CARM Toronto Chapter - What are you working on? **July 5, 2020**

Hello everyone:

Happy Canada Day to all of you and welcome to what I will call our *2020 Canada Day Weekend Edition*.

This edition is full of submissions of projects that continually amaze me – members are experimenting, inventing, renovating, trying for the first time, re-discovering items, planning, starting, finishing, pondering, either trying to find the time or they have lots of time, etc … so much variety! Everything can be taken to so many different ideas and levels and whatever level you do take it too, well, that is just perfect! What a great hobby! Now, grab your tea & cookies and read on about what our members have been up to …

Be well, be safe, enjoy the hobby, and *Happy Canada Day Weekend* everyone!

1. **John Bigham – Rubber Band Powered Geep:** John sent the first submission for this letter with an accompanying B&W photo. I was intrigued by the *rubber band power* that he mentioned and so John sent me a second photo of that original 57 year old Athern Geep: John writes:

James, the past month's Arduino programming does not constitute a pretty sight. However, I was tidying up our picture frame shelf and came across this 57 year old shot of a Pittman rubber band repowered Athearn Geep on a "diorama" built in the garden in Etobicoke. Wooden doweling for exhaust silencers, brushed-on Humbrol railway colours except just maybe Floquil grimy black on the trucks, Walthers decals I'm pretty sure that led to 1950-type gold chevrons, and definitely oversized spikes to hold the rail down onto a trestle that would appear quite dilapidated but that nevertheless appears to be bearing up to task. Hey, nothin' like natural light! How many fellow sentimentalists out there? I not only have the photo, I have the Geep! - John

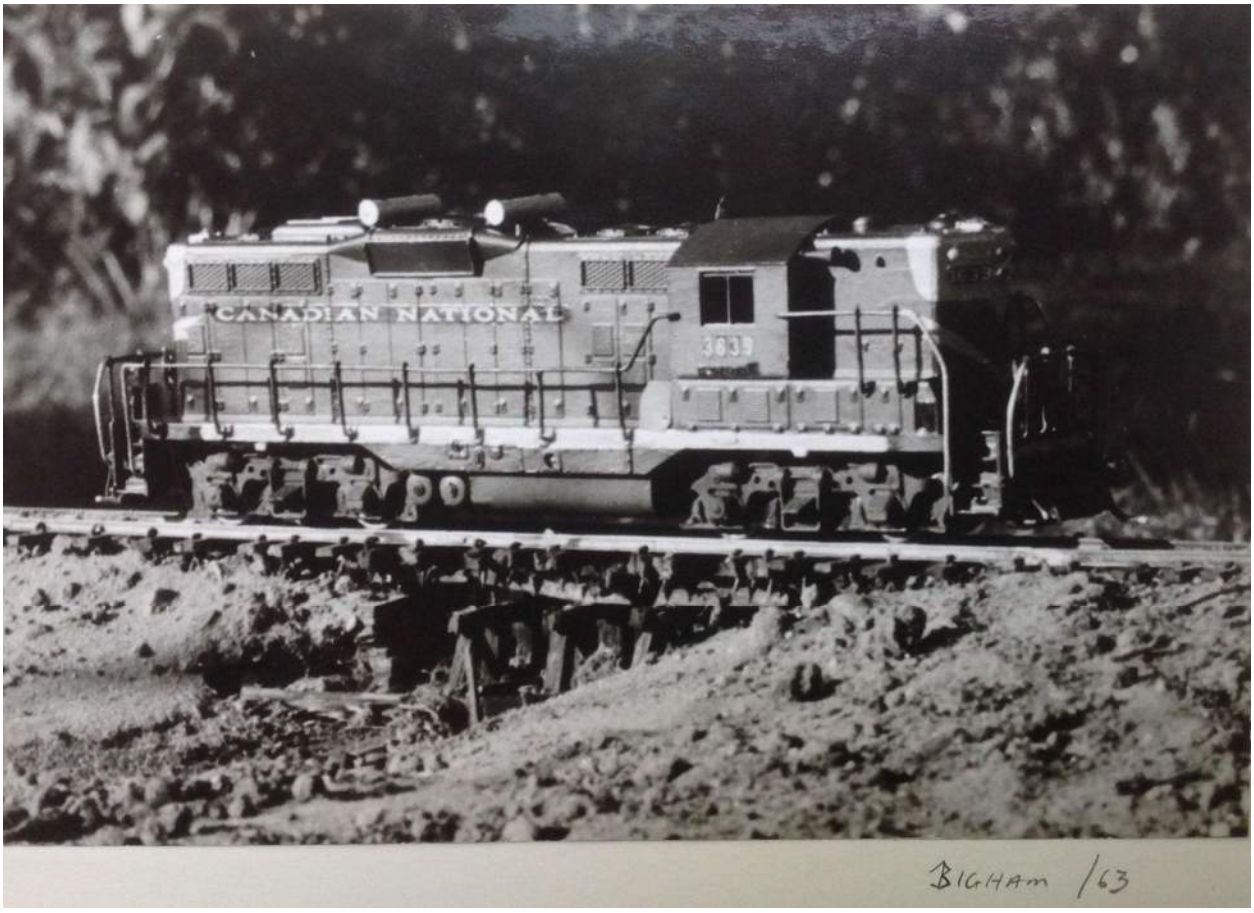

Photo credit: John Bigham

2/4 bands in place. The gear reduction was about 3.5:1, with another 2.2:1 with the drive shaft/axle diameters; neither torque nor quiet running was the objective.

Photo credit: John Bigham

2. **Hal Huhn – Gardening Time:** Hal has been renovating his Maerklin layout all winter and spring as we saw in the previous letters but now it is gardening time. I can relate to that; my family is out in the garden everyday too. Hal writes to us:

Hi James, My garden has priority right now! Hal Huhn

p.s. Hey, Hal, check out Ian's new submission further down with his first try at a catenary system!

3. **David Dunning – Planning stages**: David is planning a layout and working with the existing conditions of his home layout. I am sure many of us recognize what he is going through at this stage of planning when he says:

I am having a difficult time fitting in the tables as I have a sliding door closet on one side that I need access to. Plan to follow shortly.

I am looking forward to seeing David's plans as they evolve in the next letters.

4. **Richard McQuade – Commanda General Store:** Richard submitted these photos of his new building project which involves research, photos, along with drawings from a thirty-year-old kit Ontario kit. He describes his progress to date as follows:

Around 30 years ago John Rendall from Gravenhurst produced several HO scale craftsman kits of Ontario buildings including this one which he named The Palace Hotel but which in truth was based on the Commanda General Store/Museum in Commanda, Ont. His kits included photocopies of instructions and drawings of the four sides of the building, cardboard, paper, a few castings and several bundles of "dimensional" stripwood which Rendall cut himself. Theoretically this was for board-by-board construction but the wood is of inconsistent dimensions. This kit also included a single photo of the prototype. Search online for pictures and you'll see what an attractive but challenging model this could be. This building fits nicely into my modelling era – ca1914.

Photo credit: *John Rendall*

Before starting this project I photocopied the plans and built cardboard mockups of the two buildings. These allowed me to visualize it in its planned location against the backdrop and led me to switch the location of the smaller building from the right side to the left side of the larger building. It also helped me to get the roof right. Nonetheless, I still made errors and needed to rebuild the front wall. I doubt I've ever built something right the first time.

My attempt only uses Rendall's drawings and a few pieces of his wood for framing. For the walls I used Northeastern clapboard siding I have that's at least as old as the kit. I replaced all of the metal window castings with styrene windows. Evergreen styrene was used for the front wall of the first floor so that Grandt Line windows and doors could be cemented into place. These look like the prototype's, unlike the shop windows provided. The columns and spindles/railings also are from Grandt Line. The first and second floor porches are styrene, stained to look like wood. Roofing shingles came from BEST (formerly Precision Lasercraft.)

I feel that the ornate gingerbread trim is very much a signature element of this building so I'm using much more of it than Rendall's plan shows.

Maybe by next month I can show the completed building here but as it has taken 30 years to get this far, I won't make that promise!

Photo 2. The building was built using subassemblies as shown here. Everything was prepainted before assembly. On the left the second storey front wall is glued to the styrene beams which go from the front of the porch to the rear of the building so that it can't be broken off. The gingerbread trim and railings are tricky to preassemble. A slight error means they must be rebuilt. (How would I know this…?) Each "panel" consisted of a column, railing, top spindle set and trim. After each was assembled they were then glued to each other. The side panels were done the same way, then glued to the larger front panel. Everything must be exactly true and square for a perfect fit. The roof of the porch will be glued to this assembly which will then be glued to the porch floor and wall. This photo also shows how the first floor porch has been stained and painted to show a deck that was originally painted blue but has been worn down by all those HO customers who shop here! The blue is concentrated around where the columns for the second floor will be installed. There would be less wear nearest these columns.

Photo credit: Richard McQuade

Photos 3 and 4. Different views. The roof over the second floor porch was actually the cardboard mockup but it fit just right so I'm using it for the model itself. The trim around the small building was assembled and painted before being glued to the building. The three cornices at the top were provided by Rendall. Although very similar they aren't absolutely identical.

Photo credit: Richard McQuade

Photo credit: Richard McQuade

5. **David Woodhead – Freight Car Fleet Addition and More!:** David had one of my favourite quotes this time as at the time of writing this letter it is 30 degrees outside: *"I could also just turn on the DCC and run some trains, and the basement is nice and naturally cool on these hot days."* Yes, there is method to the madness of many great basement hobbies, and cool basements on hot days is definitely one of them. Being next to the hot furnace on a cold night is right up there too! David has, in my mind, been very busy in a cool basement and he writes about what he has been doing since our last letter with the following report:

Man, it seems like my projects are getting harder as these months progress. I need a couple of one-evening kits to lighten the load!

