THE "CANADIAN"
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CANADIAN CARM ASSOCIATION OF RAILWAY MODELLERS
WINTER 2022 ISSUE #78

# IN THIS ISSUE




a quarterly publication of the "Canadian Association of Railway Modellers"

**THE CANADIAN ASSOCIATION OF RAILWAY MODELLERS**
**Founded October 15, 2003**
**Founding Members: John Johnston, Peter Moffett, David King, Lex Parker**

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**COVER PHOTO TOP BY GEORGE DUTKA:** The trio of PGE gondolas built during the *Rapido Gondola Project* by George Dutka and Peter Mumby are headed back to the Canadian border on George Dutka's New England based layout.

**COVER PHOTO BOTTOM BY TED RAFUSE:** At North Creek, on the Northumberland, Haldimand and Hastings Railway, Millers Feed Mill provides both inbound and outbound rail traffic and provides a switcher with activity in this community. This business nestles in a small flat farming area between outcroppings of the Canadian Shield.

**WOULD YOU LIKE TO PARTICIPATE IN THE MONTHLY ONLINE CLINICS?**

**ARE YOU NOT RECEIVING NOTIFICATIONS?**

**DOES CARM HAVE YOUR CURRENT EMAIL ADDRESS?**

**IF NOT OR YOU'RE UNSURE FORWARD YOUR CURRENT EMAIL ADDRESS TO:**
**DAVID KING at membership@caorm.org**

**DO IT NOW AND PARTICIPATE IN CRAIG SYMINGTONS DECEMBER CLINIC ON HIS HOn3 Rio Grande Southern RR**

**PUBLICATION SCHEDULE FOR *THE CANADIAN***

***The Canadian* is published four times per year.**

**Submission by authors or Chapters should be submitted by the following dates.**

**Spring Issue: February 1**
**Summer Issue: May 1**
**Fall Issue: August 1**
**Winter Issue: November 1**

***Material for the Canadian should be sent to:***

**John Johnston**
**41 Glenview Place,**
**Hamilton, Ontario, L9C 6H9**
**or by**
**e-mail at editor@caorm.org**

**MEMBERS AREA PASSWORD**

**USERNAME: gondola**
**PASSWORD: hopper**

# observation platform
# john johnston: editor

## MEMBERS SUBMISSIONS TO THE LAST TWO ISSUES OF THE CANADIAN

I requested Members to submit what they had been working on for the Summer and Fall issues of The Canadian. The response was overwhelming and in my mind a complete success. It allowed Members to share their modelling without having to write a significant article and it involved more members in the Canadian and in CARM than we have had for a long time.

So, if it was such a success, why didn't I continue it with this issue? I can answer in two words. Canada Post. I received enough material from you the Members that I was able to expand the Canadian back to 24 pages. However with the Winter Issue we also include the Calendar. I normally pay postage for Oversize up to 100 grams. The Calendar moves us to Oversize up to 200 grams, if I hold the Canadian to 20 pages, which increases our costs from $1.94 to $3.60. To add the 4 more pages would take the postage up to $5.02. That is not sustainable for us. So the answer is, I didn't have enough space in this Issue.

My plan going forward is that I will send out an email call for Members Submissions for the Spring, Summer, and Fall Issues of The Canadian, but most likely not the Winter Issue due to the postal rate constraints. So, if you are working on a project this winter, take lots of photos, I'll be contacting you in early February for the Spring Issue.

## LATEST MUSINGS ON THE THE DESIGN AND MAINTENANCE OF MY LAYOUT.

Like most modellers, when I began to design my current N Scale Grand Trunk Southern layout I wanted to maximize the use of the 14X20 ft space that I had available. To do this I went to a two level design with the bottom level being a double ended 14 track staging yard that holds 28, 25 car trains. "Yes I drank the Kool Aid of the *No amount of Staging is Enough* crowd". The upper level is at a height of 50 inches and the lower level at 30 inches. There is also mid level hidden trackage at 45 inches which allows for twice around the room and returns trains to the helix. When the width of benchwork and fascia is taken into account this leaves a working/visual gap between the levels of just under 10 inches. When I stand right in front of the layout I can see the first 3 of the 14 staging tracks and when I step back 2 feet I can see the first 5 of the 14 staging tracks.

The first 200 times I bent over to look further in didn't seem too bad but lately, as I approach my mid 70's it is starting to get irksome to say nothing of the effect on my back. My regular operators also seem to be getting tired of doing it this way. I am actively looking at ways to redesign how I do staging including moving it to the top level utilizing a large area over the helix. I think in hindsight, if I had to do it over I would seriously consider moving the heights of the levels upward to 40 inches for the lower and 60 inches for the upper. There are solutions to gain height for shorter people, such as risers, there are no solutions other than bending over to reduce height.

That narrow gap also came into play recently when one of my tortoise machines decided not to play nice and stopped working. When these were installed there was no fascia and no scenery attached to the fascia so you could look straight in and the 10 inch gap didn't appear to be a problem. Now however the only way to see the machine was to perform a contortion worthy of Cirque de Soleil. This proved impossible but did lead to the use of about half a tube of back liniment. I eventually removed the machine, dealt with the cold solder joint, (*why did it take 5 years to act up)* and then undertook the again agonizing task of reinstalling it. Add in the fact that I wear glasses and twisting your neck so that you see through the bottom of your glasses to work on up close stuff under the layout is a fun exercise. Not sure the answer to this but I have taken note of the extremely large number of modellers who have gone to manual turnout operation which puts everything above the benchwork.

Of course a two level layout requires a 4 turn helix to run between the levels. Originally, it felt like nothing to crawl under and inside the helix to clean track. Fortunately my track cleaning cars keep it relatively clean but once or twice a year it needs a bright boy. Thank goodness for grandsons. The helix has proven to be both a blessing and a curse as it increases the useable layout footprint but it really is a nuisance losing your train for several minutes while it transitions between levels. In conjunction with reviewing how I use staging I am also looking at whether I can minimize the use of the helix during operations We generally operate for around 2 1/2 hours and with switching and running at prototype speed we can run about 8 to 10 trains in a session. That does seem to raise the possibility of creating enough staging on the upper level for a single session while leaving surplus trains in lower level staging. In between sessions I can change out trains running them up and down the helix. It is an option I'm exploring.

There are also numerous things in hindsight that I did right. I won't mention them all but to highlight a couple.

The overall trackplan has stood the test of time and operations and is fun to run which was the goal. I check with my operators regularly to ensure they are enjoying themselves and the feedback continues to be positive.

I didn't scrimp on aisle widths. My standard width is 40 inches with two "chokepoints" which are 30 inches. Too often I see designs with 24 or even 18 inch aisles. Two standard size humans can't pass one another in that space. My 30 inch chokepoints are doable but tight for two people. If I had to identify one single design element that has made the layout enjoyable it would be the aisle width and the comfort it brings. In that same vein when I designed this layout I eliminated the duckunder I had on the previous layout. Best move ever! Being able to walk straight in to the layout is great. Several friends have swing gates and if you need to loop across the entranceway to the layout I would highly recommend a swing gate or lift out as the way to go.

Bottom line, with a fair bit of operation now under my belt, the layout design appears to be standing the test of time and will improve if I can come up with the few tweaks that it needs. Stay tuned.

**JOHN JOHNSTON: EDITOR**

# Chairman's Report

I am writing this as 2021 draws to a close and one day before I do a presentation of my Anyox narrow gauge layout model to the CARM membership through the facilities of Ian McIntosh's monthly ZOOM meetings. As the year is drawing to a close it is maybe a good time to look back at the past year or two and reflect on our hobby and in particular its strengths. Back in March 2020 when we all cancelled our operating sessions and had to contend with closed stores and lack of supplies, flea markets, conventions and all the other events where we were able to meet and converse with our fellow modelers it seemed as if we were in for a dismal period and various e mail chat groups started to express those lamentations.

Now, 19 months later it is a very different story. ZOOM has played a major role and most of us are gathering for conventions, presentations, lectures, how to's, etc in ever increasing numbers. I now have ZOOM meetings of modeling/railway groups four times a month and could sign up for more. Most importantly I have learned a lot to make me into a better modeler. As some of you know I have been doing quite a bit of brass bashing recently to build the railroad equipment that was unavailable any other way for the Anyox railroad. I invested in a resistance soldering iron and had no success in making it produce good tidy results until I enjoyed a ZOOM session where an expert actually showed me how he did it. Now I too can be a pro (maybe)!

We have also accepted the reality that much more of our purchasing is going to be by mail order or equivalent which means planning on a longer time basis. The frustration arises when we learn that something is back ordered and not available, so that project goes back into a box and a holding pattern while we decided what to work on instead. The whole large world has been experiencing similar problems as we observe news bulletins reporting on backlogged container ships, clogged intermodal train systems and shortages of truck drivers. One of the projects I had to put back in a box was a mini model of the Victoria Falls station and yard at a scale of HOn3.5.

