Frisco Interlocking Tower PB at Paola, Kansas

By

Richard E. Napper, MMR

Frisco Interlocking Tower PB at Paola, Kansas

By
Richard E. Napper, MMR

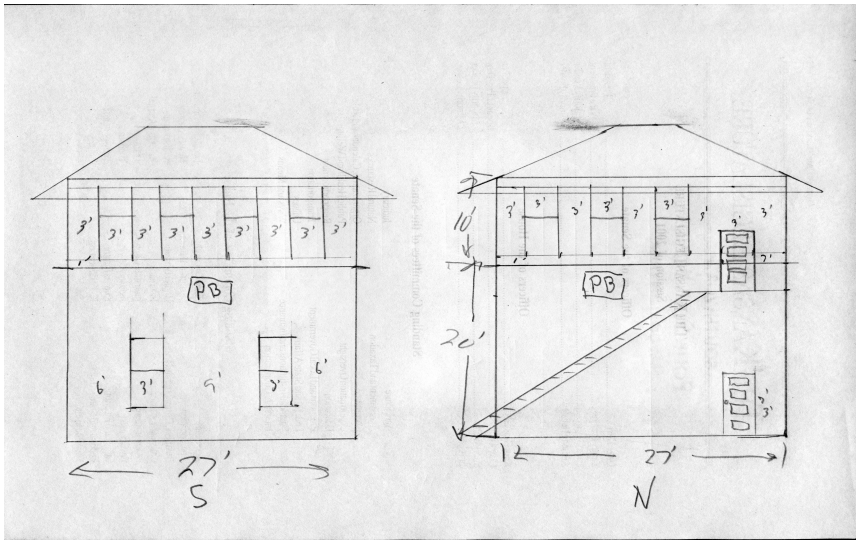
The first structure I ever scratch built was the Ash Grove, MO Frisco depot. I earned my first merit award with that model, but I had Frisco depot plans and the layout of the depot to build it from; however, my second project was the Frisco tower PB, and I only had one photo to go on for the construction. Again I won a merit award for the structure, but I have always wanted to build the tower again, and see if I could not do a better job of not only construction but building dimensions.

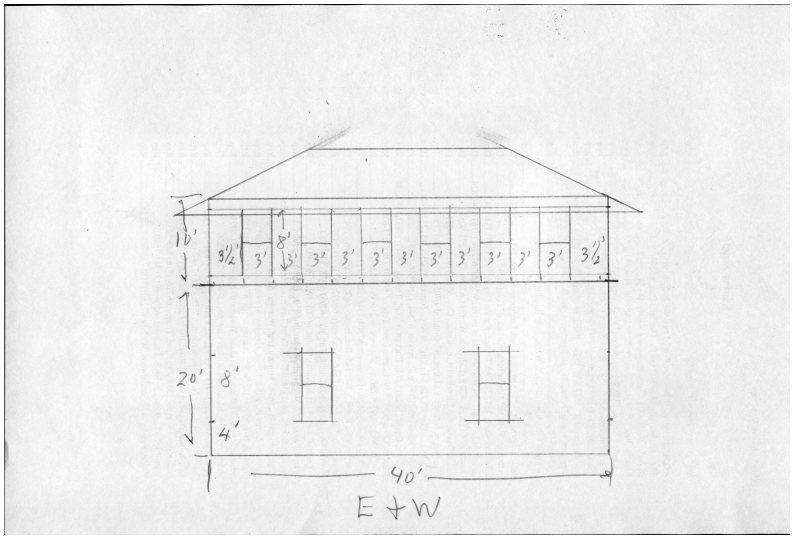
First, a little history, PB tower was located in Paola, KS just south of the Frisco depot, Northern Division, Kansas City Subdivision, Mile Post 43.1. The tower controlled three railroads at Paola, KS. The MKT had trackage rights on the Frisco from Kansas City, KS to Paola, KS where they diverged off to go west behind the Frisco depot them crossed the Bull creek on their own bridge, then crossed the Missouri Pacific just after crossing the creek and heading southeast. The tower was located west of the MP-SLSF tracks but east of the MKT tracks next to the Bull creek bridge of the MP. You see the MP came down off the hill east of the Frisco two mainline tracks which turned southeast at the tower and crossed the single MP track which also went over the Bull creek on its own bridge crossed the MKT line then headed southwest. There is an interchange track between the MP and Frisco just east of the crossing, then the double track Frisco line goes to single track and crosses Bull creek on its own bridge. I do not know when PB tower was built, but the picture I worked from as taken by Howard D. Killam on 9/1/1956. The tower was an Armstrong interlocking plant. The tower is in pretty good repair in Howard's photo although it does need paint. I do not know when the tower was torn down.

Frisco Interlocking Tower PB at Paola, Kansas

The photo shows the double track Frisco lines crossing the MP line and the MP Bridge over Bull creek in the distance and the MP-MKT crossing just beyond the bridge.

I studied the tower photo for a long time before I started construction of the tower in styrene. The tower is built of lap siding and in that era, the exposure would have been 5 1/4 inches. I thus counted up the siding and multiplied that by 5 ¼ inches to get 20 feet from the base to the ledge. Another count gave me another 10 feet for the second story. That makes the structure 30 feet tall to the roof. The tower is longer than it is tall so I estimated that dimension to be 40 feet. It is not a wide as it is tall so I guessed that dimension to be 27 feet. I estimated the windows to be 3 feet wide and about 6 feet tall, since they are evenly spaced, that put the windows on the second floor at 3 feet wide with spacing of 3 feet between them. From these estimates, I drew up my own plans in HO scale. I cannot see the South or west exposure of the building, so I guessed the west side to be a mirror image of the east side and the south side to have four windows on the second floor and two windows on the first floor. These estimates make a very nice looking structure when finished. You can get a lot of information from just one photo if you study it closely.



