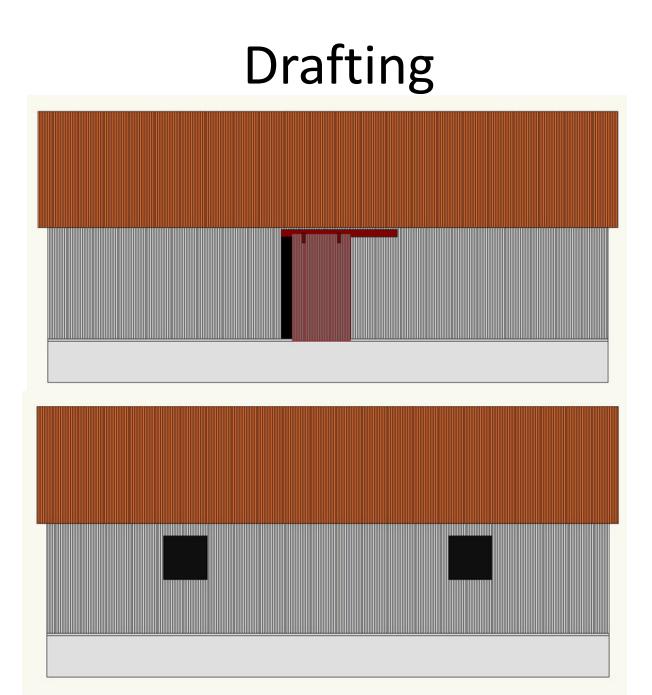
### Measuring Up



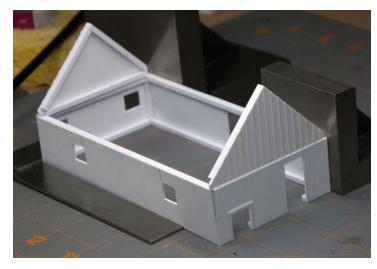
As part of the Measuring Up article we gathered dimensions of the warehouse.

