

THE BRASS POUNDER



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Kansas Central
Division NMRA

Mid-Continent
Region NMRA

National Model
Railroad Association



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Upcoming Meetings

ZOOM KCD Turntable Meeting
Wednesday, March 17, 2021 @ 7:00PM

**ZOOM KCD Business Meeting
and Clinic**

Saturday, April 10, 2021 @ 1:00PM

ZOOM KCD Turntable Meeting
Wednesday, April 21, 2021 @ 7:00PM

Join the KCD on Facebook

Kansas Central Division-NMRA has a Facebook page and is for NMRA members only. It is a place to share model railroading adventures, post pictures, tell tales of woe in building your empire, post obstacles you have overcome, and ask questions. Have Fun. Simply enter "KCD" in the Facebook search block and select "request to join". See you there.

Table of Contents

Superintendent News.....	2
Director/Editor Comments.....	3
Minutes of the Last Meeting.....	4
Next Meeting Announcement.....	4
Building a Resin Butter Dish Milk Car.....	5
By Henry Kramer	
Cheyenne Backshop from Cardstock.....	7
By Ray Brady	
On a Binge Building Spree	15
By Alan Meinholdt	
Timetable	19

Superintendent News

By Ross Boelling

So, as I put pixels to screen today, I find it hard to believe that we are ALREADY almost a quarter of the way through 2021. I remain optimistic about returning to normalcy sometime this year. I have had my first shot and am scheduled for my second on March 16th. Spring is in the air; the birds are singing and I am thinking "garden". This is also the month I turn 65 and start to use Medicare. Those people used to be OLD. I mean REALLY OLD. Funny how time changes your perspective.

This month I am looking through the windshield rather than the rear-view mirror. Mostly I am not looking back because I failed miserably at accomplishing anything significant on the Lyona Valley Route. Fortunately, LVRR customers are not screaming too much yet. Grain business is in a lull and refinery shipments are off because of COVID-caused reduced fuel needs.

In the windshield are some rapidly approaching changes in my life. Lynnette has finished her contract at Wesley Birthing Center in Wichita and has accepted a new 12-week nursing contract in Ashland Oregon. Or, as I say: "Lynnette is Ore-GONE!" We will leave for Ashland on March 16th and she starts her new assignment on March 22nd. So, what does that mean for me? I am staying with her for several days as she gets adjusted. We are looking forward to visiting the beauty of Oregon. She will be located a handful of miles north of California and about 2 hours from the coast.

How does that tie into model railroading? Well, have you heard of Train Mountain? I have a friend in Montana that told me about it (he has a locomotive he runs there). It is an amazing place.

<http://www.trainmountain.org>

We will be about 90 minutes from it and my friend has put me in contact with someone who volunteer there and who will be available to show me around.

Train Mountain is the world's largest miniature railroad - over 36 miles of 7.5-gauge track on 2205 acres of pine forest spanning 2 miles by 4 miles near Chiloquin in South Central Oregon.

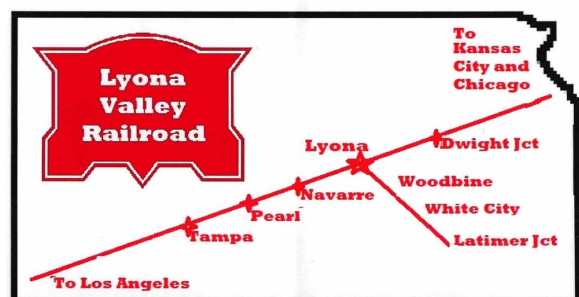
When I am done visiting, I leave on March 29th and will ride an Amtrak bus from Ashland to Klamath Falls, catch the Amtrak Coast Starlight to Bakersfield, and ride the California Zephyr from Bakersfield to McCook NE where my son will meet me. Roomette sleeper all the way!!

Then, our current plans are for me to pull the camper out to Oregon in early June before Lynnette's contract is over on June 19. We will camp a bit and I hope to meet up with my friend to attend a late-June Train Mountain operating session. Then we will camp back towards home. I also hope to find some layouts to visit and maybe do some Northwest US train chasing.

I hope you have been able to do some railroading this month. I really, truly, planned and hoped to get motivated on the LVRR during the long cold snap, but the train room cooled to 49 deg. So, I, instead, stayed upstairs close to the pellet stove and watched railroading on YouTube!

Look forward to seeing you on our March 17th Turntable and at the April 10th business meeting. I remain optimistic that we will get to meet in person sometime this year!! Get your shots!

Ross, Superintendent
Kansas Central Division NMRA



Director/Editor/Modeler Comments

By Ray Brady



It has been a long winter! Yes, it seems like it has been a 12-month winter. Last year, in the middle of the cold weather, the world entered into the pandemic and my life (and most of our lives) turned into a retreat from society. I self-isolated. I changed my shopping habits, I changed my interactions with others. Google became my friend. July 4 was "another day at home"- as was Thanksgiving and Christmas 2020.

We watched as friends became ill, and the world was thrust into turmoil. Well, almost! I learned that I could still go out to eat. Yes, I got in the car, drove around the block, return home, and fixed something to eat. Yes, I went out to eat! What a life.....

But, I also spent many hours working on genealogy and my model railroad layout. It was an opportunity to do things that didn't require interactions with society - things I had been putting off. It became my new norm - my routine.

Did I accomplish anything? I think so. I identified some Swedish relatives just down the block that I did not know I had. They had become lost to my family history until my research tracked them down. And, my model railroading led me in a direction not intended. You can read about that starting on page 7 of this issue of the Brass Pounder.

But what has been the consequences of this? First the "good". The model railroad community has learned new ways of socializing. The Kansas Central Division has entered into the ZOOM world - and expanded from bi-monthly to monthly. THAT IS GOOD! We started internet meetings in earnest last fall, and the opportunity for learning and seeing what others are doing, both inside and outside the Division has greatly expanded our horizons. No longer are we constrained by a 3 hour drive to get to a meetings - we can meet in the comfort of our home with people from around the world. And, other

Divisions and Regions have expanded their virtual presence to

include the whole world. Unintended blessings!

Is there a down side to this? Yes! Technology is not universal with everyone. We have excluded some. We still need the face-to-face meetings. I hear that from people within the Division. I hear that from people within the Region. There are some in Region leadership that are adamant that we need in-person meetings. And they are correct!

We are becoming weary of the isolation and the restrictions. Humans are a social beast. We are tired of isolation. We are ready to put it behind us. As a result, my calls for articles for the Brass Pounder have been met with fewer and fewer responses. I suspect we have been so immersed in the hobby for so long that we are extremely tired of the subject. We just want to let go of it and GET OUT OF THE HOUSE!!! Ray, go away!

I understand. I am the same way. March 10 I get my second *Fauci Ouchi* and am looking forward to FREEDOM. Not that I don't enjoy my cat, but I dearly want to get out. I am facing a new challenge - "What do I want to do first?" So many choices.....

So, take a break. Take a deep breath. The vaccine is being administered as you read this. More and more of us are being liberated daily. Some are back on the boat. Some are on the road to new places - me included.

Things to look forward to: The MCoR region convention in Tulsa October 6-10, 2021. This is a chance to see some superb layouts, attend some great clinics, see some fabulous models, and meet many other model railroaders from the Mid-Continent Region as well as the Lone Star Region. And trains shows are starting up, and, soon, we'll start face-to-face meetings for the Mid Continent Region Divisions. SEE you soon! ***There is light at the end of the tunnel.***

Ray



Minutes of the Last KCD Meeting

February 6, 2021

The February 6, 2021 meeting of the KCD was a virtual ZOOM meeting due to Covid limitations. The meeting was called to order at 1:03PM by Superintendent Ross Boelling.

