Modeling the M&NJ's Enginehouse

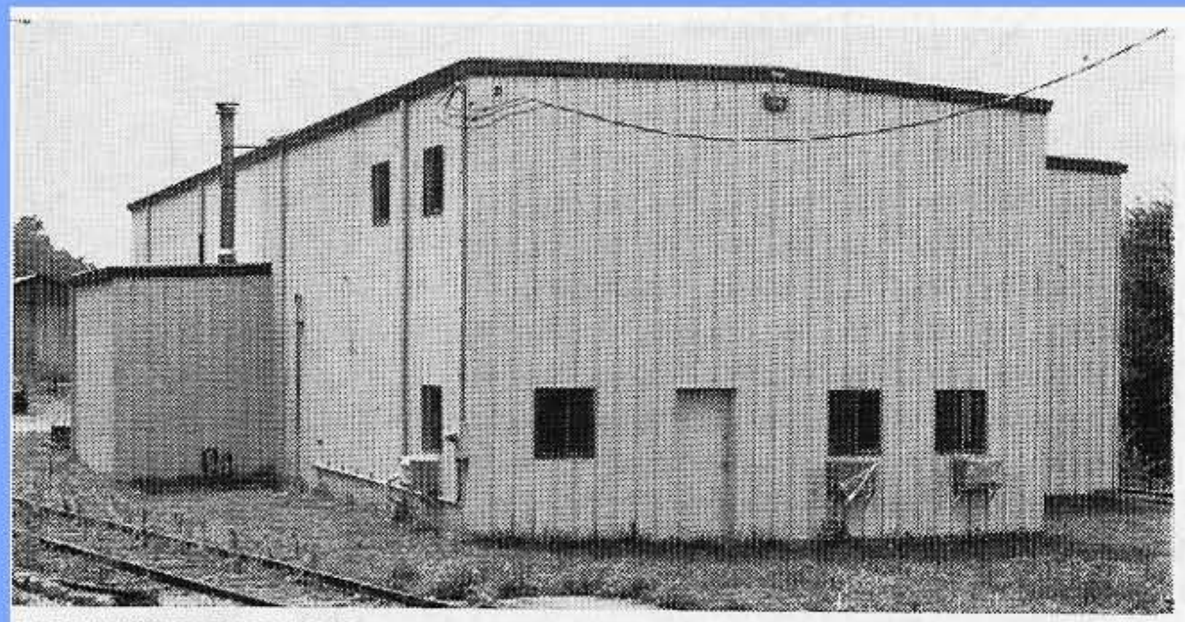
By Julian Cavalier - RMC - October 1989

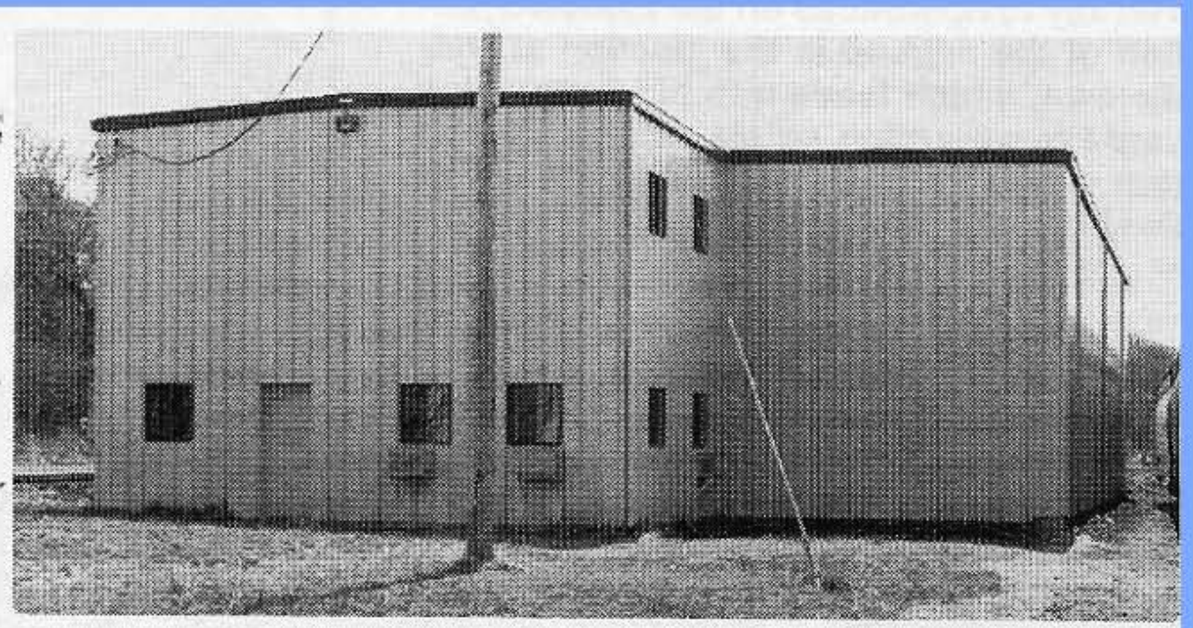
RAILROAD MODEL CRAFTSMAN®

Scratchbuilding the M&NJ enginehouse

by Julian Cavalier

The author's model is posed outside the M&NJ's enginehouse in Middletown (*above*).





THREE PHOTOS BY CHRIS D'AMATO

The Middletown & New Jersey Railway's new enginehouse in Middletown is a modern two-stall structure built of prefabricated materials. It was built in 1985 with the assistance of an industrial development program sponsored by New York State. Just as it was nearing completion, the railroad's largest customer, the Agway bulk feed depot, closed down. To save money, the railroad uses the new enginehouse to store its maintenance equipment and spare motive power (44-tonner No. 1 and a 2-6-0) and continues to use the old railbus shed, which is cheaper to light and heat, for the active locomotive.

The enginehouse has some interesting details not apparent at first look. Its main stall has a wider door, concrete floor and service pit, while the adjoining stall has a narrower door and gravel floor; the second stall is used mainly to store maintenance equipment. As the drawings show, at the back there is an office on the first floor with records storage above. One side has a small furnace room with its own double-door entry. All the windows and smaller doors are of the same style. The main roof and furnace room roof are of the same material.

Building a model of the enginehouse is quite easy in HO scale using Pikestuff kits and parts. It can be done with two Pikestuff No. 8 enginehouse kits, or one of them and one No.15 shop with office kit, plus the parts listed. In either case, there will be leftover parts to build another structure.

The Pikestuff materials are nearly identical to those used on the enginehouse. The only thing not available commercially are the roof vents, which may be made up from wood or plastic. I omitted the service pit from my model. To model it, use a thicker scenic base and cut it in; styrene can simulate the concrete construction. I decided to have one door closed on the model and one open.

The enginehouse is of recent construction, so very little weathering is evident. It is best to paint the walls (and windows) before the windows are installed. Also before proceeding, note that the thickness of the styrene floor (to represent concrete) depends upon the rail being used (whether code 70, 83 or 100); the plastic should match the rail.

Basic construction

The Pikestuff kit walls and end panels are only a couple of feet higher than those on the prototype, so I left them as-is. The extra height is hardly noticeable on this large structure and part of it was taken up by the addition of the interior floor and the irregular level of the grading outside. If you trim the wall heights, make the cuts at the bottom to retain the gutters.