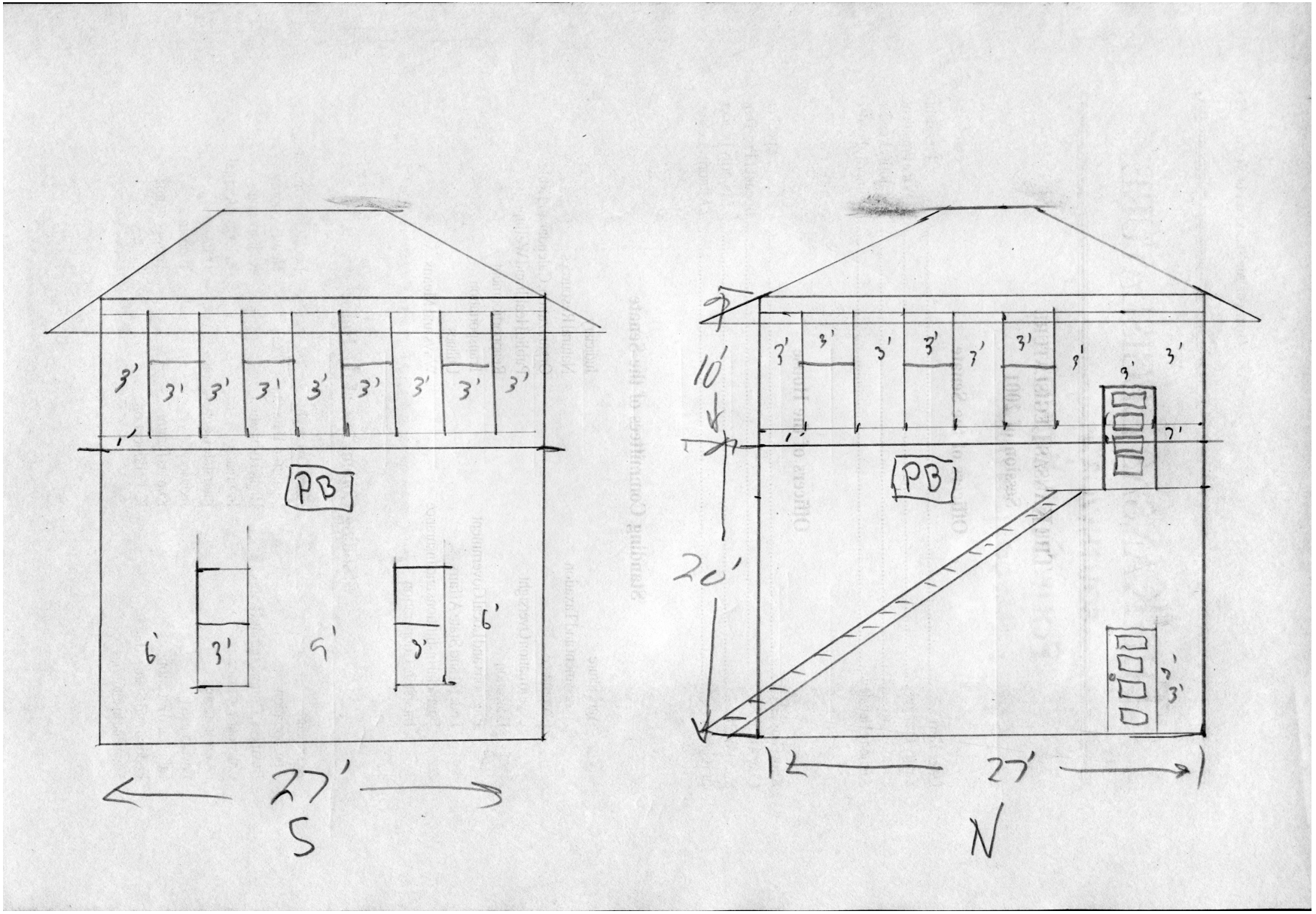


Frisco Interlocking Tower PB at Paola, Kansas

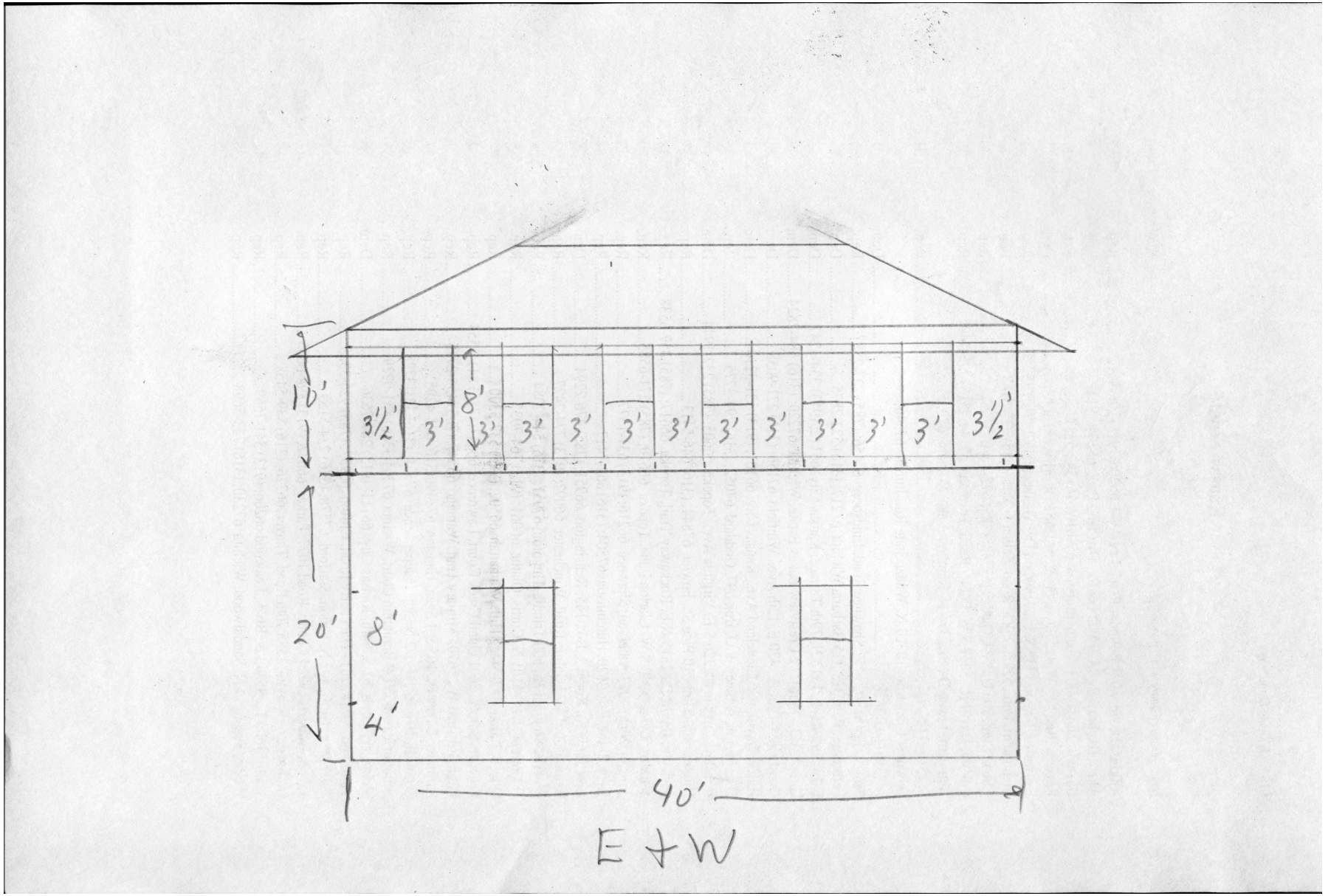
Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