I grew up in what was then Rhodesia, now Zimbabwe and developed a special fondness for Beyer Garratt steam engines, which performed marvels of haulage on 3ft 6inch gauge track as is the norm all over south and central Africa. I visited Zimbabwe and Victoria Falls again 2 years ago and found a Beyer Garratt parked across from the station. I was not aware of anyone making such models but with COVID induced additional trolling of the internet I discovered someone who was building said models of 4-8-2-2-8-4 Garratts, which were the last model built before diesel took over. I ordered one in HOn3.5, or in other words HO scale but with narrower gauge wheel sets to reflect the 3 ft 6 inch gauge. Six months later I am nowhere nearer to getting my model because the decoder manufacturer that had recorded and installed the correct sound files ran out of chips and cannot get any more due to the world wide backlog of chip manufacturing. While I can wait for my model I feel sorry for that manufacturer as they depend on a supply of chips to turn into product to keep their business going.

For anyone unfamiliar with Beyer Garratts I attach a photo I took 2 years ago at Victoria Falls station of a tourist train 2-6-2-2-6-2 Beyer Garratt in magnificent condition for a 75 year old locomotive. As an aside note also how wide apart is the spacing of the ties in the track.

With Christmas nearly upon us I hope you have all planned well ahead to order your presents for your friends, relatives and self. If you haven't yet done so think about getting an extra copy of the 2022 CARM calendar. It is a wonderful gift available at a very reasonable price. There is no risk of it being unavailable as (a) we grew all the trees to make all the paper in Canada and (b) I am informed it is already printed and waiting to go into envelopes. In addition to prototype photos it features some close ups of models which display excellent modeling skills.


I look forward to seeing many of you virtually on zoom in November and if not then, at some later date. On behalf of the Executive of CARM I wish you a wonderful Christmas and New Year and hope you will all have a great 2022. While the CP Christmas train is not running this year here is a reminder of it from 2015, the first year it was pulled by a rebuilt ECO unit.

**GERALD**

# Chapter Reports

**TORONTO CHAPTER:** The Toronto Chapter plans to have a CARM table at the Lakeshore Model Railroaders Association Flea Market in Mississauga on December 12th. It's being held at the Pope John Paul II Cultural Centre at 4300 Cawthra Road. Attendees must show proof of vaccination. Local CARM Members who have items for sale should first contact Ian McIntosh or myself then bring them to our table with a clearly marked price. Sellers should remain near the booth at least at the market removing any unsold merchandise when they leave.

CARM's Toronto Chapter members have been receiving invitations to online Zoom meetings hosted by the Toronto Railway Supper club and vice-versa. We have taken pains to preserve email address privacy. The sharing of invitations with privacy protection in mind seems like an excellent way to increase membership for both groups. Eventually we may extend our invitations to railway historical societies in hopes they reciprocate.

Another idea to bolster and enhance membership is the production of CARM business cards and flyers that could be taken to Toronto area hobby shops and put on their counters/bulletin boards. I have made a list of local printers and I plan to have printed material ready soon. I have a square tuit and a triangular tuit, I just need to get around tuit. (See bottom right for information on *tuits)*

Our Chapter Support Director Ian McIntosh has provided us with data that shows a distinct and welcome increase in both Toronto-area and national CARM memberships. As of the end of October, CARM had 390 active members, with 60 in the Toronto chapter. **Richard Morrison**

**Layout Expansion by Richard Morrison**

Three years ago I expanded my original six-track double-ended yard to 10 tracks by widening the benchwork by eight inches into the aisle. The project, which took about 50 hours over three months, involved the following:

1: adding 8" to all the wires feeding the control panel, which would now be further from the original tracks
2: extending the benchwork cleats by 8" into the aisle
3: detaching the control panel, moving it out by 8" and reattaching it to the benchwork and reconfiguring the control panel toggle switches and display.
4: installing plywood underlay and cork (in each case a single 2' x 4' sheet was cut into three lengths of 8" x 4 feet, enough to do the job)
5: pulling up parts of the ladder tracks
6: laying the four new tracks
7: installing Tortoise switch machines
8: painting and ballasting the new tracks

Even after the expansion, the aisle was still about three feet wide, enough for two operators to easily pass. With Covid, there have been no in-person layout visits nor operating sessions and folks seem to be in no rush to get back. That means there's room for expansion, which is handy because I'm running out of space for new structures. I've jumped in again with another 8" wide expansion to give the yard 14 tracks, some single-ended, creating space for a passenger station and a refrigerator car icing platform.

The expansion means rebuilding the engine facility that was installed earlier this year. Although they've only been down for six months, the tracks serving the coaling and water towers will be pulled up and relocated. The new, wider yard will measure a full 32" from the front of the fascia to the back track that runs behind the yard. For now, I will use a small step-ladder to reach the rearmost track but eventually I may splurge the $300 for a TopSide Creeper. As for aisle space, it's still 26" at its tightest point, if and when operators need to pass.

**NATIONAL CAPITAL CHAPTER:**

**Capital Region Virtual Layout Tour a Success**

Following weeks of video shooting and editing by layout owners and other dedicated volunteers, the Capital Region Model Railway Tour (Virtual Edition) went live on Saturday, October 23. An even dozen layouts in the Ottawa-Gatineau area are featured, covering steam and diesel eras, with Canadian, American and British settings, in N, HO, OO and P4 scales. The Tour videos received about 340 views in total on the first day, and by the time you read this will easily have passed 4500 views. Most views come from North America, but there are also a significant number from as far away as Australia and Argentina.

Thanks go to those who shot and edited the videos, and to Chris Lyon who allowed footage from his excellent YouTube series to be re-used. Special thanks go to Dilip Chinnakonda and our team of translators for creating English and French subtitles. While some of this work can now be done automatically, there is still no substitute for having a real human check and correct the output of the machine!

The layouts on show are:

1: O Scale: Alisten Lea Junction
2: P4 Scale: Ambleside
3: HO Scale: B&M Western Route/Maine Central
4: HO Scale: Canadian Northern
5: HO Scale: Chemin de fer NORD Railway
6: N Scale: Great Western Railway
7: OO Scale: Hornby DUBLO Daze
8: HO Scale: North Pontiac Railway
9: N Scale: St. Francis Valley Railway
10: HO Scale: Torbolton and Bay RR
11: HO Scale: Wakefield Valley Railroad
12: N Scale, 2mm/ft Scale: Wimplethorpe

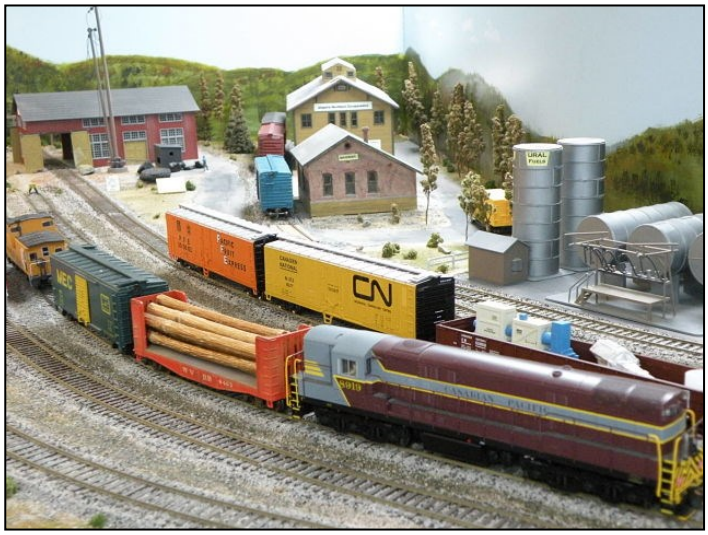
The Tour will remain available on the Capital Trains YouTube channel until 22 January, 2022, and are linked from the CRMRT website at http://capitaltrains.ca/how-it-works-virtual-tour/ We hope you will pay our layouts a visit. **Steve Watson**

**PHOTO ABOVE: Derek Uttley's British-themed Alisten Lea Junction**

**PHOTO CENTRE BELOW: Tom Badenoch's North Pontiac Railway**

**PHOTO BOTTOM LEFT: Engine facility on John Shipman's Torbolton & Bay RR**

**PHOTO BOTTOM RIGHT: Geoff Chase's Wakefield Valley Railway**

# Chapter Support & Online Meetings

**October:** **Ian Clarke** (London) on "The Railway on the Parkway and Other Ferroequine Adventures" including the subways, computer controlled lighting and animation; also the new London Model Railroad Group layout.