First, since last time, were three On3 boxcars. I haven't added to my freight car fleet in a while, so this is long overdue. The first was a laser-cut wood kit by Protowest (later Leadville Shops) of a Colorado Central 24 foot car, and went together nicely with full interior bracing, only visible if you peek in the doors! I had hoped to stain this car, but not being familiar with laser-cut sheetwood hadn't counted on the grain being that strong on the sides. So after initial staining (using Hunterline), I brushpainted the whole car with Polly Scale Mineral Red, with some boxcar red, followed by light washes and powders (Bragdon and Vellejo) to give some variety. I used very old Simpson Carter trucks that have been sitting in a drawer for ages, nice and light for this small car.

The other two boxcars are "rescues" from train shows – a Peach Bottom outside-braced car of the 1870s (likely a Smokey Mountain or Wiseman kit) which just needed regauging from On30 and repainting, and a wood DSP&P car with brass details that needed a re-paint and detail finishing, easy compared to the many parts of the Protowest kit.

Photo credits: David Woodhead

My major locomotive project is this On3 Porter-Bell 0-6-0 that I'm building from a Flying Zoo Argent Lumber Company mogul #3. The boiler, tender, and mechanism are all very close to what I wanted for the 1870s engine, but much later in detailing such as cab, domes and other details. I had already converted the tender to a six-wheel design and the next big project was raising the running boards to the centreline of the boiler, and adding the smaller wood cab. The cab (etched nickel-silver) and domes are from Bill Meredith at Leadville Shops. The stack is cut-down PSC with some thick-walled brass tubing. It's starting to have some of that Porter-Bell character now!

Photo credits: David Woodhead

This week I've been working on some ore car kits – old boxes that have on the shelves for eons – two are Classic Miniatures and two are Taurus, but essentially the same. The side stakes in the Taurus kit are Grandt Line plastic but I liked the wood-stake look

much more, as I intended to stain these cars. Well, that took days! There are 64 stakes for the four cars, and each has eight NBW castings – in fact, I decided to add it all up and each car has 87 pieces of wood, 172 NBW castings plus the brakes, trucks and coupler parts. Yikes! Well. The Madoc and North Hastings needed some more ore cars but I really didn't quite think it could this time-consuming! Glad I'm only doing four.

Photo credits: David Woodhead

I could also just turn on the DCC and run some trains, and the basement is nice and naturally cool on these hot days.

I recently updated my On3 webpage, too: http://davidwoodhead.com/page7.html

David Woodhead

6. **David Hicks – Using Grout for Ballast**: David has been catching up on modelling as well as his reading and one of the articles gave him an interesting idea to try for ballasting. Here is his comments on testing the ballast material:

About a year ago there was an article I believe in MR about using sanded grout as ballast. I gave it a try & was pleased with the process & results. It spreads easily with a 1 inch paint brush. Glue is included in the grout so all you do is spray with "wet" water. It also is much cheaper than the std method. Comes in many colours.

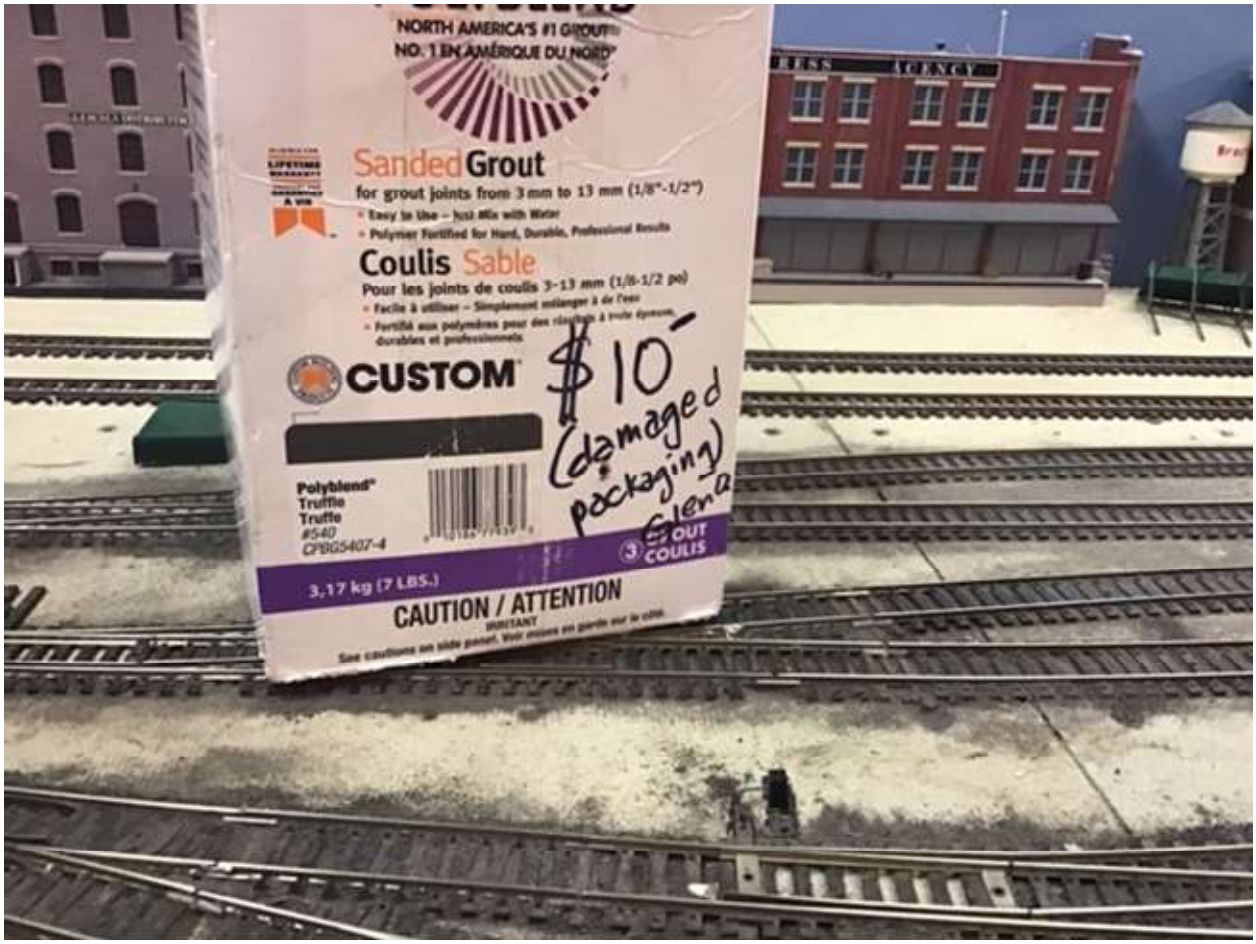

Photo Credit: David Hicks

Photo Credit: David Hicks

Photo Credit: David Hicks

7. **Walter-Joseph Grabowski – Milling Machine:** I had the pleasure of meeting Walter-Joseph while working on Willie's N-scale layout last year. Walter-Joseph just shared an image with me of the new milling machine (Proxxon MF70) he just bought for the modelling hobby and he writes:

My name is Walter-Joseph Grabowski, we briefly met a year ago at Willie's n-scale layout. I'm still working for TrainMasters TV, and living between Hamilton and Toronto. Recently Willie shared his thoughts on my new n-scale layout based on the Dundas Sub at Aldershot towards Brantford Via Station.

8. **Malcolm Back – Multiple Scales**: Malcolm models in multiple scales and has a new On30 layout. In this submission he updates us on both his new layout and his HO/HOn3 Nipissing Central Railway:

I have been working on a few projects, both on my new On30 layout that I reported on last newsletter, and my HO/HOn3 Nipissing Central Railway (NCR).

First on my On30, yet to be named railway I have almost completed a Campbell Grain Elevator kit. Yes, it is HO but I am experimenting with forced perspective. The elevator is in a distant corner (1m) from a viewing position. Even with On30 cars parked in front I am satisfied that this will work quite well. The fuel tank is also a HO model. I will be adding more tanks in the future.

Photo Credit: Malcolm Back

I read an article in the July 2020 Model Railroader, by Larry Puckett in his DCC Corner column on adding sound to older Atlas S2 and S4 models. I had one of each stored away because I could not find a way to install sound in them. Larry used a new LokSound version 5 decoder and sugar cube speaker from Streamlined Backshop. www.sbs4dcc.com,

SBS4DCC "Sugar Cube" Speaker 11x15mm 8 ohm 1 watt w/ HO Cab Roof Sound Chamber

***`Price: $9.35 USD , Item Number:** 4091*
Manufacturer: SBS4DCC - Streamlined Backshop
Manufacturer Part No: 4091

The speaker is ideal for installations in the cab of a locomotive when space is at a premium. I also used Micro-Tsunami TSU-750 #827011 sound decoders instead of the LokSound decoder. It was a tight fit, but all was installed in the cab. I now have 2 more switchers on my NCR layout.

ALCO S4 number 14 and ALCO S2 number 12 on my NCR layout.

To round out my contribution for this issue, here are a couple of shots on the NCR.