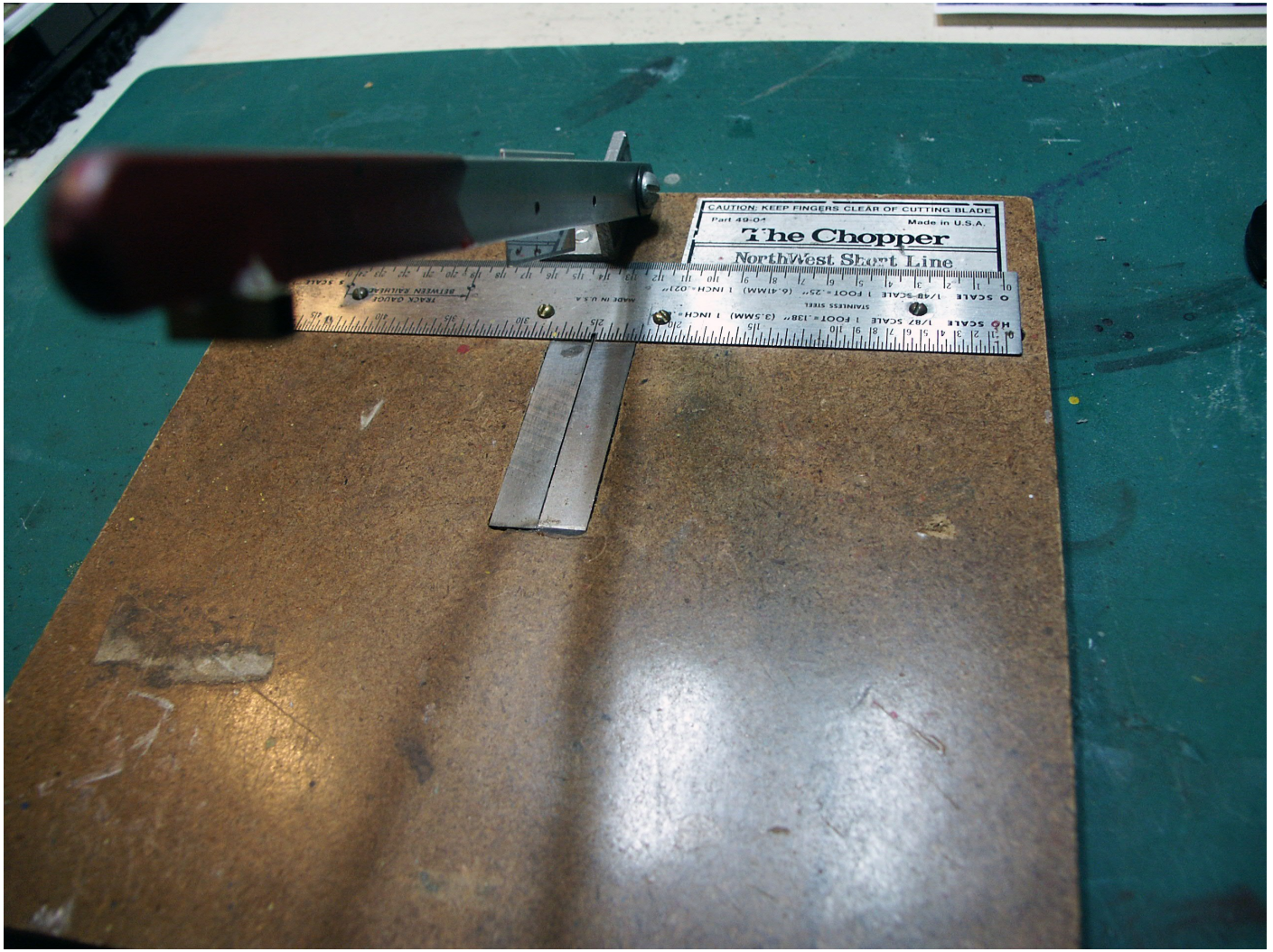


Frisco Interlocking Tower PB at Paola, Kansas

The tower is 100% scratch built from styrene; no commercial parts were used, just Evergreen shapes and Plastruct shingle roofing sheet. I only use Tenax-7R styrene cement with styrene shapes. I like it because of two properties, the joint is solid in 10 seconds, and the cement will bond styrene to styrene through paint with no ill effect. I needed to construct two doors and 24 windows for this tower, so I did that first using my own jigs and the article I wrote for RMC a number of years ago. Each window has thirteen parts and each door has twelve parts including the doorknob. I built five windows a day until I had all of them finished. I worked on the structure only in the afternoons and not every day of the week, I was in no hurry to get it done.

I use a different cement to make my windows and doors. I bought Testers Plastic Cement which use to come in the little square bottle with a too big applicator brush. I do not like the new bottle and the cement cost too much for the one once you get in the bottle. Testers is nothing more than MEK, Methyl Ethel Ketone. Go to any paint store and you can buy a pint or gallon of MEK for about $6.00. I keep all of my old Floquil paint bottles; I clean them out with Lacquer Thinner and use them for everything. Just fill up a used bottle with MEK from your big supply, and use a small brush to apply it to the styrene as you build the windows and doors.

Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

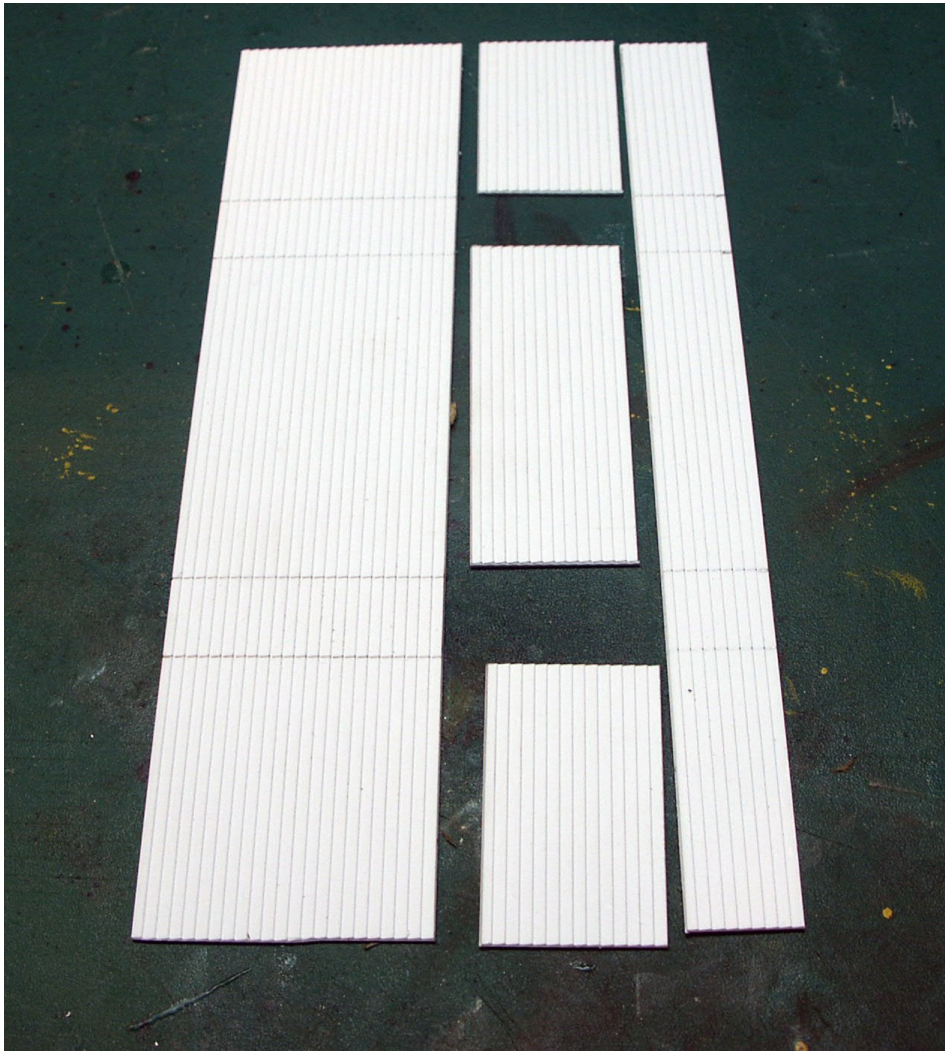
Frisco Interlocking Tower PB at Paola, Kansas