**November:** **Gerald Harper** and **Harold Kemp** (Toronto) on "The Anyox Mine Railroad", serving the world's largest copper mine. They are modelling it in On3, so lots of scratchbuilding.

**December:** **Craig Symington** (Thunder Bay) on his Hon3 "Rio Grande Southern". A year ago he presented "Railways of Thunder bay - Evolution of a City". Craig writes a related article in each issue of *The Narrow Gauge and Shortline Gazette*.

**Upcoming topics**: Weathering, and Roger Chrysler's new interurban layout.

Using a new tool can be intimidating, but Zoom is very easy. For a one-on-one lessons or emailed advice, just email.

The Toronto Chapter and the Toronto Railway Supper Club have arranged to share their online meetings. I do the CARM emailing so contact info stays private. If another chapter or external group would like a similar arrangement, let me know.

**Ian McIntosh: Chapter Support Director**
**Email: chaptersupport@caorm.org**

**PHOTOS ABOVE AND BELOW: Two Toronto Eglinton Light Rapid Transit trains shown coupled together. The only passengers are a half dozen employees because the trains are still being tested for the 2022 opening. Above they can be seen heading eastbound on Eglinton at Birchmount, nearing the east end of the line at Kennedy Station. Below they are descending eastbound on Eglinton into the tunnel under Kennedy Avenue into the Kennedy Station Both photos taken November 9, 2021 by Ian McIntosh.**

# WASHOUT

## ARTICLE AND PHOTOS BY PETER MUMBY

Do you have an unused or abandoned piece of trackage on your layout? Would you like to consider an easy modelling project that would immediately inform observers as to the cause of this abandonment? Perhaps a small washout would do the trick! Disrupt the roadbed as illustrated, model some pooled water on either side of the embankment, and you are almost there. The reason for said pooling is likely a beaver dam, so a judiciously applied pile of sticks could represent this feature. The ultimate detail, however, would be a model of the dam's resident. Check out Bernard Helen's selection of 3D-printed animals in the "Miniprints" line and you will see that he offers beavers (unpainted) in HO, S, and O scales. You would probably be the first kid on your block to have one of those! Oh, and now you probably understand why the Algoma Central Railway used to have a gentleman on the payroll who's sole job was to dynamite beaver dams. Maybe you could model this person too!

**PHOTO BOTTOM RIGHT: Washout photographed by John Blakely on July 26, 2021 at mile 13.8 of CP's Nephton Subdivision.**

**PHOTO CENTRE BELOW: The vigilant crew of the day's northbound train avoided disaster spotting this washout in advance.**

**PHOTO BOTTOM LEFT: The pooled water on either side of the embankment is readily apparent in this photo.**

# THE ANYOX MINE RAILWAY

## PART 4: SCRATCHBUILDING LOCOMOTIVES & ROLLING STOCK

ARTICLE AND PHOTOS BY GERALD HARPER

As explained in Part 1 of this series, information on the Anyox railway is limited and not easy to find. As a private railway it had no reporting requirements to the Ministry of Transport. The best source is the annual British Columbia Ministry of Mines reports. These describe the annual production, safety issues and every second year or so when an inspector actually visited the site then a more extended report on some aspect of this mining complex. The items described in that manner are great reference material and include the surface electric ore haulage system comprising 42 ton steeple cab locomotives and steel bottom dump ore cars. With pictures and dimensional details I was able to scratch build both. I chose brass for the ore cars and a mixture of brass and styrene for the steeple cab. The locomotive is powered by a pair of "Beetle" drives available from Northwest Short Line. Steeple cab #10 is shown in the first three photos.

**PHOTO ABOVE: Steeple cab #10 pulling a string of gondolas on the high line. A double ended catenary pick up pole was scratch built but was subsequently replaced with a brass casting available from PSC.**

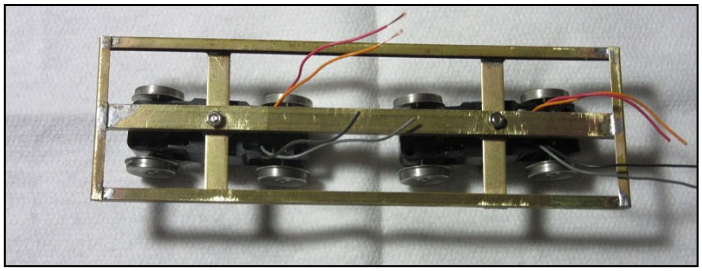
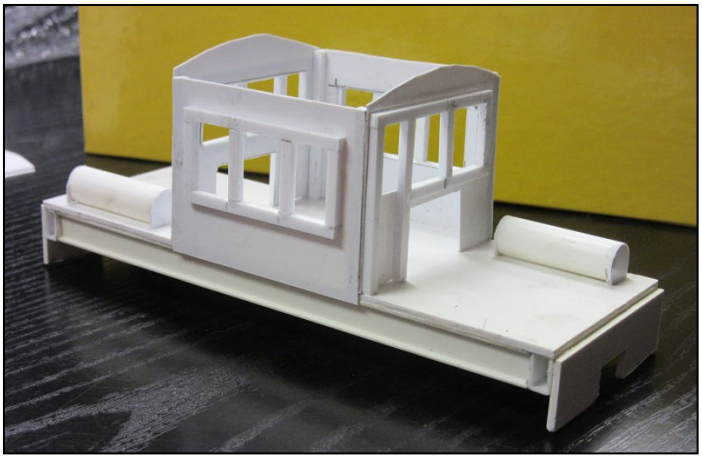


**PHOTO ABOVE: Steeple cab brass frame with beetle drives attached. Dimensional drawings were prepared from photos assuming I beam horizontal main frame is 12 inches high. Loco scales out to 20 feet long approximately**

**PHOTO BELOW: Steeple cab styrene body.**



Some of the ore cars survive. At the time of the mine closure they were bought by the White Pass and Yukon Railway as ballast cars to aid in the refurbishing of that line for the Second World War. The next series of photos show the cut out brass sheet parts, the soldered car and a completed car. It only had a walkway on one side as the automatic bottom dump device was on the other side

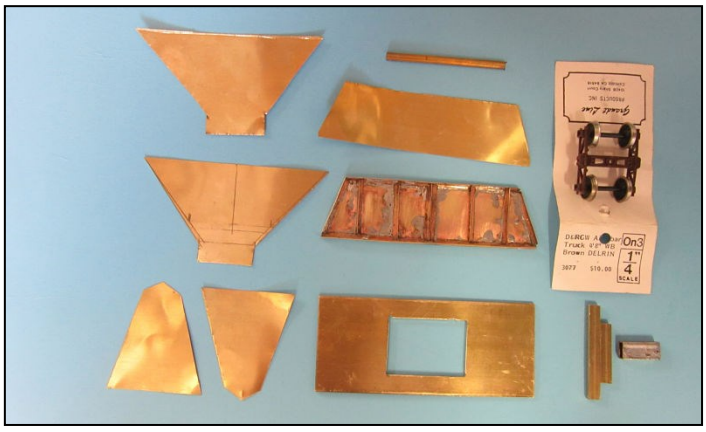


**PHOTO ABOVE: Anyox ore cars plans are provided by Daryl Muralt in the Appendix at the end of his book on the Dolly Varden Mine. From those I was able to prepare construction diagrams so thin brass sheet could be cut out and riveted with a ponce wheel before soldering.**

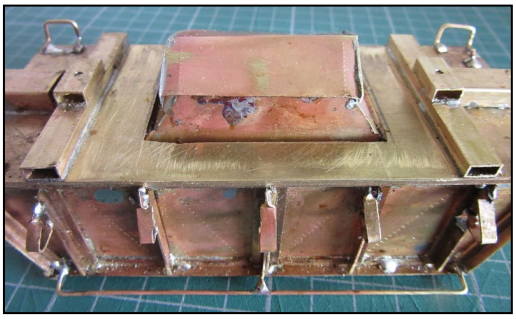


**PHOTO ABOVE: Partially assembled ore car showing brackets for manway and handrail.**


**PHOTO ABOVE: Completed Anyox ore car with the simple decaling they featured. They did not need railway names or other detailed information.**

**PHOTO ABOVE: 18 ft flat car with single rack load of copper ingots.**

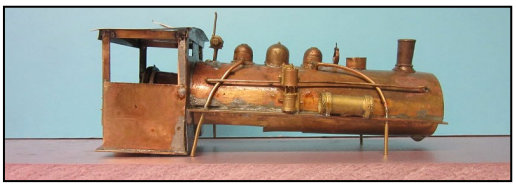


**PHOTO ABOVE: Partially built 0-6-0 based on Overland 2-6-0 mechanism with scratch built body. In an 0-6-0 the boiler is long enough to fit inside the electronics needed for DCC.**

and this side was used by a man to pole down any frozen ore that hung up in the car during winter operation.

