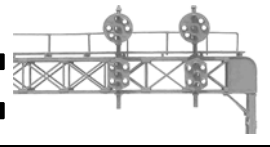


THE SIGNAL BRIDGE



Volume 17

NEWSLETTER OF THE MOUNTAIN EMPIRE MODEL RAILROADERS CLUB
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Following the Tracks of the "Tweetsie": ET&WNCRR Right of Way Trip, March 21, 2010. Part II

Text, Legends and Photos by Fred Alsop

This is the second edition of a field trip to explore some of the ET&WNC RR, the "Tweetsie", right-of-way on March 21, 2010 by members of the Mountain Empire Model Railroaders (MEMRR) club. The group was led by long-time Tweetsie experts Phil Sloan and Jerry Turbyfill, both residents of North Carolina, and included Richard Gallaher, John Carter, Gary Rabetoy, Gary Emmert, Joel Shipley, and Fred Alsop.



Photo 1: L to R. Jerry Turbyfill, Rich Gallaher, & Phil Sloan inspecting the south abutments of the ET&WNS State Line Hill trestle.



Photo 2: The State Line Hill trestle south end poured concrete abutments of the ET&WNC.



Photo 3: Looking up at the front face of the ET&WNC south side State Line Hill trestle abutment

Our next stop after leaving the Cranberry Mine site was to travel north through Elk Park leaving Avery County, NC and entering Carter County, TN on the north-facing down slope of Highway 19E on State Line Hill. The ET&WNCRR had negotiated this grade by building a tall wooden trestle spanning a gorge here. Later when the trestle began to age and weaken the railroad had solved their engineering problem by not replacing the bridge, but rather, by covering it up to the track level with rock dumped from the top of the trestle by train after train of loaded hoppers. After the railroad was abandoned the contractors rebuilding highway 19E took that same fill rock to build the current base of the new highway up State Line Hill. All that now remains of the Tweetsie ROW here are the huge poured concrete abutments and the culverts and retaining walls that held the rock fill in place when the trestle was buried.

Leaving State Line Hill we traveled through the town of Roan Mountain and north of the town leaving the highway at Crabtree we followed the Tweetsie ROW east of Hwy 19E where it follows the Doe River as a single lane paved road with turnouts for passing on-coming traffic. Here for several miles you drive on the old ROW easing downgrade and through rock cuts hewn out by hand with the aid of black powder in the late 1800s. This is one of my favorite "Tweetsie drives" and I can almost imagine being aboard one of the little 10-wheelers as it ran towards The Gorge

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LOCATION

ETSU Campus,
George L. Carter
Railroad Museum

HOURS

Business Meetings are held the
3rd Tuesday of each month.
Meetings start at 7:00 PM at
ETSU Campus, Johnson City, TN.
Brown Hall Science Bldg, Room 312,

Open House for viewing every Saturday from 10:00 am until 3:00 pm. Work Nights each Thursday from 5:00 pm until ??

and back homeward to Johnson City, TN as I watch the beautiful mountain scenery along the river pass by.

from the bridge along with the rails, all except a few at the northernmost end of the structure.



Photo 4: The ET&WNC Blevins Steel Truss thru bridge just north of Blevins



Photo 6: The Tweetsie ROW beside the Doe River north of Blevins between Blevins Steel Truss thru bridge and tunnel #5.

Shortly after passing through the community of Blevins we cross the only remaining functional steel truss bridge on the line. The Blevins Steel Thru Truss Bridge is now a highway bridge and shines in its recent coat of silver paint. The builder's plates above each end of the bridge state, "Keystone Bridge Co. 1889, Pittsburg, Pa."

Deciding to cross the bridge takes a bit of daring, but pedestrians are now aided by a single steel cable that has been suspended from the superstructure and provides a degree of balance as you tread a single supporting steel girder. Everyone in the group decided to cross and did so successfully (roundtrip).



Photo 5: The well constructed stone abutment of the Blevins Steel Truss thru bridge.



Photo 7: Rich Gallaher goes to explore the entrance of collapsed Sand Tunnel #5.

The original abutments still hold the span and are constructed of well-laid cut stone that has supported the bridge from the late 19th century well into the 21st. A short drive on north on the graveled ROW and the road ends at a large mound of dirt and rock that prevents all but foot traffic along the old railroad bed from here northward. Vehicles are parked and locked and we take cameras and supplies and begin our walk on the old roadbed beside the cascading waters of the Doe. The first landmark encountered is Tunnel #5, the Sand Tunnel, cut through soft stone it is now partially collapsed and dirt, stone and debris block its openings. Skirting around it we are soon back on the ROW and headed north towards the next river crossing on the Steel Thru Truss Bridge just south of Tunnel #4. Most of the ties from the more recent standard gauge "Hillbilly Railroad" that ran for a while as a tourist attraction from the Hampton end of the Doe River Gorge to this point before it was abandoned have been removed



Photo 8: The group walking the ET&WNC ROW beside the Doe River between Tunnel #5 and the steel thru truss bridge south of Tunnel #4

The waters of the Doe roar beneath with little in the way of flooring to obstruct your view of them and you approach the rocky north bank of the river and the dark entrance to Tunnel #4 with a feeling of conquest and of relief.