Door and window opening are very easy to cut out of the Clapboard or Novelty siding. All siding has either horizontal or vertical lines (Board and Baton) or joints on it. All I had to do was put a window on the siding upside down, so I could line up the window frame with siding lines on the siding. Using a Xacto number 11 blade, I just cut the siding apart on these two lines. I use a .007" lead mechanical pencil to draw lines on the styrene. You do not have to remove it because the Floquil paint will cover it right over and you will not see it in the finished product. Measuring the correct vertical spacing of the windows, I cut out the window openings from the siding. Now lay the remaining pieces on your work surface, push them together and put Tenax-7R on the seam using a small brush, and the pieces are jointed back together. Do not worry about the shinny surface the Tenaz-7R leaves on the styrene; it will disappear once the styrene is painted with Floquil. I have never used the new water based model paints because I have enough Floquil that I will never use it all up before I die, and I am use to using it on styrene without the barrier. I used a 4 x 12 mounted vertically for the decoration piece between the two stories. Cut the windows in the same way for the second floor, and reassemble the second floor in place above the first floor wall. You can easily do all four walls this way in one afternoon.

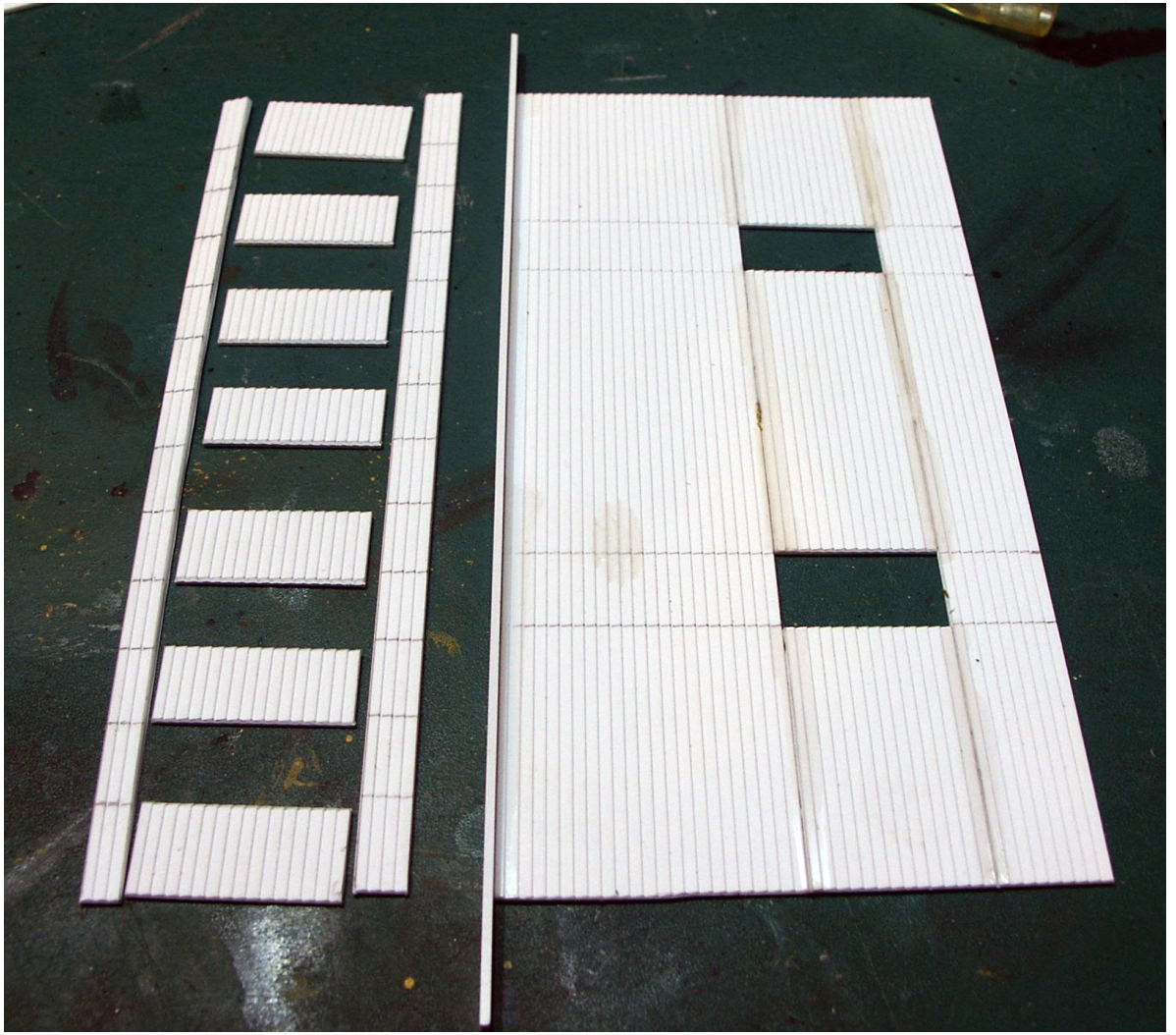
The wall base was made of .080" plain styrene on edge and painted concrete color. The inside corners of all four walls have a 1/8" square styrene rod in each corner and a right angle styrene piece on the outside of each corner. Another trick always let a piece run long on one side of a wall section. Assembly the walls, and cut and file the piece to fit, that is a lot easier than trying to cut and fit a piece to fit.

If all else fails and you do get a gap you must fill, fill it with liquid styrene. Take another used bottle of Floquil paint, and fill it half way up with MEK. Add styrene scraps until the bottle is full, add more MEK if needed and put the cap on the bottle. You now have a semi-liquid of styrene. Use a screwdriver or any other tool you like, and apply the semi-liquid styrene to any joint gap you have. The MEK will evaporate, and the styrene will solidify sand or file smooth and the gap will disappear.

Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

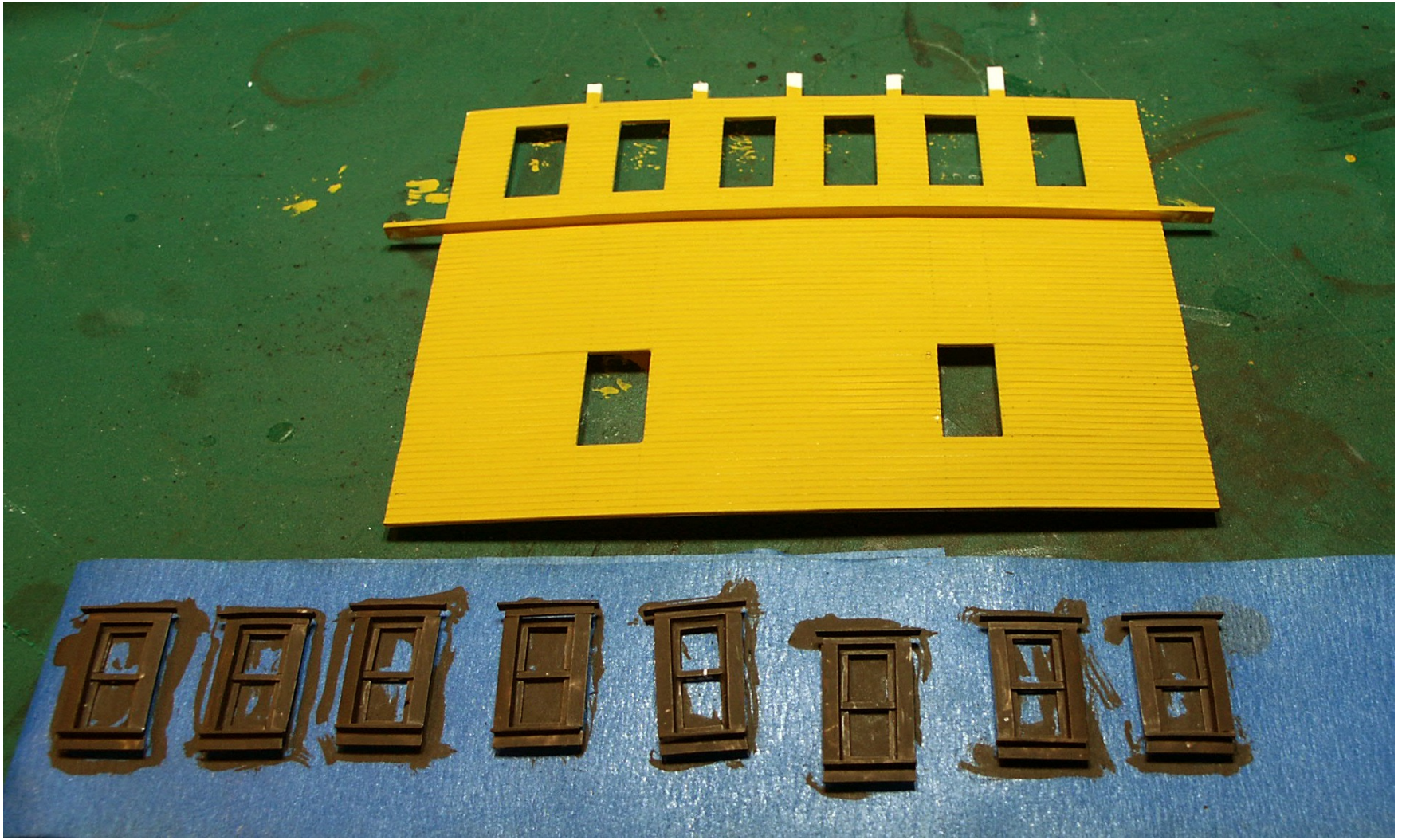
I painted my tower roof brown for the windows and doors, and reefer yellow for the walls and trim. The roof is painted CNW green. I have no idea what the correct colors are for the Frisco tower, so these are the colors I use for my railroad structure colors. Put down some blue painters tape, stick it into a circle, put it down on your work surface, stick the windows and doors to it, and paint them roof brown. Paint the wall sections reefer yellow at the same time. Using the Tenax-7R, glue the windows and doors in place on the wall sections and assemble the four wall sections on the concrete painted base and you will have 80% of the structure finished.

After the walls have been painted and assembled into the finished structure, I add window glass by laying the structure down on its side and using a tooth pick; I add MicroScale Kristal Clear to the window openings and let it dry in place. I like to use it because it puts the glass in the window, not behind it!

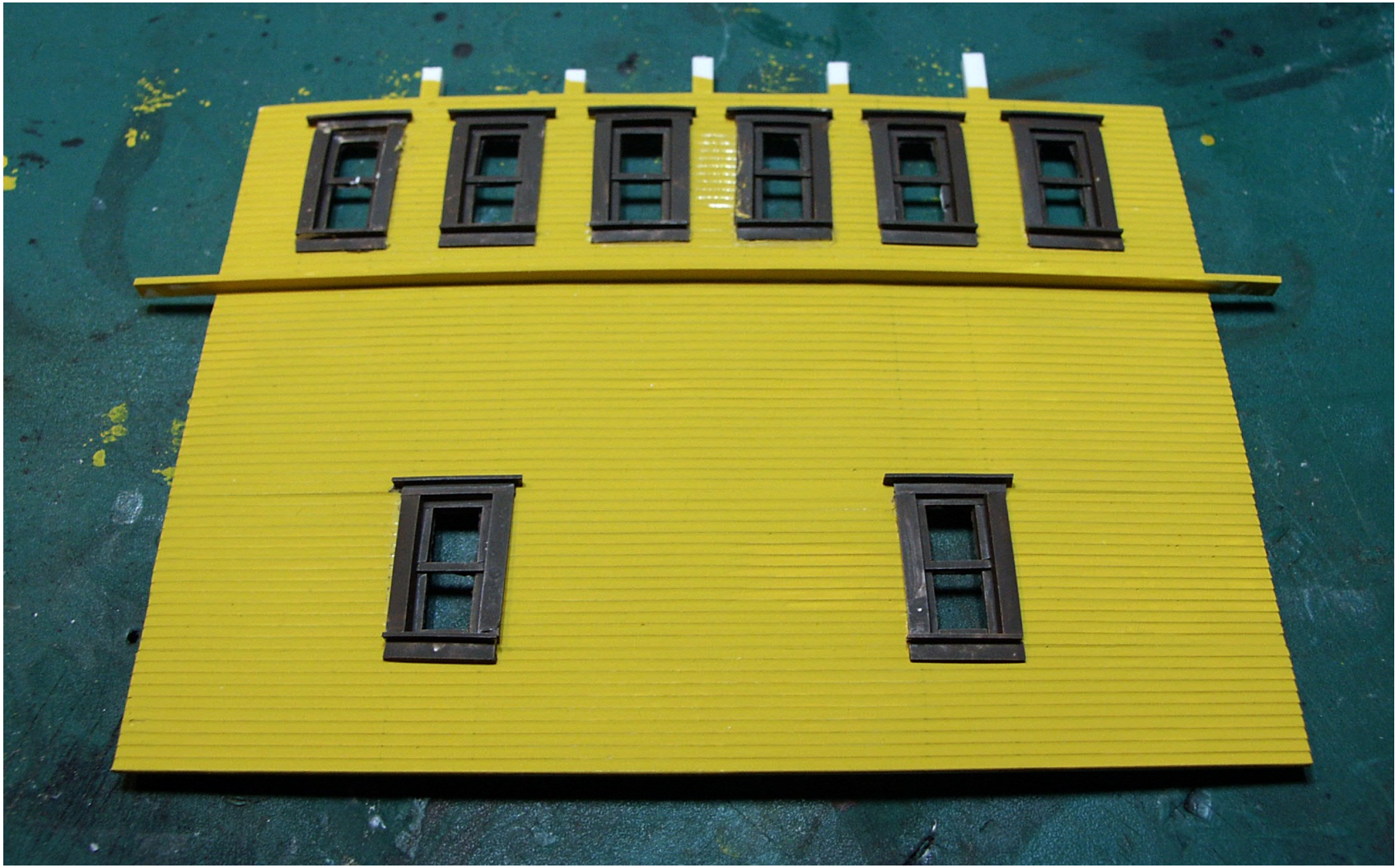
I am sure an architect can tell you how to make a four sided pitched roof, but since the picture is a perspective, there was no dimension I could use from the picture; so after some fussing around I came up with the dimensions I used for the four roof pieces shown on the drawing. The sub roof is plain .040" styrene, with the Plastruct HO scale shingle material glued on top of that. It was painted CNW Green. Now for the fun part, using 2 x 8 " HO scale dimensional lumber, I glued the rafter tails on, on two foot centers. I cut them on my modified Chopper One. Here again cut them long with the inside end cut to the slope of the roof. After they dry, cut them and file them to length with the outside ends vertical. Now install the roof trim boards I think they are called fascia boards. One is a 2 x 12"with a 4 x 4 "drip edge above that.

