

Conowingo Models



Hand Car Shed

HO SCALE



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March, 2025

Thank you for purchasing this kit!

We believe that this kit is of a fictional structure as we have not seen photos of anything like it. It is based on a kit originally produced by Inland Scale Models. However, we have laser-cut this kit so that it's easy to build, changed a few things around and added a few more details, including a piece of Atlas track.

Additionally, we were doing a little bit of research and discovered that my great-grandfather worked Maintenance of Way, utilizing a hand car for Canadian Pacific, long before I was born. As a result, the "Gaudreau" sign was added. There is a story about a great uncle being crushed by crews swiftly moving a hand car out of the way of an oncoming train. He eventually died from his wounds, reminding us that the railroad often had and still has, deadly consequences.

This character-filled building tells the tales of a shed where hand cars and equipment were kept as well as an office where men often huddled around the stove in the winter, drank coffee and told tales.

We designed this kit so that the doors for the shed would be modeled closed. This kit does lead the builder down

the path that this could be modeled with the doors open. In the interest of time and cost, we did not design an interior. It wouldn't be hard to do. Perhaps future versions of this kit may include that if we get sufficient feedback. If you decide to build your model with the doors open, PLEASE send us photos so we can pass along that information and possibly base an interior on it.

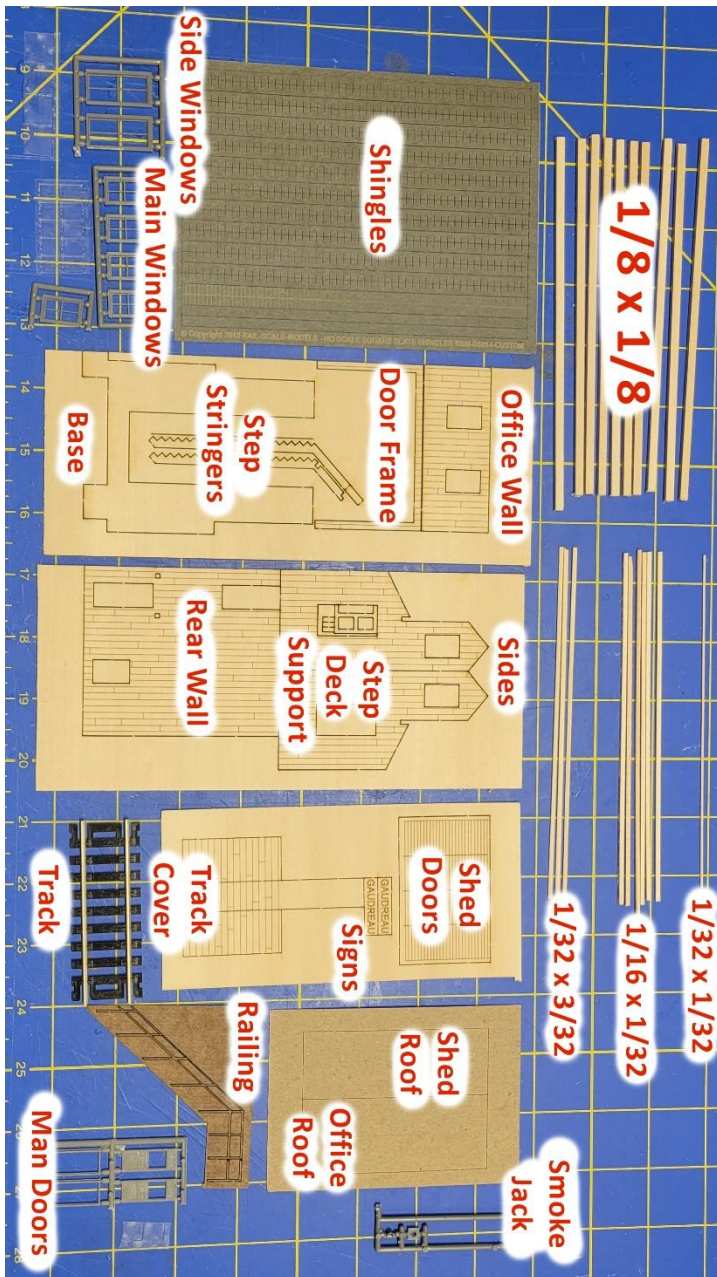
We highly recommend that less-experienced modelers (or experienced modelers that are interested in possibly learning a few new tricks) refer to the General Instructions Help file, which can be found on the Instructions page of our website.