Those in attendance were Ross Boelling, David and Chris Heinsohn, Alan Meinholdt, Larry Tiffany, Ken Mosney, Greg Schneider, Ray Brady, Henry Kramer, James Knabb, Pat Boltz and Tom Katafiasz.

The minutes of the December meeting were approved as read. The treasurer's report showed a balance of \$113.00

Superintendent Boelling stated that the Herington Train Show for 2021 has been cancelled and rescheduled for April 30-May 1, 2022 at the Herington Community Bldg. There were two other announcements concerning train shows in that the NMRA National Train Show has been cancelled and the joint Indian Nations Division, Mid-Continent and Lone Star Regions show has been rescheduled for October 6-10 in Tulsa OK.

Larry Tiffany has been voted in for another term as treasurer. Tom reported that he has submitted the 990 form which is a federal

form for 501-c(3) organizations.

There will be a KCD Turntable ZOOM meeting on February 17 at 7pm. The next regular KCD meeting will be on April 10 at 1pm.

Ray mentioned that he needs articles for the Brass Pounder.

The meeting was adjourned at 1:15PM.

The clinic presenter, Ken Mosney, introduced himself. He is from Rockford, IL. The title of his clinic was "Bits and Pieces, a Potpourri of Modeling Techniques". He began the clinic with a power point presentation describing "Fabricating Brass, Repairing Wood, Soldering Methods, Holding Small Parts, and Forming Brass" and other helpful modeling tips which were depicted on his handout. He mentioned using an alcohol lamp for soldering (has numerous advantages over a soldering iron), and Dycem, a very tacky substance used to hold small parts. It was a very informative clinic from which every attendee picked up at least one new modeling technique to be used in their modeling.

*Respectfully submitted
Tom Katafiasz, Clerk, KCD*

Next Two KCD Meetings via ZOOM

Turntable on March 17, 2021 @ 7:00PM

Business Meeting and Clinic on April 10, 2021 @ 1:00PM

Mark your
calendars

Mark your
calendars

Because of the Covid-19 virus, KCD will teleconference our next meetings via ZOOM. For those that have not used it, ZOOM uses the internet to allow us to see and talk to each other on a tiled screen. All that is needed is:

- A Mac or PC computer, an iPhone or Android phone, or an iPad/tablet.
- The Zoom Application on your device. (<https://zoom.us/download>) and highspeed connection.

Once you download the ZOOM Application, you are good to go. Ross will be hosting the session and will be sending out the internet connection meeting ID and pass code via email. The second level of security will be as follows: once you enter the passcode and press "join meeting" you will be placed into the waiting room. When Ross sees you in the waiting room, he will authorize your request to join the meeting, thus weeding out any unauthorized guests. If you do not have an internet connection, talk to KCD members in your area about "carpooling" if you are comfortable with that much

social distancing...



Building a Resin Butter Dish Milk Car

By Henry Kramer

In this article, we welcome Henry Kramer. Henry is an NMRA member currently registered in the Mid-East Region. He is currently working at Valmont Industries in Salina and is looking for a permanent place to live. We welcome him to the Kansas Central Division area. We welcomed him to the February 6 ZOOM meeting and look forward to his participation.

Several years ago I moved to the Hudson Valley in New York State. Soon after, a friend of mine invited me to join the New York, Ontario, and Western Railway Historical Society. Since I had never heard about this railroad, I went to one of their meetings to check it out. It turns out that the O&W had a long history serving the up-state New York region.

Briefly, the New York, Ontario and Western Railway started out as the New York and Oswego Midland Railroad, running from Oswego on Lake Ontario southeast to the New Jersey border at Unionville. It ran into financial problems and in 1880 was reorganized as the New York, Ontario & Western Railway. After the reorganization, the O&W expanded its operations from the Hudson River westward to Lake Ontario. During its long life, the O&W was never financially stable. It operated in rural mountainous areas making construction costs high and industry density low. Throughout its life the O&W depended upon three main income streams: coal, passengers, and milk. As these revenue streams dried up, the railway was unable to replace them with profitable alternatives and was forced into bankruptcy. On March 29, 1957 it ceased operation and liquidated its assets. (For a complete history of the railway visit the Historical Society website at www.owrhs.org.)

There was an article in the July 2020 edition of the NMRA Magazine titled *Borden's Butter Dish Milk Tank Cars* that I found very interesting. The article mentioned that these unique cars ran on many northeast railroads including the O&W. Additionally, it mentioned that resin kits from Funaro & Camerlengo were still available. In the past I have enjoyed building several F&C resin kits so when I discovered that one was available on eBay, I purchased it.

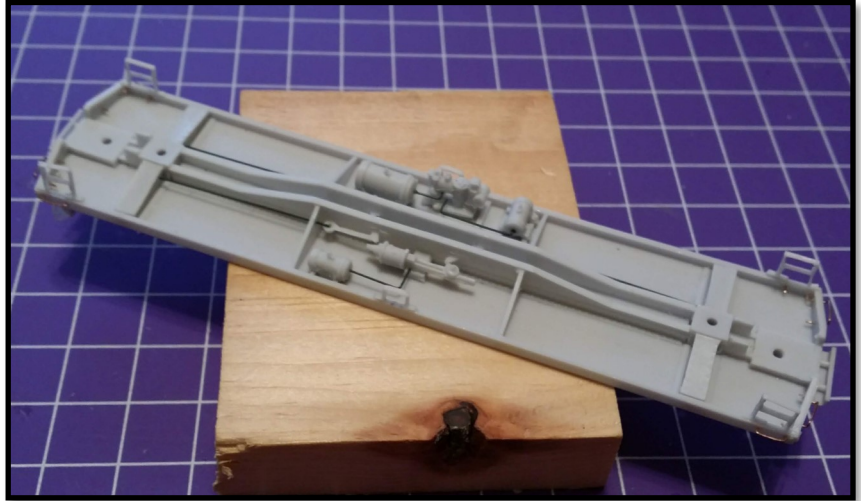
The kit I purchased must have been a newer version from the one mentioned in the NMRA article. The tank in my kit was fully formed and the detail parts were good quality. I did replace the trucks that were included in the kit with Bettendorf 33" trucks from Kadee. I also replaced the cast brackets with .012" Phosphor-Bronze eye bolts from Barker's Trains. Finally, in order to get the

correct coupler height I used underset shank couplers from Kadee. All of the F&C kits I have built had required using either underset shank couplers and/or adding several washers to the trucks in order to get the correct coupler height. The instructions were not particularly detailed but complete enough to build the kit. The only problem I had was



with the underside brake detail. Not being familiar with rail car brakes, the instruction statement “... *add the brake details with as much piping as you choose to add*” was not particularly helpful.

Around the mid 1930's the Borden company started building cars employing a cover, complete with doors and fittings over tanks already fastened to the floor. The cars had the appearance of a butter dish or inverted bathtub on a flatcar. Only a limited number (about 35) of these cars were ever produced. An additional unique feature of these cars was a vertical aluminum fin down the car's center. These fins were later removed, except on the ends, as Borden's contribution to a scrap metal effort at the beginning of WW II. The cars carried BFIX reporting marks and were used in Chicago and New York area operations of the Borden's farm Products Division.



During the car's life, it appeared in three different paint schemes. The red cars started to make their appearance in the latter part of the 1940s. By 1960, only 22 of the originals remained, finishing out their service lives in Borden's chemical and glue divisions.

Since I am not a stickler for historic accuracy, I elected to purchase and build a red Borden car for the simple reason that it would stand out. I also added the top fin for the same reason even though the red cars never had one.