# Drafting





### Construction

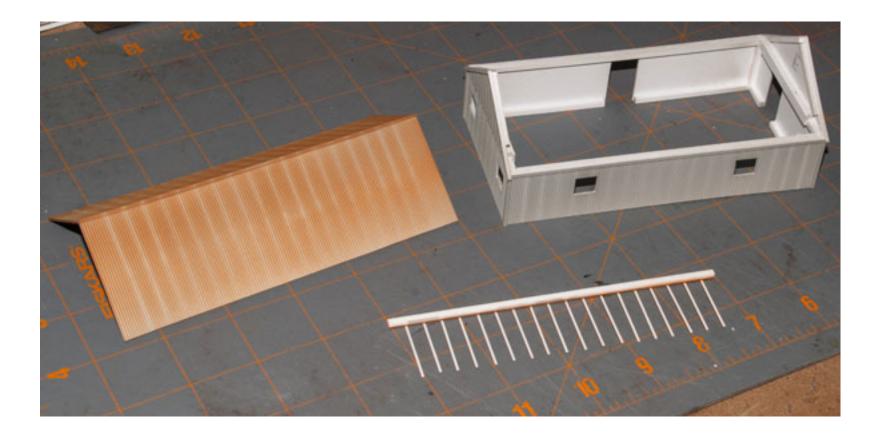




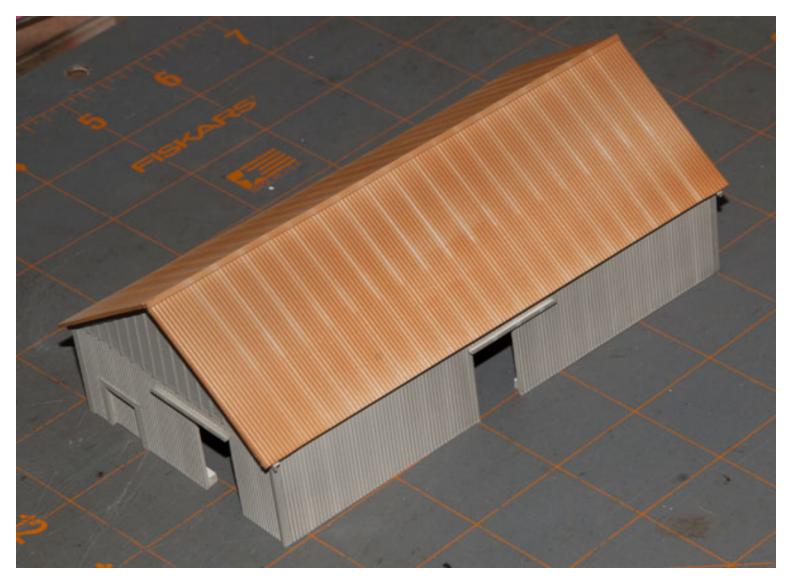




# Finish



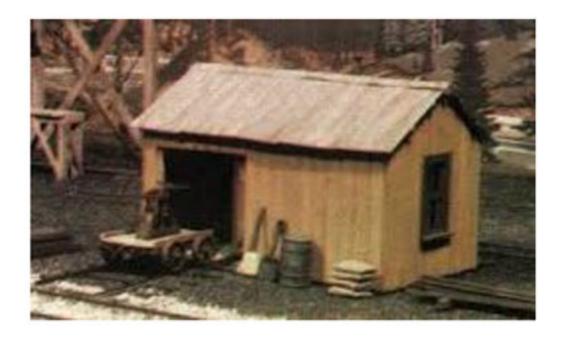
# Finish



# Ready for Additional Weathering



### Winter Project



#### This structure was designed over 20 years ago by Al Potts, MMR

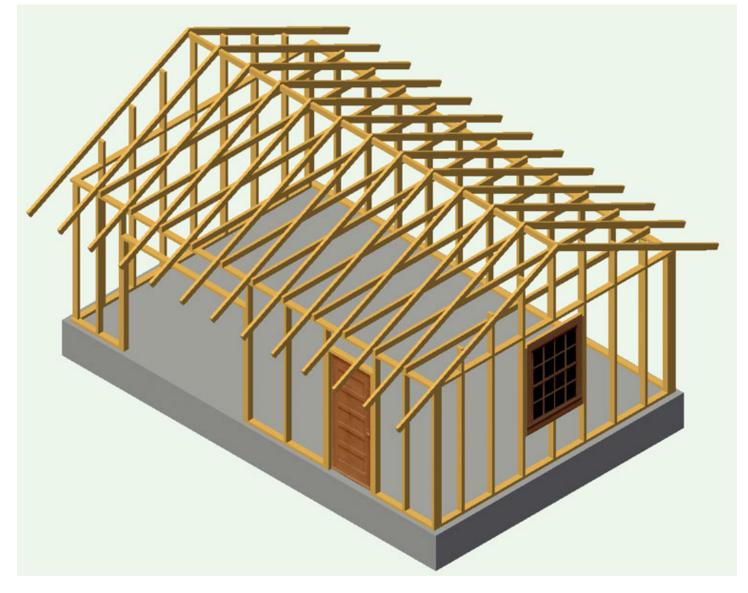
# Winter Project

- The project was a hands on clinic by Al Potts, MMR in the 1990s for the SCWD and he supplied me with a printed copy of his instructions and dimensions of the prototype structure.
- From these dimensions I drafted a new prototype set of drawings and scaled them to O, S, and HO Scale.

# **Vectorworks Computer Drafting**

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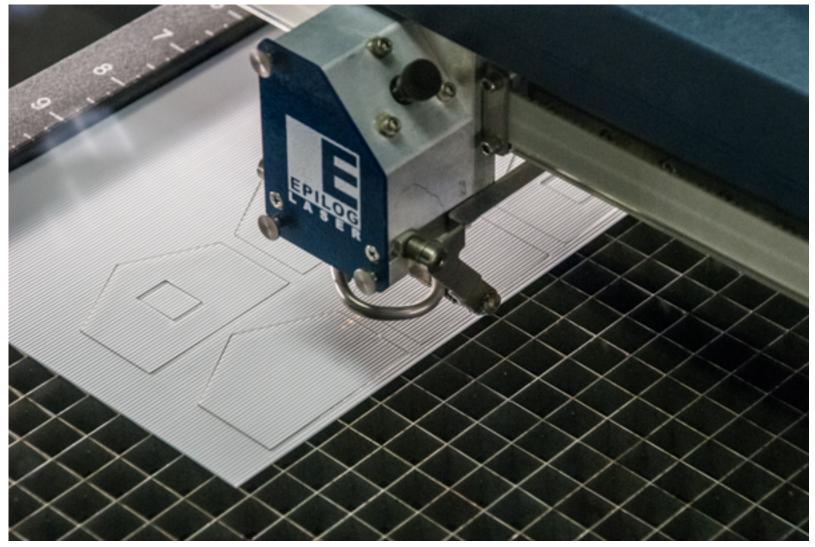
# **3D Vectorworks Computer Drafting**