Another car which there is considerable information about is the flat car fleet that transported the ingots from smelter to dock. The original batch were 24 ft long and within a year had all had their sills broken from overloading. A second fleet was bought which were 18 feet long and therefore could not be overloaded. My time period was after the 24 footers were all destroyed so I was able to utilize Bachmann and Mount Blue kits for the basic flat car and I added racks with ingots. As the ingots are painted sheet lead they provide a nice load for each car.

Thereafter I had to do some guesswork. The balance of the locomotives were all saddle tanks so I had to scratchbuild or kitbash locomotives to make 0-4-0Ts and 0-6-0Ts. The 0-4-0Ts are all very old Kemtron/ Grandt Line locomotives assembled from kits. The 0-6-0Ts are kitbashed from 2-6-0 tender engines. In reality for operating purposes I do use a few tender engines and also a gas mechanical which I assume some mine engineer managed to convince the Manager to try out. I also acquired an extremely nice model of a gas mechanical rail bus so decided to convert it to an electric rail bus by adding the pantograph.

Lastly there is a grab bag of miscellaneous cars which they must have had but about which I have no information. Firstly they must have had coaches or similar means of conveyance to carry workers to and from mine, smelter and town each shift. There must have also been general freight cars to carry the various supplies to the mine and smelter from the dock. Finally there must have been at least one slag car to carry the molten slag from the smelter to the dump into the ocean nearby. I scratchbuilt a slag car from brass.

I made the assumption that the mine purchased secondhand general wagons from other narrow gauge railways as they needed them so that the general fleet includes some gondolas from the Denver and Rio Grande Western, an unnamed coach and a reefer. There is no evidence they used cabooses. They also had a string of logging disconnects which were probably purchased new as they consumed massive quantities of timber all through the life of the mine and had a sawmill at site. When they had harvested all the local timber they built temporary rail lines into the foothills up and down the inlet and then hauled the logs by barge to the Anyox dock, from where they were railed to the sawmill.

**PHOTO LEFT: Scratchbuilt slag car based on plans I found of a 1916 vintage steel mill slag car.**

**PHOTO LEFT: 0-4-0 saddle tank assembled from a Chemtron/Grandt Line kit pulls a log train in from a logging area over a trestle. These little 0-4-0s are so light and have a short wheel base. They have very poor traction and the lack of tender means there is no space for weights, decoders, keep alives etc. A Z scale decoder is installed in the cab and visible from the rear.**

# PHOTO ESSAY ON BUILDING ON18 TURNOUTS

## ARTICLE AND PHOTOS BY WALTER REID

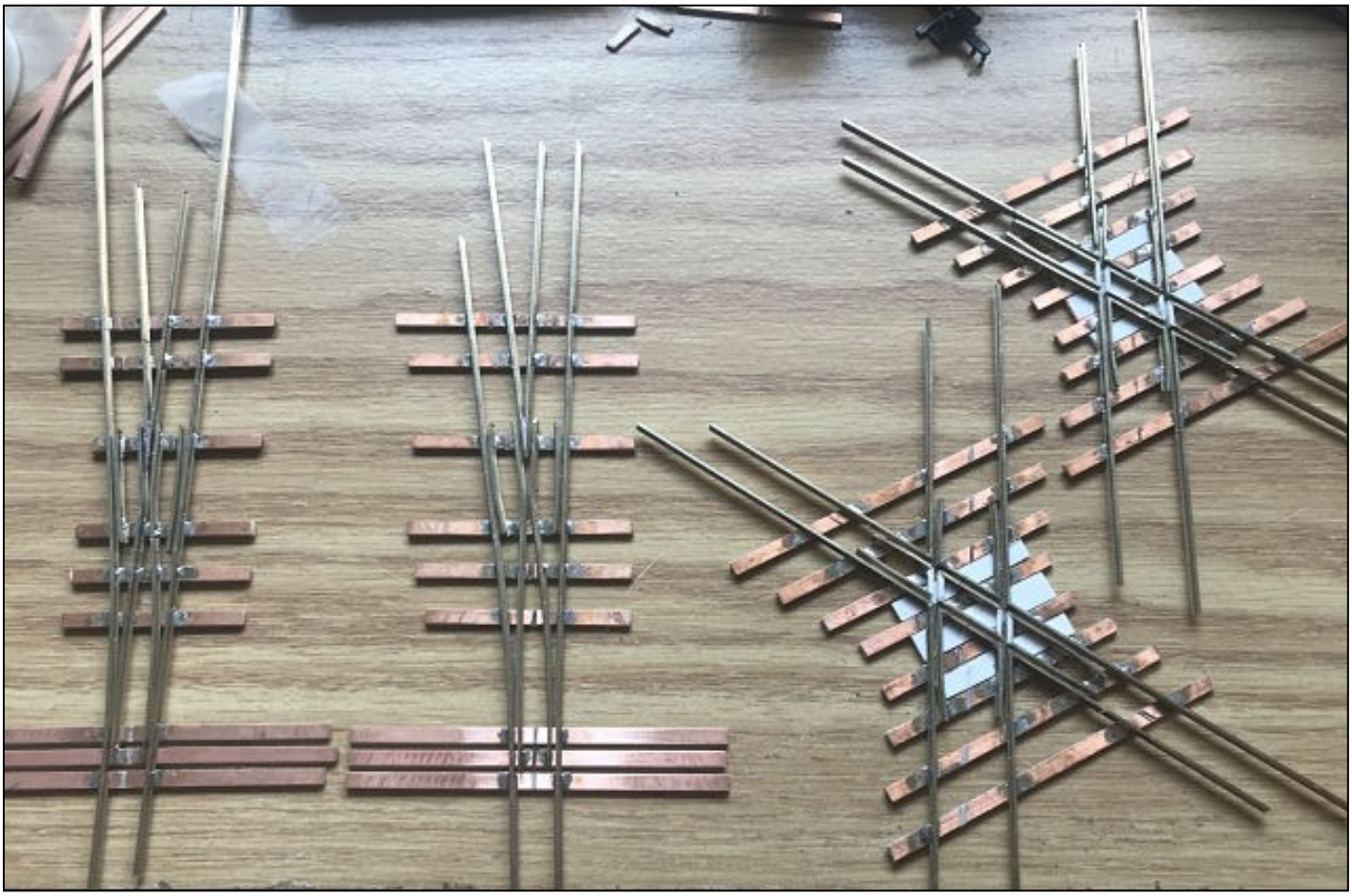
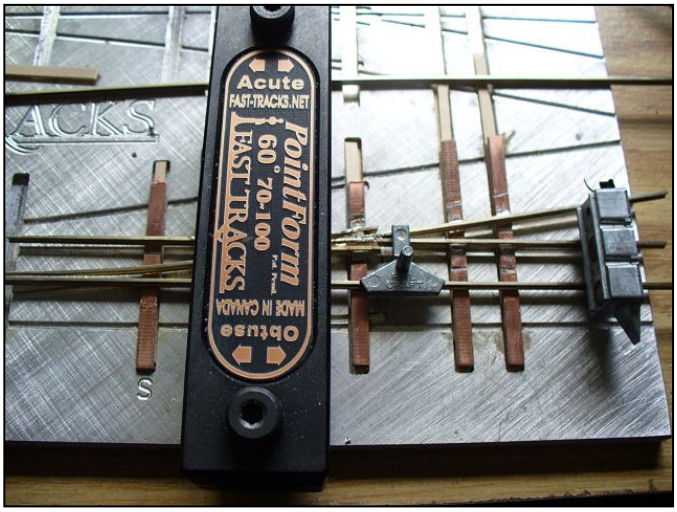
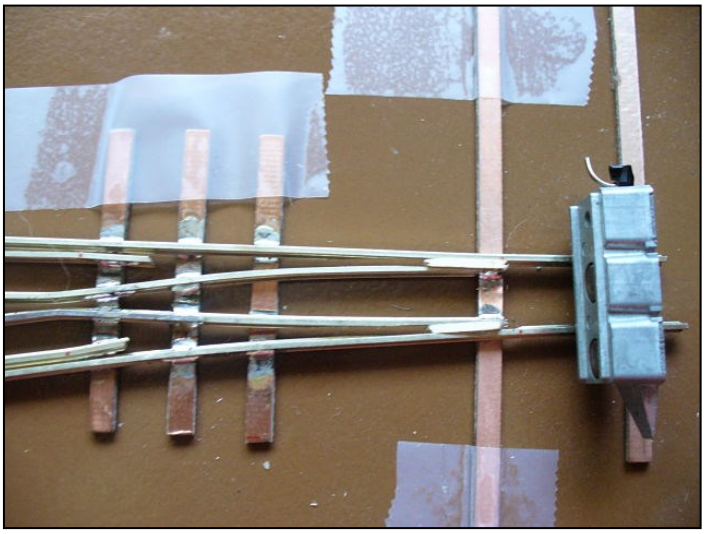