Last year (right before COVID-19 hit) I started working for Valmont Industries in Salina KS. I rented an apartment in Salina expecting to stay for a short period of time while looking for a permanent place to stay. The pandemic disrupted my plans and the short term stay in an apartment turned into a long-term commitment. In my journey out west, I brought only a few basic modeling tools so building the kit was more challenging than it should have been. One hobby tool that I did not bring to Kansas was an air brush. So, when it came time to paint my car, I went to the local Ace hardware store and punched a spray can of flat black, gloss red and flat crystal-clear paint.



Overall I found building this car to be very enjoyable and am very pleased about how it turned out.

References:

1. Funaro & Camerlengo kit instructions
2. New York Ontario and Western Railway Historical Society's website at www.owrhs.org
3. "Borden's Butter Dish Milk Tank Cars", by George Dutka. July 2020 edition of the NMRA Magazine
4. "Milk Run! The Story of Milk Transpiration", by Rail by James A. Kindraka. January/February 1990 edition of Dispatch

Cheyenne Backshop from Cardstock with CricutMaker

By Ray Brady

Simultaneously published in MCor's
Caboose Kibitzer 2Q 2021

For the last year, we have been masked, are social distancing, and have otherwise been isolating from each other. The use of ZOOM has been a blessing, but it has taken a while for us to adjust to this new way of interacting with each other.

When the pandemic first started, I retreated to the four walls of my home and turned to model railroading and family genealogy. As I related in the [June 2020](#) issue of the Brass Pounder, I looked at the pandemic as an opportunity to put off procrastinating and spent some time downstairs with my layout. I chose the Cheyenne Yard to work on because, up to that time, I had conceptualized, installed benchwork for, and had only installed a double track passing siding to make the layout operational. I was putting off the installation of a **switching yard, passenger station, roundhouse, turntable, coaling tower, engine backshop,** and a **diesel service** facility.

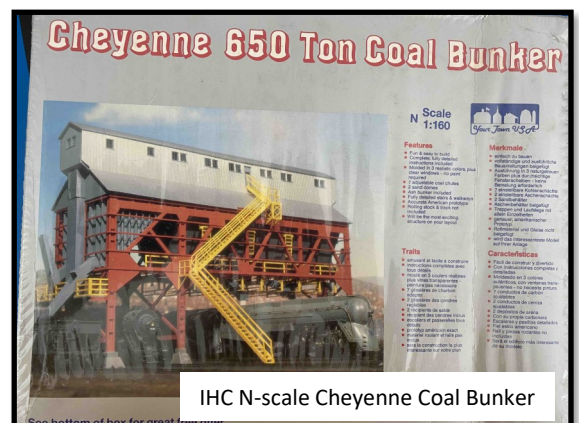
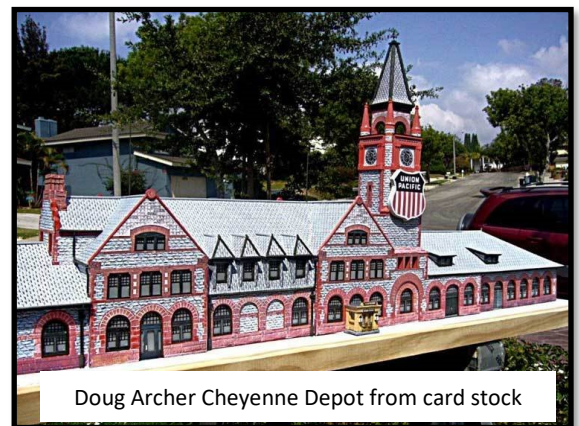
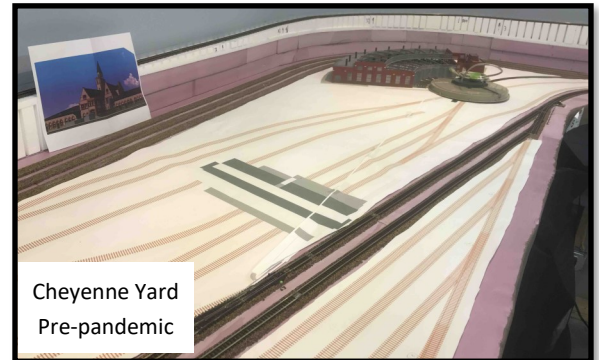
To start my COVID fun for Cheyenne, I installed some track and switches to get parts of the yard operational, and started investigating the Cheyenne Depot - with its unique architecture - to put in as a flat along the backdrop. That is when I started going in circles - circles to gather data, educate myself, more data, more education, etc., etc..

Internet searches found Doug Archer had scratch built a HO-scale Cheyenne Depot out of card stock. And, in those searches, I also found an N-scale IHC plastic kit manufactured in the 1980's of Cheyenne's 650 ton coal bunker. With the knowledge that a model of the prototype coal bunker existed, I scarfed it up from E-bay and became hooked on attempting prototype fidelity in Cheyenne. My yard area modeling now became a task of faithfully trying to represent the buildings found in Cheyenne. But that would mean scratch-building everything, since nothing was available commercially for the structures listed above except the coal bunker previously mentioned.

The process I have followed over the last year is typical of the design process I experienced during my working career, i.e.:

1. Define the objective (for example, Backshop)
2. Research
3. Design
4. Fabricate
5. Test the design
6. Define the shortcomings
7. Redesign
8. Repeat steps 4, 5, 6 and 7 until the objective is met.

As you can see, it is an iterative process to arrive (in



my case) at the Cheyenne structures I needed.

Research

Let me begin with data that I have used: i.e., what would the structures look like? I found various sources to get dimensional information so that I could build the structures. The most useful resources were the following:

- *"Union Pacific's Cheyenne Facilities"* by A. J. Wolff and J. L. Ehernberger
- *"The History of the Union Pacific Railroad in Cheyenne"* by Robert Darwin
- Various *"Streamliner"* issue published by the Union Pacific Historical Society
- A visit to the UP Steam program facilities during the 2017 UPHS convention in Denver, as well as visits through Cheyenne in other years.

These publications and in-person visits contain invaluable information in the form of photographs and dimensional data. They were what I referenced to "see" what this or that part of the building looked like. Were they complete? No! Were they sufficient to make assumptions about the structures? Yes!

Once I started getting the data, it was time to chose the guinea pig structure to start the ball rolling. I chose to start with the Engine Backshop. I chose it because it was a long pole in the tent. I had limited space available on the layout to put it. The design of the track plan depended on its size and location.

Originally, the Cheyenne Backshop was a 17-station building attached to the roundhouse with 4 rails entering from the roundhouse at the north end and 4 other rails entering from the yard at the south end. The building was composed of three sections - an 82' erecting portion on the west, a 70' heavy machine shop area in the middle, and a 41' light machine shop area on the east. It was a formidable 195' X 410' structure—almost 80,000 sq ft.

With the demise of steam but the continuation of the UP steam program (think engines 844, 3985, and 4014), the remnants of the backshop are currently the equivalent of 7 stalls. This building is where the heavy maintenance of the UP Steam Program locomotives is performed.

Design

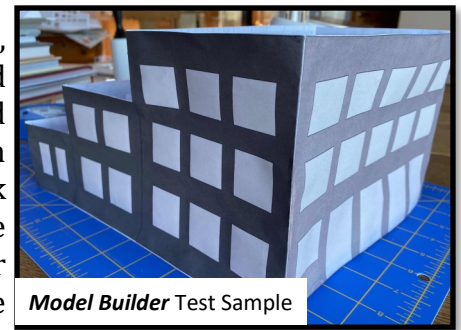
I now needed to put the information into a format that would translate to something tangible - what were the dimensions and how would the building go together? Various CAD programs are out there that could accomplish my purpose. However, I had no experience with any of them, and there would be a significant learning curve to go where I wanted. Also, my initial choice was to pick card stock as the medium because:

- I liked what I saw with the Doug Archer card stock HO model mentioned earlier.
- I liked the concept of preprinted card stock to make the various surfaces of the buildings - no painting would be required.
- The material would be easy to obtain, limited only by printer ink and paper supply.
- Cutting the paper products would be easier than styrene or wood.