The pilot model used TONS of stain. This also allows for the possibility of TONS of warping. If you are an inexperienced with this phenomenon, be sure that you have lots of weights (3-2-1 blocks work best) to stave off warping. Regardless, it may happen anyway. There were two pilot models, and several attempts at perfecting the shed doors. All suffered from warping. Lots of bracing will help.

INDEX

INDEX.....	1
KIT CONTENTS.....	2
STRIPWOOD SIZE/ PARTS PAINTING CHART	2
BRACING	3
BASE ASSEMBLY	4
SIGNAGE	4
DOOR, WINDOW AND SMOKE JACK PREPARATION.....	4
BUILDING ASSEMBLY	5
BUILDING PAINTING	5
BUILDING THE STAIRCASE	6
SHINGLING THE ROOF.....	7
ROOF INSTALLATION.....	7
SHED DOOR ASSEMBLY	7
FINISHING TOUCHES	8
INSTRUCTIONS FOR OPTIONAL TICHY HANDCAR KIT #4011	9

KIT CONTENTS



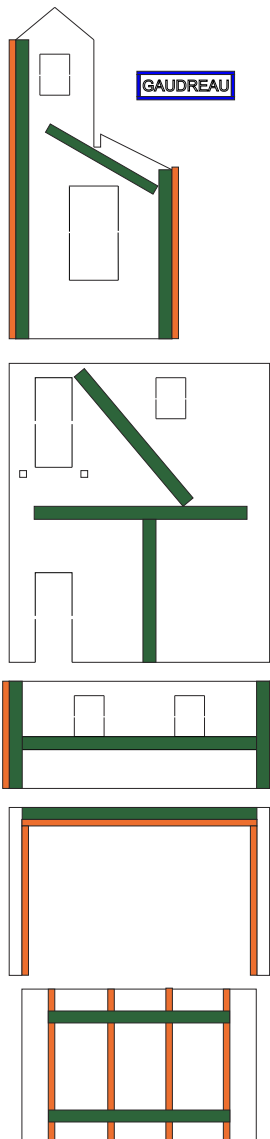
STRIPWOOD SIZE/ PARTS PAINTING CHART

The chart below assumes that you are planning on making your structure look like the pilot model. We strongly encourage you to deviate from what we did.

It would be smart to use this as a reference as you build as you may find some parts require slightly different lengths for assembly, largely depending on the builder.

Stripwood Cut / Parts and Color Chart				
Wood	Length (in)	Qty	Purpose	Color
1/32 x 1/32	A/R	3	Hand Railings (top)	Stain Grey
1/32 x 3/32	0.42	28	Steps	Stain Grey
1/8 x 1/8	3.00	2	Bracing	none
1/8 x 1/8	1.75	2	Bracing	none
1/8 x 1/8	2.45	4	Bracing	none
1/8 x 1/8	1.25	2	Bracing	none
1/8 x 1/8	2.88	2	Bracing	none
1/8 x 1/8	0.95	2	Bracing	none
1/16 x 1/16	2.48	1	Door Frame Top	Stain Grey
1/16 x 1/16	1.56	2	Door Frame Sides	Stain Grey
1/16 x 1/16	1.12	2	Corners over shed	Stain Grey
1/16 x 1/16	3.14	2	Long Corners	Stain Grey
1/16 x 1/16	1.77	2	Short Corners	Stain Grey
1/32 x 1/16	1.56	8	Shed Door Vertical Frame	Stain Grey
1/32 x 1/16	0.45	12	Shed Door Horizontal Frame	Stain Grey
1/32 x 1/16	A/R	8	Shed Door Diagonal Frame	Stain Grey
Roofing Material		2	Comes pre-painted	Black
Base		1		Concrete Grey
Man Doors		2		Grimy Black
Windows		7		Grimy Black
Smoke Jack		1		Metal
Underside/Edges of Roof		1	Paint white if painting building	None
Railings		2	Match hand railings	Paint Grey
Shed Doors	1 piece= 4 doors	4	*** Brace first ***	Stain Grey
Step Deck Support		2	*** Brace first ***	Stain Grey
Step Stringers		4	*** Brace first ***	Stain Grey
Track Cover		3	*** Do BASE ASSEMBLY first***	Stain Grey
Walls		5	*** Brace first ***	Stain Grey

BRACING



Bracing is very vital to this kit because basswood warps very easily. Ensure the bracing is glued into place and thoroughly dry before painting or staining.