Frisco Interlocking Tower PB at Paola, Kansas

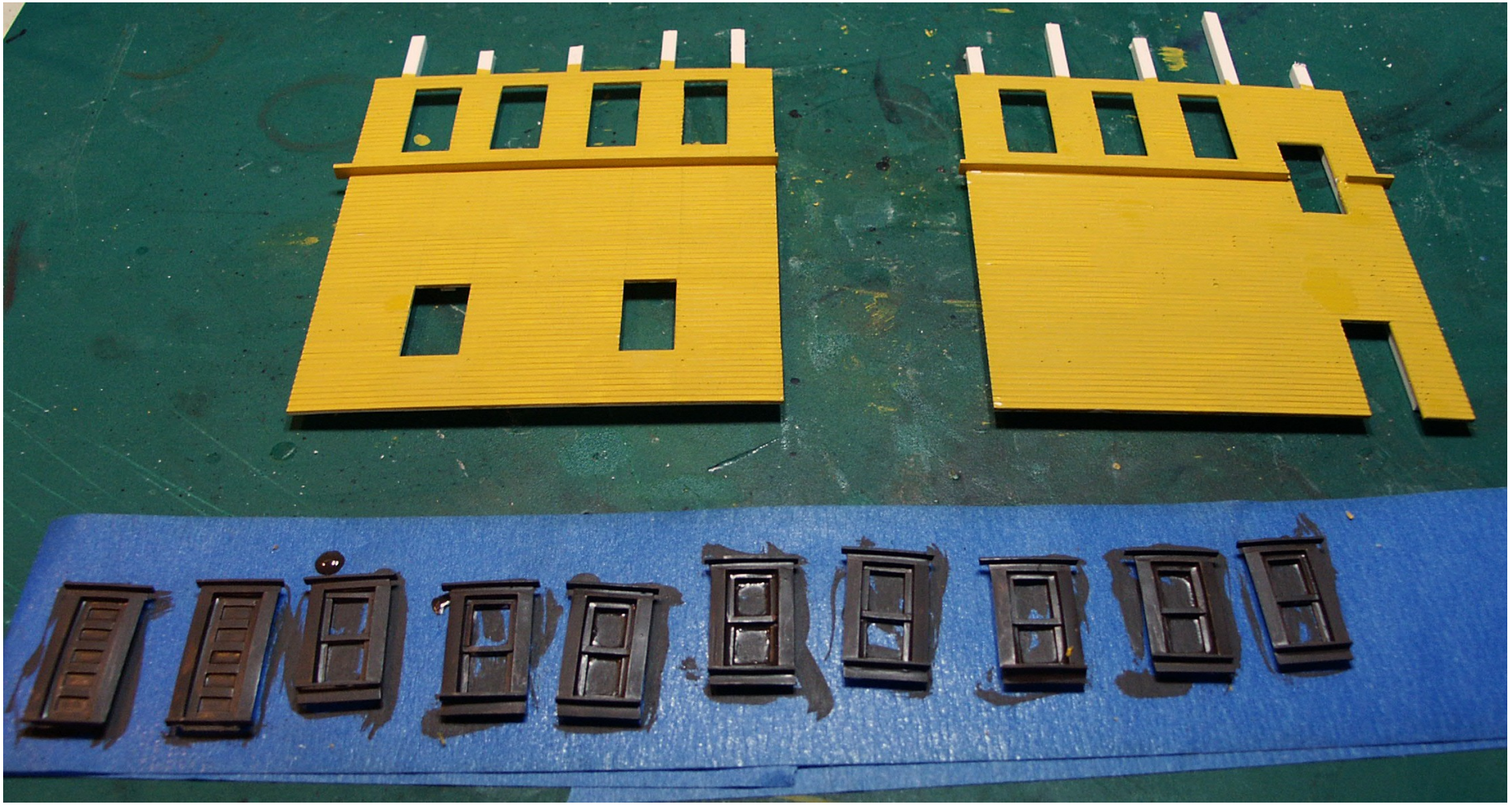
Frisco Interlocking Tower PB at Paola, Kansas