NCR Cartierville Engine Terminal

The Abandoned Farmstead

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All Photo Credits: Malcolm Back

9. **Richard Morrison – Track, Wiring, and Scenery:** Richard has completed a good amount of work this spring with a new extension added to his layout, the addition of several new buildings, and the decision to rename his railroad to *the Northeastern Guildwood* complete with new decals. Now he is moving onto trackwork, wiring, and scenery …and the addition of a passenger service using RDCs. Richard updates us on the progress with the following:

After two and a half months straight of sitting at my workbench building structures, for the rest of the summer I plan to work on the layout itself: track, wiring and scenery.
I have purchased a Rapido Trains RDC, Via #6133, since they said some of the proceeds would go toward their restoration of the prototype. The model runs great with no stalls or derailments. I had given up on passenger ops several years ago but I have discovered it's relaxing just running the RDC around the mainline. Running freights over turnouts into sidings to perform setouts and pickups can lead to stressful stalls and derailments.
I'm making room for two passenger stations that I pulled out of storage. After spending our grocery money on 11 passenger cars on eBay, I looked in the back of a drawer and found 9 dusty Athearn boxes filled with unbuilt Union Pacific passenger car kits. Since I have one tight 18" curve in a tunnel, I may have to shorten some cars and install Talgo trucks with long coupler shanks. I have never done this so I will practice on cheap shells first. Everything will be repainted in Southern Pacific Daylight colours (another major project) and relettered with the new name of my railroad, the Northeastern Guildwood. If you don't get any photos from me in the fall, you'll know I botched the repainting.

Editor's Note: Ha! I've never seen Richard botch anything and I am a great admirer of his layout and his modelling skills! I look forward to seeing the pictures in the fall, Richard!

10. **Ian Jameson – First Catenary:** In the last letters we found Ian has been putting his first hand to working on everything from lighting, landscaping, carboard models, sound… did I also tell you his layout was built on a car lift so he can par his cark under it when he needs to! This was the only way he could build a layout in his home and I think that is amazing, I mean, I have admired models of lift bridges whenever I see them but Ian when one step farther and built a lift layout! This month Ian is putting his hand to building his first catenary section. He writes:

Trying something new for me and the Orley Station. I want to set up a streetcar loop in the lower section of my layout. I have six Roco R9 15 degree curved sections plus one small 2" straight section on my test loop which will be similar to my eventual layout of a long 14 foot by 3 foot oval. I purchased some used homemade towers and some Markland 270 mm and 360 mm catenary overheads. Have assembled the test 'end' section. Now to add the electrical power and see if it works.

Photo credits: Ian Jameson

Photo credits: Ian Jameson

11. **Mike Walton – Croal Viaduct Continues and a New 3D Printer:** As noted in the previous letters Mike is taking advantage of the downtime to do some changes which includes his new Croal Viaduct. Part of this new project includes new methods of designing and building construction on his layout which includes learning about and fabricating with a 3D printer. I've included his process of developing the drawings that the 3D printer will use to print the model as the next step he is currently at for the new viaduct. Mike tells us the following:

Translating the Photos into dimensions and details for the model.
As Tony Potter put it in a recent Platelayers' Zoom meeting, this is really reverse engineering exercise. In other words you examine the picture and imagine what the Victorian Engineer had in his mind when designing the bridge. This research is necessary even if the model weren't to be 3D printed but with the 3D option there is the option of adding more detail easily.

I used the picture below to get a better understanding of the characteristics of the railings such as height, radii and pitch dimensions. The numbers are railings counts and as you can see, the posts aren't evenly pitched. I may understand why as I start to look into the constructional details.

I used the photos below to start to create a picture of the decking details.

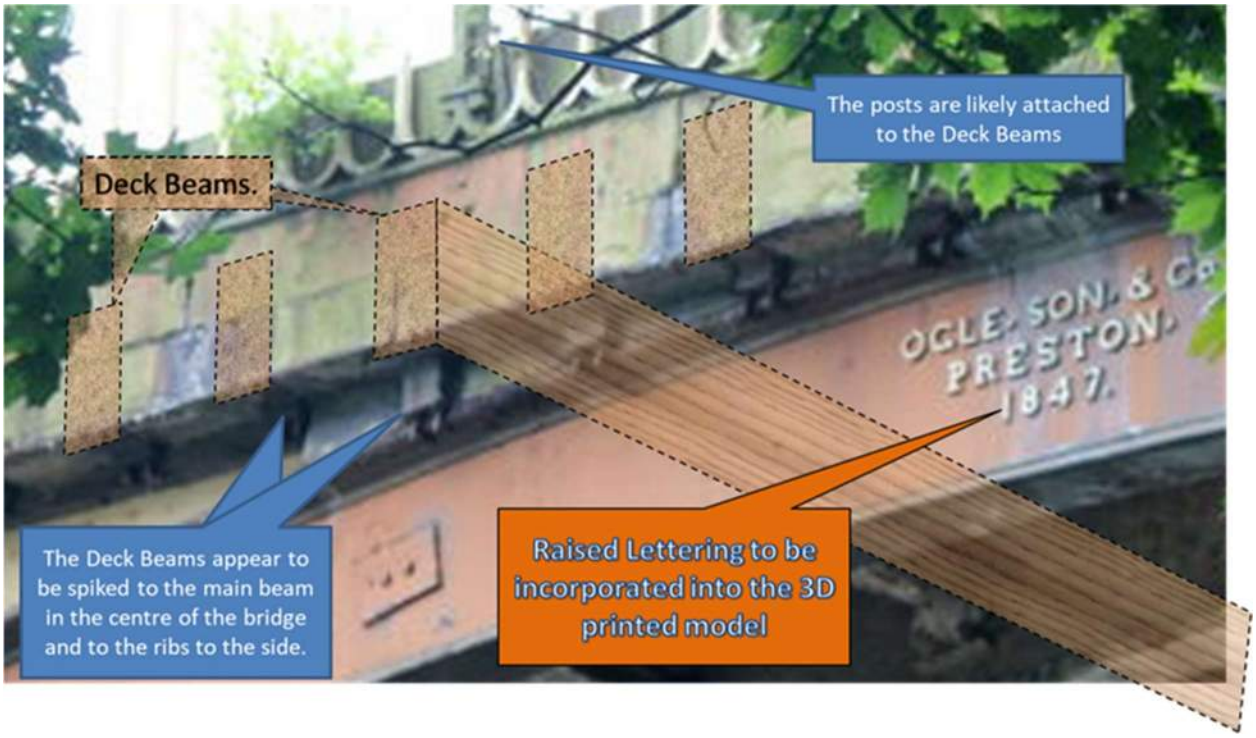
Approx. 16 cross beams on the centre span

Assume Total number of Cross Beams on one beam (2 x 13) + 16 = 42 beams on the 65 foots span.

Approx. 13 cross beams on the centre span

Images from Google Street View

From this I was able to imagineer the structure shown in the image below.



From the photos it would appear that the ends of the deck beams are concealed by a layer of tiles or thin bricks. The clamp details will be incorporated into the 3D printed model. I will likely print these with the beams and ribs and not with the decking.

The printer I have on order (ELEGOO Mars) uses a 2560×1440 2K HD masking LCD as to provide accurate printing with XY axis resolution of 0.00185inches / 0.047mm, this translates to 0.14 inches on OO scale, probably just about good enough to print the "OGLE SONS cast lettering which is about 2 inches high in scale.

Configuration Control

It's very easy to get lost as you move between the various drawings so it's essential to keep a record of what is intended on one place. Therefore the Key dimensions and where they came from are documented in an Excel workbook, see below.

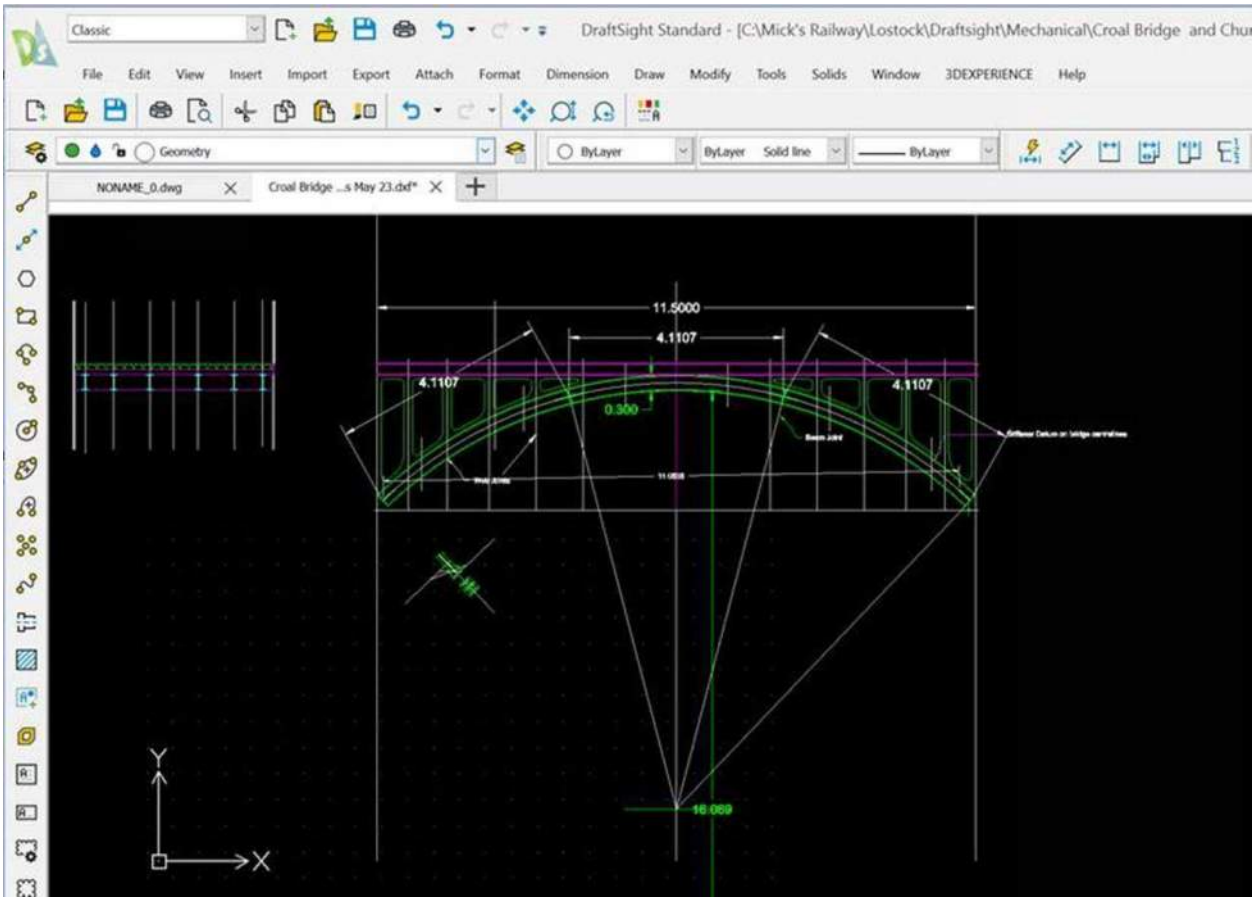
Key Dimensions - Derivation from photos and used on model