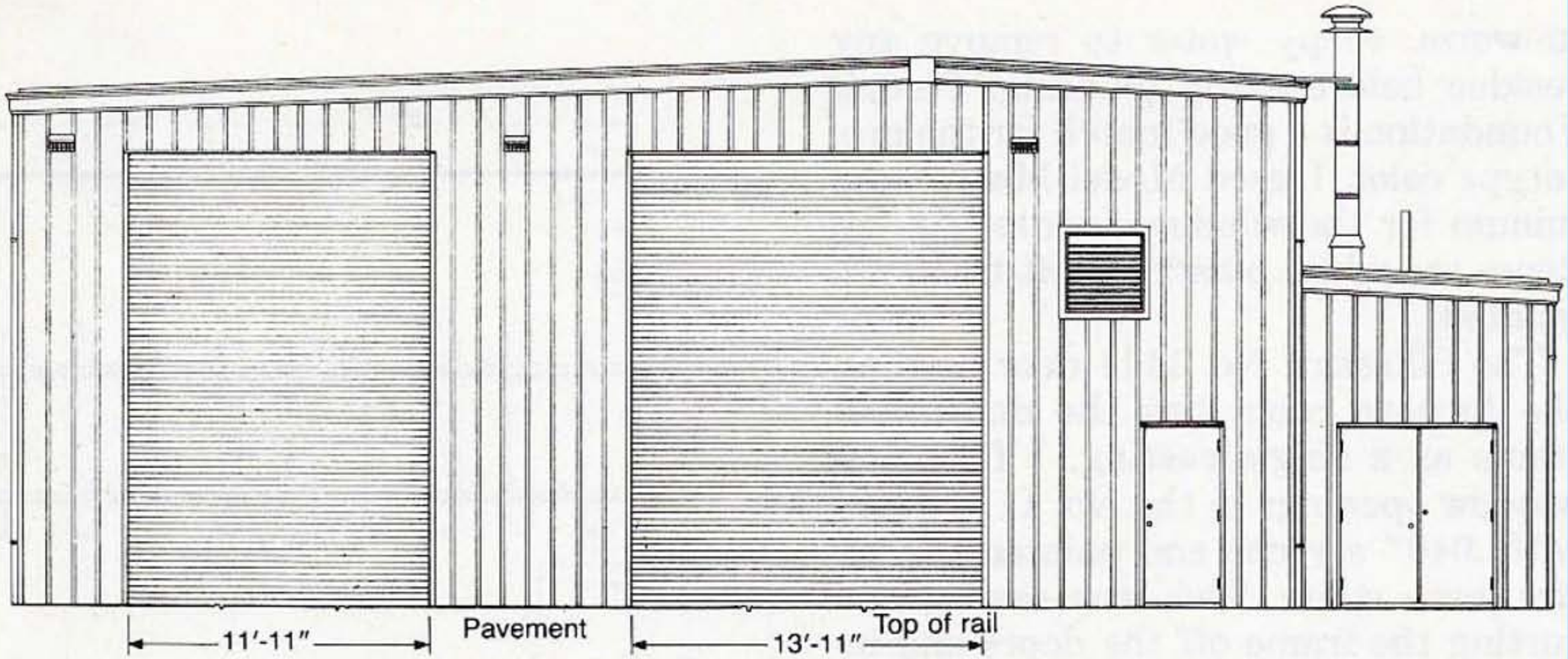
Begin with the front. Using two end wall panels from the Pikestuff No. 8 enginehouse kit, cut them to shape as shown in Figs. 1 and 2. Figure 3 is a composite end elevation showing where the parts are cut and joined to create the new front wall. Liquid plastic cement (like Testors) or Plasti-Zap (a cyanoacrylate cement specifically formulated for plastic) may be used for all bonds. I added .040″ styrene sheet across the entire back of the spliced piece to reinforce the joint.

Mark the locations of the two big door openings (they are 8′-0″ apart) and the small door, then cut them out. Be sure to allow for the frames on the doors. (This applies to the windows as well.) On the larger roll-up door, the kit's door framing is almost the same height and width as the prototype, so I left it unchanged. For the other roll-up door, I just narrowed the frame to match the prototype and kept it the same height.

The 100-foot long side wall is taller than the shorter side wall because of the roof slope. Make the long wall first by cutting and joining two wall sections from the kits. Its height matches the front's taller side. Next, cut out the three window openings. The Pikestuff windows are very close to the prototype's size, so I used them; if you prefer to build them up, measurements for scratchbuilt sashes may be taken from the drawing.

The opposite wall is 80 feet long and is shown in Fig. 6. A full side wall panel from the Pikestuff No. 8 kit is the correct length. Trim the bottom so its height matches up with the adjacent corner of the front.

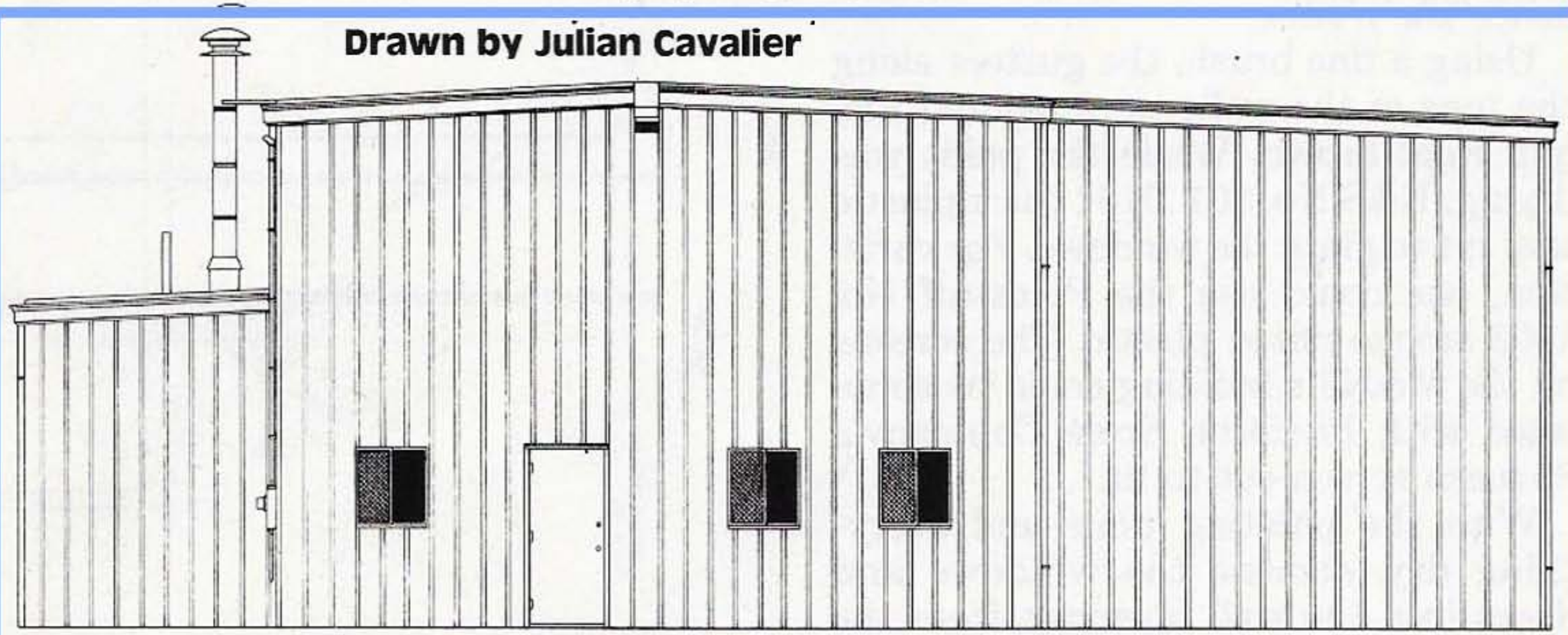
Before proceeding, the centerlines of the H-columns of the interior framing