**PHOTO ABOVE: I have been working on an On18 / On30 interchange for the Dolly Varden RR. I needed to build a On30 / On18 crossover and an On18 turnout using code 83 track.**

**PHOTO BOTTOM LEFT: Since Fast Tracks does not build On18 track assembly fixtures, I used part of the On30 track assembly fixtures and the pointform tool for the frogs and guardrails. This is an example of the completed core of the On18 turnout. Note that the point rails have been filed to their appropriate taper using the pointform tool.**

**PHOTO BOTTOM RIGHT: After the core is complete, I used track gauges for the stock rails. The area closest to the point has had the inner edge of the rail ground off to allow the points to align closely with the stock rail.**





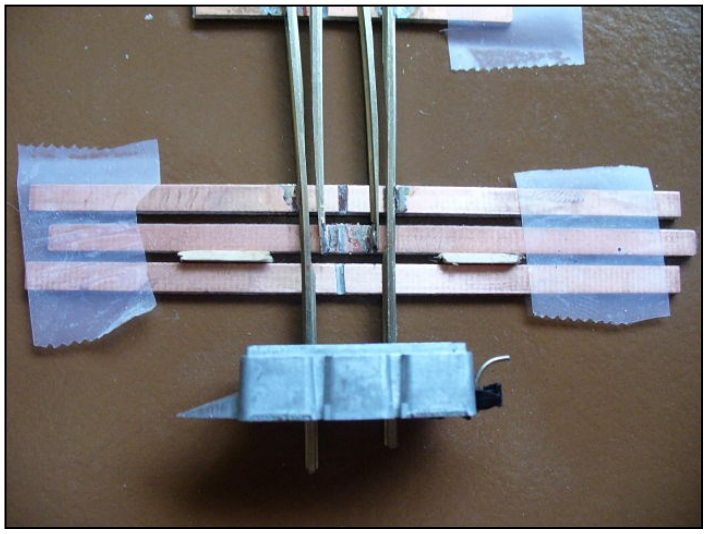
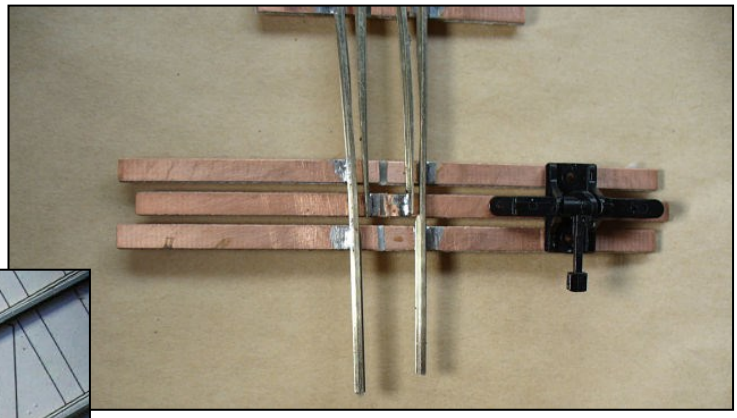


**PHOTO ABOVE LEFT: To create the point spacing, put a 0.04" shim on each side and solder the inside of the rail only!!**

**PHOTO ABOVE RIGHT: For the throwbar, use .04" shims to create the needed spacing for a ground throw to be installed.**

**PHOTO RIGHT: This spacing allows for a Caboose Industries N Scale ground throw to fit perfectly in the middle.**



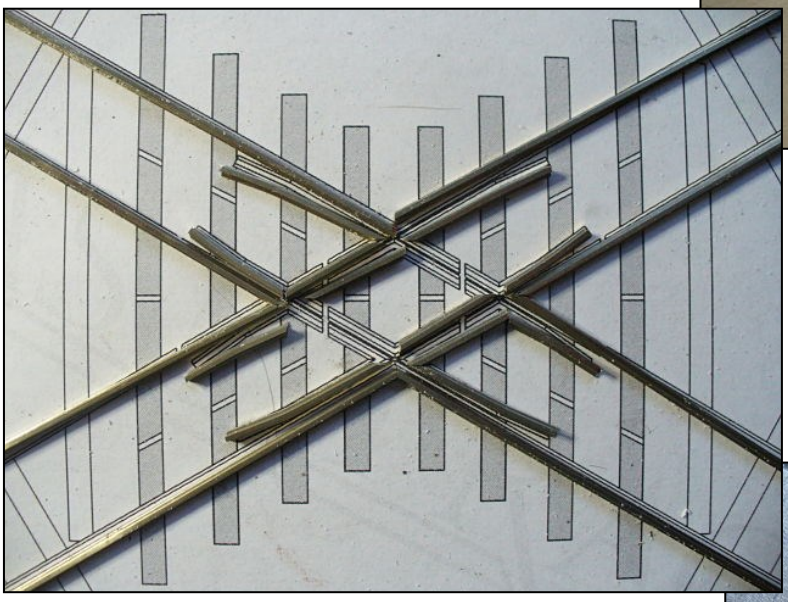


**PHOTO BELOW: I placed some wood pieces to replace the copper ties in the assembly fixture when soldering the parts that I wanted to remove later.**

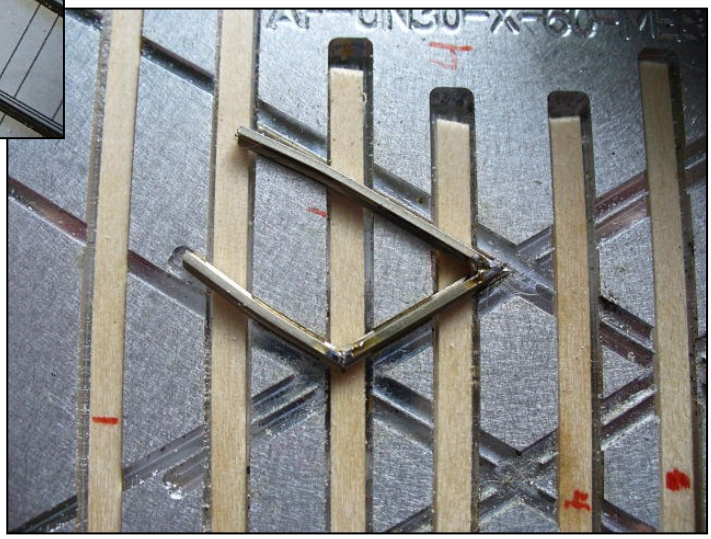
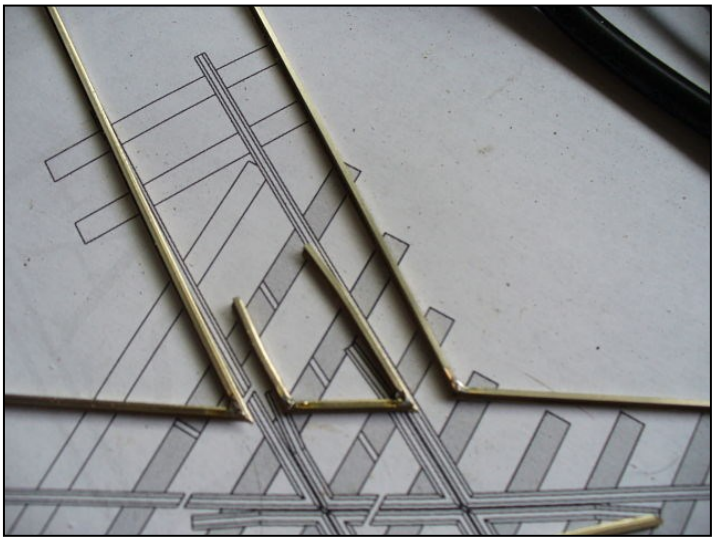
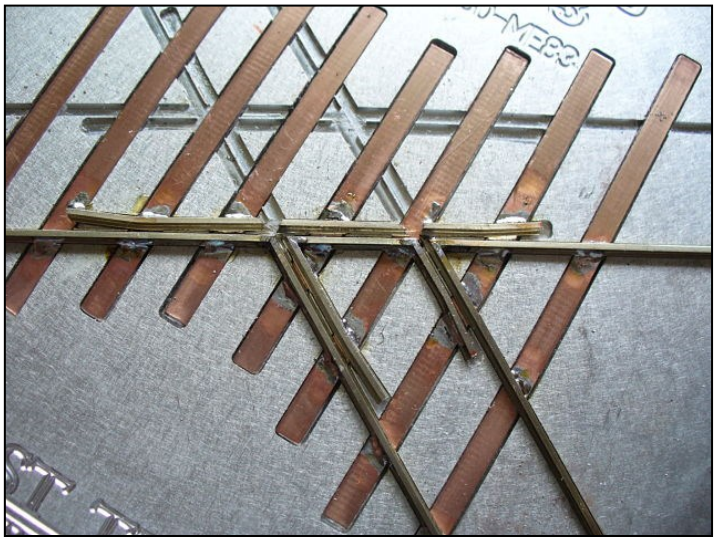
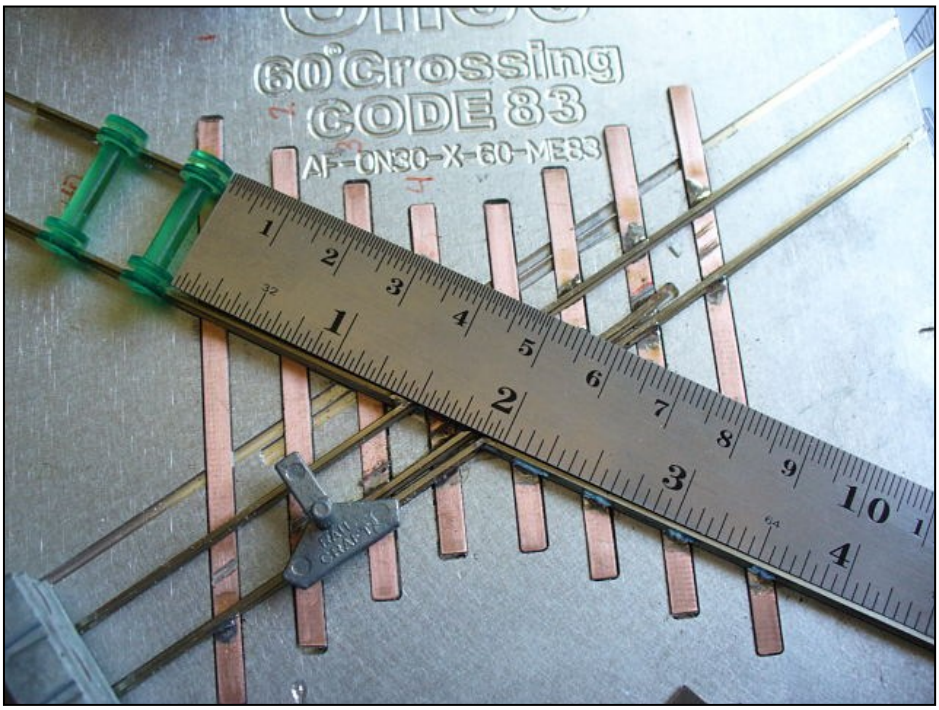