Photo 9: The south entrance to Tunnel #4.

Tunnel #4 was cut through the native rock and while the approaches at both ends have some debris piles that have accumulated over the years, the inside of the tunnel is essentially clean of any fallen materials. The group continued through Tunnel #4 and on north to the next river crossing.

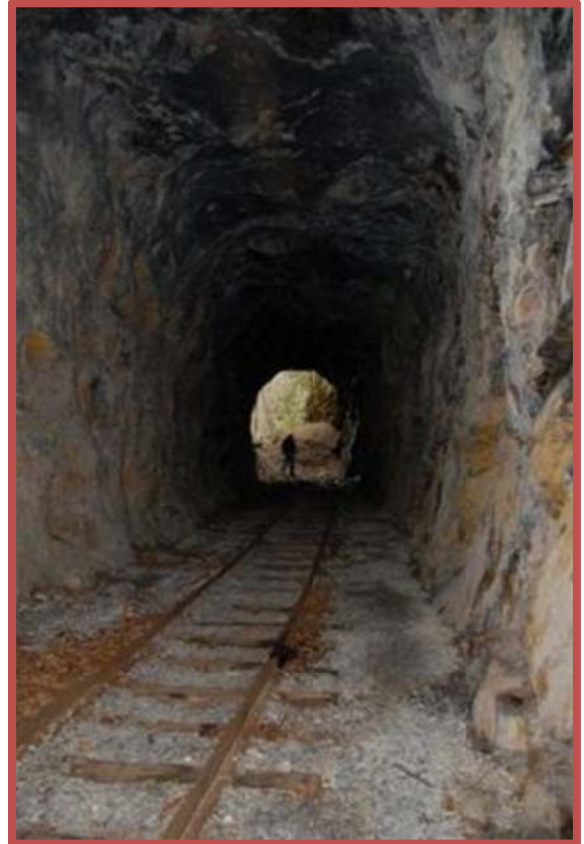


Photo 10: Inside Tunnel #4 looking north



Photo 11: Gary Emmert exiting the north end of Tunnel #4



Photo 12: Phil Sloan (foreground) crossing steel truss thru bridge just south of Tunnel #4.

The steel truss bridge crossing the Doe here is also still in place on its stone and concrete abutments, but it is setting much closer to the surface of the river as it was used as a steel truss deck bridge. Even though aging crossties and their attached rails are still in place crossing it on foot is a much riskier task.

bridge was as far as we hiked northward towards the gorge. As it was getting late in the day and we had one more section of the ROW we wished to explore, we retraced our steps back south to our vehicles and out to Highway 19E taking the road north of its Doe River crossing north of Hampton, TN.



Photo 14: From the north side of the Doe River and from L to R: the new Hwy 19E/321 bridge, the ET&WNC north and south abutments for the covered deck bridge, and the old highway bridge connecting Elizabethton and Hampton, TN.

Our last stop for the day's trip was near Valley Forge where we crossed to the west side of the ET&WNC ROW and walked the old highway route, now only a foot trail overgrown with trees and shrubs, south to its crossing of the Doe River via the old concrete highway bridge. Reaching the site on the north side of the river one has in their view the new Highway 19E bridge to the east, the stone and concrete abutments that held the 3-span wooden covered Tweetsie deck-bridge, and the still-standing, old Highway 19E concrete bridge.



Photo 13: Gary Emmert checking the crossing situation on Steel Deck Truss bridge just north of Tunnel #4

As with the preceding steel bridge, someone has attached a steel cable to the structure to aid any hiker wishing to cross the span, but it is along the bottom outside girder and close to the water below and none of us attempted to use it. The south end of this



Photo 15. The poured concrete south abutments for the ET&WNC 3-span covered wooden deck bridge viewed from the old highway bridge.

Walking across the old highway bridge provides excellent views of the two cut stone pillared abutments on the north side of the river and the two poured concrete ones on the south side. Climbing up the hillside on the south side of the river, and around the railroad abutments there, placed us back on the ROW looking south into the mouth of Tunnel #1 carved into the rock. Tunnel #1 is a relatively short tunnel and is unique among the ET&WNC tunnels

in that it was constructed with enough extra width and height to accommodate standard-sized rolling stock.



Photo 16: The stone north abutments for the ET&WNC 3-span covered wooden deck bridge viewed from the old highway bridge.

The intention was of using the flatness of the terrain and the roadbed with little change in grade between Johnson City, Elizabethton and Hampton to allow the little narrow-gauge locomotives to pull standard gauge rolling stock between these three towns and the connecting larger railways in Johnson City.



Photo 18: Inside short Tunnel #1 looking south.