Middletown & New Jersey Ry. enginehouse

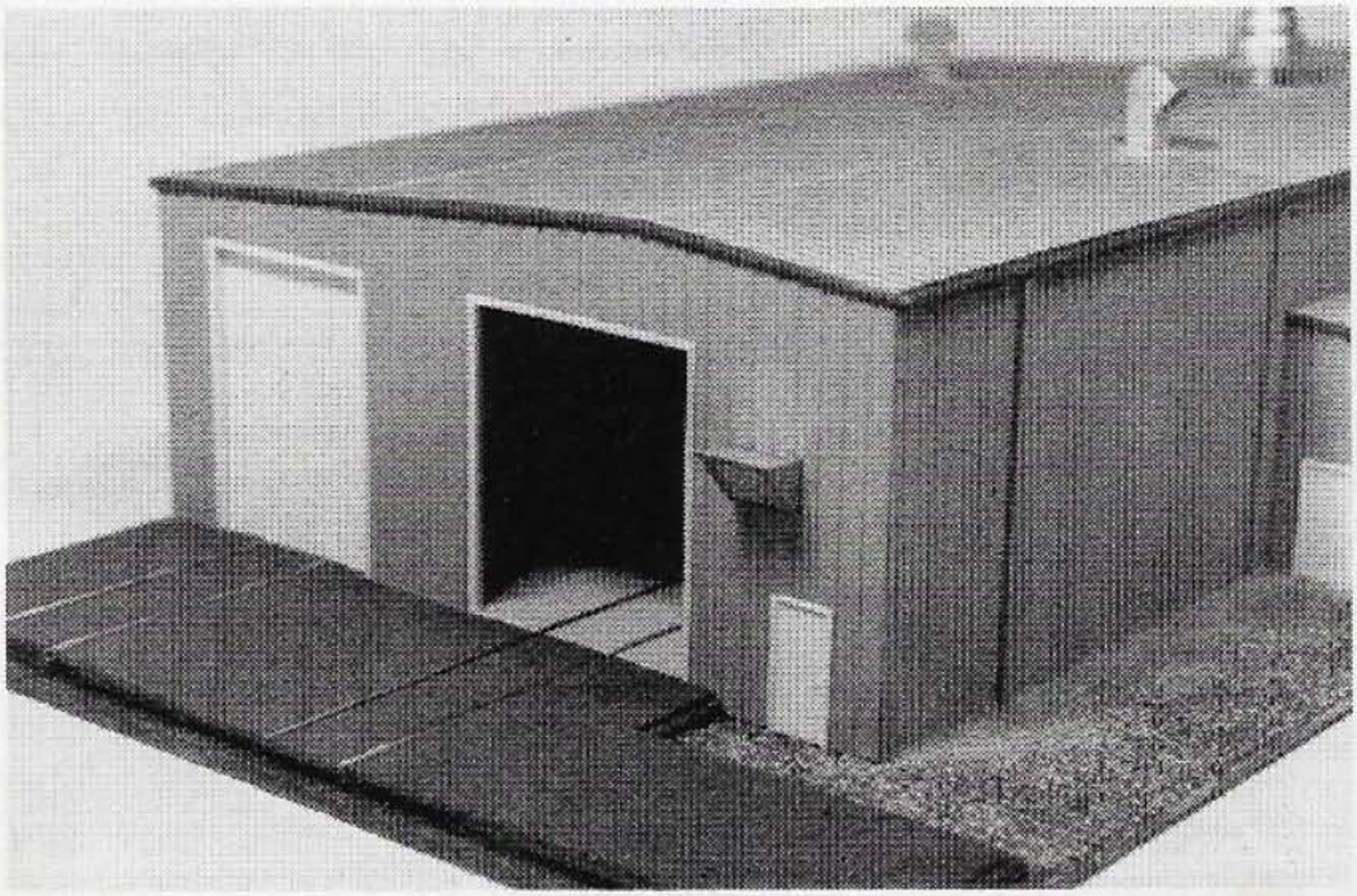
South elevation

Drawn by Julian Cavalier

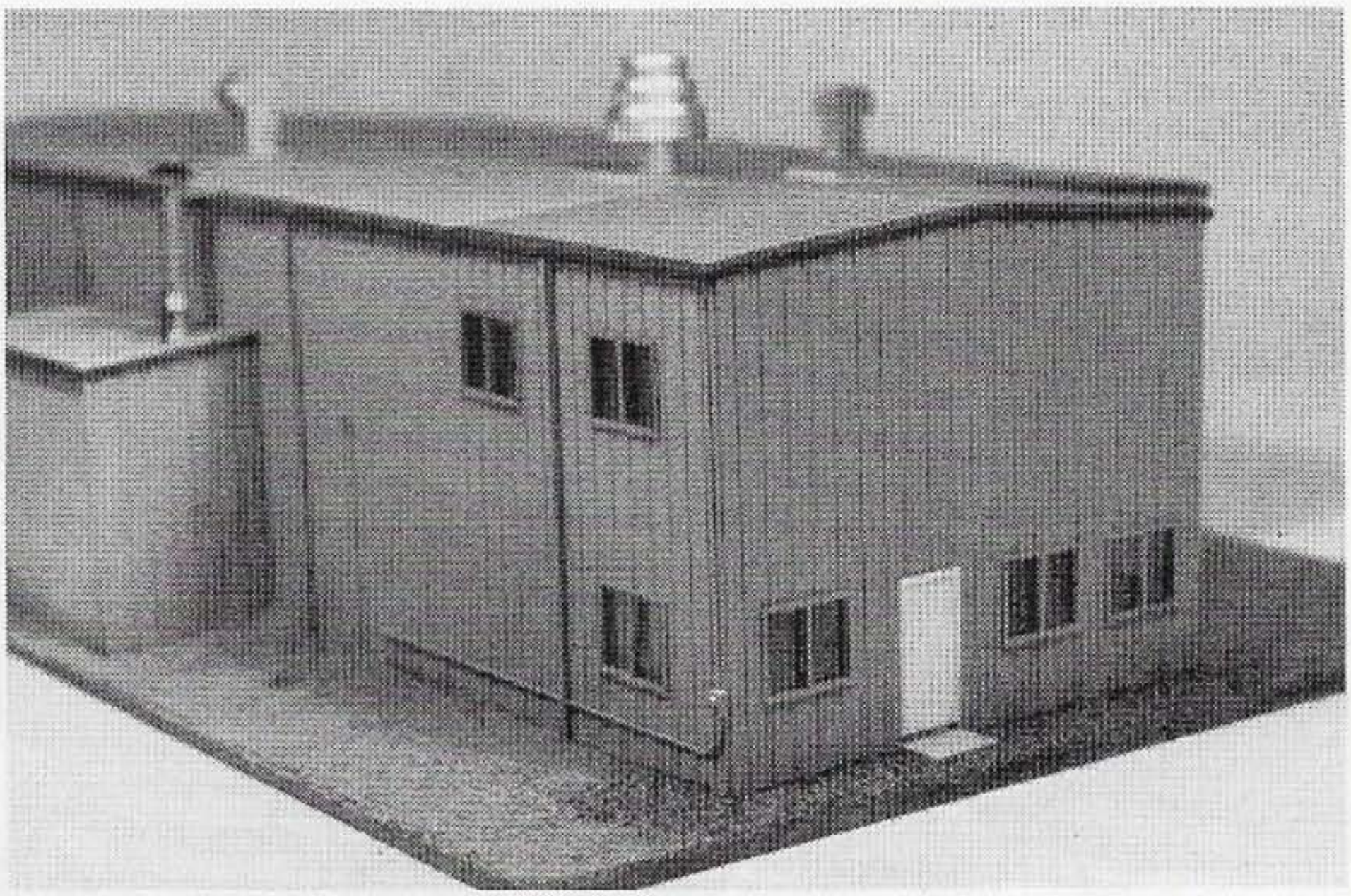


North elevation

PHOTOS BY THE AUTHOR UNLESS NOTED



The enginehouse can be easily modeled using Pikestuff components. It should be painted light tan with brown trim on the eaves



and around the windows, a silver roof and a trim color on the doors that is just a shade peachy when compared to the walls.

should be marked on the inside of the model's walls. This will make positioning them easier. The small doors and windows in this wall should be cut out next. Because the commercial windows are a little larger than the prototype's, some compensating is needed to retain the proper appearance. I set the windows two feet in from the corners, rather than three, and also evened out their spacing. Line up the tops of the doors and windows so they are approximately even. This is a common architectural practice.

The inner back wall (Fig. 5) can be cut from the No. 15 shop kit; if the alternate wall (Fig. 4) is used, add the 9″ needed.

The last main wall to be made is shown in Fig. 7; it has four windows. It, too, can be cut from the shop kit or salvaged from the Pikestuff enginehouse. Note the notched gutter end, which allows the adjoining inner back wall to fit snugly against it. The prototype side elevation shows the window locations. The upper and lower windows should line up horizontally with those on the other walls and their positions adjusted to account for the use of the castings.

The downspouts (four on each side) come from the Pikestuff kits and are glued on the main walls next. Use the drawings and photos as guide. I saved the excess downspout pieces for use on the furnace room.

The furnace room walls are shown in Figs. 8 and 9. Cut them from the Pikestuff wall material, beveling the inside corners for a close fit where the three walls join each other. Use a sanding block for this. The double door opening should match the Pikestuff No. 1111 door part. Add the short downspout on the side wall.

At this point, wash all the wall parts in warm, soapy water to remove any residue before spray painting. Floquil Foundation is a good match for the prototype color. I used Model Master aluminum for the window frames. As the doors are white plastic, I left them unpainted.

The Pikestuff No. 1111 door used on the furnace room has the doors and frame as a single casting. I filled the window openings in the No. 1111 doors with .040″ styrene and painted the entire piece white. This was easier than cutting the frame off the doors and inserting Pikestuff No. 1102 solid doors inside the frame.

Using a fine brush, the gutters along the tops of the walls were painted Floquil Roof brown. While the paint was drying, K&S No. 301 .010″ thick plastic was cut to glaze the windows. For variation, one could use the Pikestuff No. 1003 smoke-tinted plastic. The screens on the M&NJ's building could be simulated with Precision Scale Company's 80-mesh screen cut to fit.

With the painting done and everything dry, cement the windows and doors into the wall openings from the inside. I held off on installing the narrower roll-up door until the floor was in place so its height could be adjusted to fit.

Assembly

Assemble the main building walls first, them make up a sub-assembly for the furnace room and position it on the side. I made up a sub-floor of .030″-thick styrene to fit within the walls and provide a base for the tracks. The partition wall between the enginehouse and office was cut from .040″ styrene sheet and cemented in place.

Trim the enginehouse door and glue it from the inside. I cemented a piece of code 70 flexible track to the base inside and also added a length of Plastruct 1/4″ angle to the floor as a separator between the concrete floor and the gravel floor inside the building.