1. Glue the bracing to the insides as shown above.
 Green = 1/8 stripwood
 Orange = 1/16 stripwood (corner bracing, put on the ends only)
 Blue = 1/32 x 1/16 stripwood framing

Keep in mind that the front and rear walls will need to slide into pockets created by the 1/8 bracing and 1/16 corner bracing on the side walls.

This does not apply to the second-floor, trackside wall, on which the opposite is true.

2. The bottom piece (shown above) are the doors. The doors were the biggest challenge in the design of this structure because of warping.

The door piece has slits to show where the doors would separate. DO NOT cut them now. The 1/16 bracing should go vertically down the middle of each door. The 1/8 bracing should go on after.

In an effort to add stability to the doors, you may choose to install them in the door-wall piece shown above it. Slide the door up to fit under the 1/8 bracing, so there is some room on the bottom. You will need approximately 1/16-inch clearance.

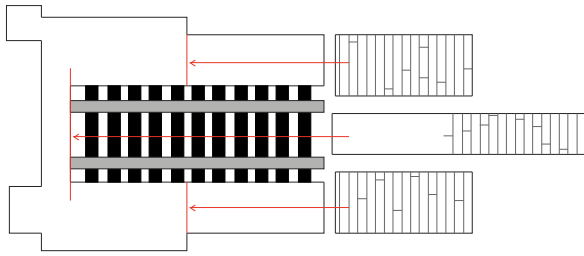
3. The end wall at the very top can be repeated for the other side, reversed, of course.

The end wall corner bracing will need to be trimmed to be even with the roofing.

If you deviate from above, be sure that you have room to slide the side walls against the end walls and that each piece is braced both horizontally and vertically.

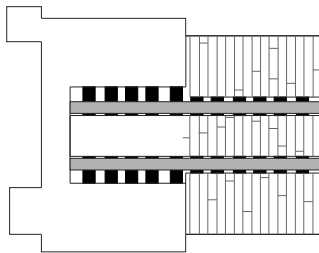
4. Let the bracing dry thoroughly before doing anything further with the walls.

BASE ASSEMBLY



1. The base should be assembled as shown above.

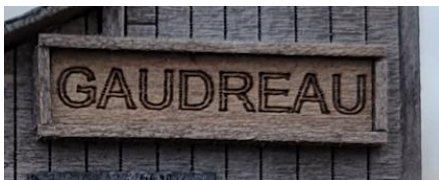
We recommend using LOTS of CA to adhere the wood decking into place.



The track covers will only come as far as the bottom of the large doors.

We recommend using clamps to hold all pieces together until the glue dries.

SIGNAGE



1. Decide what you want to do with the signs.

You could lightly add some grimy black to the lettering.

Another option is to flip it over and apply your own signage.

Or you could simply not use it at all!

2. We included a piece of 1/16 x 1/32 to frame the signs out. If you use them, we recommend painting them before constructing them.

Use the photo of the sign above as a guide on how to frame your signs.

DOOR, WINDOW AND SMOKE JACK PREPARATION

1. Cut out and paint the doors and windows as you desire.

The pilot model has dry brushed black, so that it appears that the paint wore off over time.

This step DOES NOT apply to the wood doors on the front of the shed.

2. When dry, add the glazing to the windows and the doors.

You may need to slightly cut the window edges so that they fit into place.

Be sparing with the glue to prevent unsightly globs.



3. Cut out the three pieces of the smoke jack.

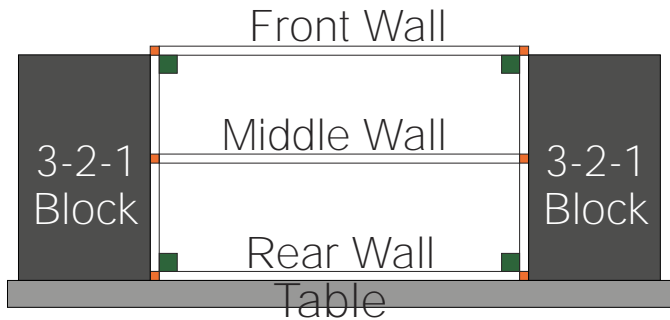
We decided to install ours on the side of the building, so we cut the smoke jack with a 90' bend, using extra sprue to do so.