We walked through this tunnel and watched the traffic rush by on the newly widened Highway 19E; the road that took a large toll on the transport of the freight, timber, and mineral products that once were the life blood of the Tweetsie. The Doe River still rushes by the old abandoned ROW beneath our pathway upon it. Looking south the ROW is still clearly visible along the bench hewn so long ago in the hillside above the river as it reached beyond our vision in its southward journey towards Hampton and The Gorge.



Photo 17: L to R. Gary Emmert, Phil Sloan, and Rich Gallaher at the north entrance to Tunnel #1



Photo 19: The south entrance to Tunnel #1. The tunnel was excavated large enough to handle standard gauge rolling stock.

The daylight was escaping us and we had had a long and interesting day exploring and learning along the roadbed of the line that once was so important to the communities and the people who lived along its route and were faithfully served by the Tweetsie. Phil and Jerry had been outstanding guides and we had been given a lot of information about the railroad, its ROW and the people who worked for it. I took many photographs to chronicle the day's adventure, but more importantly for me, to capture some of the artifacts still standing of the ET&WNC, and the scenic terrain it traversed, with the hopes of using them someday as reference materials to bring some of the Tweetsie back to life in miniature with the assistance of my colleagues and friends of the MEMRR. The ET&WNC is gone forever, but perhaps we can recreate some semblance of it in our little railroad museum for the old timers to remember, and for the rest of us who never

experienced the thrill of a first-hand experience with this Southern Appalachian narrow-gauge railroad, a little glimpse of history.

On Easter Sunday, 2010, I walked and photographed the section of the ET&WNC ROW between Tunnel #2, through The Gorge, and on to the Steel Deck Truss Bridge just north of Tunnel #4. I look forward to sharing some of that day with you in Part III in another issue of *The Signal Bridge*.

MEMRR Club Promo Video On ETSU Website

Check out the link to a short promo David Currie shot and pieced together for the railroad museum. It takes a few minutes to load so please be patient.

<http://elearning.etsu.edu/railroad/cartermuseumpromo.htm>



Photo 20: Rich Gallaher looking southward down the ET&WNC ROW just south of Tunnel #1 with Doe River and Highway 11E to his left.

MOUNTAIN EMPIRE MOFEL RAILROADERS Coordinators Meeting September 9TH, 2010

MEMRR President Fred Alsop presiding. Meeting held in room 235 Campus Center Building, ETSU. Meeting called to order 6:05 PM and adjourned at 7:09 PM.

Library: Gary Emmert. No report. Librarian out of town, but Bob Jones has continued to catalog books and DVDs.

Publications: Ted Bleck-Doran. September issue of *The Signal Bridge* is a full 14 pages with lots of good materials submitted by MEMRR members. Keep it coming!

Events: Hobie Hyder. Craggy Mountain Railway speeders club event still in the works. President's Classroom "students" will visit museum at 5:15 PM, Monday, 20 September for 3rd consecutive year.

Publicity: Hobie Hyder. A brochure rack fully stocked can be placed in the museum (as per Jim Pahr). Alsop will contact university administration to try to facilitate this.

Sales: Duane Swank. Duane has completed inventory of engineer hats and will propose motion at Sept. club business meeting to order approximately \$100 of new hat inventory for club sales.

Display Cases: Jim Pahr. Jim has pulled the G-Scale Tweetsie locomotive and rolling stock display and is replacing it with a display representing the history of Lionel from 1915 to present. Geoff Stunkard will also be changing out some of his historical postcards and other railroad paper displays.

Little Engineer's Room: Duane Swank. The "porch light" on the caboose is being changed out for a prototypical marker light with the addition of a custom-made journal box. Jesse Kittle has reversed the running direction of the Dollywood G-Scale train.

Rabetoy HO/HOn3: Gary Rabetoy. Paul Haynes and Gary Rabetoy have placed leg extenders on all the modules with track, roadbed and signals on them bringing them up to the same height as the window ledge modules. Emile Hamm is still in the process of

creating 2 separate track plans for the planned Tweetsie layout. We are still waiting word from the ETSU administration on our request for additional space for this layout.

Rabetoy Layout Development Progress Report

1. Leg extenders to elevate the Rabetoy layout benchwork to the same level as the shelf benchwork have been fabricated by Paul Haynes. The first set was tested on one module and found to be entirely satisfactory on August 19, 2010. Members assisting in the test included Fred Alsop, Paul Haynes, and Gary Rabetoy. Thank you Paul and Fred.

2. On August 26, 2010, the leg extenders were fastened to two more modules. Assisting in this effort were Fred Alsop, Rich Gallaher, Paul Haynes, and Gary Rabetoy. Thank you Fred, Rich, and Paul.

3. On September 2, 2010, the leg extenders were fastened to one additional module with the assistance of Fred Alsop, Tod Eaton, and Gary Rabetoy. Thank you Fred and Tod. At this point four of the seven modules scheduled for extension have been completed.