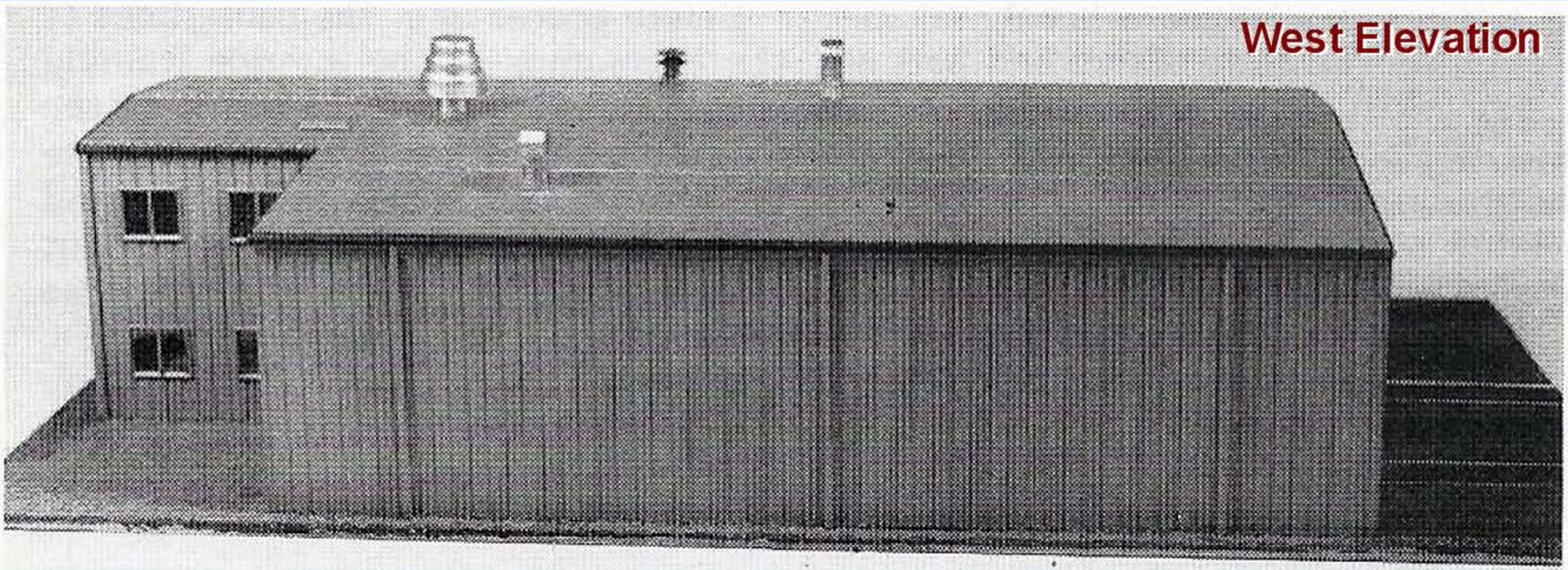
At this point, the model was mounted on a hardboard base to allow for easier handling and scenicking. An apron (.030″ styrene) was cut for the front and trimmed to fit between the tracks. For the concrete floor, I cut strips of .060″ styrene to fit. Check for flange clearance when you do the floor.

Use Plastruct 1/4″ angles along the tops of the walls to reinforce them, then glue 1/8″ H-columns at the places previously marked. Plastruct angles at each corner will give added strength. When viewed on the layout, this reinforcing will effectively simulate the steel post framing of the prototype.

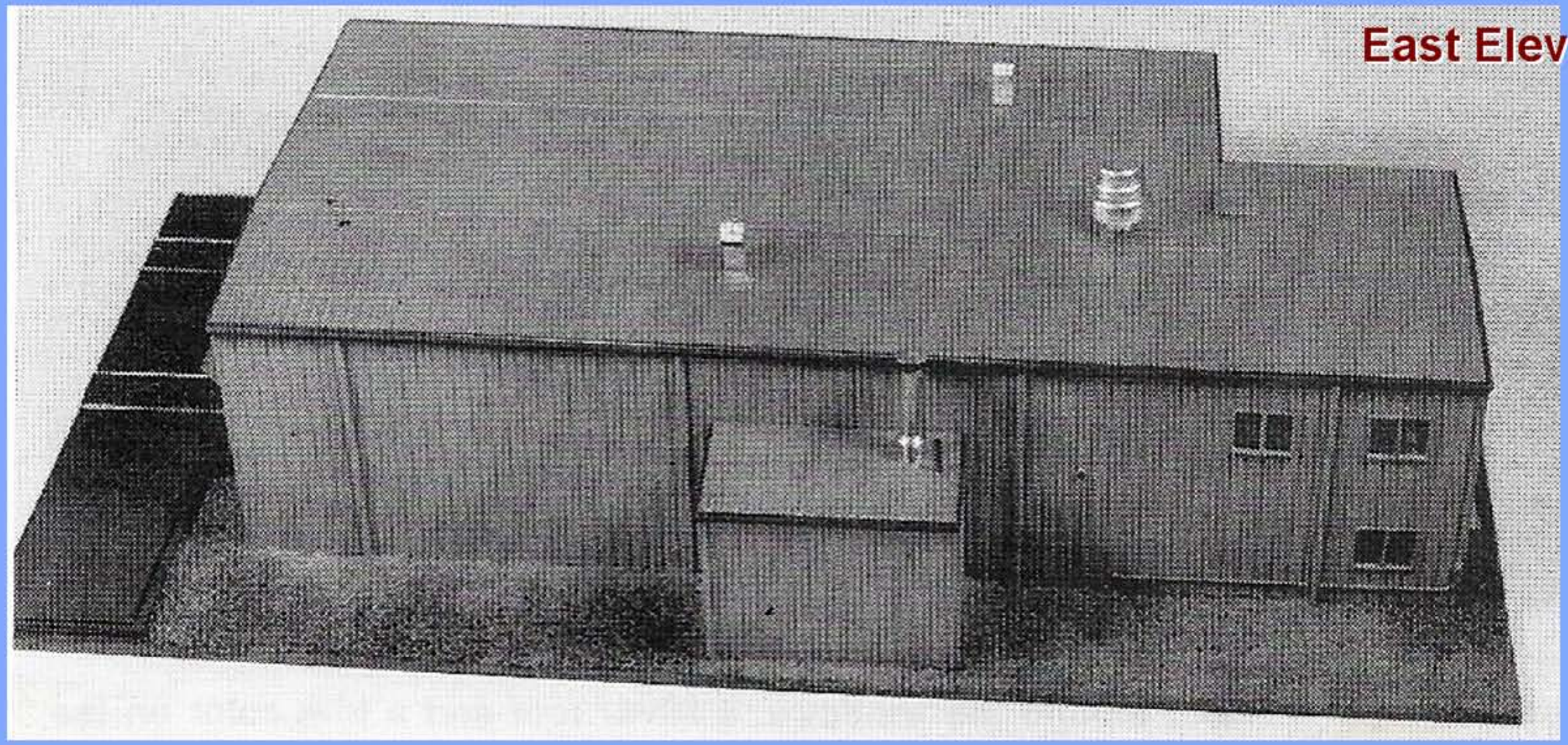
Floquil Concrete may be applied to the floors; the blacktop apron in front may be done with Grimy black.

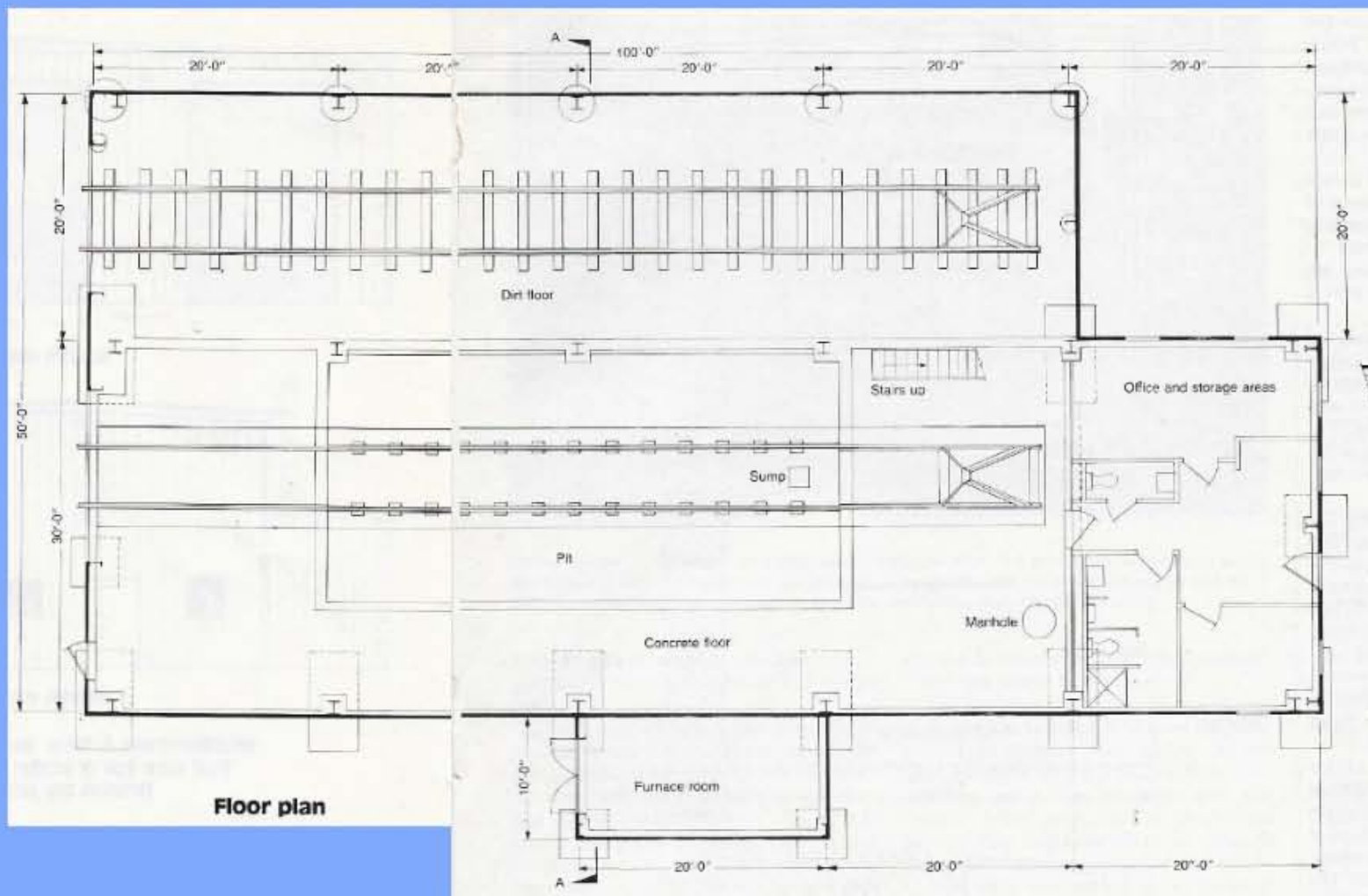
The roof parts from the Pikestuff kit are used for both the main and furnace