My initial choice was to try Evan Designs software called **Model Builder**—the software used by Doug Archer for his Cheyenne Depot. It is an entry level bundle that lets the user design card stock



models. It has built in textures (material representation) for siding, roofs, windows, etc., and lets you design buildings that can be printed on your own home computer. I tried the program by designing and printing the engine backshop and printed it on copy paper as shown in figure to the right. The process demonstrated that clearly the card stock process had merit but it seemed constrained by the flexibility of the **Model Builder** program. It was good for what it could do, but after trying it, I felt that the building could be much better if I could put more detail into the design.

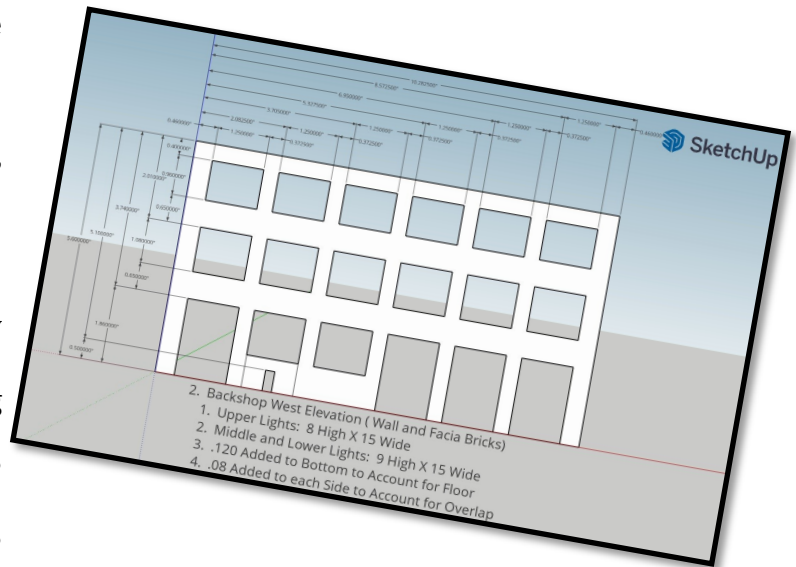


I then turned to **Sketchup**. It is a 2D/3D design program that is free, available online, and seemed to provide what I wanted without a steep learning curve. I initially thought about FreeCAD, AutoCAD, CorelCAD, TurboCAD, or others that I found by searching the internet. But they either had a steep price tag (\$\$) or they were far more complex than I needed. I downloaded FreeCAD (free software) but quickly got bogged down because of its complexity.

After establishing the layout's Backshop footprint of 135' X 160' (10.13" X 12.0" in N-scale) for a 6 stall Backshop to fit in my allotted space, I proceeded to generate each side's 2D representation. This is smaller than the prototype, but that is what model railroading is all about - selective compression and scaling back but still be recognizable of the prototype.

I elected to do the Sketchup design as separate sheets representing the "flat plate" representation of:

- Floor
- West Wall
- North and South Wall (the same only reverse images)
- Clerestory Roof over the 82' erecting bay
- Double Sawtooth Roof over 70' Machine Shop
- Single Sawtooth Roof over the 41' Machine Shop
- The East Walls (series of Short Walls Connecting the Clerestory, Double Sawtooth, and Single Sawtooth roofs.



In all, 21 "sheets" have been generated to get the desired level of detail necessary to move on to the fabrication of the structure. The above figure is a sample of the sheets showing the west wall detail.

Fabrication

To fabricate the structure, I needed to obtain the cardstock material and then cut it out to the dimensions indicated by the above design phase.

First the **Material**: Initially, I thought I could use commercially available brick sheets instead of cardstock. But that did not prove feasible. I got some "brick" sheet styrene from N-scale Architect, but the "brick, because of the N-scale petiteness, turned into bumps on the styrene. Not acceptable!! Not the right kind of detail. There are styrene sheets available for larger scales that look good, but in N-scale, it just does not give the detail.



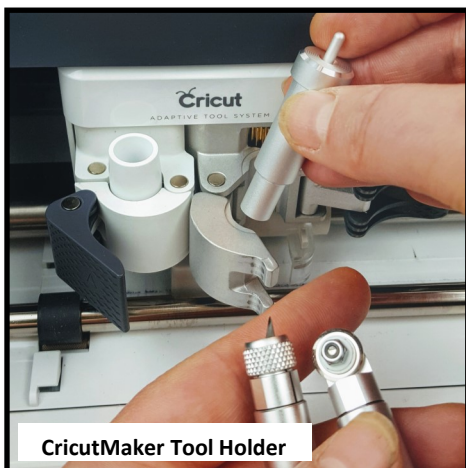
I also found a number of web pages that allow you to download printable sheets for various materials in N-scale. But, the sheet size was limited to partial coverage of an 8.5 X 11 sheet—it would not print borderless. I needed more flexibility since the Backshop model would need 8.5 X 14 and borderless to print the 12” sides.

So, I turned to the internet so see what was out there that would let me create brick (and other materials). What is found was a web site called textures.com. This is a site that has thousands of “textures” that are photos of various brick, doors, floors, landscapes, and much more. The site contains photo images that can be “scaled” and even better, can be “tiled”, i.e., multiple images of the same photo can be joined to make a seamless, scaled brick sheet, roof, floor, or whatever. Perfect!!! I can make the sheets I need to for the 8.5” X 11” and 8.5” X 14” sheets I need for the Backshop.

But what about the tiling procedure. That is a simple (so they say) photo manipulation process. All you need is software to do that, right? Well, Photoshop and I don’t play well together. And it is expensive. Enter another search for photo manipulation and I find **GIMP** software. It is similar to Photoshop, but it is free. Yes, there is a learning curve associated with that, but that is where YouTube videos enter the equation. There are many videos that have been posted that take you through specific photo manipulation processes - including the tiling process that I need. So, with **textures.com** and **GIMP**, the source of card stock material was solved.

But what about **Cutting** the material. I indicated that cardstock would be easier than styrene to cut. But how to do that accurately was my question.

During the search where I located the textures and photo software, I accidentally came upon the **Cricut** machine. No, No, not the crickets I routinely encounter in the fall when they come into the basement to escape the winter cold. I’m talking about the Cricut machine that the crafters use - normally of the female gender - to do their crafting. Now, lest you accuse me of being sexist, there are male-gender folks that use it too. But, just not as many. And, as I started doing some

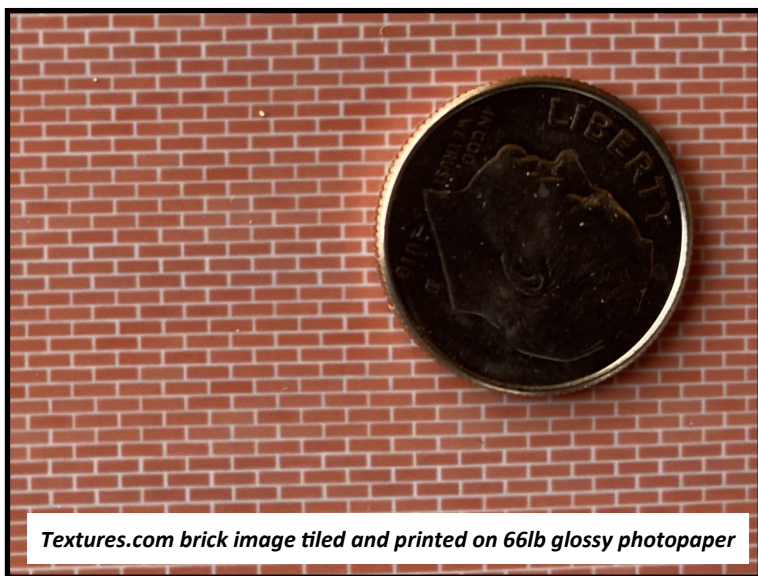


CricutMaker Tool Holder

Google searches, I am finding there is a steadily

growing cadre of model railroad folks that are using the machine. In fact, there is a Facebook group called **Modeling with the Cricut Explore** of almost 500 modelers