4. Emile Hamm is continuing work on the ET&WNC layout plan and possible extension, definitive rendering of the latter awaiting the result of Fred Alsop's request for additional space.

5. Recommendations:

A. Complete the Rabetoy layout benchwork extensions.

B. Complete the Emile Hamm layout plan revisions.

C. Await the decision on more space.

D. When C above is known, reconnect and make operational the Rabetoy layout, noting that one lift-out and one splice section will need to be constructed for full operation to be achieved.

Respectfully submitted:
Gary Rabetoy

Cope Traveling Layout: Gary Emmert. Alsop opened discussion regarding the possible purchase of DCC throttles and command station by MRC for the layout from a private individual at a discounted price. Consensus of the coordinators was not to purchase the MRC, but rather to consider purchasing a Digitrax Zephyr System to remain consistent with our DCC operations and operating systems.

McKee G-Scale Layout: Jesse Kittle. Dan McLeod has repaired the Heisler and Jim Millhorn has repaired the Shay. Both locomotives are working well. Thank you both, gentlemen. We have old steel track to dispose of; first-come-first-served. We need some "jawed" rail joiners.

Bankus N-Scale Layout: Tod Eaton. The 2 curved turnouts that were long-backordered are in and will soon be installed. The highway bridge has been completed after materials were secured between working sessions. Layout is operating well.

Club HO Layout: John Carter/John Edwards, Lyle Montieth, Joe Roberts. Track is being laid on staging yard and is 30% completed. Wiring needs to be concentrated on the staging yard first during this new yard construction phase. Still having some electrical problems with the old yard and the roundhouse.

Submitted by
Fred Alsop,
President MEMRR
Director, George L Carter RR Museum

RAILROAD TRACKS AND HORSES ASSES — AN AMERICAN HISTORY LESSON Anglo-imprint from Roman Empire.



Railroad tracks.

The US standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number. Why was that gauge used? Because that's the way they built them in England, And English expatriates designed the US railroads. Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used. Why did 'they' use that gauge then? Because the people who built the tramways used the same jigs and tools that they had used for building wagons, which used that wheel spacing.



Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England , because that's the spacing of the wheel ruts.



So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (including England) for their legions. Those roads have been used ever since. And the ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels.



Since the chariots were made for Imperial Rome , they were all alike in the matter of wheel spacing. Therefore the United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot.

Bureaucracies live forever. So the next time you are handed a specification/procedure/process and wonder 'What horse's ass came up with this?' , you may be exactly right. Imperial Roman army chariots were made just wide enough to accommodate the rear ends of two war horses. (Two horses' asses.)



Now, the twist to the story:

When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory in Utah



The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains, and the SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track, and the railroad track, as you now know, is about as wide as two horses' behinds.



So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's ass. And you thought being a horse's ass wasn't important? Ancient horse's asses control almost everything...

In Fact, they still control almost everything. They just live in Washington D.C. Now.

Rules is Rules

The Good news: It was a normal day in Sharon Springs, Kansas, when a Union Pacific crew boarded a loaded coal train for the long trek to Salina.

The Bad news: Just a few miles into the trip, a wheel-bearing became overheated, and melted, letting a metal support drop down and grind on the rail, creating white hot molten-metal droppings spewing down to the rail.



The Good news: A very alert crew noticed smoke about halfway

back in the train, and immediately stopped the train in compliance with the Union Pacific Safety Rules.



The Bad news: The train stopped with the hot wheel over a wooden bridge, with creosote ties and trusses. The crew tried to explain to CEO 'Higher-Ups', but were instructed NOT to move the train ! They were instructed 'The Rules Book' prohibits moving the train when a part is defective !



**REMEMBER.....
RULES IS RULES !**

Don't **EVER** let common sense get in the way of a good disaster!

FROM THE ENGINEER'S SIDE OF THE CAB

We are into October and getting closer to November when we will celebrate the 3rd anniversary of the George L. Carter Railroad Museum as the home base for the MEMRR. We are planning a lot of clinics for the public during that month, which is National Model Railroad Month, and we can use all the instructor volunteers we have. Start making plans for a clinic you can do and let the officers know about it so we can start building some Saturday programs for the entire month and have time to let ETSU's Public Relations Department get the information out to their media sources. We want lots of cool how-to-do-it demonstrations that we can all learn something from.

I want to take the opportunity to once again thank everyone who came in on Monday, September 20th to operate the layouts and answer questions for the university's guests who were attending the President's Classroom. There were lots of members present all wearing their green shirts. This is the 3rd consecutive year that

we have been part of this event and we are always the first stop for the "class". I know the time with them is short and it seems they have just arrived when it is time for them to go to their next venue, but we are always highly complimented for our work in the museum and many of them come back on a Saturday and bring their family members and friends. I also want to again express my appreciation to **John Dodge, Bill Hensley, Duane Swank, Gary Rabetoy, John Newell** and **Jim Pahr** (and anyone I may have overlooked) for the time you took to secure the rooms of the museum when the new windows were being installed. My teaching schedule and other duties at the university made it impossible for me to spend much time in the museum when the workers were there and your presence took a load off everyone's mind. This is a terrific organization we have in our model railroad club and I truly appreciate the willingness you all show to volunteer to help us all out when we need you in the Carter Railroad Museum for these special events, both scheduled and unscheduled.