West Elevation



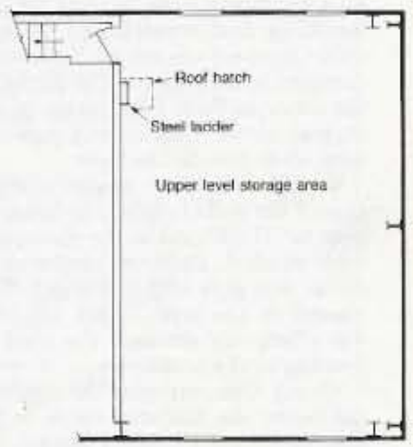
East Elevation



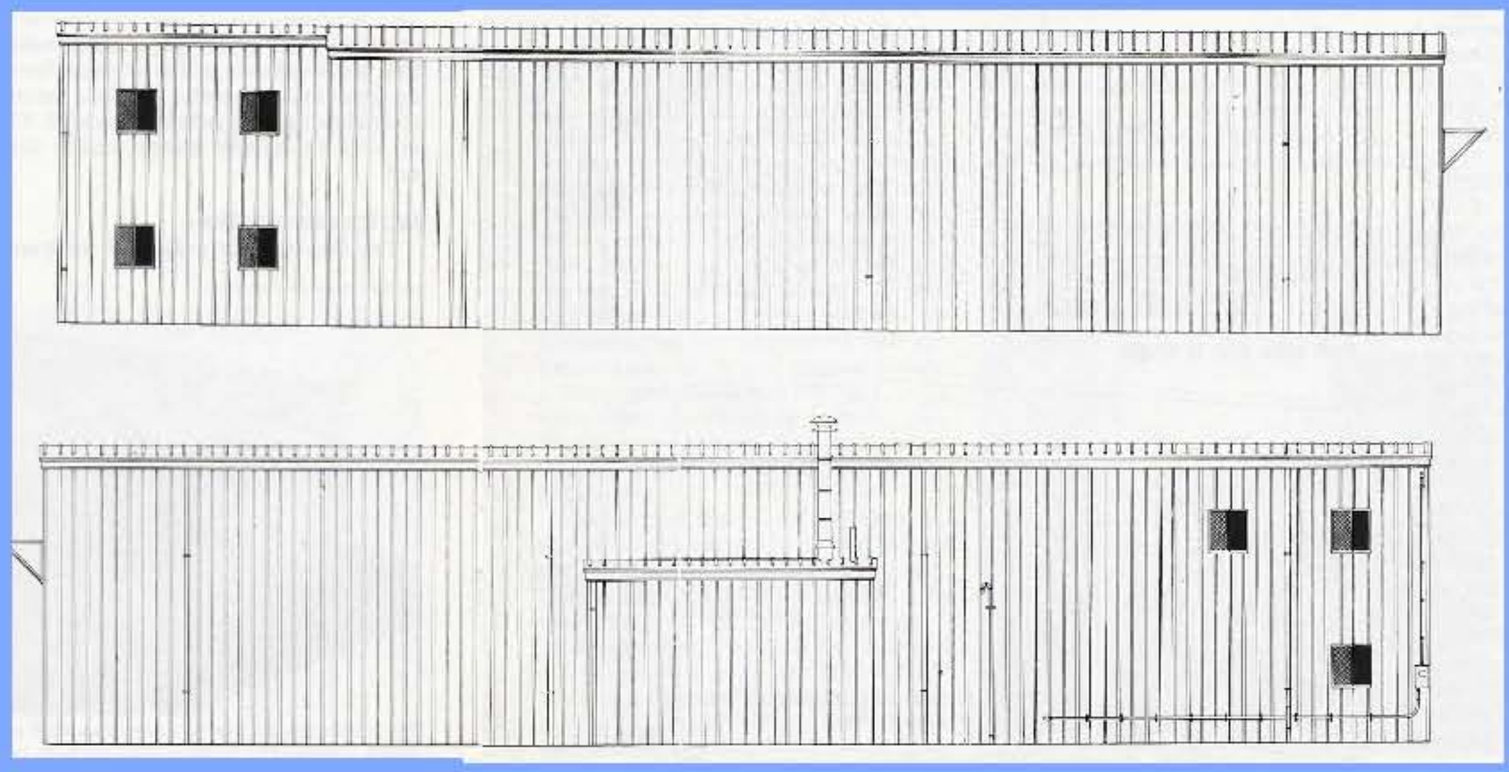


Floor plan

Middletown & New Jersey Ry. enginehouse



Second floor storage area



West elevation

Drawn by Julian Cavalier

East elevation

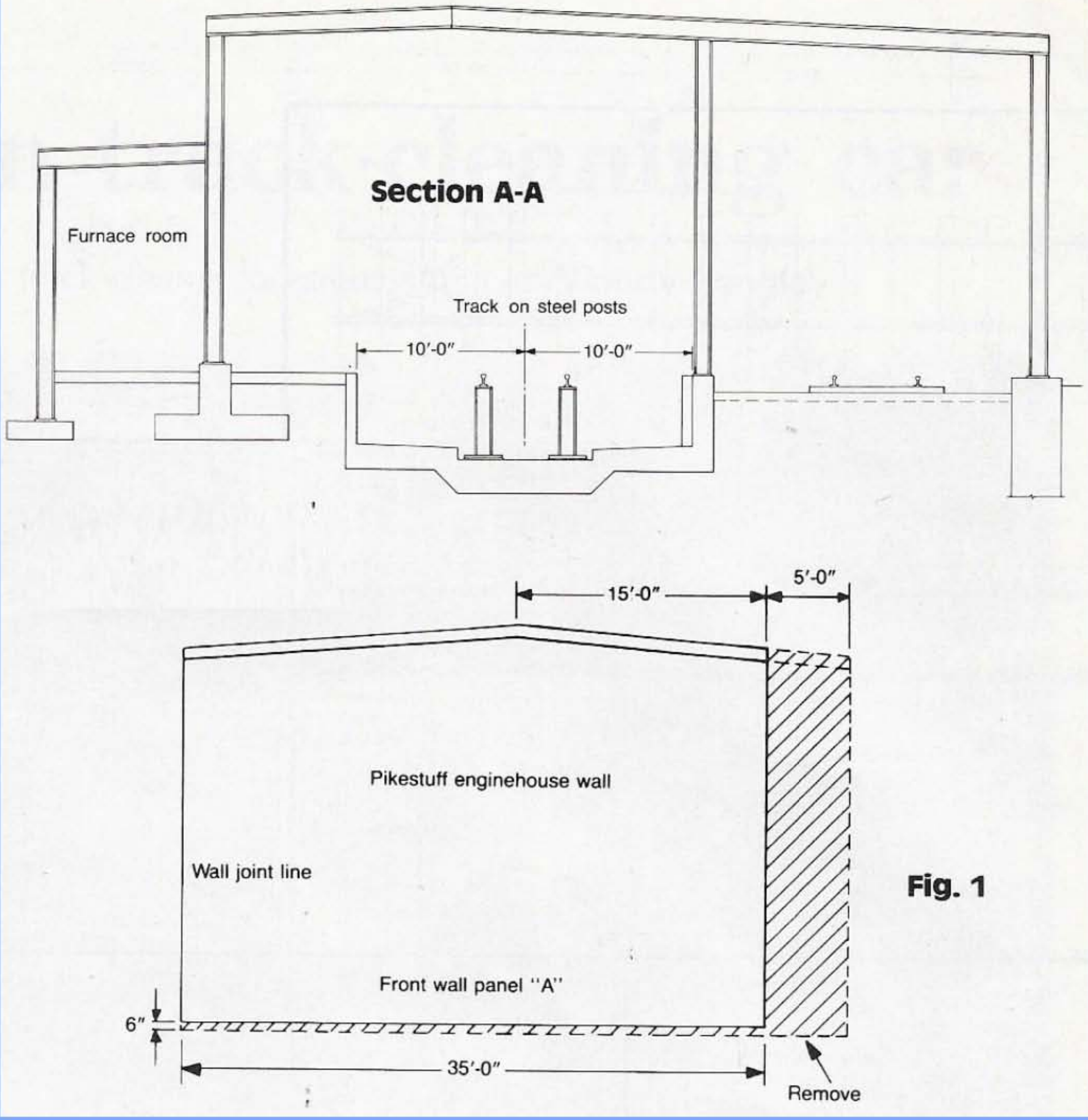

Section A-A
Furnace room
Track on steel posts
10'-0"
10'-0"
15'-0"
5'-0"
Pikestuff enginehouse wall
Wall joint line
Front wall panel "A"
6"
35'-0"
Remove