Component	Feature	Dimensions (inches) Estimated from Photos	Scaled down to 00 76	Used on Model	
	Overall Distance beteen Between Buttresses on layout			11.50	
Arch Beams	Length at Neutral Axis	Draftsight Drawing		4.111	
	Depth	24.00	0.316	0.300	
	Width - Middle	10	0.132	0.130	
	Pad Width - Ends	18	0.237	0.240	
	Flange & web thickness	1.20	0.016	0.018	
	Fillet Radius			0.010	
	Beam Transition in Gusset	24.00	0.316	0.300	
Track Bed	Aluminium Plate with plywood cover		Width	3.800	
			Thickness	0.100	
	Centre distance of Beams from Bridge Centre line				Derived from photo, see Beams Centre line calc sheet
		Outer beams		1.700	
		Mid track beams		1.160	
		Inner beams		0.460	
Cross Beams	Depth	16.00	0.211	0.210	
		Length - same as trackbed		3.800	
	Width			0.230	Derived from photo, see cross beam calc sheet
	Top and Bottom Plates	1.00	0.013	0.010	
Decking Units	- 3 reqd with 14 beams each		Width	3.830	rediced by a few thou to ensure fit
			Beam spacing	0.274	
			1/2 space	0.137	

The measurement shown in red were measured on the layout so are now pretty well cast in stone ☺.

Translation of information to 2D and 3D drawings.
I certainly went in at the deep end as far as 3D printing is concerned with this is very challenging project. Fortunately I'm not alone I've been blessed with loosely be called a team of six talented helpers.

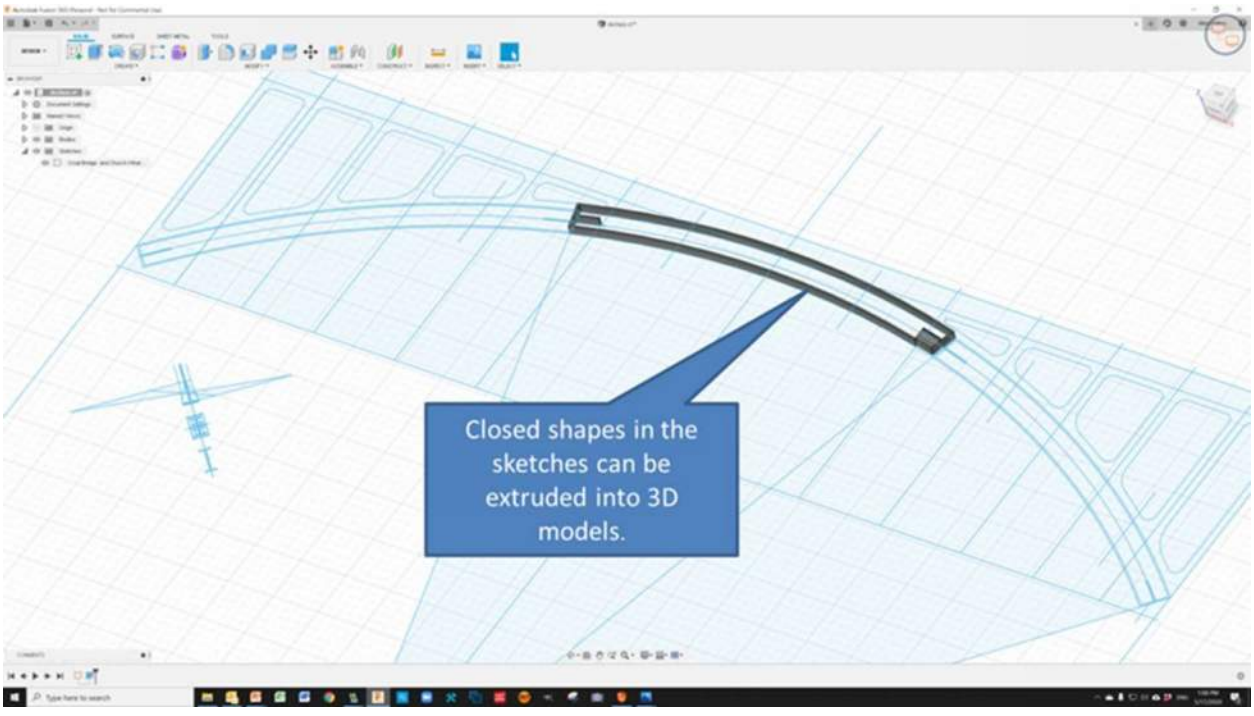
I choose to layout the design in 2D Draftsight, see image below. Dimensional correct 2D form Draftsight can then into Fusion 360, a 3D (solid modelling) application.



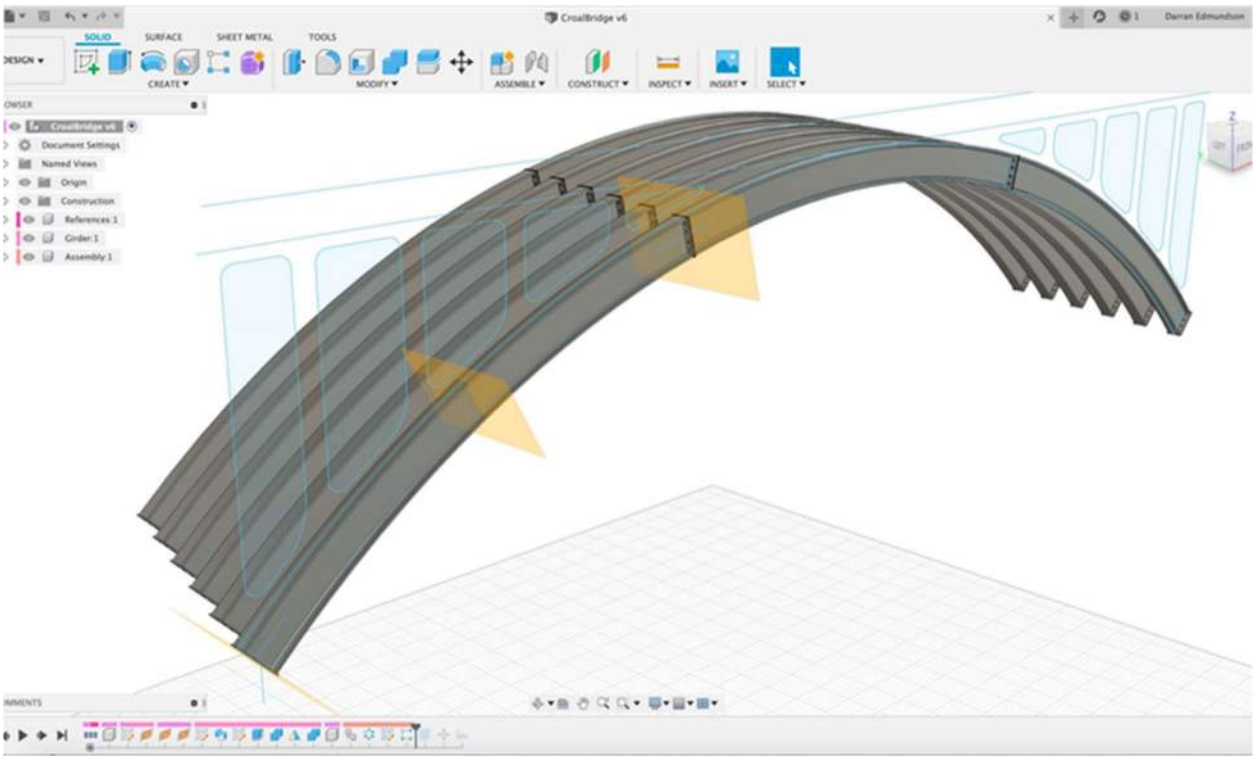
I choose to start in Draftsight because I work very comfortably in Draftsight and Draftsight doesn't really care about the sequence in which you choose build the image. This allows me to exercise draftsman's licence freely.

After a few iterations moving for photo to PowerPoint slide to drawing, the reliable design concepts evolve which are reflected in the dimensions captured in various Draftsight drawing images. As an example I might nudge a flange thickness up or down until it makes engineering sense and can be printed on the 3D printer.

There is a lot of clutter in the Draftsight drawings but this clutter can be filtered out so that only the required elements are exported from Draftsight to Fusion 360 as a dfs (flat file) for further processing. The diagram below shows the flat file imported into Fusion 360 and then extruded a solid.