We have more than enough members to establish the George L. Carter Chapter NRHS and I am only waiting at this writing (1

October 2010) for my request for the papers to officially establish the chapter from National NRHS headquarters to get the chapter officially recognized. When that occurs we will have our first meeting and elect officers. If any of you still want to join as charter members there is time to do so. Just let me know. There are blank application forms located in the museum.

We have some new, very large, historic photos up in the hallway outside the railroad museum galleries. Come down and check them out. The photos were digitized and printed on a large poster printer in the Department of Biological Sciences and dry-mounted on foam board at Nelson's Art Gallery. See if you know where each was taken and what the subjects are.

Larry Burkholder, President of the Knoxville model railroad club, and President of the Smoky Mountain Division of the National Model Railroad Association, was a guest at our last MEMRR business meeting in Sept. Larry is promoting membership in the NMRA as his division makes plans to host the national NMRA convention in Gatlinburg in 2012. Some application forms and other information about the NMRA is located in our railroad museum.

David Currie and his talented video crew have been shooting footage in the Carter Railroad Museum over the past several months and have just released a promotional 1.5 minute video about us. Take a look at it using this link:

<http://elearning.etsu.edu/railroad/cartermuseumpromo.htm>

The video is pretty high definition so give it several minutes to download on your computer and then enjoy. On Thursday evening, Sept 30th, David showed us a longer edited version of their work that will be the first of 3 or 4 segments about the MEMRR and the Carter RR Museum. We will be given links to them when they are ready in the next few weeks (maybe by the time you are reading this) and he will make some available to us in the form of DVDs as well. I plan to use them to promote the club and the railroad museum and David and the University will post them on the university's facebook page where thousands of people will have access to them. This work is terrific and very professionally done and should provide lots of publicity for your work at the museum.

MEMRR members **William** and **Judy Sullivan**, of Dandridge, TN, have donated a professionally constructed, fully scened Z-Scale,

Bavarian Special layout to the Carter RR Museum. The museum, in turn, is going to loan it to The Bristol Train Station Foundation, for display at the newly revamped Bristol Railroad Station. The Bristol Train Station Foundation is purchasing locomotives and rolling stock from the Sullivan's to operate on this layout. The layout will have signage on it acknowledging that it is on loan from ETSU, the Carter Railroad Museum and the MEMRR, and we will have information about the club and the museum available with it in the Bristol Train Station. Several MEMRR members have volunteered to do any initial troubleshooting that might be necessary to try to make sure the layout is operational and in good shape for the viewing public who will visit it. The Bristol Train Station Foundation will be responsible for moving expenses and will pay for any initial work, materials, equipment, etc., involved in getting the layout running and will be responsible for keeping it operational while it is on display in the depot. The move will probably take place sometime in November. If anyone in the club would like to be involved in the initial work to get this little 5 x 15 foot layout going please let me know.

We have a busy time ahead of us with several major events between now and our December Holiday Party. The 3rd anniversary of the Carter RR Museum, our series of clinics to mark National Model Railroad Month, and ETSU's homecoming family and alumni Saturday festival. We elect club officers in November as well. Oh, yeah! There is all that model and building stuff going on on all the layouts in the museum as well. Check out the monthly coordinator's reports in *The Signal Bridge* to see what is happening in every part of the railroad museum, all aspects of which are driven by our terrific MEMRR club of modelers. There are plenty of opportunities to enjoy your hobby and build terrific model railroad exhibits at the same time. The club is almost 100 members strong and we need everyone to get involved and join us on Thursday evenings and Saturdays from 10 AM to 3 PM, or any time you can any day of the week to share the fun of creating miniature scenes and running trains through them. Come on and get on board as an **active member of the Mountain Empire Model Railroaders**. Hear the whistle blow and dream of all the destinations yet to come!

Fred Alsop,
President MEMRR
Director, George L Carter RR Museum

NEW VIDEOS ARRIVE AT THE MEMRR CLUB LIBRARY WHY NOT CHECK ONE OUT?

MEMRR has a growing collection of DVDs produced by Kalmbach Publications and the club has been a subscriber since the series' inception. There are over 50 titles so far in the series which range from how-to clinics to railfan tours of railroad hot spots.



DREAM – PLAN – BUILD Rails Across America Winter on Tennessee Pass

Winter on Tennessee Pass takes you on a journey through the snowy Colorado Rocky :

Mountains along one of North America's highest main line rail roots. Witness trackside views of hard working coal trains running through the Tennessee Pass tunnel, winding over the S-curve at Mitchell, and tackling steep mountain grades. Watch railroad employees in action during the tough winter months.