Fig. 1

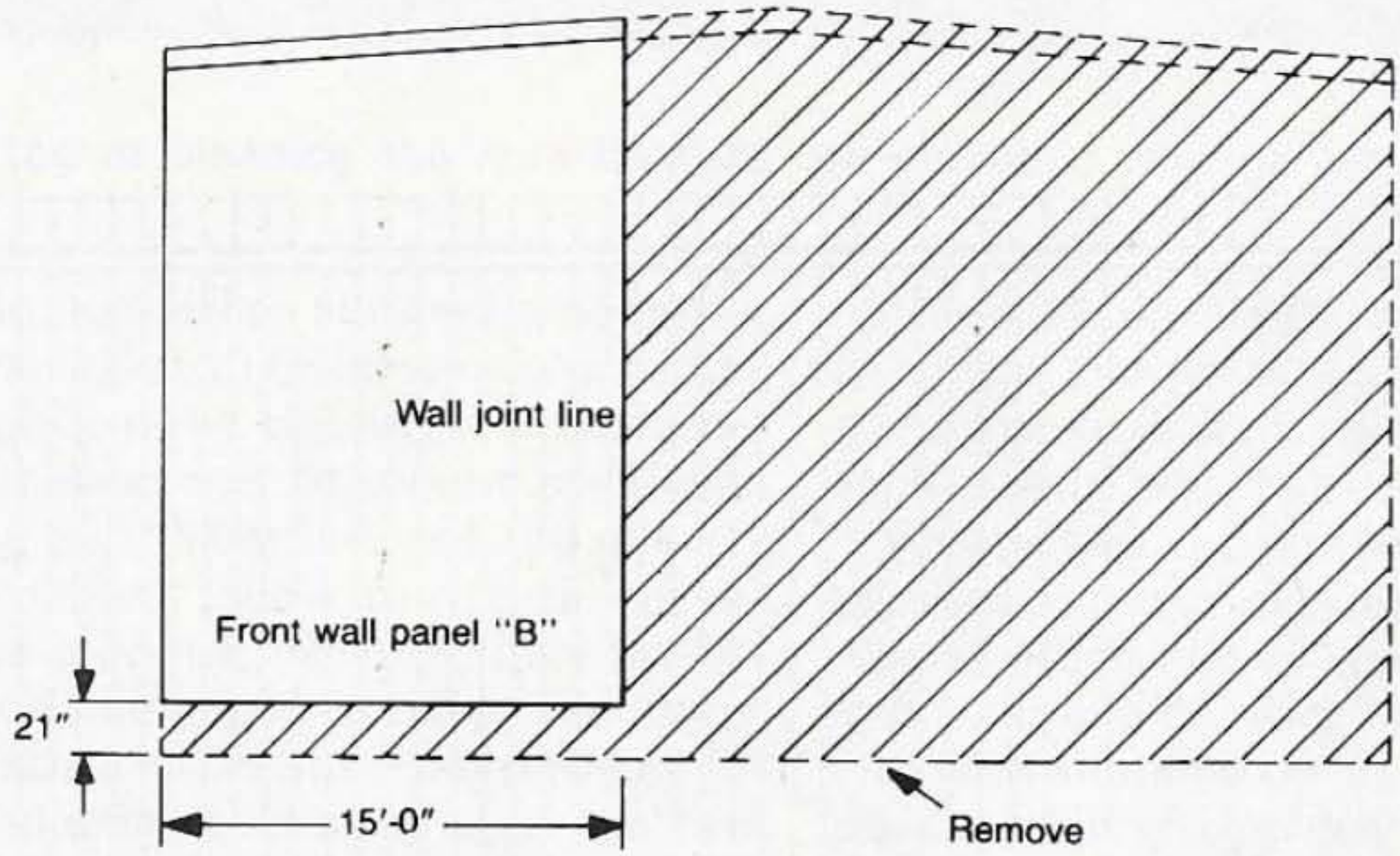

Wall joint line
Front wall panel "B"
21"
15'-0"
Remove

Fig. 2

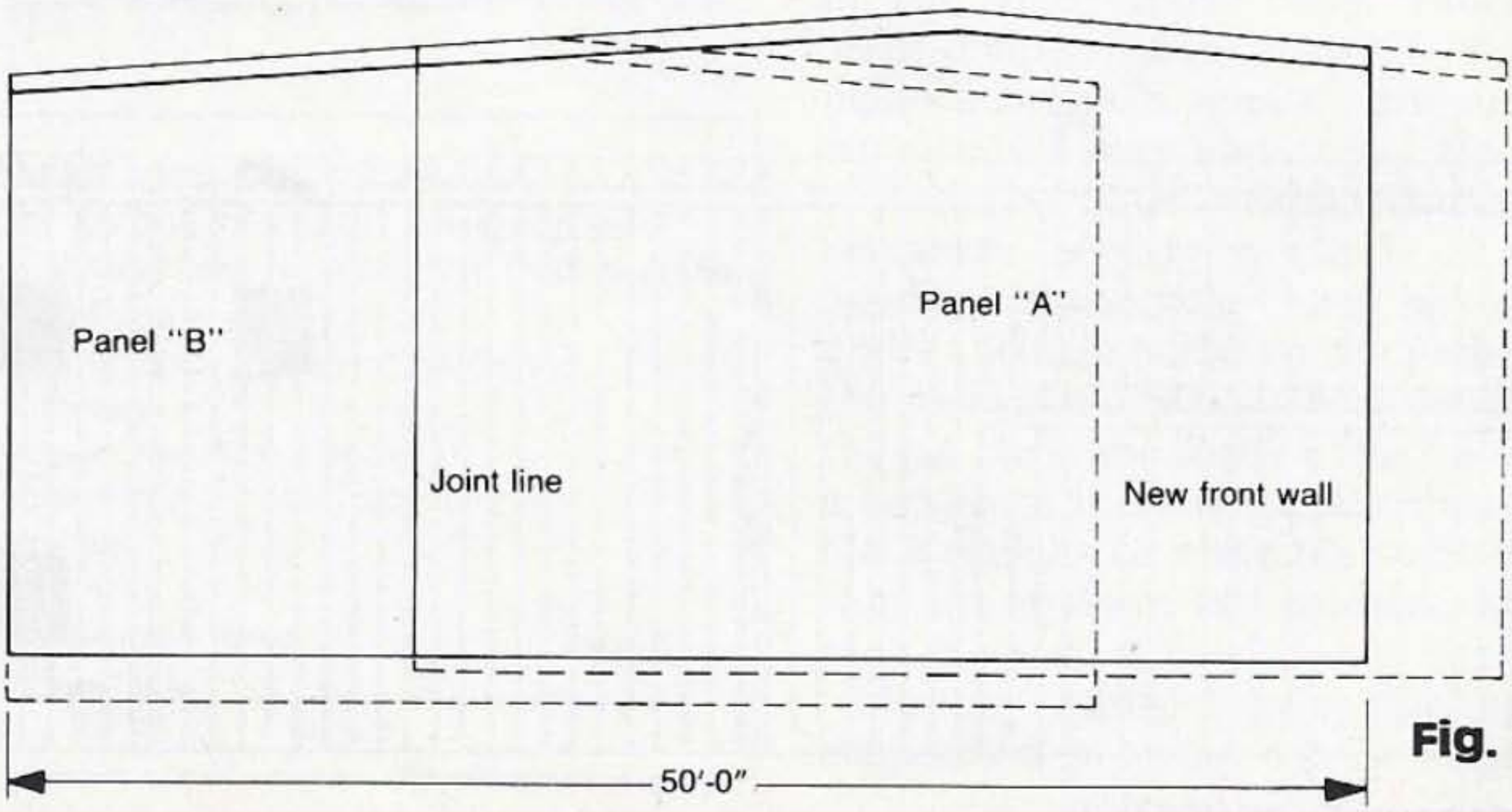

Panel "B"
Panel "A"
Joint line
New front wall
50'-0"