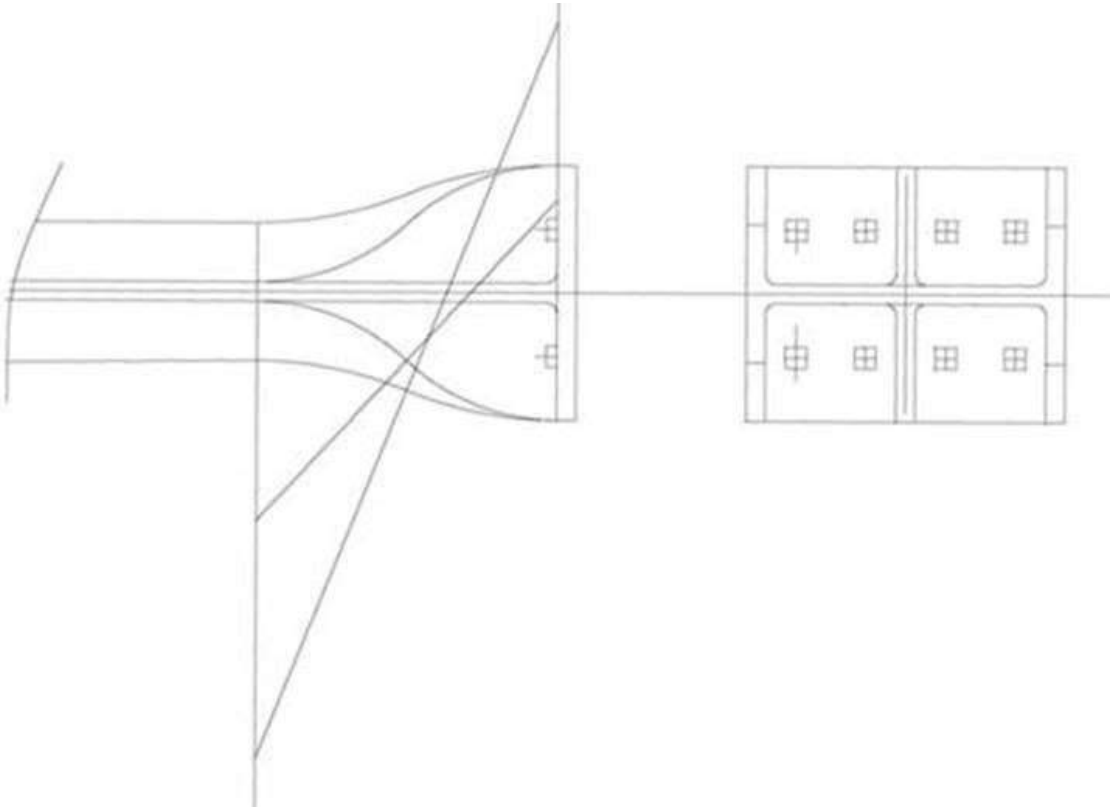


The above diagram shows my tinkering but my friend Darran in BC has been playing with solid model to establish the all-important Fusion 360 work flow process to create the model below.

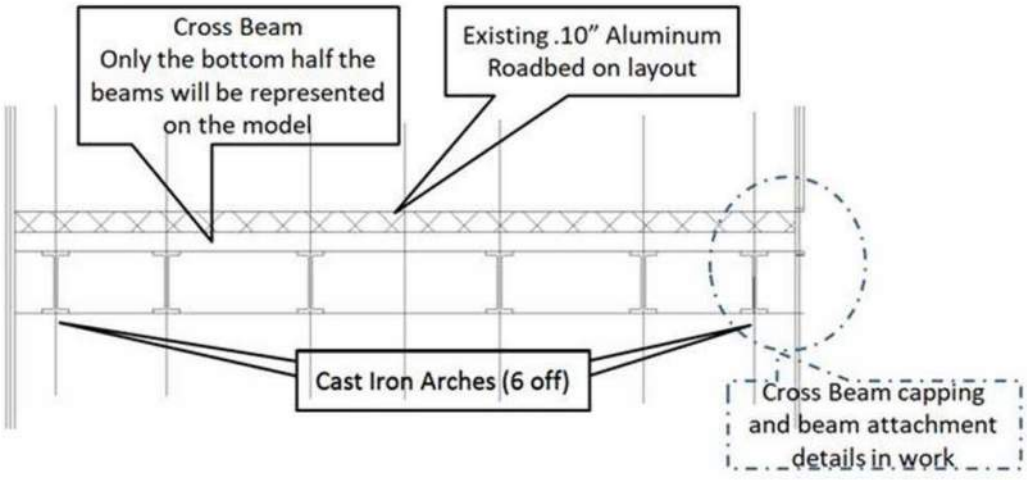


Again, the process is evolutionary process, as more details emerge, they are incorporated

into the model. As an example I have just revised the end pad details, see below.



I'm still interpreting the photos to define the dimensions in Draftsight, see below



Note that the arched I beams aren't equally spaced. Actually, this view will never exist but it does explain the geometry, it's a good example of a draftsman's licences..

The printer below arrived today, Wednesday May 27, 2020, now I will really need to get my head down ☺.

We'll see what happens
☺

All photos, diagrams, report, by Mike Walton.

12. **Gerald Harper – Latest Aquisition**: Gerald has a new acquisition for his Anyox Mine layouts and he tells us the following about it:

Here is a picture of the Anyox Mine's latest acquisition - a secondhand 0-4-0 gas mechanical Davenport from D&RGW. It was delivered as 30 inch gauge but the smart mechanics at Anyox regauged it to 3 ft gauge and also added modern (ca 1920) electrics so it has sound and DCC control. The sound leaves something to be desired but a better, larger speaker will probably help. Problems of supply. #50 is hooked up to a flat car full of copper ingots from the smelter to haul to the dock. The loco shop is in the background and the high line trestle is on the left.

Photo credit: Gerald Harper

13. **Walter Reid – Arduino Controllers:** Like many of us these days, Walter has been attending the *University of YouTube* with great results to self-educate himself on something he wants to try next, which in this case includes lighting control and track detection. We sends us this report on his latest progress along with two links to YouTube videos showing the work in action:

I have learning how to use Arduino controllers for various projects around the layout. I have no formal programming training, just Youtube video training and trial and error(lots of this!!).

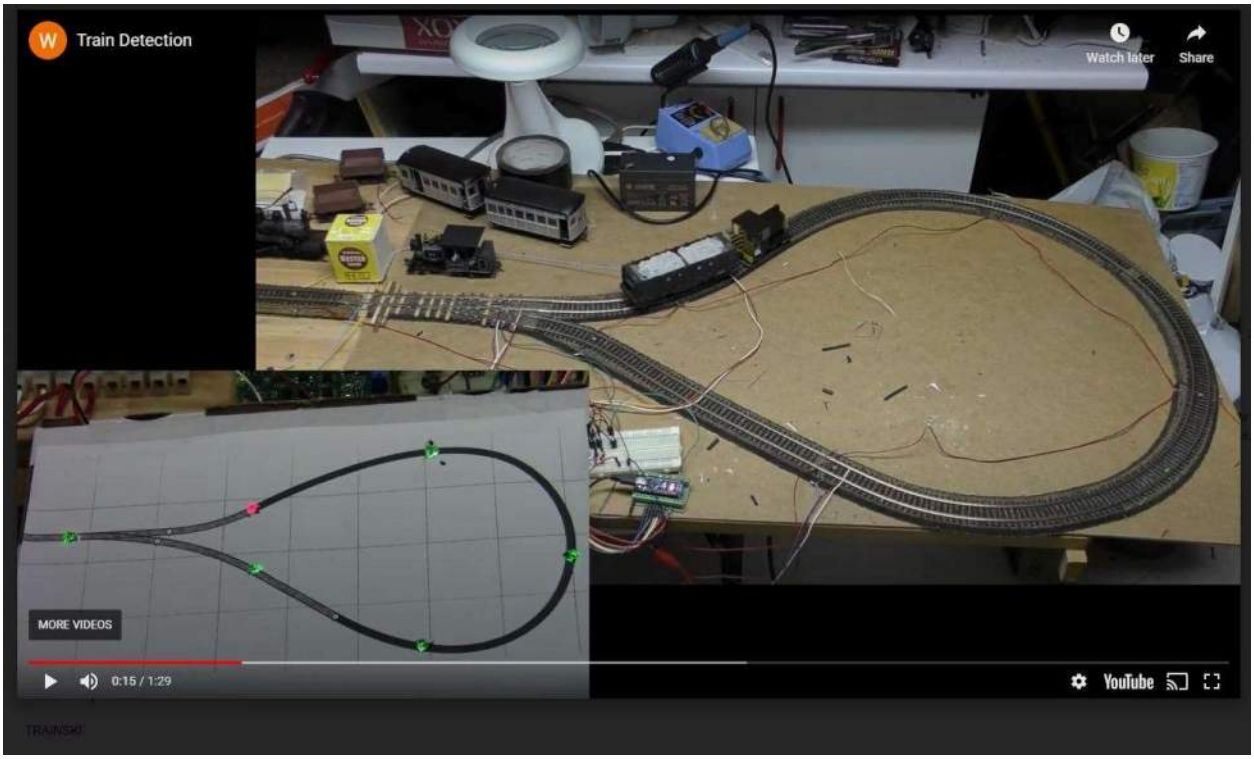
The first one was a method of controlling the lighting in the buildings. I wanted to be able to turn the building lights on and off randomly when it got dark and back to daylight. I used regular LED lights on the exterior, and Neopixels (smart LEDs that allow you to change colour and brightness on each element) for the interior lights.

https://youtu.be/hIunoKQRnkg

Video by Walter Reid

I also was playing around with train detection. Using photoresistors for detection and Neopixels for the multicolour display on the panel, I made this simple circuit. I am hoping to create a more sophisticated control once I understand the programming a bit better.

https://youtu.be/LynmykwJPW0



Video by Walter Reid

14. **William Waithe – MacMillan Yard Office:** Willie gives us an update on the progress he is making on the MacMillian yard area on his layout including the new addition of a yard office building and the progress he went through to choose the right one for his era. Additionally, he also updates us on his work replacing some decoders on his N scale RDCs. He writes to us:

I have been working on kit-bashing some buildings to make a suitable yard office building for the MacMillan yard. For the first attempt, I used one-half of a former brick industrial depot building. I removed some decorative finials, re-fashioned the roof edge and added some roof details. However, it didn't look quite right for a yard building (either with two floors (photograph 1)

Photo Credit: William Waithe

or after I cut it down to one level (photo 2).