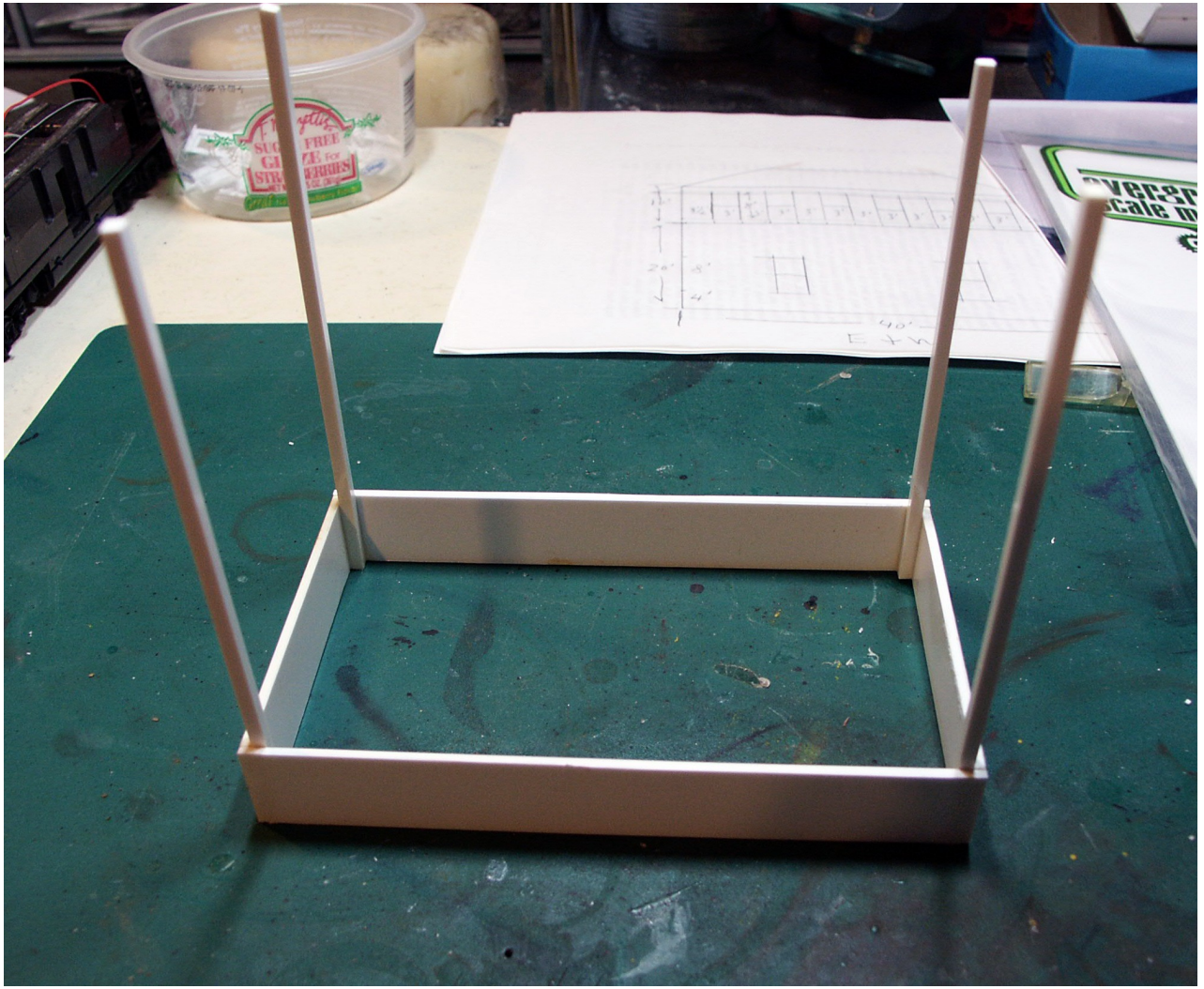
Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

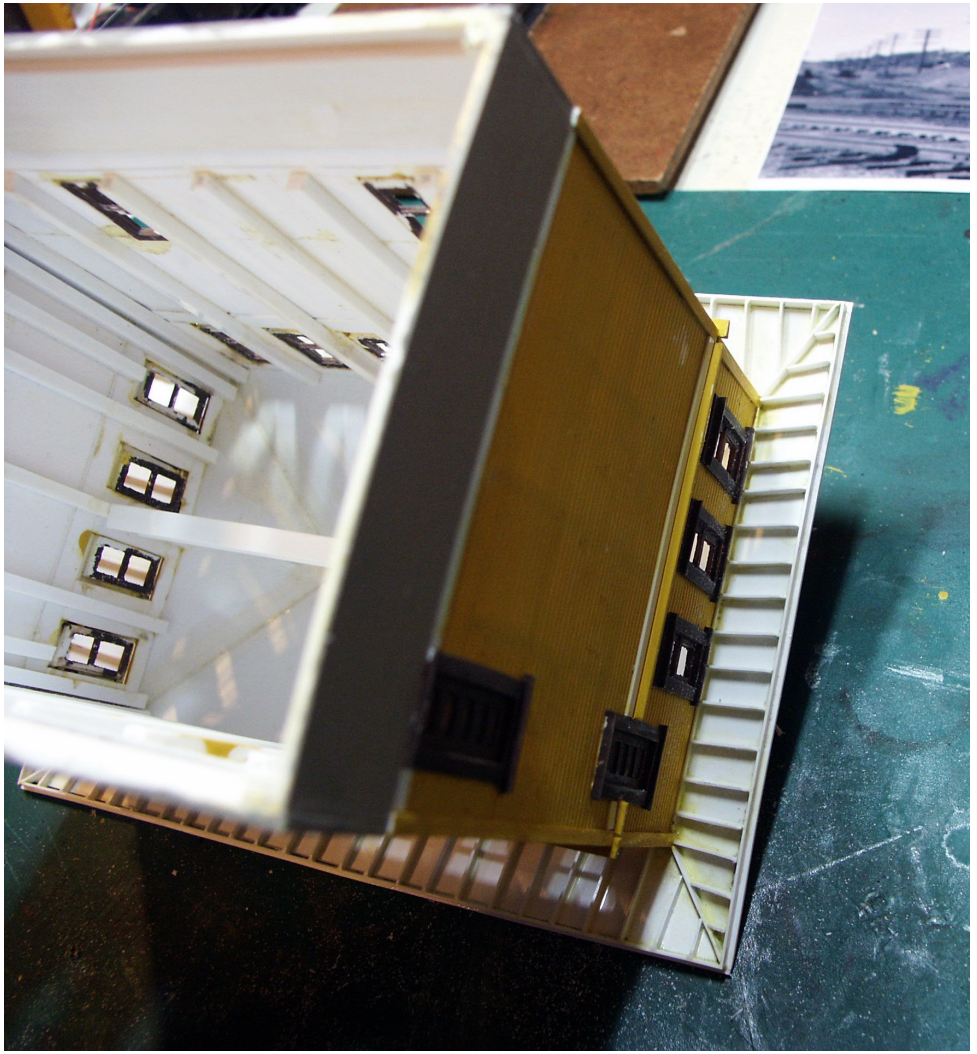
Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