# Construction (cutting with a laser)



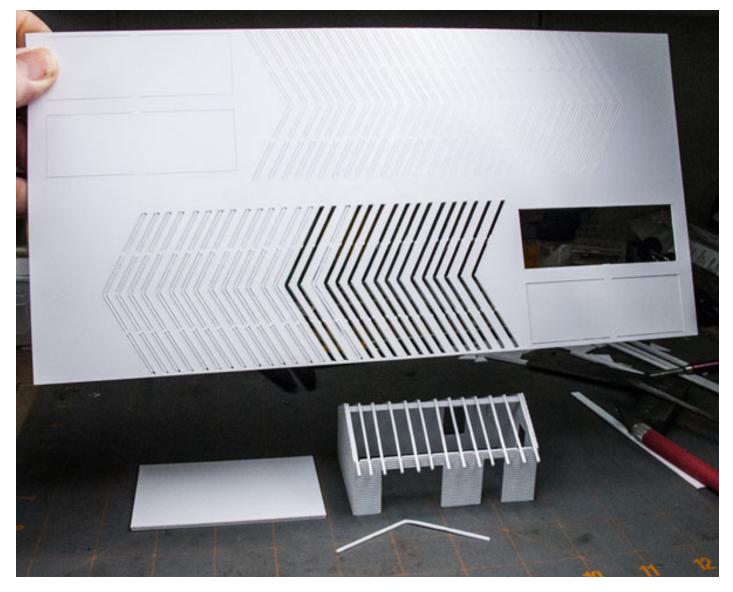
#### **HO Scale Results**



# Construction (Like a scratch kit)



#### Laser Cut Rafters



# Construction (Adding Details)



# Finished? Not yet



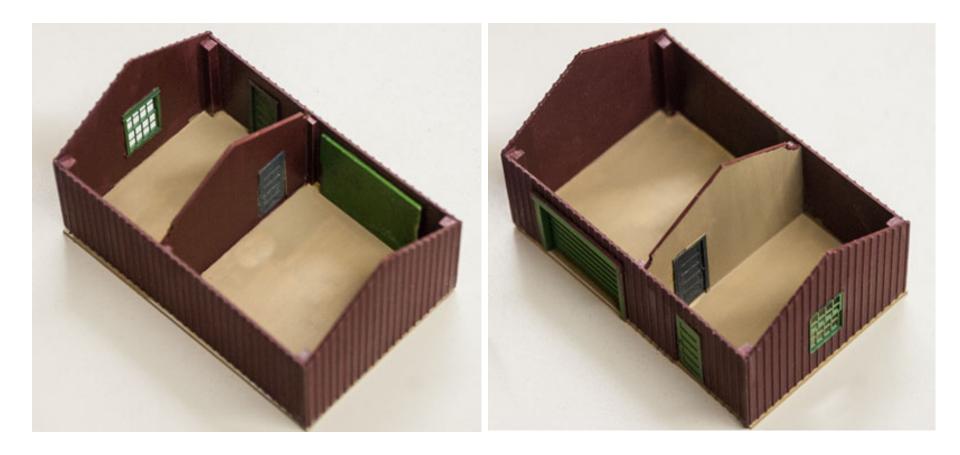
#### Bob Knobbe



# **Roofing with Construction Paper**



## Interior with office wall



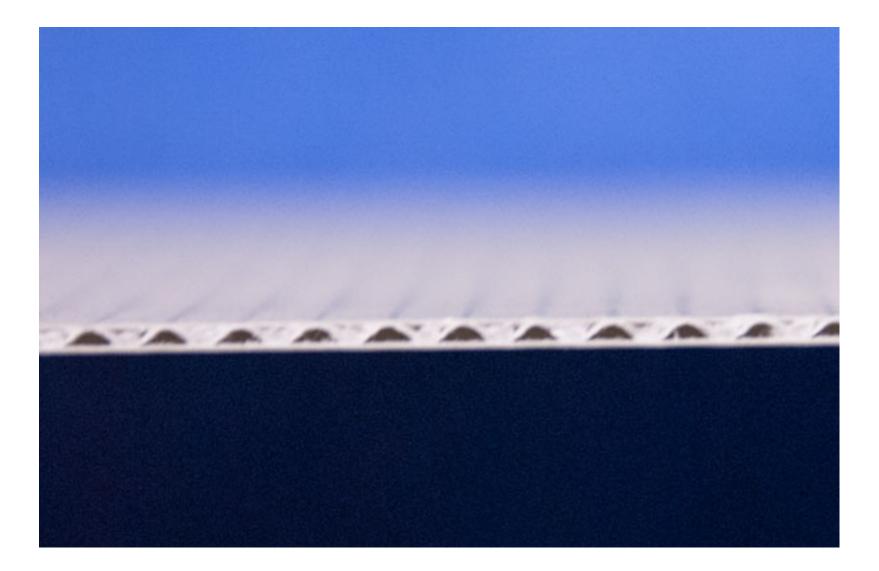
#### Paper or Plastic?