Fig. 3

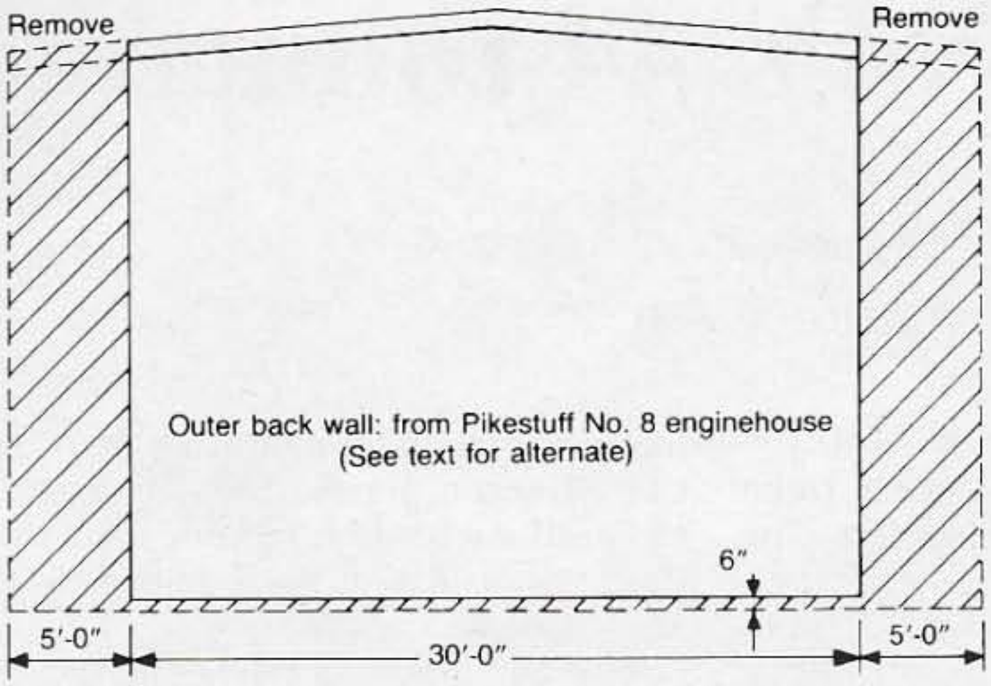


Fig. 4

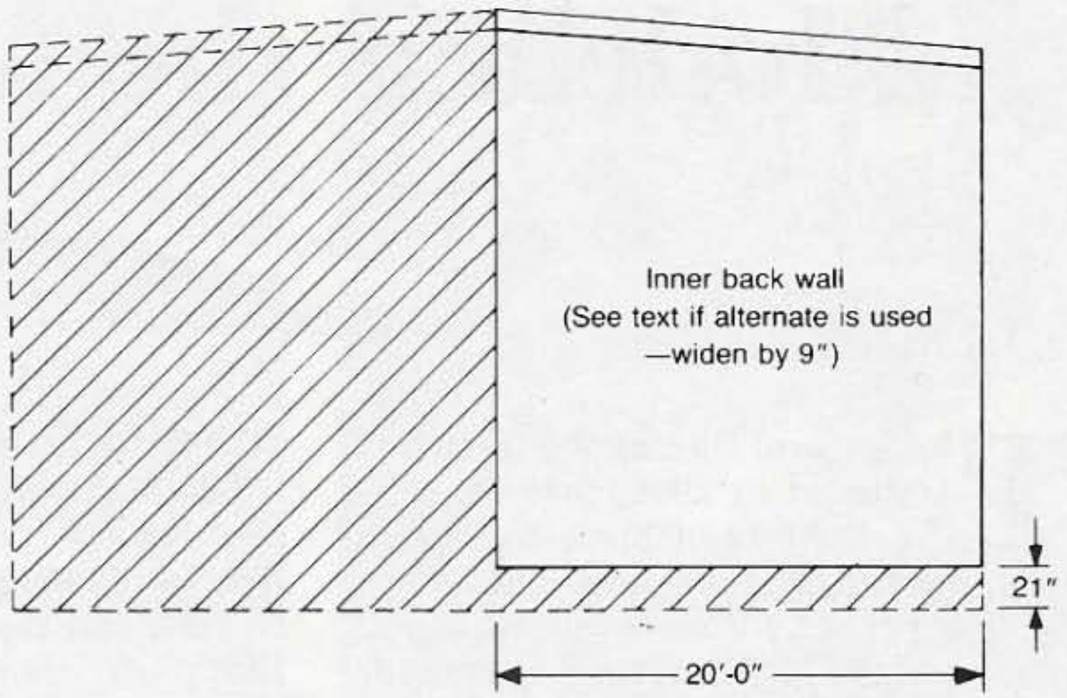


Fig. 5

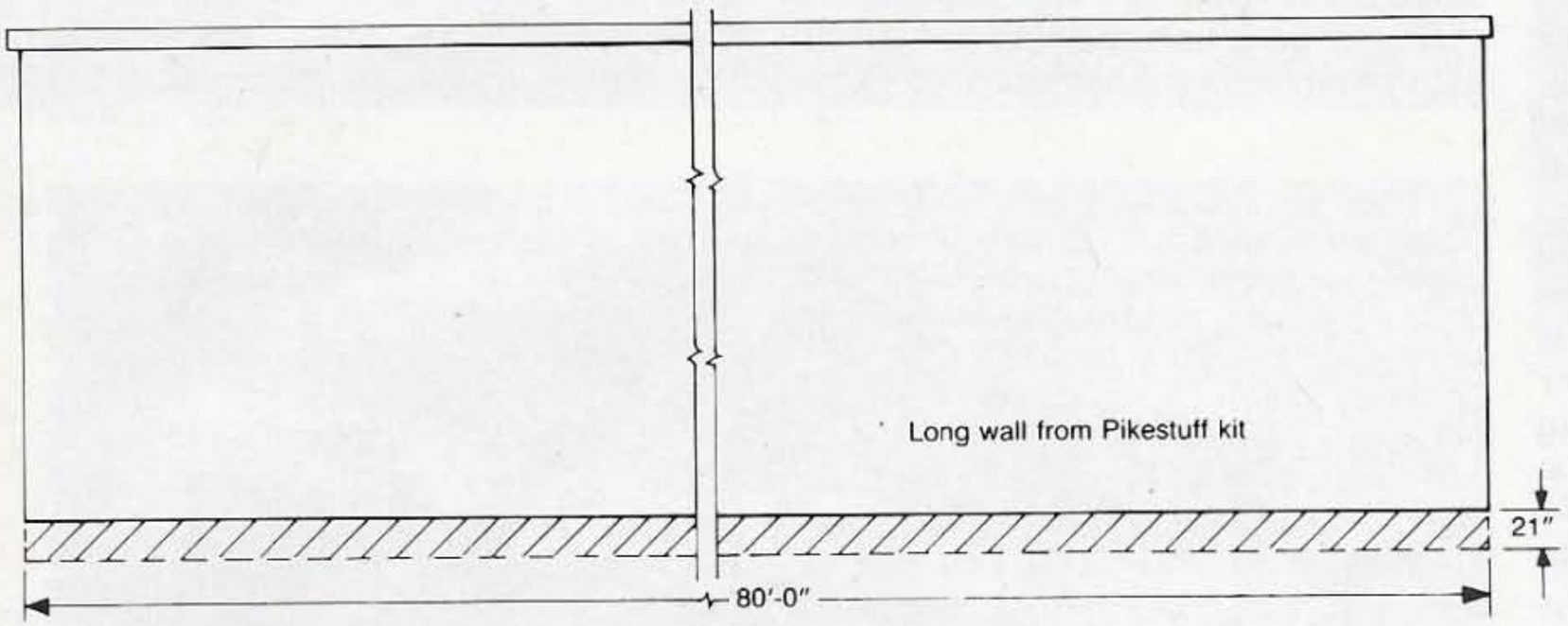


Fig. 6

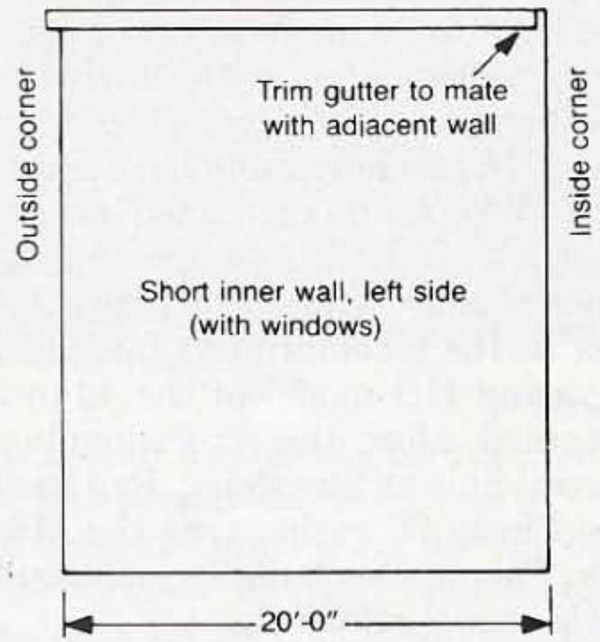


Fig. 7

room roofs. The kit instructions contain useful tips for fitting and using them. I painted the roofs with a Testors spray can, No. 1246 silver. On my model, the roof just drops in place and is removable. Initially, it had no reinforcements. It sagged some and tended to flatten out, so Plastruct H-column was glued to the bottom later. The furnace room roof was reinforced with angle and cemented in place.