So what does the Cricut do? It is shown in the image and has an x-head and a y-bed where various tools can be used to cut, draw, or score various materials to .001” accuracy. Shown at left are some of the tools that can be put in the Cricut head to draw, cut, or score on various media. In addition, various media are preprogrammed into



Textures.com brick image tiled and printed on 66lb glossy photopaper



CricutMaker

the machine, such as:

- Artboard
- Cardstock materials
- Craft foam materials
- Aluminum foil
- Paper products
- Plastic materials
- Balsa to 3/32"
- Basswood to 1/16
- Birch

Further, the materials list is customizable to cut other materials, including styrene and ABS (which I have done). So, after purchasing a CricutMaker, test samples indicate that it can:

- Draw on transparency material to simulate glass panes using markers. In the prototype Backshop, 50% of the walls are glass. It has 17,000 windows panes that I estimate are about 16 "X 20". The Cricut makes drawing those .083" X .12" N-scale windows easy-peasy....
- Cut on card stock to produce the wall flats necessary to glue together to yield the finished structure.
- Score the cardstock to produce crisp fold lines for the corners and roof ridges.

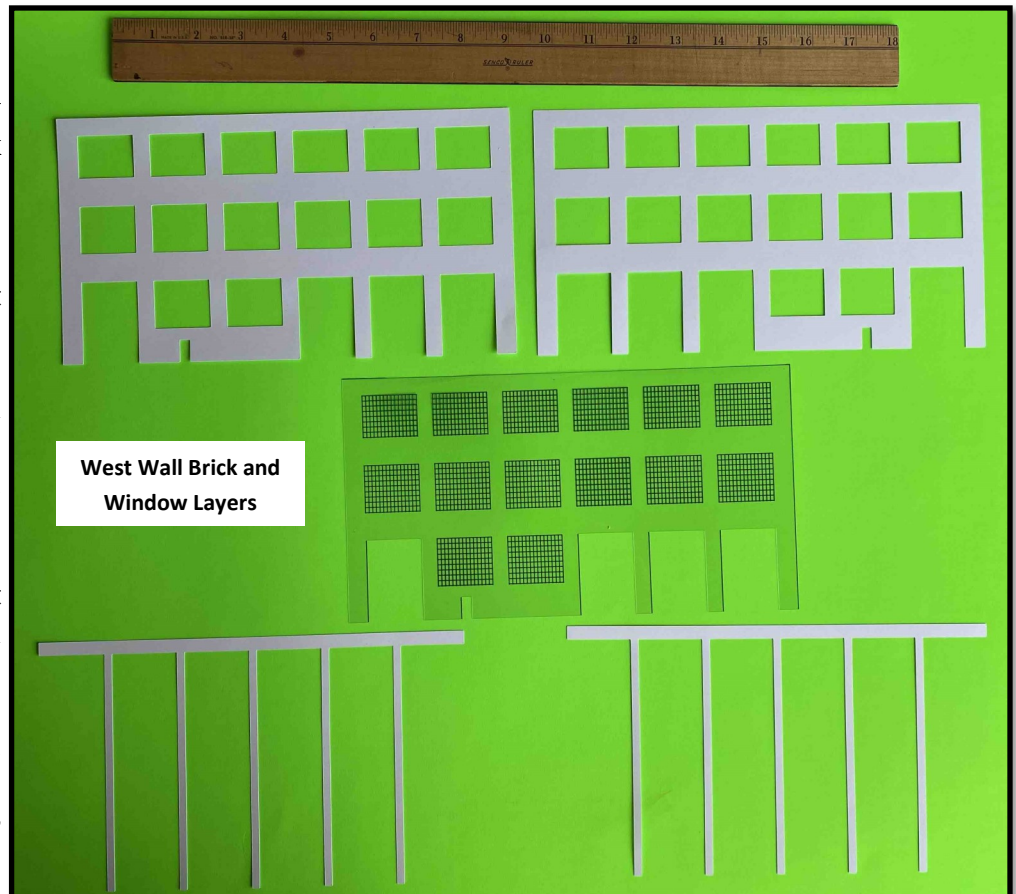
And the accuracy is superb. I could never make such precise perpendicular and parallel knife cuts, or draw those parallel lines on a transparency if I tried to do it by hand. Terrific!!

Oh yes, because the Cricut has the ability to cut more than cardstock, I obtained some .010" and .020" gray ABS sheet material and have successfully designed and cut gray "roof trusses" to support the clerestory and sawtooth roofs. Gray means no painting—they are already industrial gray... Perusing the internet, some modelers have reported they have cut .040" styrene.

Test the Design

So, now to test the design. I elected to do a "proof-of-concept." I started with 110lb white cardstock, Duralar .040" transparency film, and .020 gray sheet ABS materials to test out the design. (Why consume ink to print the brick and wood when the dimensions may change?) I transferred the Sketchup dimensional data in the Cricut software that comes with the Cricut machine and came up with the necessary cut and draw lines to cut out the sides and roofs. And, I programed the Cricut to draw lines on the Duralar representing the panes of glass. The Cricut software is easy to use and also makes it easy to include gluing tabs so that the resulting pieces can be glued together.