## Jack Zimmer Models in Paper



#### **Corrugated Paper**



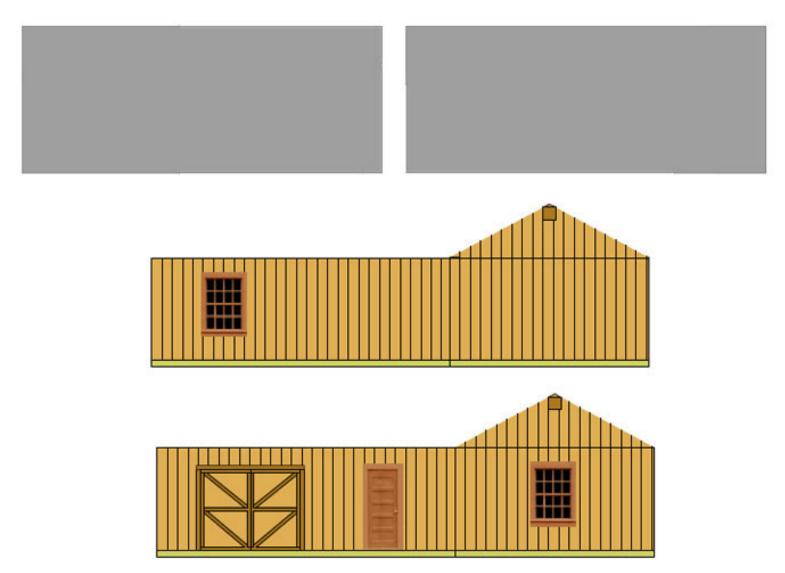
# **Double Sided Tape**



## Double Sided Tape



### **Printed Paper**



#### Double Sided Tape on to the Paper



#### Remove the Back of Double Sided Tape



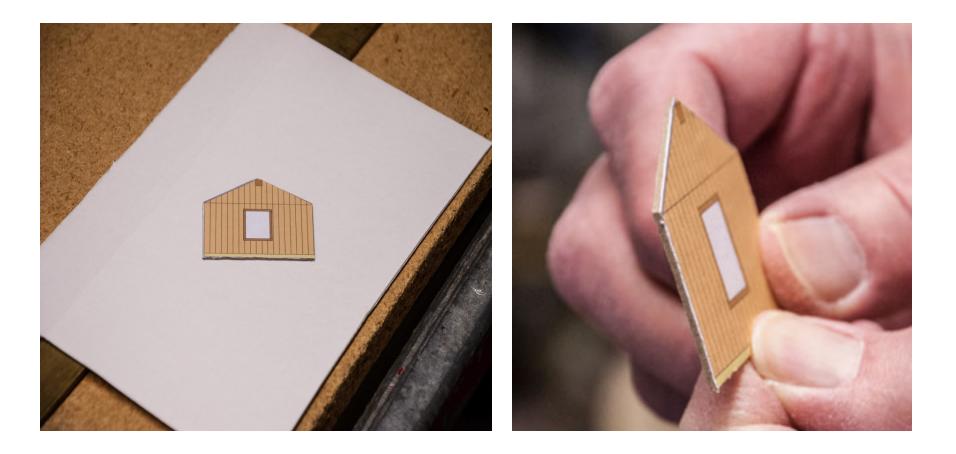