4. Glue the cover in place.
5. When dry, paint silver.

We used watered down flat black and flat orange to age it.

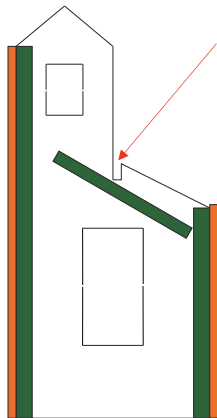
BUILDING ASSEMBLY

1. Assemble the walls so that the side walls fit against the inside of the end walls.

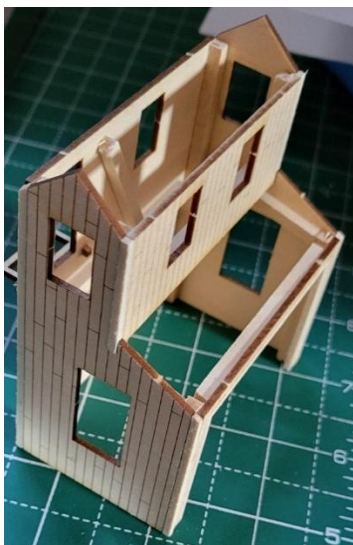


Lay the back wall flat and bring the two side walls next to them, ensuring they fit snug.

Ensure the walls are at 90° angle. You may choose to use 3-2-1 blocks to hold them in place.



Slide the middle wall into the slots on the sides and then the front wall.



2. Set aside to dry.

You will notice in the above photo that the staircase frame has been added. We DO NOT advise doing this before assembling the building. Let us make the mistakes, so you don't have to!

3. The staircase deck will not fit into the back wall because it has now been covered by the 1/8 bracing. You can either cut the notch out from the inside or shorten the leg on the deck so that the two pieces will fit together snugly.

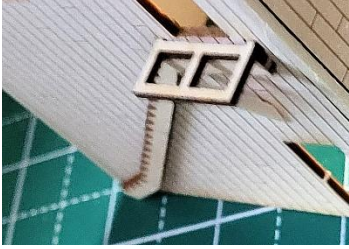
BUILDING PAINTING

The pilot models were stained using layers of Hunterline Blue Grey and Driftwood. This will cause warping. Even with bracing, you can fight it, but warping is inevitable.

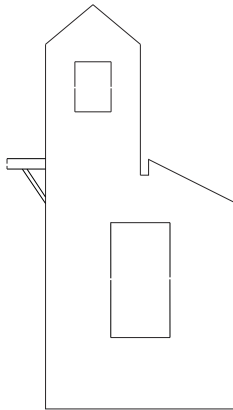
We recommend that if you are staining this structure, to stain the stripwood before constructing it. This will alleviate issues with glue spots. Stain the walls after construction so that the building will have the greatest chance to fight warping by being a solid structure.

For those that prefer to use acrylic paint, the same general warnings regarding warping apply.

BUILDING THE STAIRCASE



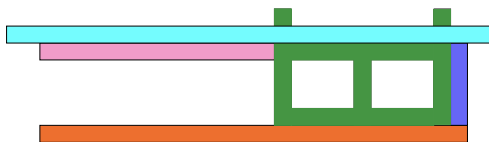
1. Glue the staircase deck into position, using the two cutouts under the door.



2. Brace the staircase deck with a scrap piece of 1/16 x 1/16, cutting the edges to support. We forgot to do that on the pilot models.
3. Assemble the staircases as follows-

The first kits have an extra set of stairs. Discard the set that is on the main sheet with the building.

View from above-



Aqua = Building

Pink = Inside Stringer

Orange = Outside Stringer

Green = Deck Support

Blue = End Cap

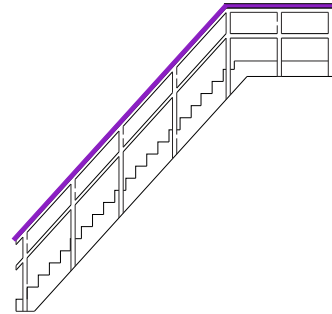
Glue the end cap(blue) into place. It should be level with the deck support.