**PHOTO ABOVE: The crossover was considerably more challenging, but the same technique was used. The Fast Tracks crossover track assembly fixtures and pointform tool were used to make the parts. The pointform tool makes the job much easier with the many angled cuts in the assembly. I cut and file most of the parts before assembly**







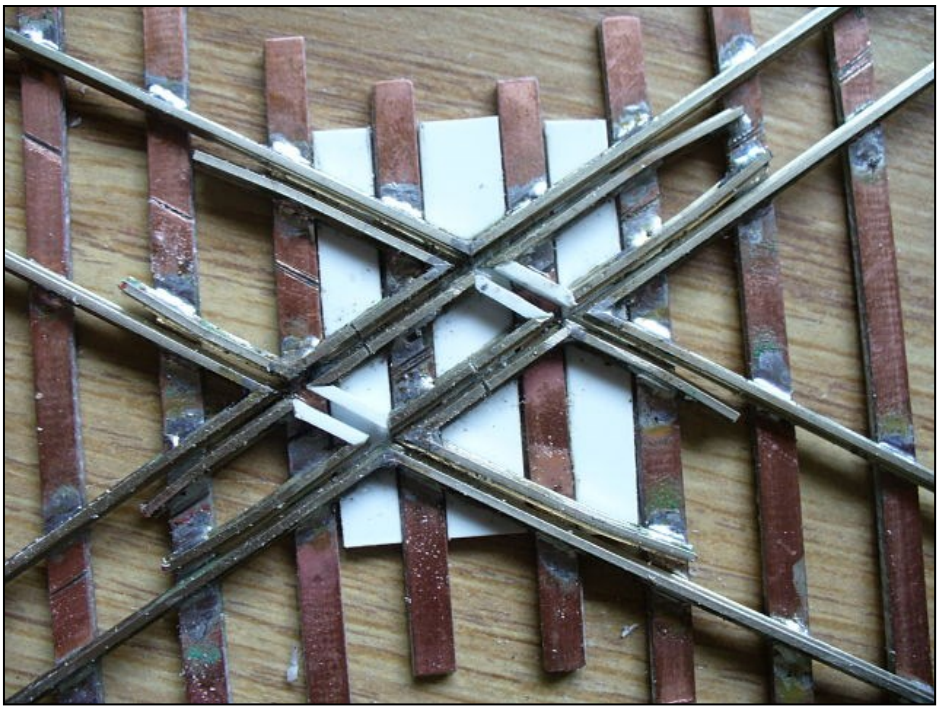



**PHOTO TOP LEFT: Premade parts sitting on a paper template.**

**PHOTO TOP RIGHT: I assembled one side of the crossover in the Fast Tracks assembly fixture.**

**PHOTO LEFT CENTER: Then I used track gauges and a ruler to align the other parts. I have put 0.06" shims under the ties to raise the ties close to the surface to help in the final assembly.**

**PHOTO BOTTOM LEFT: The hardest part of the crossover was making the isolation between the 2 junctions. To do this, I cut the upper and lower guardrail with a razor saw. Then I glued some styrene on the back and created 4 pieces of styrene to act as the running rails for the On30 side of the crossing. This creates the electrical isolation required.**

# NORTHUMBERLAND HASTINGS & HALIBURTON RWY

ARTICLE AND PHOTOS BY TED RAFUSE

Bob Duncan's railway modelling is no stranger to the pages of *The Canadian*. Earlier incarnations of his layouts have appeared in *The Canadian* issues of July-August 2004, #4, Jan/Feb/Mar 2007, #18, and Winter 2017, #58. The latter issue previewed the layout of this article, but displayed a different concept and configuration. The initial Northumberland, Hastings & Haliburton Railway was conceived several years ago, was revised, and now has currently reached a near stage of completion. There are of course detail tweaks yet to be undertaken to provide the 'finishing touches' to the layout.

The NH&H HO model railway is free-lanced: the notion was to avoid standard railway names. The NH&H name origin is interesting. Sally, Bob's wife, at the time of initial construction, was a volunteer at the Northumberland Hills Hospital in Cobourg, Ontario. Bob, for reasons he cannot now explain, became enamoured of the initials NHH. From his fertile mind sprouted the Northumberland, Hastings & Haliburton Railway, the NH&H initials replicating those of the local medical facility.

Each of the names in the model railway company have an association with his life. He lives in Northumberland County, early in his life he lived in a village in Hastings County, and, simply, Haliburton was a nearby County in which he spent time in his early years. Hence the NH&H name evolved from Sally's volunteering!

The layout follows typical construction. The modelling surface consists of 1" blue insulation foam, laid in a 2x4 foot box frame. The boxes are attached to 2x3 inch legs to bring the layout height to a universal 52 inches above the floor. The fascia is 1/8" Masonite. Bob has red-taped track layouts in front of each town to assist operators in their knowledge of the track location of a specific town. Necessary electrical block toggle switches direct power to various track section.

Track and turnouts are primarily Atlas products, the turnouts thrown by Caboose Hobbies ground throws. These throws are designed to engage the physical attention of brakemen when the layout is operated with his modelling pals.

Manually revolved turntables occupy either end of the point-to-point layout. Once motorized Atlas products, the turntables were purchased inexpensively at train shows as they contained burned out motors. The motors were removed and a small dowel glued into the turntable base

**PHOTO ABOVE: Newly acquired, but previously owned, a former CNR locomotive slowly approaches the single stall NH&H engine house in the town of Watts. The locomotive is a LifeLike SW1200. The vegetation overgrowing the ties illustrates the NH&H's short line continual financial and maintenance challenges. A portion of an Atlas turntable is visible to the right.**

now allows a train crew to turn a steam or diesel locomotive so that it faces in the appropriate direction for running.

Landscaping consists primarily of Woodland Scenics products including ballast, grass, foliage, and some trees; most of these products obtained economically from model train shows. Mortar sand was used to simulate gravel roads. Woodland Scenics plastic pine trees provide coniferous forest products while dried sedum sprigs, some of which have their foliage depicted by spraying the top with hair spray and swirling the head in a bowl of ground foal foliage of varying green hues. Various types and colours represent other types of vegetation. These imitate deciduous trees.