#### Place Corrugated Paper on Tape



# Cutting out the wall



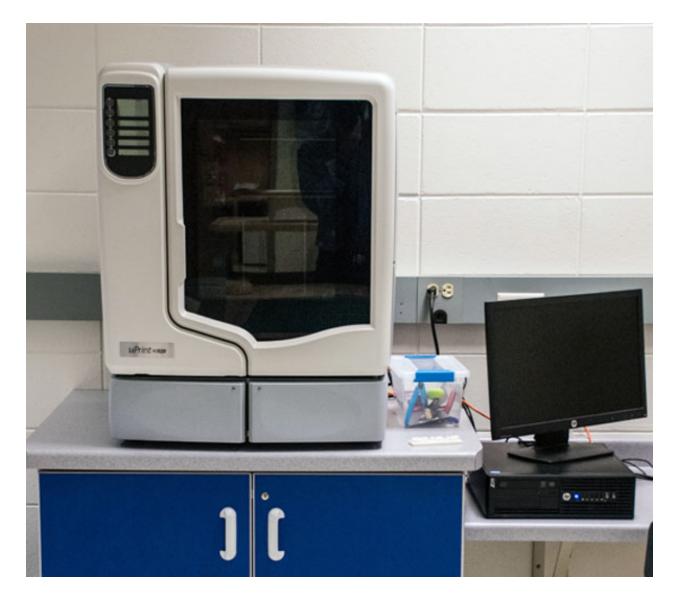
#### We have an end wall



## Paper Structures by Jack Zimmer

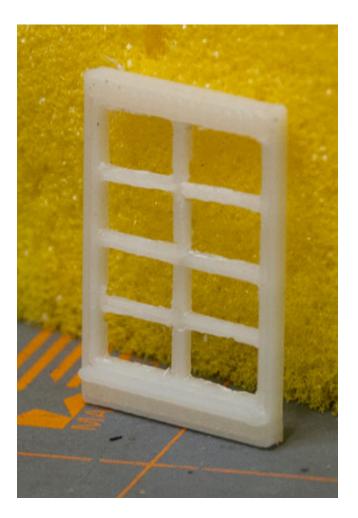


### **3D** Printing

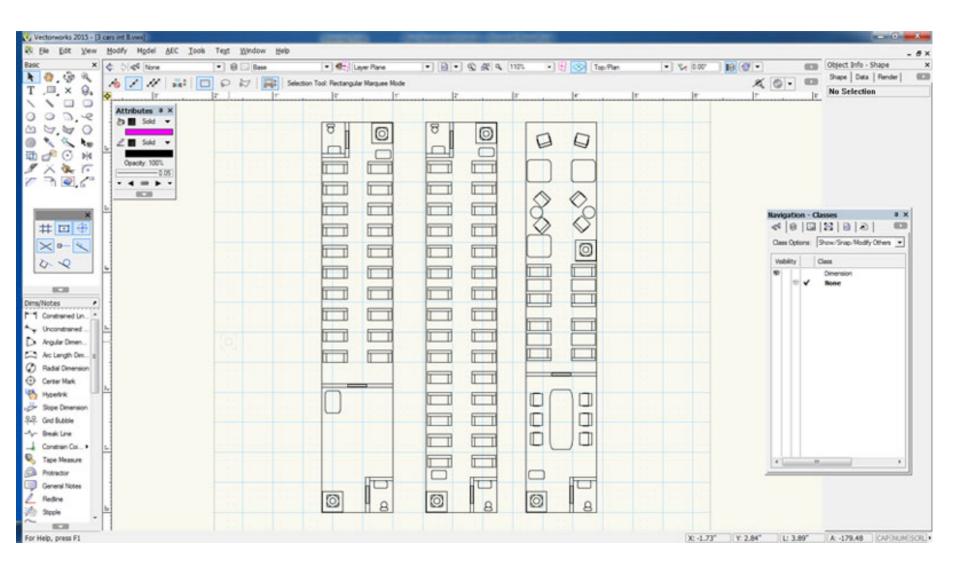


#### 3D Printed S Scale window and door

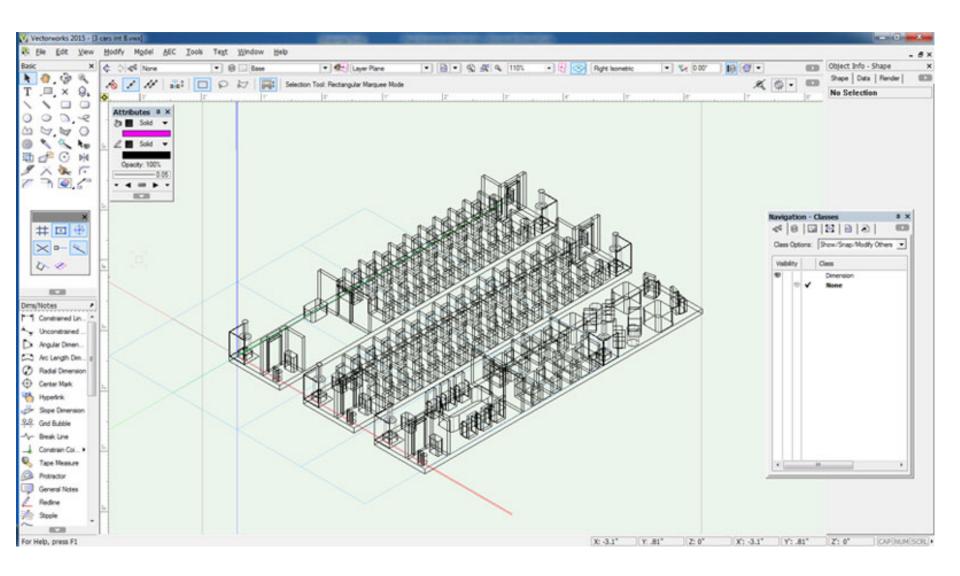