Starting with the 4 walls, I made each wall as a 5-



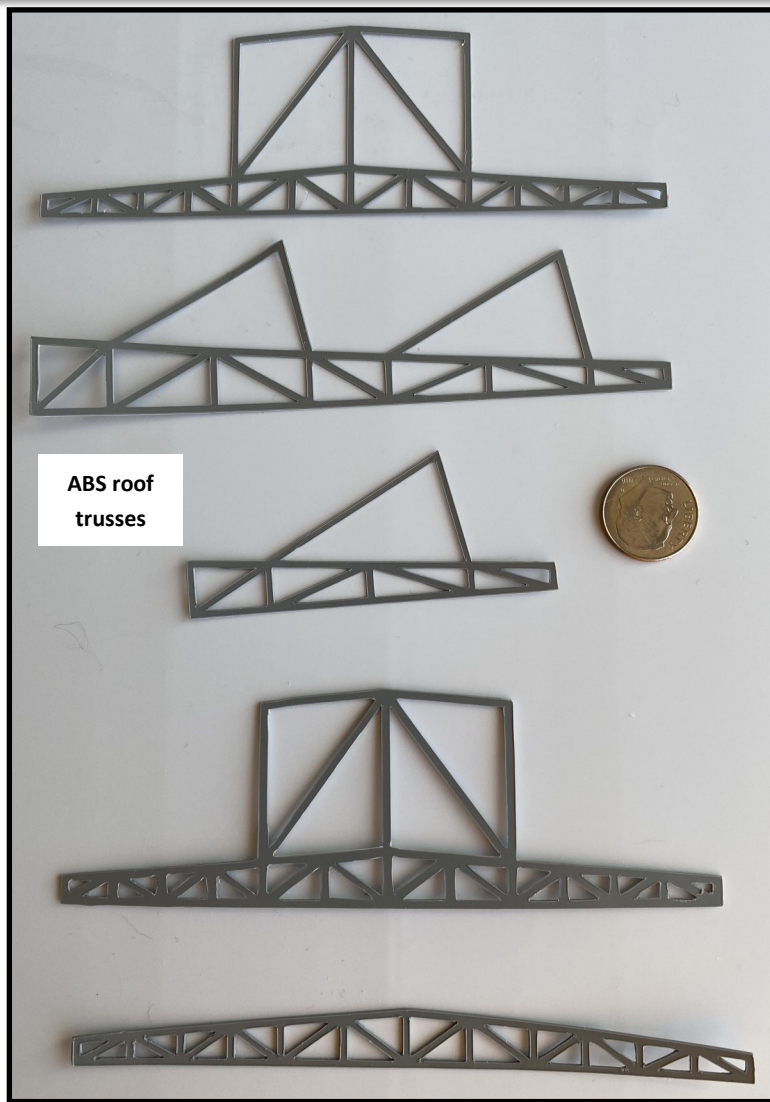
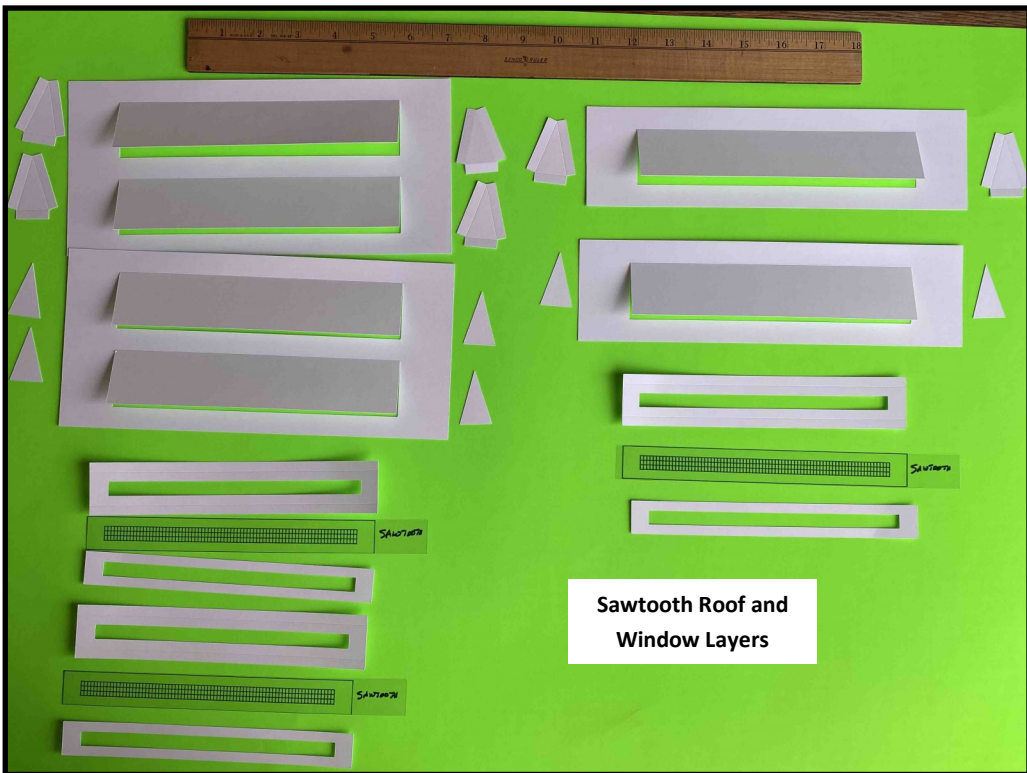
piece lamination. Because of the Backshop architecture, the walls will consist of a 5-piece sandwich consisting of brick relief, brick wall, windows, brick wall, and brick relief as shown in the figure to the right. This arrangement also allows the interior of the wall to be detailed, yielding a better representation of the prototype interior.

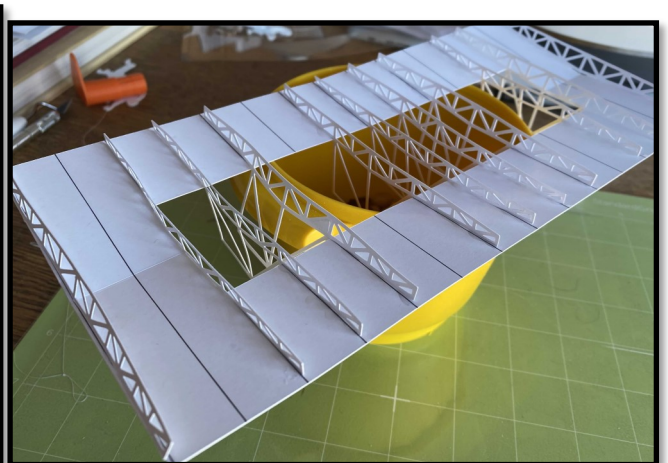
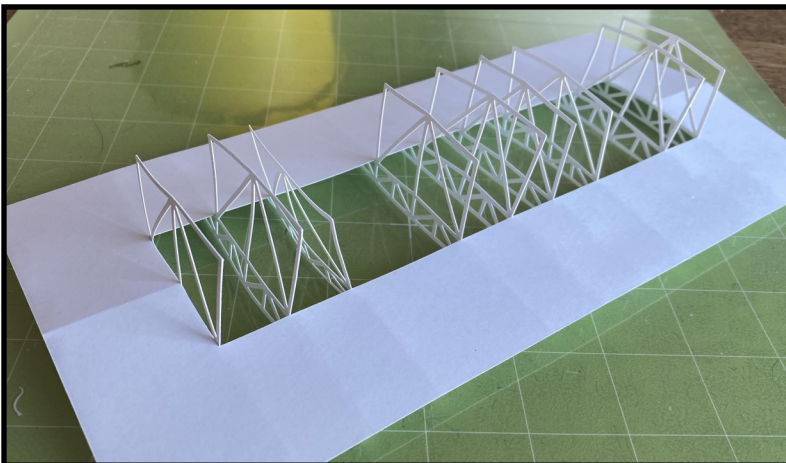
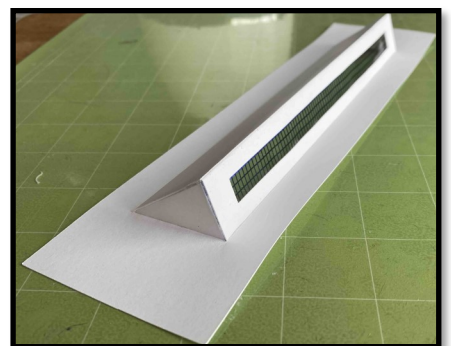
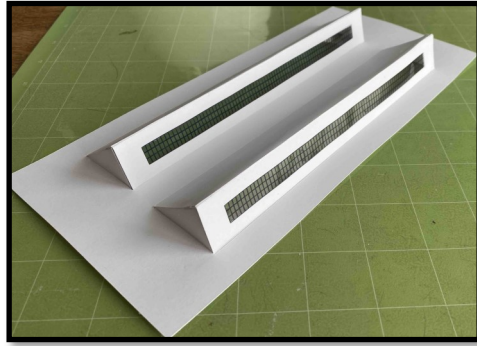
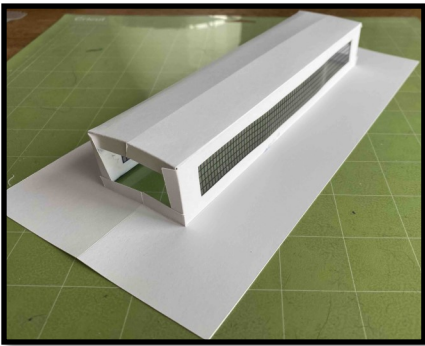
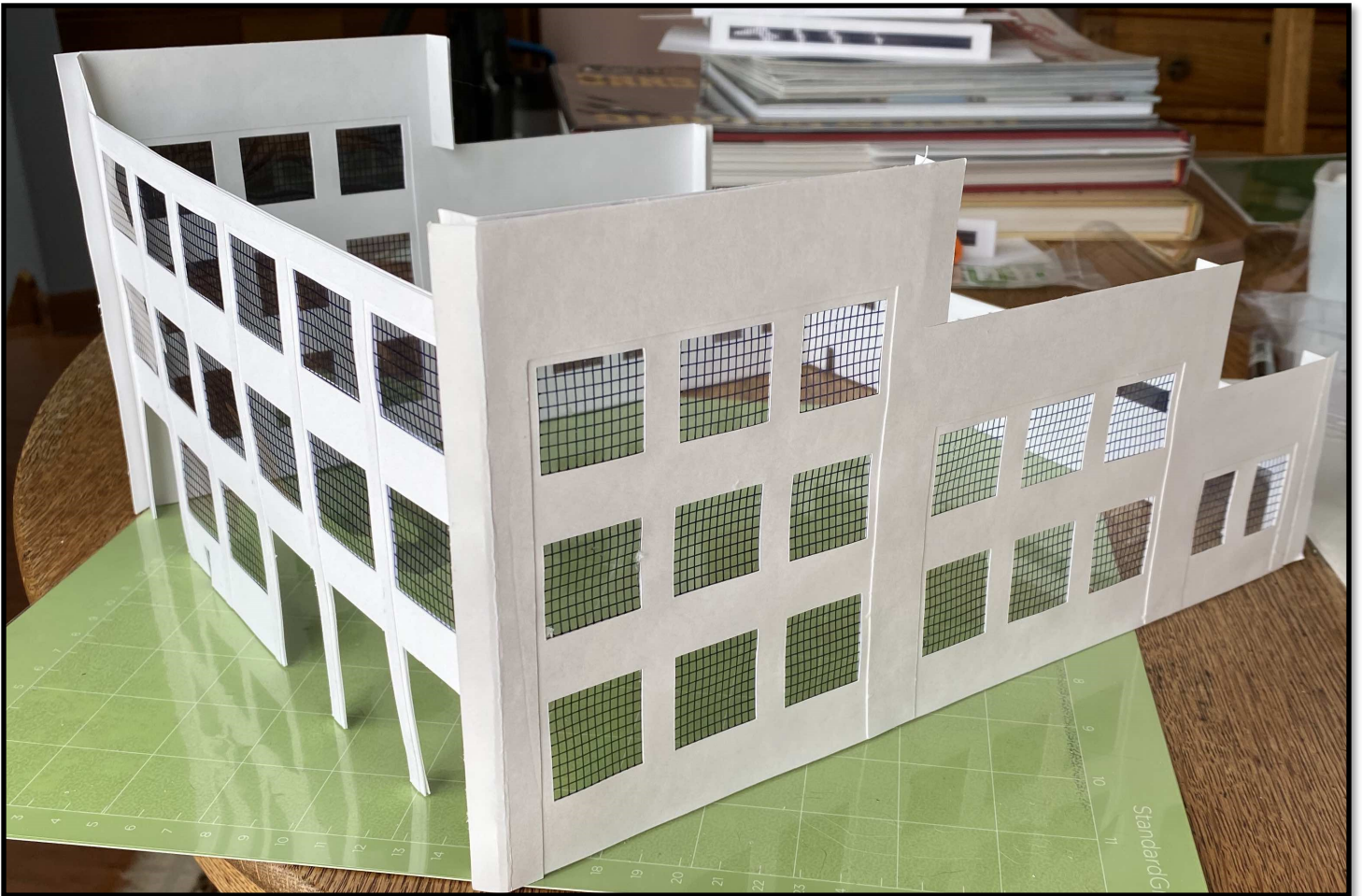
Similarly, the roof will be three layers consisting of an interior cardstock roof structure showing the wooden beam ceiling trusses and sheathing visible on the inside of the underside, a layer for the Duralar window glazing, and a cardstock layer for the exterior rolled roofing as shown to the right.