Photo Credit: William Waithe

So, I bought a used, already assembled freight depot I spotted in Panther Hobbies (they have been open since 19 May, by the way). I cut off the loading dock, re-did the roof, covered the stone facing with industrial metal siding and added some trim (photograph 3). Finally, I think it looks right for the time and location.

Photo Credit: William Waithe

In addition to the yard building, I am working on the two Kato RDCs which I bought second hand some eight years ago. One has a defective decoder which I will be replacing. I think it may have been damaged because I had been operating with a track voltage of14V, a bit too much for N scale. The other has a truck gear problem (probably worn) so I plan to turn that one into a non-powered trailer (photograph 4).

Willie

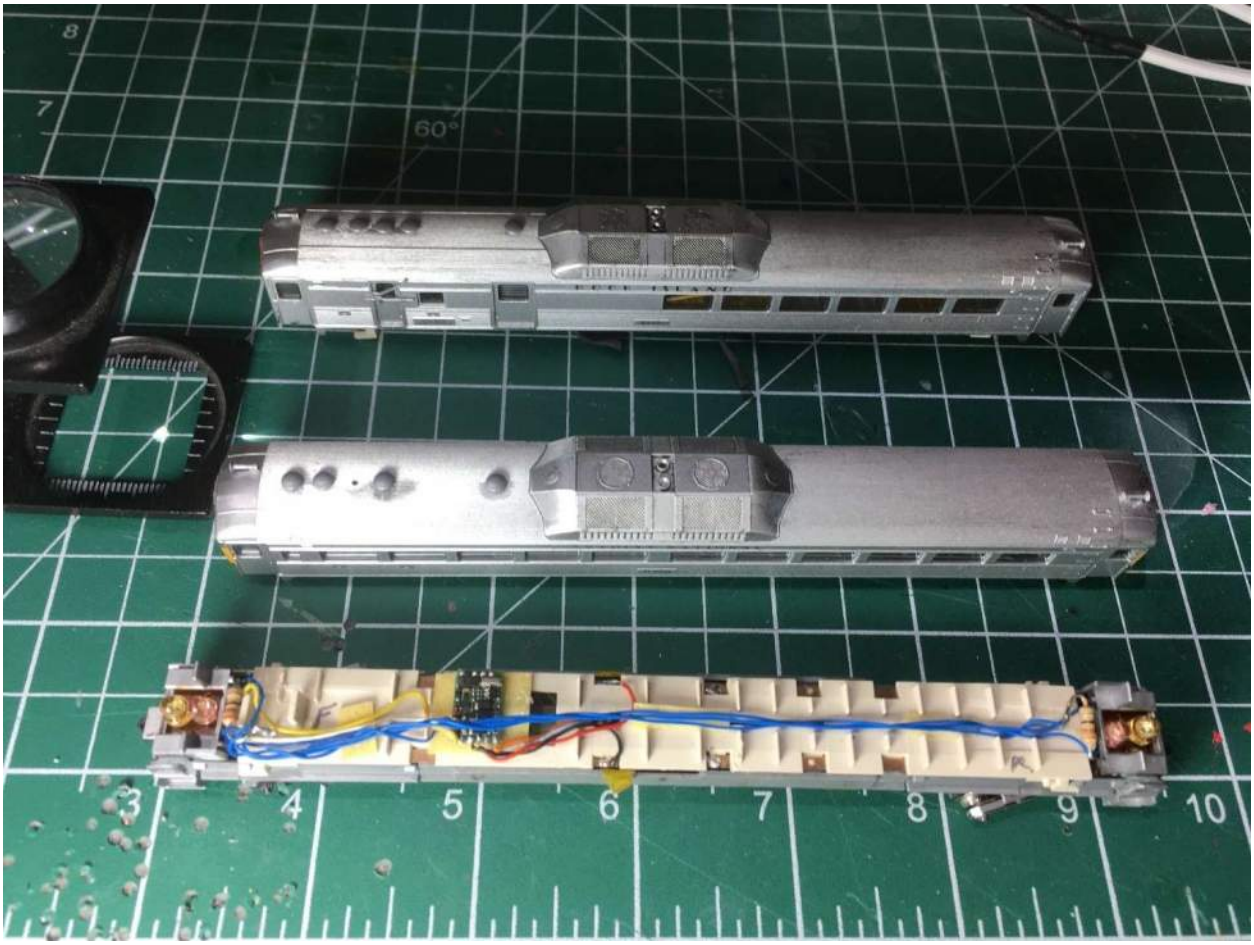


Photo Credit: William Waithe

15. **Sim Brigden – Zoom Meetings**: Sim has been installing and working with a new wireless operating system and he tells us how he is doing it in his latest submission:

I'm working on going to DCC++ from NCE.

Folks: Do you want unlimited WIRELESS throttles for your friends to run trains?
Would you like to power and control your entire layout for about $200?
Are you fed up with dropping huge cash on proprietary systems like Digitrax and NCE?
Then, DCC++ is the answer.

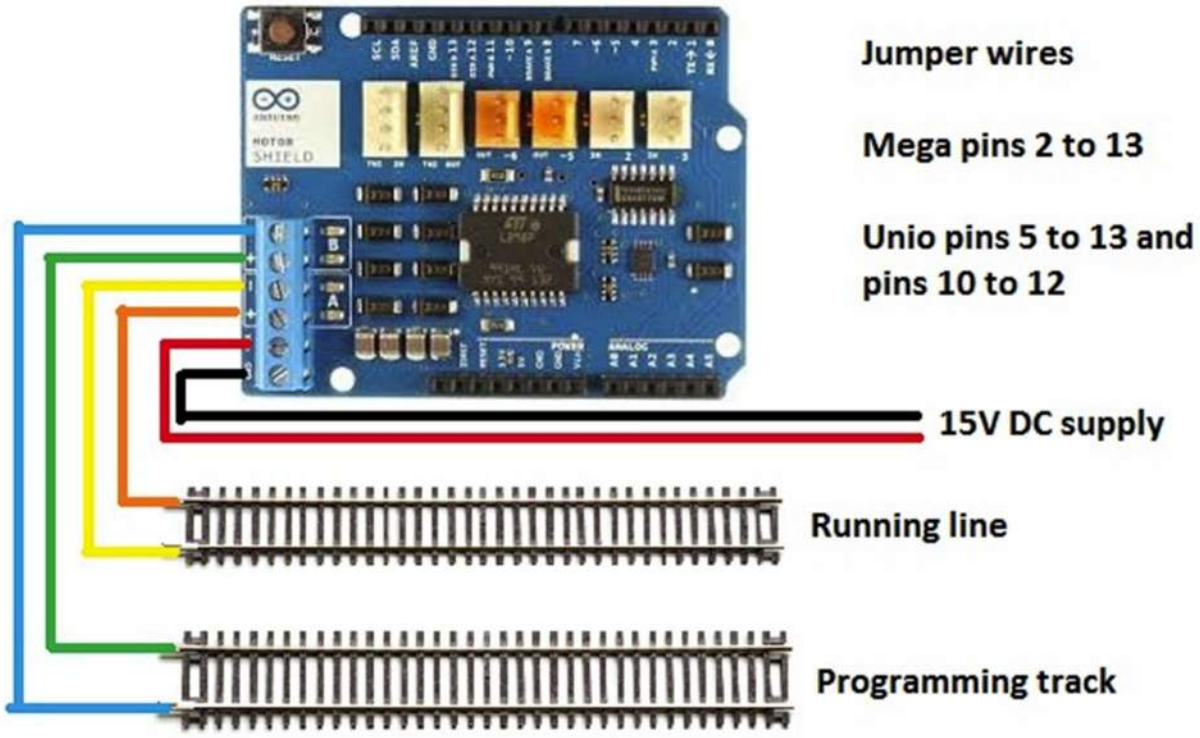
I bought a Raspberry Pi and carefully followed Steve Todd's instructions - downloading and installing his pre-configured Raspberry Pi Operating System with JMRI overlaid on it.
Here's the link: https://mstevetodd.com/rpi
The whole process took me about an hour.
I recommend getting a Raspberry Pi 3 or 4 with WiFi built in.

Next, came the Arduino. I bought an Arduino Mega and an Arduino Motor Shield (good for up to 2 Amps.).
There is one crucial step that you have to take: Cut the Vin Connect trace on the back of the Motor Shield.
Per the instructions, I also ran a jumper wire from Pin 13 to Pin 2
I plugged in my Arduino to the USB port of the computer.
When I did so, it installed an Arduino USB driver and showed that it was on COM5.

A guy named Fred Decker and 11 others are re-writing the DCC++ software.
Most importantly, they have built an Alpha version of a DCC++ installer that will work on Windows, Apple and Linux.
https://github.com/DCC-EX/BaseStation-Installer/releases/tag/alpha-1.2

I downloaded the file, unzipped it to the default directory and clicked on the .exe file.
I chose the Arduino Mega and Arduino Motor shield along with COM5 as the port.
A couple of minutes later, at was as though a miracle happened: the installer went out on the web, got the latest version of DCC++, downloaded it, compiled it and uploaded it into my Arduino.