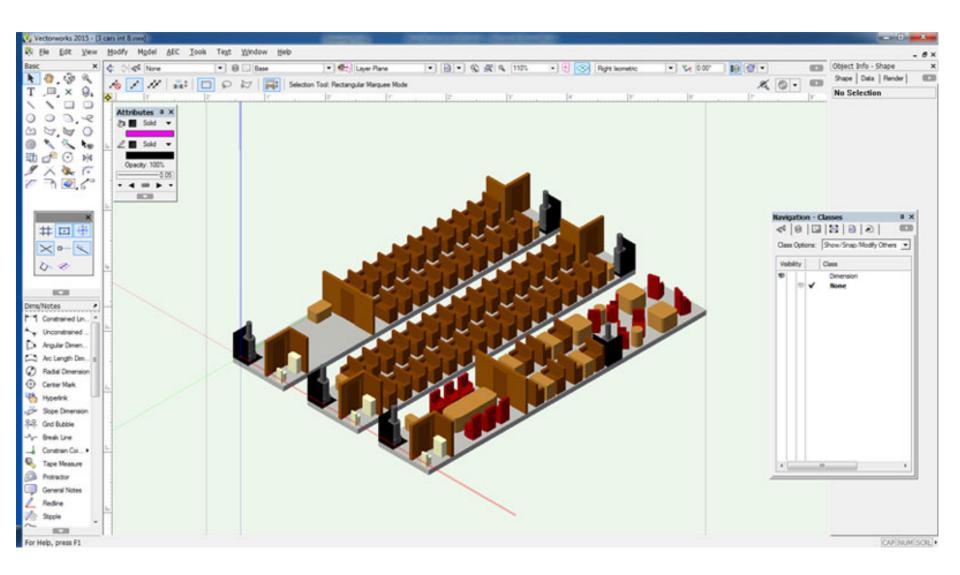
# Drafting for 3D printing 1



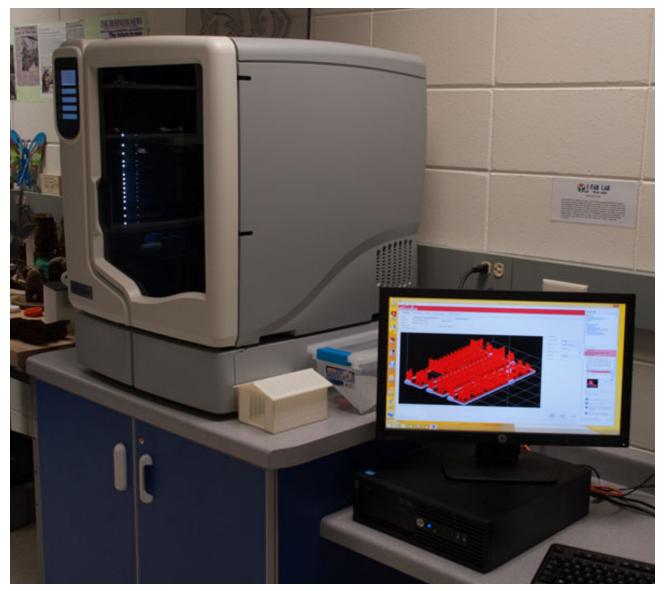
# Drafting for 3D printing 2



# Drafting for 3D printing 3



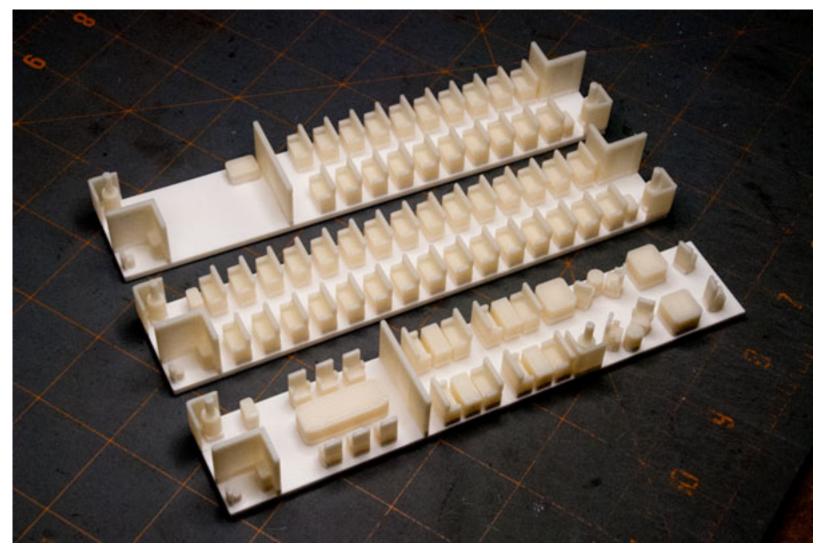
### Convert to .STL File and Load



## Print



# Ready for finishing



### Combine



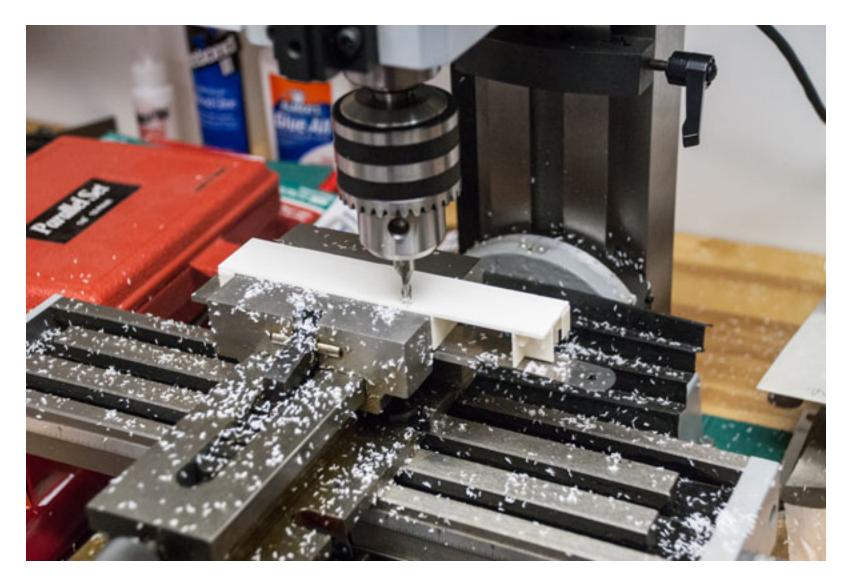
### Coach



#### **Business Car**



#### Adjust base of the print



### Reinstall



#### Share with others



# Share with others

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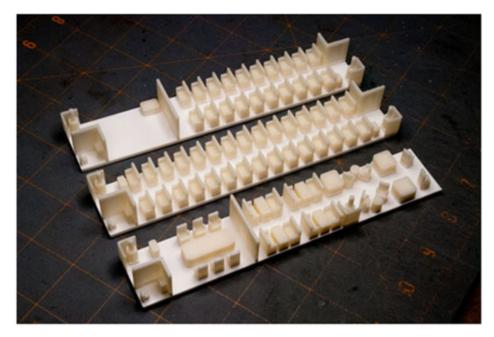
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#### Spread the Word







#### http://www.tlmrc.org