To support the roof, trusses similar to the prototype were designed and cut by the Cricut from gray ABS sheet as shown in the figure to the right. The top three trusses are cut from .010" gray ABS, and the bottom two trusses are .020" ABS, and together with purchased Plastruct beams and columns (again in gray ABS material) the building steel framework can be modeled—already in a gray color representative of “industrial gray paint.”

The design of the trusses meets my expectations. The Cricut stringers in the trusses, as cut, are .020" X .050" (Prototype 3.2" X 8"). This puts the truss stringers at a heavy cross section, but anything smaller would be too fragile to be practical. (One thing learned during my working career was that hardware does not scale. Practical limits come into play.)

The figure on the next page shows the proof-of-concept of the Backshop using 110lb cardstock. The Cricut machine tolerances appears to have an accuracy of .001. The Cardstock was cut cleanly and to the desired dimensions, and the Duralar





was inked precisely such that the cardstock window opening cut lines indexed properly with the Duralar inked window glazing. My aligning of the layers during glue-up was the long pole in the tent - Cricut did it's job. An Optivisor and patience is needed....

Shortcomings and Redesign

So what have I learned and what is still to do?

1. The inside and outside layers are dimensionally different. I need to account for the material thickness to allow the inside layer to fit over the outside layer. For the flat sides of the building, tabs were put on the north and south side to wrap around to the mating side, thereby hiding the rough edge of the wall lamination and to hold the structure together. These need to be dimensioned accordingly so that they meet up with the outside brick layer on the mating wall. The 110lb cardstock I used measures .011 thick. That is almost 2" prototype in N-scale. I need to adjust the Cricut cutline to allow for that thickness. And, the inside and outside layers for the roof structure geometry is complex because of the Clerestory and Sawtooth 3-D relief. That means that the inside and outside layers need to be slightly different sizes to allow the outside to slide over the inside without much, if any, interference or excess play.
2. I need to design the trusses to sit on internal column and beam structure so the roof may be removed, revealing the internal iron structure. Since the ABS material already is an Industrial gray hopefully it will not need to be painted. Cricut will be able to cut the ABS dimensionally.
3. Once the building structure is defined, then I can turn to lighting and furnishing the building with hardware to represent a working erecting bay and machine shop. With the huge amount of window openings, the inside of the Backshop will be able to show off the interior well if lighted. Unfortunately, (or fortunately) the size of the building is just barely long enough for an N-scale Big Boy, so I will not be able to install very many machine shop tools, etc. ... But, I envision a nonfunctional Atlas 2-8-2 Mikado in my stable that will fit nicely on one of the two non-functional tracks in the erecting shop.
4. I will need to print the "cardstock" at high resolution. That will give the resolution needed to show bricks, boards, and rolled roofing. Remember, a 4" X 8" N-scale brick measures .05" X .08". I need good print resolution to see the bricks at 1 foot viewing distance. But, I have waited until the design is locked in to spend the ink on printing the textures needed for the Backshop.



On a Binge Building Spree

By Alan Meinholdt

Since the first of the year I have started a building binge. Also, I have the Walther's Northern Light and Power building along with the interior kit on order. I am still working on my bridge as reported on earlier Brass Pounders and am ready to put down the rail and set the steel girders in place.