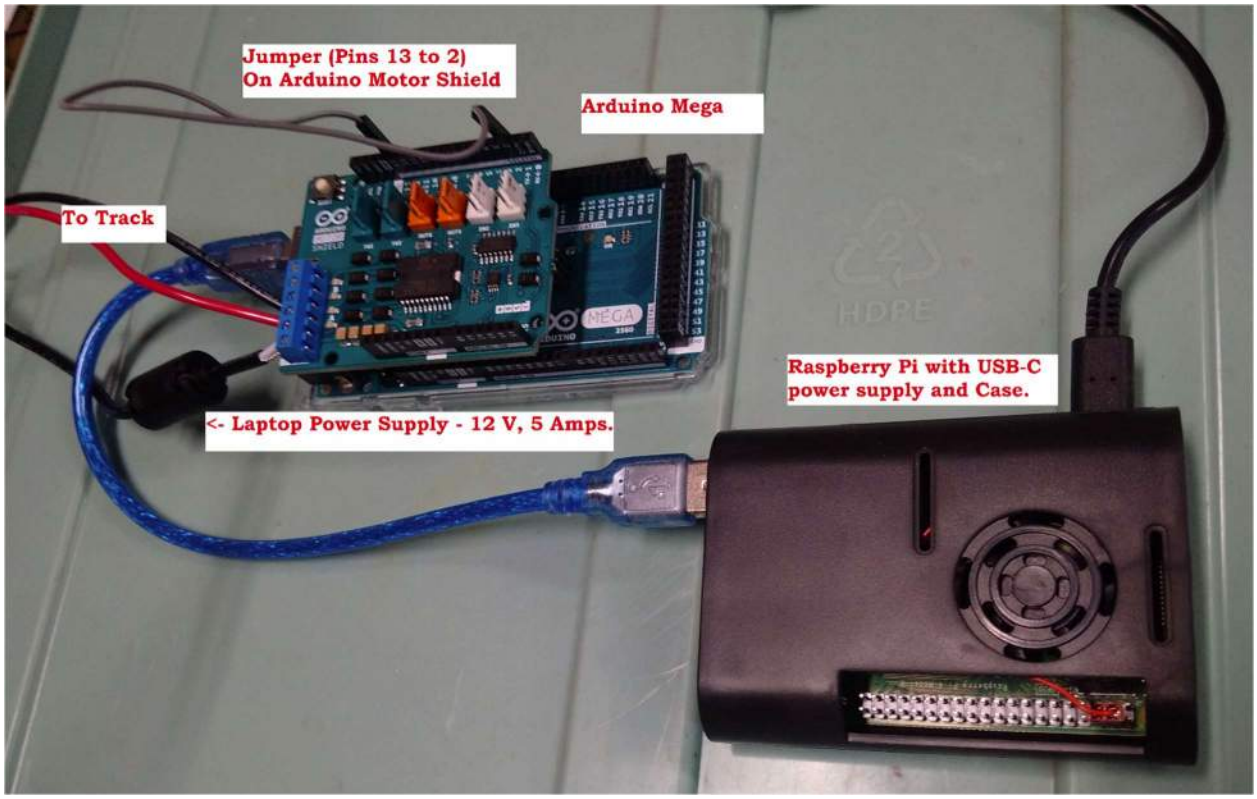
I did no, zero, zip, nada programming or tweaking.



Once it was done, I unplugged it, got a laptop power supply for the Arduino Motor Shield and connected it to the Vin & GND lugs. I connected two wires to the first output and hooked it up to my track.
I plugged the Arduino into the Raspberry Pi's USB port and fired the whole thing up.

I won't go into detail about configuring JMRI but I wanted to customize it to make it much easier to use so I set the SSID to Train and the password to Traintrack.
The Raspberry Pi broadcasts a WiFi signal. You simply connect to it like any other WiFi and then run an app called TightVNC.
This is, basically, a remote screen to the Raspberry Pi. It lets you configure JMRI, your consists and your entire railroad...
https://www.tightvnc.com/?f=va

Lastly, I downloaded Engine Driver for my Blackberry(!!) - also for Android. (WiThrottle for iPhone)
You connect to the WiFi the same way you did with your computer but simply click on the displayed server.
Just type in your locomotive's DCC address and you're up and running.



All in, the whole process took about three hours - but mostly because I was documenting what I did as I went along.

The system is incredibly cool. Turn it on... pull out your phone and run trains!

Once the Engine Drive is connected to the network, the possibilities are incredible. You can run more than one loco from your phone - at the same time!!

Example 1: Select Loco 20 for throttle 1
Select Loco 30 for throttle 2
Select Loco 40 for throttle 3

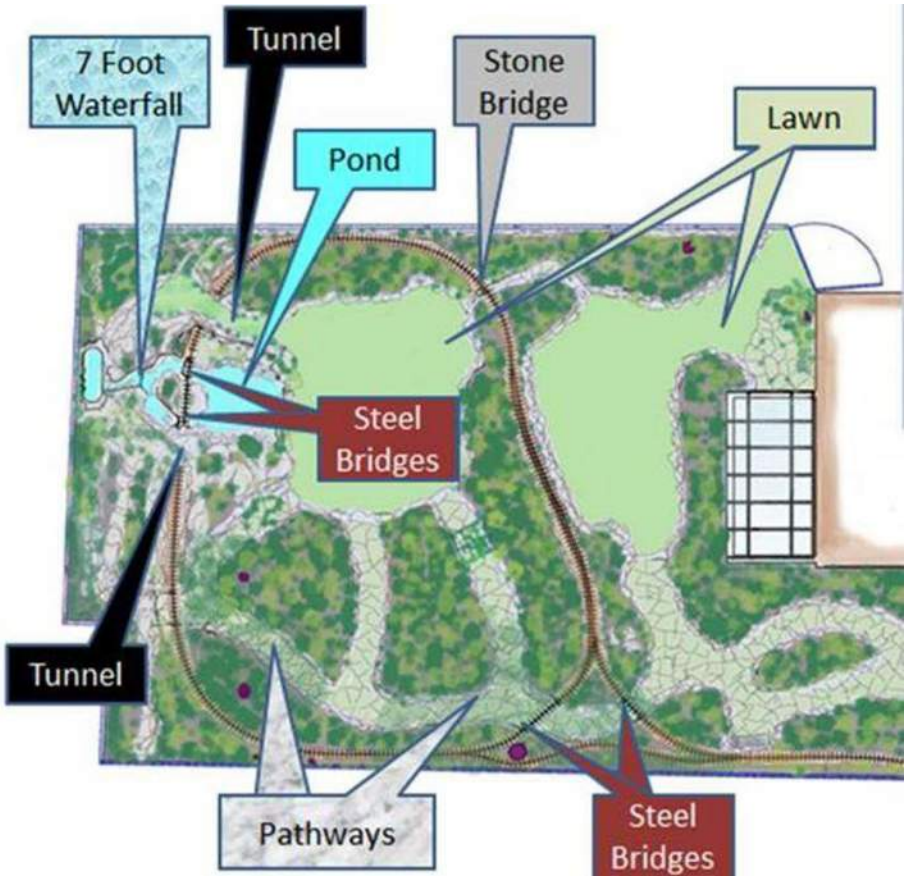
Run all locomotives independently from each throttle - at the same time!!

Now, say Loco 20 can't pull the train and needs a 'B' unit and another 'A' unit.
Back it up to the 'B' and 'A' in question and connect couplers.
Without doing anything else, in Throttle 1 punch in the address for the 'B' unit (50) and the 'A' Unit (60) and they become an instant consist!! When you're done with any consist or locomotive, just hit 'Release' to make it available to other Throttles.

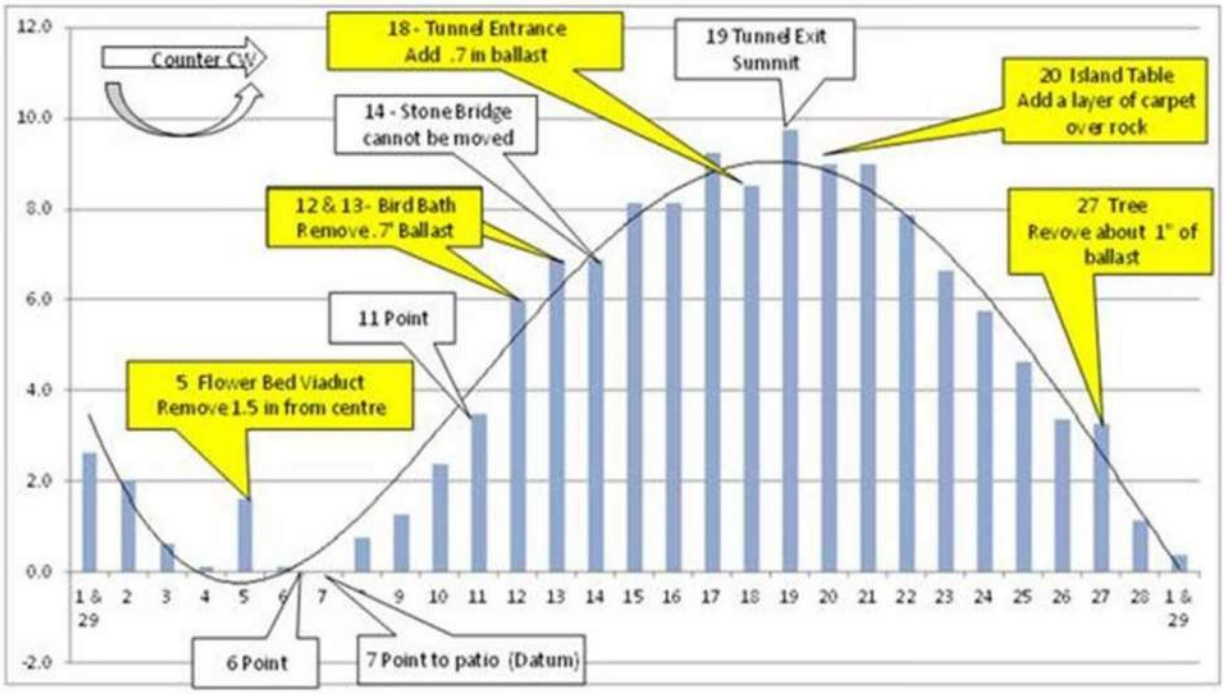
16. **Mike Walton – Re-grading the Tracks of the Garden Railway:** In our last letter Mike sent us the first *Garden Railway* submission we have had for our letters and in his 3RD REPORT ON THE WORK IN PROGRESS WHILE THE 216TH OPERATING SESSION IS ON HOLD - MAY 26TH, 2020 email letter he updated us on the garden railway progress:

The COVID has been an ideal time to re-grade the tracks of the Formby Gorge Railway. The garden railway had settled over time, basically the gardener kept adding soil in some areas and in other areas the rain had gradually washed away the ground below the track bed. It wasn't a problem with highly geared steam engines and electrically powered trains. However with free running radio controlled steam engines, it was a problem for the inexperienced operator. Trains always seemed to stall at a location hidden by the vegetation.

In the preliminary survey, 29 elevations at about 5 foot intervals were shot with a laser level around the circular track work shown in the diagram below.



The track rises about 9" from the low point at the junction in front of the sunroom to the high point at the tunnel before the waterfall. It used to be an easily managed consistent grade but over time small humps had developed. Plotting the results as shown below highlighted the areas to be corrected.



Images credit: Mike Walton

Rather than correct everything at once, levelling is being conducted in 15 to 20 foot stages, starting with the most flawed sections first. The centre section of track between the points, in front of the sunroom, was raised about 1-1/2 inches, see photo below.

Photo credit: Mike Walton

I could have used water levels with a ruler and bucket but with a laser level it's much more easily done ☺.

17. **Ian McIntosh – MoW Railfanning:** These great images of a pair of CN MoW vehicles near his house are fresh off the print from Ian today. Ian emailed me this morning and said he could get some pictures of them today if I wanted them – well, that is a set-up if ever I had one because he knows I have a great passion for MoW vehicles and they are not always easy to photograph closely. So, I said *"Okay, if you want to?"* …Ian tells us about how he spotted them and got the photos of the ballast regulator and tamper:

I first spotted this pair on the east side of Faukland Road a block east of Pharmacy Avenue between Comstock Road and Leahurst Drive, parked on a switch.

Photo credit: Ian McIntosh

A couple days later they had been moved across the street onto the Griffith Foods siding, more accessible for photos than their original location. Griffith (aka Griffith Laboratories) is a major food flavouring manufacturer on Pharmacy both south and north of Comstock.

Photo credits: Ian McIntosh

The other path from the switch (in the foreground of the photo of the left side of 65660) curves north to the back of IPEX Pharmacy Building Materials, on Pharmacy the second company south of Eglinton. There are usually 3 or 4 covered hoppers delivering plastic pellets that IPEX makes pipes out of. You can see the hoppers from west of Cineplex Odeon off Lebovic Ave.

Photo credit: Ian McIntosh

Thank you, Ian! ☺.

18. **James Rasor – Circus Train Research:** I have been continuing my research for my new "N scale" *"imagineering"* circus train project. My most recent research has been re-reading and making notes in my circus train project sketch book based on some books that I had already purchased several years ago. They have been great resources, full of information and photos. Another great research piece has been the internet which can certainly be a rabbit hole leading down the path of many other projects you would like to do if you are not careful and keep your focus. My latest search has lead to Joseph Kasper who donated a 200 piece 1947 Ringling Brothers and Barnum & Bailey HO Scale replica circus train to Circus World Museum. Something to go see someday maybe…

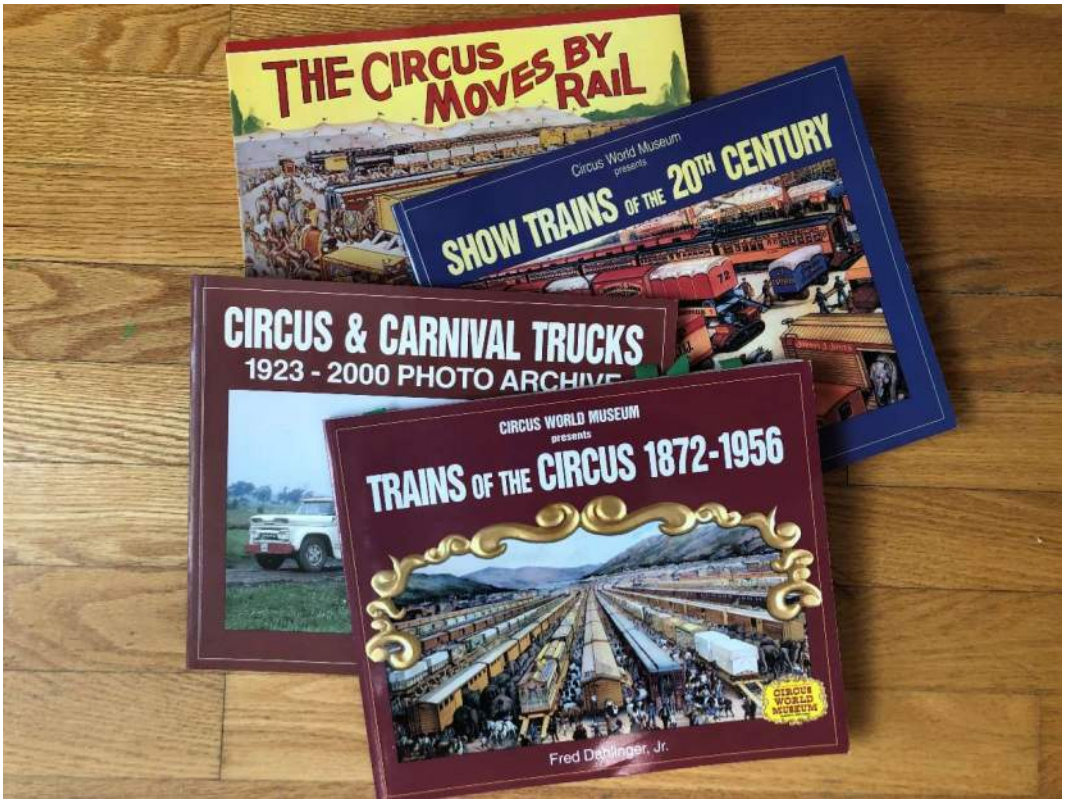


Photo Credit: James Rasor

CARM
ZONE 2
Toronto Chapter
Secretary

What are you working on?

****

That's our July 2020 addition of what some of our CARM Toronto Chapter Members are currently working on.

Now, go look at your stash of projects, or dust off your layout, or grab that railroad book you have been meaning to read from cover to cover, or sort and label your railfanning work, or work on that railroad presentation, or install that first decoder, or write about the first train you ever saw or road on, or teach your family how to be operators, or teach them how to solder or ballast a track, etc., etc., and have fun! It's one of the greatest pastimes that you can enjoy either alone, with friends, or with family …and it keeps your mind active and healthy!

And…. don't forget, we would like to hear from every one of you about what our *CARM Toronto Chapter Members* have been working on so please do send me a photo and a quick 75 word maximum description (*or even just a written description*) about what you are currently working on and we'll get it in the next ***CARM Toronto Chapter - What are you working on?*** chapter email letter.

How do you do it:

Step 1: Send me a single photo or even just a description of your:

- present model railroad project,
- or your most recent prized model railroad purchase,
- or your model railroad layout photo or layout drawing,
- or your most recent prized railfan photo,
- or your current model railroad scratch-built project,
- or your favourite model railroad rolling stock,
- or your latest model railroad operating session,
- or your research model railroad sketches,
- or your custom model railroad track build,
- or your first model railroad decoder install,
- or your latest model railroad weathering project,
- or the most recent model railroad disaster that happened to you,
- or your model railroad landscape project,
- or your model railroad lighting project,
- or the model railroad area you just pulled apart to start all over again!
- or any model railroad related item that you have been working on.

- It doesn't have to be perfect, professional, etc., etc., etc., just something you had fun with and want to share with us for this hobby we share together.

Step 2: Include a brief description, 75 words maximum; or less if you want, that's okay too!
Step 3: Don't have a camera? That's okay! Just send me a 75 word description of what you are working on. You do not always need a picture - the goal is to hear from all of you and we really do want to hear from you!
Step 4: Updates from you! Yes, we would love to have updates on items our fellow members have submitted previously for the letter – do let us know your progress since your last submission.
Step 5: Go ahead, submit something again! Did you submit last time? Wonderful! Please do so again and again and again! This is about us staying in touch and having fun together, even if it is just through this letter sometimes.
Step 6: Send it to me at: CARMtoronto.jamesrasor@gmail.com
I will then take the information, put it together with the other submissions and issue it in the next "***CARM Toronto Chapter - What are you working on?***" email letter along with the other members' news every few months.

Let us know what **you** are working on, have fun, and ***stay in touch!***

Yours truly,
James Rasor, Secretary
CARM Zone 2 - Toronto Chapter
For more information on the *Canadian Association of Railway Modellers* go to http://www.caorm.org/