The inside stringer (pink) can be glued into place, so that it lines up with the underside of the deck support (green) and butts against the end cap (blue).

The outside stringer (orange) can be glued into place as shown above. It should be level with the deck support.

Co-located on the parts sheet with the deck support are some small laser-cut pieces that can be used to properly space the two stringers. We recommend adding some Micro Liquitape for this.

4. When dry, cut and glue the 1/32 x 3/32 steps (and deck boards) into place.



5. Glue the railings into place. The bottoms of the supports should line up with the bottoms of the stringers.

Don't forget to install the end piece, between the hand rail and the building.

6. Cut and glue the 1/32 x 1/32 top railing into place. (purple)

SHINGLING THE ROOF

You will notice that there are two roofing pieces. One has a score down the middle. This is the roof for the office. The single piece goes over the shed.

1. Bend the office roof along the guide line.
2. Add the starter strip to the office roof, on the lower end of both sides.
3. Add another starter strip to the shed roof, on the lower end.



4. Shingle the office roof using the included shingles. (Or your own, as you see fit)

Overlay the starter strip on both sides.

Be sure to alternate the shingles as shown above.

On the office roof, we recommend that you do one or two rows at a time, then flip around to the opposite side to make it match. This seems to help keeping the shingles even on both sides.

Do not add the ridge cap yet.

On the shed roof, shingle as before, except of course, you don't need to do two sides.

Do not add the roof cap yet.

ROOF INSTALLATION

1. Center the office roof front to back on the building.

You may want to mark it lightly with a pencil so it can be positioned properly.

2. Glue the roof to the building.
3. Hold the roof in place until the glue sets enough that the roof doesn't come away from the building.
4. Carefully, apply the ridge cap to the building.
5. Repeat for the shed roof, except use leftover starter strip for the cap as shown in the photo to the left.

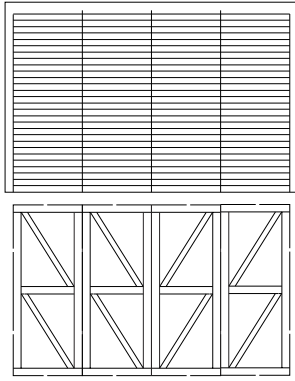
If you don't have enough starter strip remaining, you could use other parts of the roofing sheet or black construction paper. Cut pieces of masking tape with permanent marker would work as well.

SHED DOOR ASSEMBLY

We believe the intention was for the shed doors to be bi-fold doors, similar to what most bedroom closets have for doors. Therefore, we did not include hinges as they would have been on the inside as the doors would fold outward in the middle of the left and right sides.



Decide how you want to add the framework for the doors. The diagram below is what was in the original kit. We showed it separated from the doors for clarity.



We did a variation for ease of building. (See photo below). However, we meant to have the cross boards form a V in the middle, like the original kit.



1. Install the shed door on the building.

You will notice in the top and sides do not have scribing on them. This is where the door contacts the door frame. (Reference the black and white diagram above)

You will also notice that there is a gap at the bottom. This is to allow the decking and tracks to fit. You may need to trim this later, if things don't line up properly.

2. Cut and install the 1/32 x 1/16 boards as shown (or whatever you decide to do).
3. When dry, cut the dividers where the doors meet. This will make it look more realistic, especially if you cut it and the frame wide enough to make a visible gap.

FINISHING TOUCHES

1. Glue the doors and windows into their respective cut outs on the building.
2. Glue the building to the base.

The walls should slightly overlap the base.

The concrete pad for the staircase should line up with the staircase.

The concrete pad for the man door on the shed should line up with the man door on the shed.

The shed doors should be centered over the wood-planked walkway.

3. Install the chimney wherever you desire.
4. Glue the signs into place.
5. Do paint touch-ups where required.
6. Weather as desired.
7. Enjoy!

Once again, thank you for your purchase!

If there are any parts missing, please e-mail us what you need to complete the kit and we'll send it your way. I'm a one-man shop and I do occasionally miss things. Also, suggestions for improvement are welcome.