Chapters

Starting the Journey at Minturn
Heading through Eagle River Canyon and Redcliff
Multiple Train Meets at Pando
Tennessee Pass Tunnel
Approaching Tennessee Pass
Traveling through Leadville to Malta
Rolling through Kobe, Colorado
Balltown and Granite
Ending the Journey at Princeton



DREAM – PLAN – BUILD Real Rails Edition Heart of the Wisconsin Central

Join our tour along one of America's most extraordinary railroads in this *Real rails Edition*. *Heart of the Wisconsin Central* explores the challenging years the WC endured and how it became famous for its diversity in commodities and locomotives. You'll travel from Waukesha, Wisconsin to Neenah, Wisconsin, the gateway to the Fox River paper-producing region. Throughout your journey you'll see exceptional footage of the WC diesels hard at work as they

make their way across the heart of central Wisconsin in this edition of the *Dream – Plan – Build Video Series*.

Chapters:

History of the Wisconsin Central
Today's Wisconsin Central
Waukesha
Duplainville
Sussex and Slinger
Byron Hill and Fond du Lac
A Tour of the Shop Yard
Oshkosh
Neenah



DREAM – PLAN – BUILD Volume 19

Chapters:

Layout:
Operations at the Nassau Lionel Model RR Club
David Baule's S Gauge Layout and Collection
Multiple Gauges at the Toy Train Barn
Gil Freitag's Stony Creek Western Railway

Technique
Considerations When Modeling Industries
Installing Micro Slide Switches
Adding Details to Urban Streets
Tips for Blending Rural Scenery

Prototype

A Trip on the East Broad Top Railroad
The History of Barnum & Bailey Circus Trains
The Boone and Scenic Valley Railroad

HISTORY OF LIONEL O GAUGE TRAINS 1915 – PRESENT

ON DISPLAY AT THE GEORGE L. CARTER RAILROAD MUSEUM

BACKGROUND INFORMATION

In 1900 Joshua Lionel Cohen and Harry Grant formed the company on September 5, 1900. Their first business venture was to produce fuses for mines for the U.S. Navy. This contract completed, Cohen began tinkering to find something to keep the business going. The motor from a less than successful electric fan was installed in a gondola like car and ran on 2-7/8-inch gauge track. The initial Lionel catalog was issued in 1900. This was a 12-page flyer filled with medical devices and electric novelties, but no trains. The 1901 catalog was the first to offer trains. In 1902 a trolley car was added to the inventory.

In 1906 Lionel began manufacturing Standard Gauge Trains, which ran on 2-1/8-inch gauge track. Beginning in 1909 Lionel used the slogan "Standard of the World".

Lionel began producing O Gauge trains in 1915. Its first offering was a 0-4-0 electric outline locomotive (#700); three freight cars (#800 box car, #801 caboose and #802 stock car); and three passenger cars (#600 Pullman and #601 observation and #603 baggage). O Gauge track has a gauge of 1-1/4-inch between the outside rails.

Lionel trains have been produced every year except 1967. In 1942 the factory stopped producing electric trains and switched over to the production of electronic items for the military services. Lionel substituted a paper train with wood axels during WWII. In 1945 Lionel resumed production of O Gauge electric trains. Gone

were the Standard Gauge and OO Gauge trains of the Pre-War period. Lionel O Gauge trains continue to be produced today



1915 O Gauge Train

Top Shelf: #700 0-4-0 Electric locomotive (1915-16); #800 boxcar (1915-27) & #801 caboose (1915-26): On loan from MEMRR member *Jim Pahr*s

1938-42 Train

Second Shelf: #224E 2-6-2 Steam locomotive (1938-41) with #2224W Die cast Tender with whistle; #2654 Oil Tank car (1938-42); #2812X Gondola (1940-42); #2757 Caboose (1941-42); On loan from *Rev. Conrad Crow*, Jonesborough

1927 Train Set (outfit #98)

Third Shelf: #253 0-4-0 Electric locomotive (1924-36); Two #607 Pullman cars (1926-37); #608 Observation car (1926-37); In 1927 this set cost \$15 and included 8 curve and 6 straight sections of track with a battery controller and a crossing signal. On loan from *Rev. Conrad Crow*, Jonesborough

1935-41 Scale Streamliner

Fourth and Fifth Shelf:#752E with #753 & 754 cars - This was Lionel's initial entry into scale trains as it is one forty fifth actual size, and a copy of the Union Pacific M10,000. Because of its scale length it required Lionel to develop the new O-72 curves for track and switches and the introduction of T-Rail, which was produced from 1935-42. The T-Rail track did not reappear after WWII. This set cost \$19.50 in 1936. On loan from MEMRR member *Jim Pahr*s.

Post WWII

Middle Shelf: 1945 - Only one train set, #643W in O Gauge, was produced that year as Lionel shifted from war production back to toy train production. Gone were the Standard Gauge and OO Gauge lines. Two significant decisions were introduced: the operating knuckle coupler and die-cast trucks with solid steel wheels. The one new item for that year was the #2452 gondola. Everything else was remakes of pre-war items.