Trim a Grandt Line No. 5084 enginehouse stack for a chimney. One of the Pikestuff No. 1009 louvered vents can be turned upside-down for the access hatch on the main roof. I painted it silver and left the sides in the casting's gray. See the drawings for the location.

Make up the main roof vents as shown in Figs. 11, 12 and 13. I used stripwood and dowels. Their position and size is estimated from photos; drill or cut holes in the roof to help secure them.

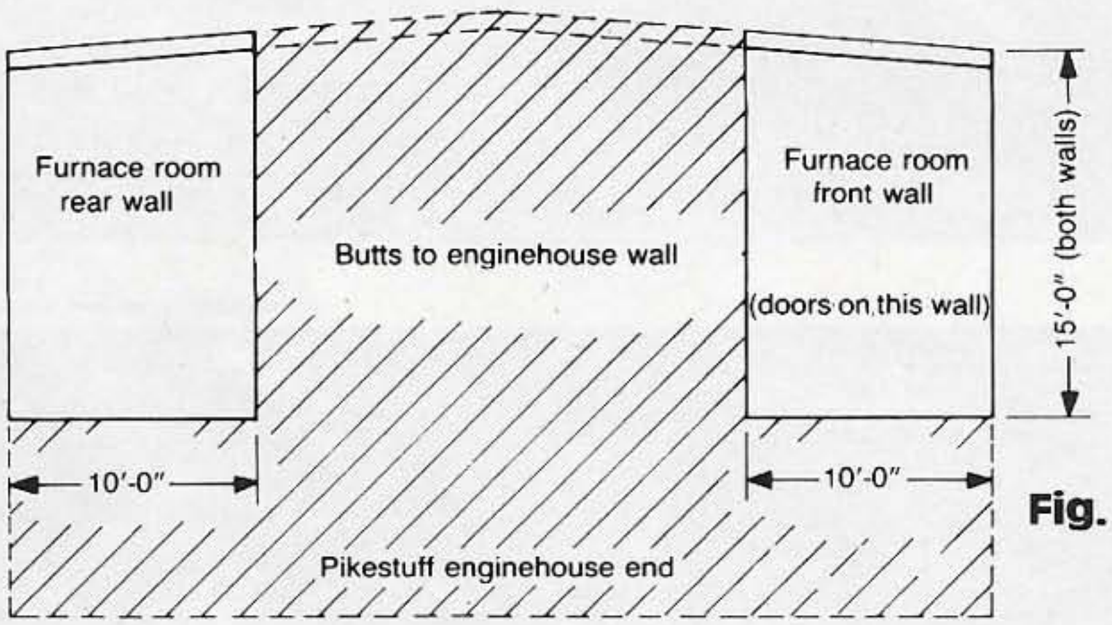


Fig. 8

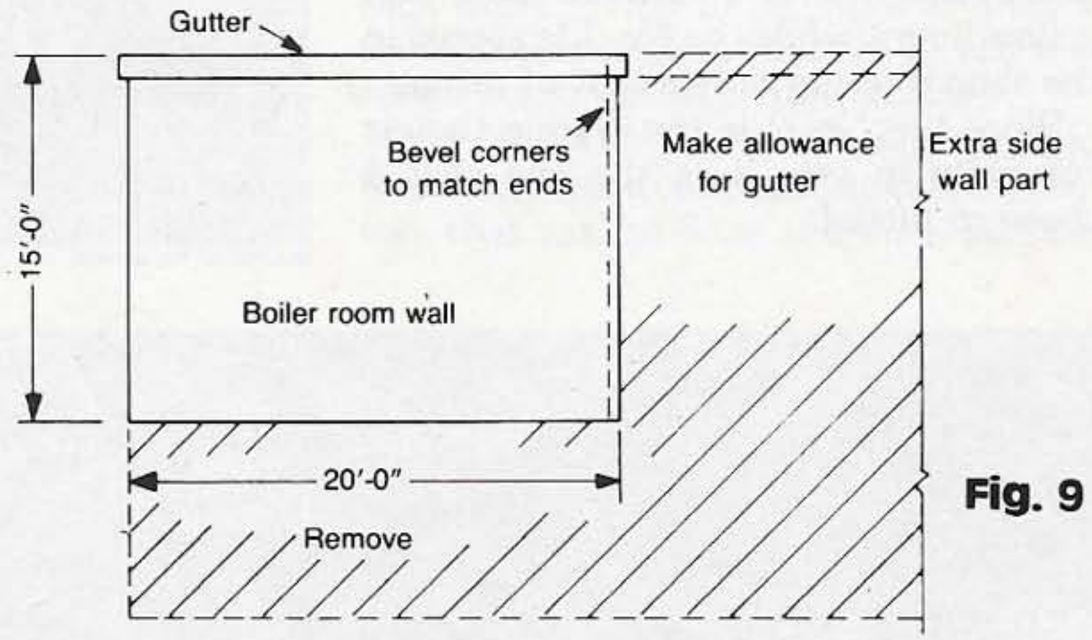


Fig. 9

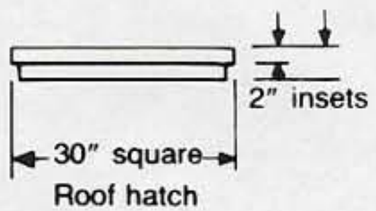


Fig. 10

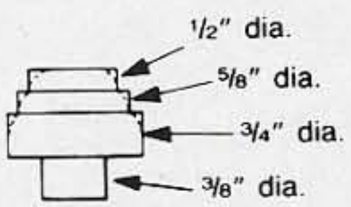
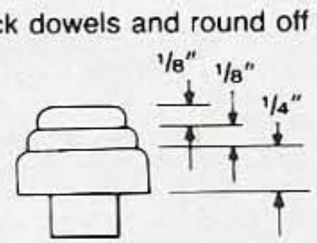
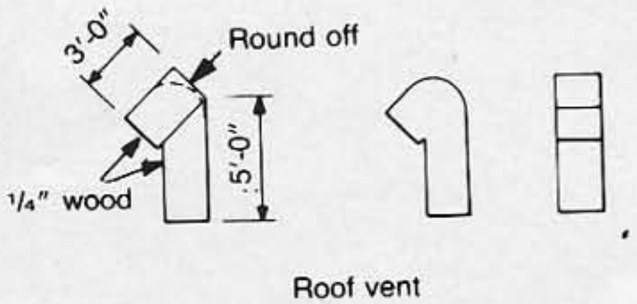


Fig. 11



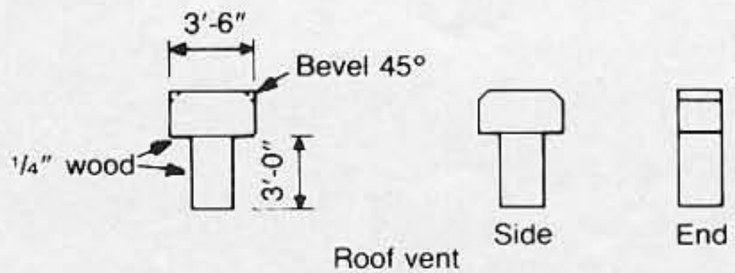
Centrifugal roof vent

Not to scale



Roof vent

Fig. 12



Roof vent

Slope bases of vents to match roof at their locations

Fig. 13

Drawn by Julian Cavalier

ver and left the sides in the casting's gray. See the drawings for the location.

Make up the main roof vents as shown in Figs. 11, 12 and 13. I used stripwood and dowels. Their position and size is estimated from photos; drill or cut holes in the roof to help secure them.

The angled-hood wall vent may be made from a Pikestuff No. 1009 and .015" sheet styrene. The electric meter is from Pikestuff; use styrene rod or wire for conduit. I painted these details SP Lettering gray prior to installation.

For the final details, add a small three-foot by four-foot step pad by the back door, using thin styrene and painting it Concrete, then check the prototype photos for scenery detailing. I used Life-Like Landscaping Cement, then sprinkled some of their ballast and ground foam ground cover on the scenic base. I omitted the modern exterior wall lights from my model, but they could be made up from styrene and lit with bulbs.

Fini