The layout setting represents the Canadian Shield. Treed woodlands and rock outcroppings dominate the landscape through which the rails pass. Layers of one inch foam, placed and glued in place atop each other at shortening intervals, replicate various Shield formations. Once Bob was satisfied with the rock portrayal the foam was painted in appropriate colors with latex paint.

Uniquely, none of the structures on Bob's layout are commercial products. All have a ¼ inch foam core base to which is adhered paper replications of various building materials: roofs of corrugated metal, shingle or tile, walls of wood, brick or block with various door and window representations, and a variety of other structure associated materials. From a British website, ScaleScenics.com, Bob purchased a computer file base of paper building products and now has access to a wide variety of printable paper structure components from his own computer.

A sextagonal water tower at Southgate is the only exception to the building construction employed in the preceding layout structures; it evolved from a Christmas gift box that once contained chocolates! Bob painted the sides boxcar red, added a six-sided roof to conform to the walls and robbed a broken water tank for the spout and its attendant hardware.

Bob selected the early 1940s era as the time frame for his layout as reflected by his vehicles, steam locomotives and early diesel engines. The NH&H operates on a shoestring financial basis. The Company only owns locomotives and vans, all acquired second or third hand from used equipment dealers. Little money is allocated to paint the 'new' equipment in corporate colours; some pieces were left painted as purchased, some pieces had the former road names obscured or removed.

A tinkerer at heart Bob rebuilt an 0-6-0 steam locomotive into a 2-6-2 Prairie style steamer which now plies the line as the principal steam hauler. Vans have been home built, aka, subject to Bob's tinkering prowess. Originally small bobber type 4 wheel vans their cabins now rest atop two 4-wheel trucks on a shortened wooden flat car base. Bob reworked multiple longer wooden flat cars into 28-foot-long rolling stock which now ply the rails hauling cut lumber. This lumber for export leaves the layout at Southgate by rail barge from the rail-marine

**PHOTO LEFT: The Watts' industrial dominates this image. At the end is a false front depiction of a lumber milling factory with its several rail sidings. A tank car rests on the siding at the tar storage and distribution company. To the upper left a portion of the removeable duck under is visible, and to the far end of the layout is a Central Valley bridge and to its right is a portion of the village of Southgate.**


**PHOTO ABOVE: The Mineral Shield Mine at Watts employs two shifts of miners. Several jennies are filled every day with ore and are then removed by the daily way freight to the other end of the line, Southgate, there to be pushed onto a rail barge and sailed to a connection with the mainland railway at a port across the water. The mine structure was scratch built by Bob using material as described in the article.**

transfer facility there. Southgate is the gateway by which the NH&H has access to its larger mainline contemporaries.

The layout is electrically DC, operated using two Aristocraft wireless throttles. The throttles are currently old technology, but they are the perfect marriage to the layout. Two trains can function on the layout simultaneously, double throw centre off toggle switches control two train operation within the several electrical blocks of the layout's track.

The track plan appears as a numeral 8, except that there is no actual connection from one side to the other at the middle part of the numeral 8. The truncated middle part forms a peninsula. The layout is operated in a point-to-point manner with a run around the entire layout between towns during an operating session with friends. On his own, Bob sets a train to operate slowly about the main line while he simultaneously operates a shunting way freight in the various villages. The two trains operate in opposite directions so some attention and skill are requisite to avoid cornfield meets!

Five hamlets appear on the layout. Southgate is the access point to and from offsite railways. It has a turntable, engine house, water and coaling facilities and siding/ storage tracks. The principal rail operation here involves unloading and loading the railway barge. Southgate was named for its appearance at the end of a pass and on the shore of a large lake, Emerald Lake, known for its colour.

Leaving the port through a forested scenery view block, Englewood appears, a small hamlet nestled among the surrounding marshes and forest. Switching operations here include a quarry, an oil distributor and a machinery fabricator. The origin of this town's name is not recorded; perhaps someone named it for a previous place where they lived. The gravel pit was used to fill the swamp area as was the foundry start. Oil came much later.

Further along, also emerging through a forested landscape, West Summit greets the engineer. This backwoods village displays a passing track, several wooden houses and two significant rail shippers and receivers: a large grain elevator/seed supplier and a busy lumber and hardware operation. A height of land, similar to a plateau, gave this village its name.

Continuing further, and over North Creek and its millpond and dam, the crew enter a small locality with the same name as the waterway. North Creek has two railway associations: a meat packing plant. Bob assures the reader that the slaughter house prepares and ships any kind of meat from 4-legged farm or wild animals or 2-legged domestic or wild fowl! An active feed mill receives rail service here. North Creek's name originates from the runoff of the far peaks and the creek flows through a fertile farmland region.

Final destination on the NH&H is Watts. Like its Southgate counterpart, here are found a turntable, single-stall engine house, coal and water facilities. Rail served industries include a large lumber mill operation, a mine with a prolific production of ore, and a tar storage and distribution company. Archibald Cooper bought the mill and the surrounding timber rights from a man named Watts and the name of the area remained when the site developed.

Theodore Hays discovered a large grove of walnut and butternut trees and bought 200 acres from the provincial government and established a saw mill and commenced a furniture, barrel and coffin making manufactory. Business is such that he has recently purchased additional timber rights.

**PHOTO BELOW: At North Creek Millers Feed Mill provides both inbound and outbound rail traffic and provides a switcher with activity in this community. This business nestles in a small flat farming area between outcroppings of the Canadian Shield.**

This concludes the tour of the NH&H, a railway constructed primarily to serve significant mining and forestry operations. Despite the finished appearance of the railway, Bob has further detailing in mind. There are no crossbucks to warn horse and buggies and vehicles approaching a railway crossing. More people would supplement the population of the small settlements. White posts currently denote electrical block beginnings or endings but Bob thinks that whistle posts should replace these and assume the same recognition feature. Also in the to-do stage is the construction of a tug boat to move the rail barge from one port to another.

Bob's love for modelling shows no indication of diminishing. The NH&H is not the end of this octogenarian's modelling plans. Recently he purchased from an estate a variety of HO and N scale rolling stock and track. Bob took great pleasure in showing me his new cache. That cache has led him to commence another project, an N-scale 2x4 foot layout inspired by the Kootenay, Navigation Company Co. flyer, a Model Railroader flyer. Stay tuned for more on that project in the future!

Let's hope that at Bob's age we all can retain the same enthusiasm for railway modelling as he displays!


**PHOTO ABOVE: Mike's Woodlot pays homage to an enthusiastic, unfortunately deceased, member of Bob's operating coterie. The trees in this forest landscape grew on Mike Sonosky's layout under construction: his sudden death witnessed the trees now replanted on Bobs layout. An interesting way of remembering a fellow modeller on one's own layout.**

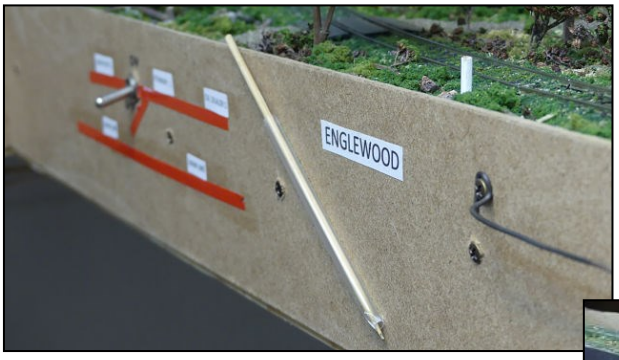



**PHOTO BELOW: Out of necessity to complete an operating circle, Bob constructed a simple removable bridge span. The base is a piece of pine, wide enough to lodge a mainline and a passing siding. It is ballasted and vegetated like the rest of the layout. Black painted cardboard represents the sides of a through deck girder plate bridge. The 'steel' sides are affixed to the bridge by staples. Electrical controls are presented on the inside of the layout for ease of operation.**

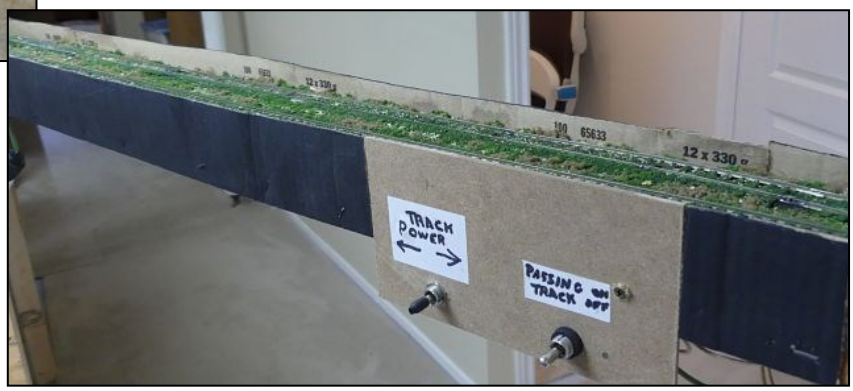



**PHOTO ABOVE: An example of a track plan that appears at points about the layout. The town community is identified, a track plan is taped to the fascia, a block toggle switch controls electrical power to a particular section of track, and an uncoupling device, a pointed wooden skewer, is handily sheathed in a clear tube enclosed at one end.**