Please send photos!

See the Conowingo Models website
www.conowingomodels.com
 Or our Facebook page

<https://www.facebook.com/ConowingoModels/>
 for more exciting, funky buildings and rolling stock for your model railroad!

Many thanks to my family, Jeff Grove, Steve Milley and Mark Schreier for their support!

INSTRUCTIONS FOR OPTIONAL TICHY HANDCAR KIT #4011

Instructions courtesy Tichy Train Group

Handcar/Pushcar

Kit #4011



TOOLS NEEDED

- Liquid Plastic Cement
- Plastic Model Cement
- #0 or 00 Paint Brush
- Hobby Knife
- #11 Blades
- Gap Filling Super Glue
- Kicker for Super Glue
- Tweezers
- Diagonal Cutters

BEFORE STARTING ASSEMBLY

1. Install a new #11 blade in your knife.
2. Clear any flash in the triangular wheel openings by inserting the tip of your knife into the hole with the cutting edge pointing to the rim.
3. Before removing the following parts from the sprue brush a coat of liquid cement onto them. This will strengthen any weak sections and prevent breakage.

A-3 (2), A-4 (1), A-8 (2), A-11 (6)

1 WHEELSET ASSEMBLY

1. Remove wheels A-10 (8) from sprue. Trim gates with knife on flat surface after removal.
2. Cut 4 pieces of .020 wire to length.
3. Place wheel on a flat surface face down. Place a drop of gap filling super glue on the hub and hold wire upright in it. Spray with kicker to set glue. Repeat for other end.
4. Repeat for other 3 axles.

As an alternative construction method you can drill out the hubs with a #74 drill. Cut axles 1/8" oversize and glue to model. Glue wheels in place and trim axle with rail nippers.

2 PUSHCAR ASSEMBLY

1. Remove Frame A-13 and deck A-14 from sprue. Trim gates.
2. Center Deck on Frame and glue in place.
3. Pick out two wheelsets. (Use the less perfect ones as they are less visible on the push car than the handcar.)
4. Glue in place with super glue. On one end the axle saddle is out of position. Glue the axle to the inside center of the car on these axle mounts.

3 HANDCAR ASSEMBLY

1. Remove Frame A-1 and Deck A-2. Trim gates. Cut out the center crossbar between the center rails to clear the gear in the center deck opening.
2. Center frame on deck and glue in place.
3. Remove A frames A-3 and trim gates with a sharp knife on a flat surface. Remove overflows on bottom also. Glue in place by running a bead of plastic model cement along the bottom. Place in position on the deck. This glue gives you more working time.
4. Remove spacers A-5 and glue between the A frames against the deck. It is easy to place these parts if you hold them by sticking a sharp knife point into the part. Remove point after the glue sets.
5. Remove boards A-8 and glue to sides of A frame. Again use the brush to apply a coat of glue and place the part using the knife tip.
6. Remove and trim gear A-7. Glue into opening in deck at one end.
7. Decide if you are building the model with the optional side benches. If not, skip steps 8 and 9.
8. Cut out 6 support brackets A-11. Glue 3 on each side of car. The center ones are offset to one end of the car about 1/8 inch. The easiest method is to hold the piece in tweezers, dip the end into solvent and place it on the car.
9. Remove and trim seats A-12. Place seats face down on the edge of your workbench. Turn car over and hold the brackets against the seats. Apply glue and let set. Repeat for other side.
10. Remove and trim handle A-4 Snap into A-frame. Clear holes with a pin if necessary.
11. Glue wheelsets in place with super glue.
12. Remove brake operator A-9. Glue to center of side.
13. Remove brakeshoes A-6. Glue one to each wheel by brake operator.

PAINTING

We strongly recommend the use of an airbrush. Hold one of the crossbars underneath with tweezers and spray an even coat over the whole model. Most cars were boxcar red or brown but many were painted in the Road's standard MOW color.

If you should irreparably damage or lose a part it will be replaced without charge. Please return the part/s to us with \$1.50 for shipping and handling -- a replacement will be sent immediately. And, to drop us a line, we enjoy hearing from you with ideas, comments and suggestions for new products.

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HANDCAR ASSEMBLY

KIT #4011