2021 TULSA UNION CONVENTION

[Home](#)
[Clinics](#)
[Layouts](#)
[Contests](#)
[Non-rail](#)
[Timetable](#)
[Register](#)
[Hotel](#)
[Contact](#)
[Updates](#)


The Convention will be held at the

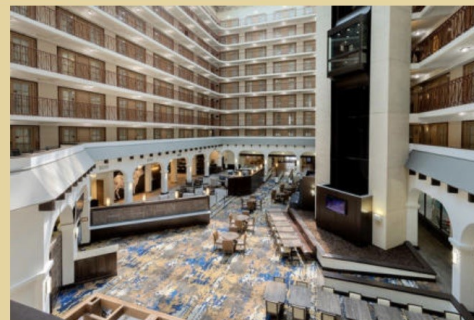
Embassy Suites

by Hilton Tulsa I-44

3332 South 79th East Avenue

Tulsa, Oklahoma 74145

(918) 622-4000



Convention dates are October 6-10, 2021

Note: Group Rates are available starting October 6, 2021 for those planning to arrive early

If you made hotel reservations before February when the event was rescheduled, your reservations will be transferred to the new dates.
(you may get a confirmation email from the hotel - else it doesn't hurt to call and confirm for yourself)

Group Rates for Convention Attendees are: Double Bedroom Suite: \$111.00 King Bedroom Suite: \$106.00
Plus local tax and fees of 13.517%

Convention attendees can reserve their own rooms by calling: 1-800-EMBASSY and using the booking code TRN
or by asking for the "2021 Mid-Continent & Lone Star Regional Convention Model Rail Association" group rate.
Or you may click the 'Book Now' link below to make reservations on-line.

Convention attendees must book their rooms before September 6, 2021 to secure the group rate.

Embassy Suites Tulsa is conveniently located by I-44 and Hwy 51. As an all-suites, full-service hotel, signature amenities include a complimentary breakfast buffet, complimentary high-speed internet, evening reception with complimentary cocktails and free parking.

Book your room with the group discount

Visit to the hotel website for other details

Access Google Maps for hotel location

BOOK NOW



Note the new date. The MCoR convention has been moved to the fall, and hopefully the Fauchi Ouchi will have been administered to all of us and we can feel comfortable attending. Tulsa NMRA members have some fabulous Layouts that are being opened up for viewing and for operating sessions.

The 2021 Tulsa Union Convention will feature a number of home layouts that will be open for touring. Many of these layouts will also be open for "operating sessions. Plans call for layout tours to be scheduled on Thursday, Friday, and Saturday afternoon. Operating sessions are expected to run Wednesday, Thursday, Friday evening as well as Thursday, Friday, Saturday, and Sunday morning.

While layouts open for touring will be open to all registered convention attendees, operating session slots will be assigned based on the date of registration. Those wanting to participate in an operating session can express their layout preference during the registration process. Our plan is for the assignment of operating session slots to begin approximately 60 days before the convention, roughly August 10, 2021.

Tulsa area model railroaders have become known for being a hotbed of operating model railroads. The Tulsa model railroad community host weekend long round robin operating sessions annually. So, the 2021 Tulsa Union Convention wants to provide an opportunity for serious operators to run on these great layouts. At the same time, this will also be an opportunity for those wanting to operate for the first time. As we contact folks to discuss the assignment of operating session slots, be prepared to let us know your experience level so that we may best match your experience to a particular layout.

Operating sessions slots will be assigned on a
first come, first served basis using your date of registration.

Assignment of slots will begin approximately August 10, 2021.

	Dale Baker	Tulsa Port of Catoosa RR	HO
	Steve Campbell	Cherokee Sub Frisco	HO
	Sammy Carlile	Santa Fe Hereford Subdivision	HO
	Steve Davis	KCS 3rd Subdivison	HO
	Kenneth Ehlers	Pandora & San Miguel Rwy	Sn3
	Tom Fausser	South Brooklyn Terminal	HO
	Steve Gillett	Spaendahl Yamanee & Densum	N
	Lane Littlefield	Tennessee Central Railway	N
	Jon Pansius	Tulsa Junction Railway	HO
	Allan Roecker	Kansas Central Div – Coffeyville Sub	HO
	Dave Salamon	Deep River Southern	N
	Sam Simons	Connell Northern	N
	Jim Sinclair	Southern Pacific	HO
	Randy Smith	Rio Grande Southern	Sn3
	David Steensland	Silverton & Lake City	HO n3

Updates

Sunday, Oct 10

9:00am Operating Sessions

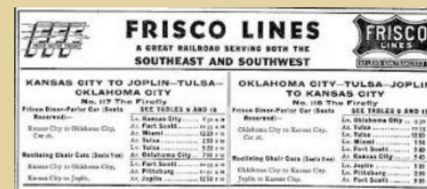
9:30pm Registration Closes
Contest Room Closes

9:30pm Registration Closes

7:30pm Awards & Desert Event

Tentative Timetable:
Check back in the months before the Convention for possible revisions.

Page updated 2/4/21



Fuzzy Anstine	Getting those classic shelf sitter engines back to running
Bob Barnett	Competition for the cotton and oil trade
Al Boos,III, MMR	Skidders and Yards
Steve Davis	Planning for Operations
Steve Davis	CTC Detection & Electronics
Ken Ehlers, MMR	Prototype Track Planning
Richard Fisher	title to come
Mark Juett	Setting up for operations
Mark Juett	Getting started in JMRI car forwarding
Lloyd Keyser, MMR	Flat Land Strip Mine Coal Loaders
Pete Leach, MMR	Backdrop Painting (hands on & extra fee)
John Lowrance, MMR	Setting the Scene
Ryan Moats, MMR & Duane Richardson, MMR	Judging Models and completing the paperwork
Gene Mangum	Gulf Northwest Railroad
Gert (Speed) Muller	Arduino – Beginners
David Salamon	Cement Plant Operations
Dean Smith	Operations on the East Tennessee & Western North Carolina Railroad
Phil Stewart	Plantation Sugar Cane Railroads
Lind Wickersham	Building Detailed Structures
Don Winn	Kitbashing - Thinking Outside the Walthers box

*Bring your models,
bring your photos,
show off your work
in the Contest Room !*



Model Contests categories:
Steam Locomotive
Diesel Locomotive
Traction or Other Locomotive
Passenger Cars
Freight Cars
Caboose
Maintenance of Way
Structures Off-Line
Structures On-Line
Bridges & Trestles
Displays / Modules
Favorite / Complete Train

Photo Contests categories:
Model - Black & White Print
Model - Color Print
Prototype - Black & White Print
Prototype - Color Print
Computer Enhanced

Arts & Crafts categories:
Arts & Crafts General
Arts & Crafts Railroadiana
Arts & Crafts Needlework
Arts & Crafts Theme

PDF download files to use for preparing for contest entry...

Contest Entry Form

Model Contest Rules

Photo Rules

Arts & Crafts Rules

NMRA Judging Guide

Model - Judge Scoresheet

Photo - Judge Scoresheet

Arts & Crafts - Judge Scoresheet

NMRA Write Up Tips

Special Awards include:
Most Popular
Best in Show
Participation Award
Best Kit Build Model
Architecture Award
Tree Award
Youth & Teen Award
Novice Best of Show
Bob Clarke Award
Linda S. Little Award

Note: read the appropriate rules and entry forms for more details.

Bring your contest entries in on Thursday afternoon or Friday before 6pm, when the Contest Room closes for judging to start.

Page updated: 9/21/2016

Rails By The Bay – NMRA 2021 National Convention

July 4-11, 2021

www.nmra2021.com

- Educational focus on prototype modeling, operations and technology
- Over 100 terrific clinics
- World-class Bay Area layouts on tour
- Extensive operating sessions
- Host hotel – Santa Clara Marriott. Ample meeting room and SIG space. Discounted room block opens soon.
- Niles Canyon Railway, Roaring Camp & Big Trees narrow gauge, & SP narrow gauge to ride
- Great local attractions and tours like Santa Cruz mountain wineries, Lido estate, Levi's Stadium and more



Cancelled

Will migrate to a virtual convention
during the same dates

Timetable



-Mark Your Calendar-

Future Kansas Central Division [NMRA](#) Meetings

ZOOM KCD Turntable

Wednesday, March 17, 2021 @ 7:00PM

ZOOM KCD Business Meeting and Clinic

Saturday, April 10, 2021 @ 1:00PM

ZOOM KCD Turntable

Wednesday, April 21, 2021 @ 7:00PM