**PHOTO LEFT: Two examples of Bob's handiwork in creating structures for his layout appear in this image. The article explains the construction of these buildings. They provide a very convincing representation of the structure the model depicts. The car in the foreground and the horse cart in the background are both Jordan Miniature products. A small group of villagers gathers in front of the carriage shop to share local chatter.**

**PHOTO ABOVE: Bob's Blast from the Past! This shelf module shows the remains of his long defunct N-Scale Prince Edward County Railway that adorned the pages of *The Canadian* of July-August, 2004.**

**PHOTOS LEFT CENTRE: The NH&H spent many dollars of its original construction funds crossing the Bowmanton River, just west of Hays. The through truss bridge is a Central Valley product. Leading the train is Prairie 2-6-2, a Bachman product reworked in Bob's tinkering shop. A mini scene appears beneath the through truss bridge. Two anglers fishing, and if lucky their catch will provide the protein for tonight's supper. The bridge's masonry supports are hand fashioned from balsa wood and the mortar lines and masonry blocks carved with an electrical pencil soldering tool with various tips, including a woodburning end.**

**PHOTO BELOW: A labourer struggles to push a factory flat car laden with cut lumber to the loading dock. The cart has an n-scale truck for wheels and operates on a small section of n-scale track. This manual activity provides a good indication that the Cooper Lumber Company experiences a busy season.**

# The Rapido Gondola Project

**Built by George Dutka and Peter Mumby.**
**Photos by George Dutka.**


**PHOTO ABOVE: A group photo of our PGE fleet. Rapido gondolas can be lettered to reflect the PGE prototype. An overhead view of the gondolas reveals that we added loads that interested us to our models.**

Peter Mumby and I prior to covid would get together for what we call “Workshop Mondays” alternating between homes working on whatever projects appealed to us. Of course, some Mondays it was more about gabbing, looking at prototype photos while planning another project or operating a train or two.

One such “copy the prototype” project was completed back in 2016. The project was modeling PGE gondolas using undecorated Rapido models. We actually began by working on CP gondola models but Peter decided to also include a PGE car. I really liked how his PGE model turned out and a few months later we each painted and lettered a Rapido gondola to emulate PGE gondola’s following Peter’s prototype photos. So here we go with the project.

About 7 years ago Rapido Trains introduced what it referred to as the "Ultimate Canadian Gondola." Based on prototypes assembled by Canadian builders between 1943 and 1957, this is another nicely detailed Rapido model. When we were able to get a good buy on a fleet of the undecorated versions (at that time Peter was a model railroad dealer), we began this project. We chose to model three boxcar red Pacific Great Eastern cars. Peter worked on two cars and I did one. Peter has an extensive collection of prototype information which helped us to following the prototype correctly.

No additional detailing was needed prior to painting, so I got right to work with the airbrush. Floquil boxcar red is the base coat of the cars. The painted cars were then treated to a decal-friendly coat of glossy finish from a rattle can, then set aside to cure. As it turns out, the cars sat for about six months as I was off sailing my boat for the summer season; the modelling urge sometimes operates in fits and starts! Once the project was revived, the hunt was on for appropriate lettering. The PGE cars are no problem - a set of CDS HO-87 dry transfers was on hand, and they were rubbed onto a sheet of Walthers blank decal paper prior to application. Once the decals are applied a full coat of flat finish was applied using rattle cans.

Peter's PGE cars are weathered from the inside out using PanPastels. The prototype photo of PGE 9156 showed a load of rail, so this came next. A piece of strip wood was stained with Hunterline creosote black Weathering Mix, then cut to make four supports for the rail. Peter found a piece of code 70 rail and cut it into nine segments (each a scale 39' length, of course!). The rail was painted a weathered rail brown colour, then everything was mounted in the car using Canopy glue. A bit of rust coloured powder applied to the finished load completed the car.

Peter completing a second car, PGE 9128 with a tie load to complement the rail load of his initial effort.

I was contemplating the type of load I would prefer. On one of our Monday Workshop's, I happened to pull out an old Westerfield hopper car kit from my inventory. This was one of the early kits made from the resin that was practically impervious to a sanding stick or a drill bit. This car really didn't interest me and would not be assembled any time soon. Peter's suggestion was then made that the small loose resin parts would make an effective scrap metal load for the car. That is exactly what happened with the Westerfield kit and it was well worth the sacrifice.

My layout is normally set in the 1950's but these days on occasion the time frame gets advanced to a modern era using a small fleet of contemporary cars. No guessing is required, this new PGE car, with its ACI label and wheel dot, fits this modern era, and will get to spend some time on the layout. Peter is leaving it up to me to concoct the story about how this strange visitor from the Pacific coast found its way onto the White River Division in New England!

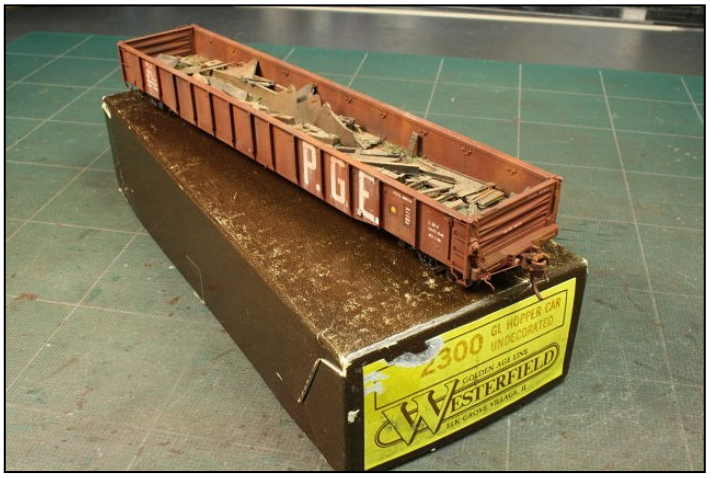



**PHOTO ABOVE: PGE 9153 modeled by George Dutka is seen resting on top of the Westerfield kit which became the load for this car. Considering the car kit will never be built, there are a lot of nicely detailed small pieces that works well as scrap.**

**PHOTO CENTER LEFT: PGE 9128 lettered by Peter Mumby is loaded with ties.**

**PHOTO BELOW LEFT: PGE 9153 finished by George Dutka is loaded with scrap.**

**PHOTO BELOW RIGHT: PGE 9156 built by Peter Mumby is loaded with rail.**



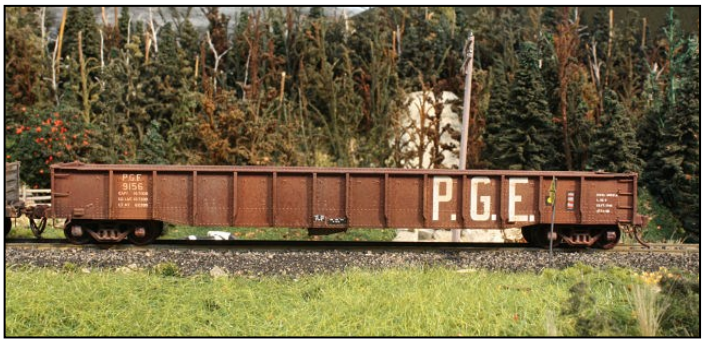



**PHOTO RIGHT: The trio of PGE gondolas are headed back to the Canadian border on George Dutka's New England based layout.**


**PHOTO BY GEORGE DUTKA:** An overhead view of the gondolas reveals we added loads that interested us. PGE 9128 lettered by Peter Mumby is loaded with ties. PGE 9153 finished by George Dutka is loaded with scrap. PGE 9156 built by Peter Mumby is loaded with rail.

**PHOTO BY TED RAFUSE:** Southgate on the Northumberland, Haldimand & Hastings RR exists due to its railmarine facility. Railway cars are transported from the NH&H across the water and interchanged on the other side. The self-propelled barge is hand crafted from a piece of 1x2 pine with many added detail parts and appropriately weathered to appear as a much used, little maintained, rugged versatile craft.


**PHOTO BY GERALD HARPER:** 0-4-0 saddle tank assembled from a Chemtron/Grandt Line kit pulls a log train in from a logging area over a trestle. These little 0-4-0s are so light and have a short wheel base. They have very poor traction and the lack of tender means there is no space for weights, decoders, keep alives etc. A Z scale decoder is installed in the cab and visible from the rear.