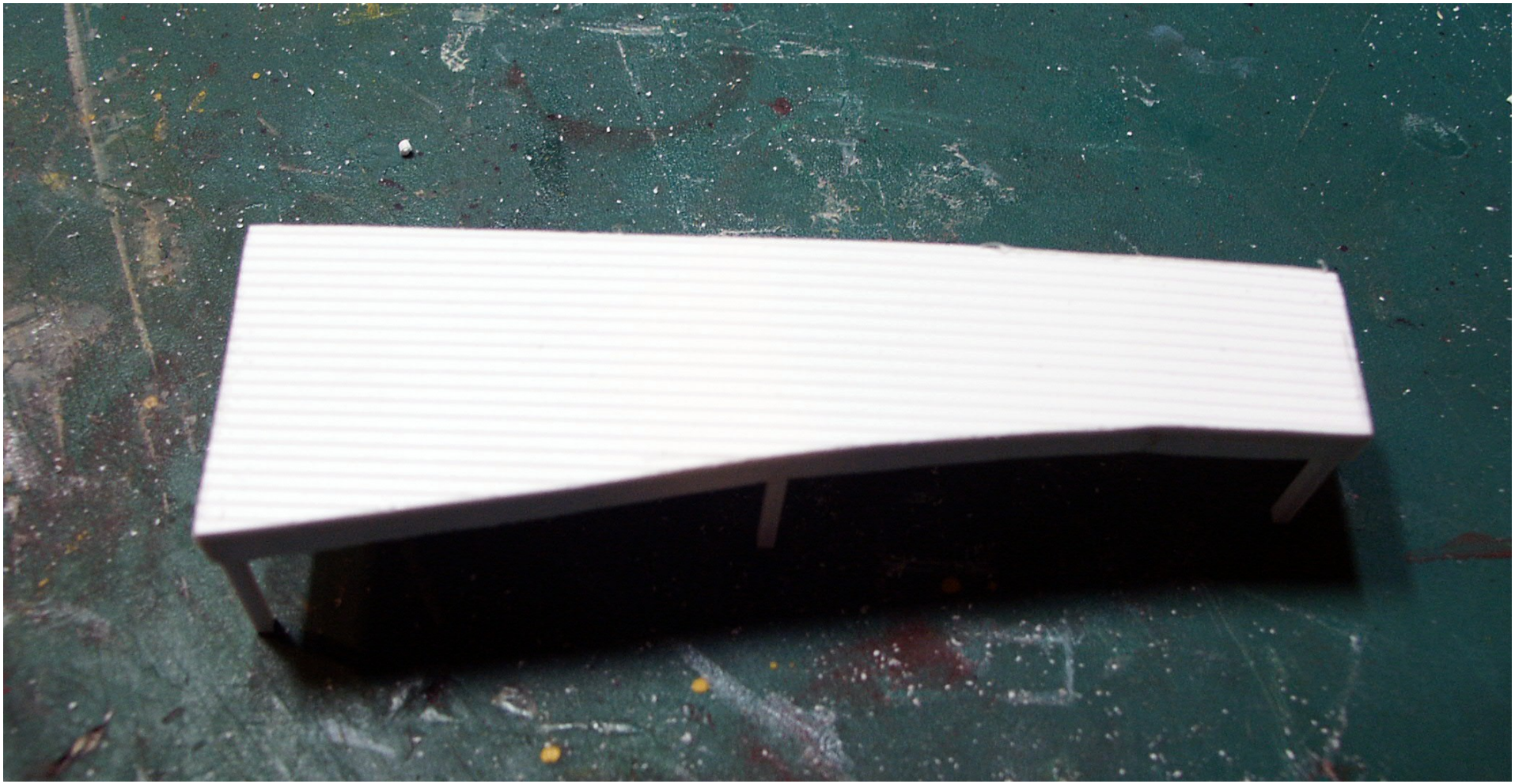
Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

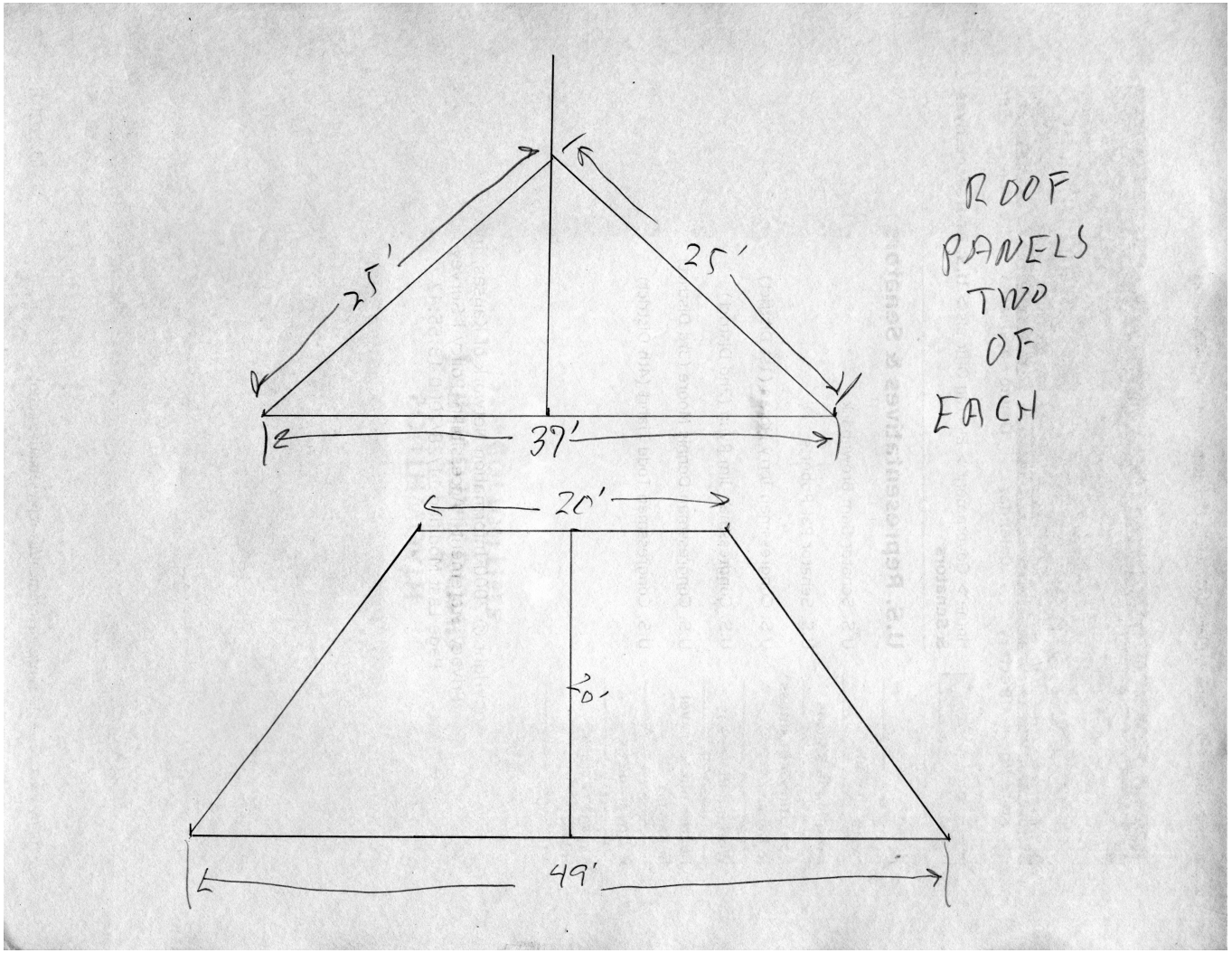
Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas

Frisco Interlocking Tower PB at Paola, Kansas



Frisco Interlocking Tower PB at Paola, Kansas

List of Materials:
Evergreen Scale Models, Inc. Styrene.
#4050 V-groove Siding
#4051 Clap board (Ship Lap) Siding
#293 Right Angle .100”
#9040 Plain .040” styrene sheet
As needed: HO Scale dimensional lumber.
#8204 2 x 4
#8206 2 x 6
#8208 2 x 8
#8210 2 x 10
#8212 2 x 12
#8404 4 x 4
#8406 4 x 6
#8408 4 x 8
#8410 4 x 10
#8412 4 x 12
#8606 6 x 6
#8608 6 x 8
#8610 6 x 10
#8612 6 x 12

I just keep about 10 packages of each size in stock to use when building a styrene structure.

Plastruct styrene HO scale roof asphalt shingles sheet.

MEK and Tenax-7R cement

X-acto knife with #11 blade.

Medium size modeling files and a cutting mat along with other modeling tools.