1946 - In 1946 Lionel greatly increased its production of locomotives, rolling stock and accessories. This year also saw the introduction of the electronic control set, as any car could be uncoupled or operated anywhere simply by pushing the correct button for the car. However, the set was not a success for Lionel as it was very expensive \$75 retail and was last listed in the 1949 catalog at a whopping price of \$199.95 with added track and accessories.

1967 - This was the only year, except for the war years of 1943-45, when electric trains were not manufactured by Lionel. Trains were available for sale that year.

1969 - Present Lionel was sold to the Fundimensions Division of General Mills. Lionel is today headquartered out of Mount Clemons, MI and the overwhelming majority of the trains are manufactured in China.



1947-49 - Locomotive
#675 Steam 2-6-2 with smoke and whistle in #2466WX tender
On loan from MEMRR member *Jim Pahr*s

1950-66 - Locomotive
#736 Steam 2-8-4 with smoke and whistle in #2046W tender:
This locomotive headed set # 2213WS, which was the initial Lionel set given to me as a boy. I still have the complete set and it

still runs. Every car in the set, except the work caboose, was an operating car. On loan from MEMRR member *Jim Pahr*s.

1954-58 - Locomotive
#646 Steam 4-6-4 with smoke and whistle in a 2046W tender
On loan from MEMRR member *Jim Pahr*s

1950-52 - Locomotive
2343 Diesel F-3 AA in Santa Fe red & silver.This has become Lionel's most popular locomotive and has been reproduced in several variations. Displayed with it are the 2500 series cars introduced in 1952. On loan from MEMRR member *Jim Pahr*s

1981 - Locomotive
#6-8100 Steam 4-8-4 Norfolk & Western J-1 (611) with matching passenger cars: This is a Fundimensions remake of the Lionel #746 locomotive from (1957-60). On loan from MEMRR member *Jim Pahr*s

Various Post-War Freight Cars

**Model Railroad Scales
(Trains come in Many Sizes)**

Most of the available scales are depicted at the bottom of the first display cabinet with a standard 40 foot box car in each scale displayed.



Z Scale
Proportion: 1:220
Approximate size: 3/4"x 1/2"
Developed by Marklin in 1970's; Mainly made by Marklin (GE) Micro-Trains (US)

N Scale
Proportion: 1:160
Approximate size: 1"x 5/8"
Best suited for apartments or limited space; Multiple manufactures

HO Scale
Proportion: 1:87
Approximate size: 2"x 1.5"
The most popular scale with the largest selection of items; HO stands for half-O (See O Scale)

S Scale**Proportion: 1:64****Approximate size: 2¾"x 2"**

Developed after WWII by American Flyer its popularity is growing

O-27**Proportion: Not to Scale****Approximate size: 3"x 2.5"**

Designed to run on 27" diameter track Lionel and Marx were major manufactures: Popular from 1920's to today

O Scale**Proportion: 1:48****Approximately: 4"x 2.5"**

The initial scale proportioned model trains; Became prominent in the 1930's; May be seen in 2-rail or 3-rail (hi-rail)

On30 (O Scale)**Proportion: 1:48****(But runs on narrow gauge track)****Approximately: 3"x 2 1/8"**

O Scale models which run on narrow gauge track. A good narrow gauge prototype example is the ET&WNC, which was located here in Johnson City. The Tweetsie was a 3' gauge railroad. Its remnant, the East Tennessee Railroad, is standard gauge.

G Scale (Large Scales)**Proportions: 1:32 (#1 Gauge) 1:29, 1:24, 1:22.5 & 1:20.3** (Model before you is: **1:29**)**Approximately 8"x 5"**

Large scale has become popular world wide for both indoor and garden railroads. Trains may be operated by electricity or live steam.

PROPORTION

Proportion is the relation of the size of a model to the actual prototype. For example a "G" scale car is listed as 1:29, or is stated as 1 to 29. It would take 29 "G" scale cars laid end-to-end to equal the length of the real car. For the width it would be 29 "G" scale cars side-by-side; and for the height 29 "G" scale cars stacked on top of each other. Or in other words 29 cars cubed, a lot of "G" scale cars just to fill the space of one actual prototype. You could substitute the proportions for any of the other scales to realize the scale of the model to the prototype.

TT Scale**Proportion: 1:120****Approximate size: 1.5"x 1"**

It is the forgotten gauge in the USA, although it was originally developed here by Hal Joyce in 1945. TT is an abbreviation of "Table-Top." It is still popular in Europe, more especially in the former Iron Curtain countries

Mountain Empire Model Railroaders General Meeting September 21, 2010 Minutes

All Aboard: President Fred Alsop called the meeting to order at approximately 7:05 with 20 members and one visitor, "Larry Burkholder" Superintendent Southeast Region of NMRA, present. Larry represents the Great Smokey Mountains NMRA division and the Knoxville Railroad Club.

Officer Reports:

Secretary's Report: Special Thanks to John Carter for maintaining minutes in my absence. Past club meeting minutes were in the August *Signal Bridge* and approved without any changes as published.

Newsletters Editor's Report: *The Signal Bridge* for August was sent via both snail mail and e-mail. If you did not receive yours, notify Ted. Ted continues to out-do himself with each new addition. If you have any stories, anecdotes, or pictures you would care to share, please see Ted.

Treasurer's Report: Treasurers report was given, income and expenditures reviewed, and approved. **Note: Dues are coming up for 2011 remember to remit your dues to Duane. Please do not let your membership expire.**

Web Masters Report: Web site is up and running fine. E-Mail addresses for those wishing to acquire a MEMR web address are available. John reports the web site has been renewed for 2-years.

Vice-President's Report (upcoming programs): John Carter reported we now have programs scheduled until Christmas.

Therefore, if you want to volunteer for a program during the upcoming year, please contact VP John Carter.

President's Report:

1. Fred noted a big "Thank You" for those members for security-sitting the Museum during the window replacement. And, to those members present during the Presidents Classroom visit. Jeremy Ross has had only good reports for us.
2. Updating our space requirements and wishes, VP Bishop has requests in the work,, be optimistic.
3. November is National Model Railroad month and we will be featuring several clinics on the Saturdays in November.
4. Concerning the Honorary Memberships we discussed last month. Guidelines are being worked up. If you have any suggestions, please contact Fred.
5. It was noted our library has 99 books and catalogs. Bob is working on the listings to make them available for checkout and research. Please go thru the library contact in doing so. Bob is also cataloging the contents of the Dream, Plan Build series of DVD's we have.
6. Gary Emmert donated 20 VHS tapes to library for member usage.

NMRA PRESENTATION:

- Larry Burkholder of the Southeast Region presented a discussion on the NMRA stating this was the 75th year of the organization and stressed the benefits of belonging to the organization. Thank You, Larry for visiting and sharing with us.

NEW BUSINESS:**Co-ordinators meeting outcome:**

- Tweetsie layout: Gary and Paul have the Extension at the correct height. Emil is working on CAD track layout.
- G-Scale: Dan has repaired the Heisler and Jim repaired the Shay.

- N-Scale: New turnouts are in and the Highway bridge work is progressing.
- HO layout: Staging yard track laying has commenced, wiring is next so yard can be tied to existing "we" at our present yard throat.
- Cope: Discussed going to DCC and staying with Digitrax.
- Kids Room: New lights have been placed on the caboose, and the G-train has reversed direction to account for track wear. This addition to our club is going over GREAT!!
- Displays: Jim Pahr has updated with a history of Lionel.
- Brochure rack: has been approved and should be installed soon.
- Sales: Hat inventory is ready as is an order for 36 hats.
- Club Shirts: List is in museum should you want to order another one.

Dream-Plan-Build: A discussion was held as to whether or not to continue purchasing these DVD's. Please advise the officers of your thoughts on this. Also, if you have borrowed one, or have one checked out, do not forget to return it in due time.

NRHS: George L. Carter Chapter, This chapter is being set up. If you want to join, signup sheets are available in museum or see Fred. This chapter will be affiliated with ETSU and independent from MEMR. OK to join both should you so desire.

Old Business:

- **Speeder rides** in Asheville, NC has been reset. See Hobie for more info.

Volunteer Recruiting for Saturday Operating Sessions:

If you have volunteered to run trains on Saturdays, Great, Thank you. If you have not, why not come on down and enjoy yourself on Saturday with the club. Volunteer to help keep trains running. It is after all how we repay ETSU for our room.

Announcements:

Yahoo Group **CRR list** will be visiting the Saturday of Oct. 23rd. Come down and help present our trains and museum.

Next Scheduled Monthly Meeting:

October 19th, 2010, Plan to attend at 7:00 o'clock.

Program for the Evening:

Fred presented the kit-bashed "Whistle Stop Diner" Wow, what a great presentation it was... Very descriptive. If you missed it, you should try and see his power point presentation. Very good and excellent work Fred

Respectfully submitted by
Don Ramey
Secretary MEMRR

**TRAIN WATCHING AT MEMRR:
AMTRAK PASSENGER
CARS – PART 5
THE HERITAGE FLEET**

From www.wikipedia.com the free encyclopedia

Heritage Fleet was a program started by Amtrak in 1977 to convert its older cars from steam heating to head end power. Head end power conversions were performed at Amtrak's heavy repair center in Beech Grove, Indiana, outside of Indianapolis. The program was completed by the mid 1980s.

Most Heritage Fleet cars have been retired from Amtrak service, but several remain, mostly baggage cars, diners, and sleepers. Others include the "Pacific Parlour" Hi-Level lounges and single-level diners. One former Great Northern Railway full-length dome is occasionally used on special trains. Most of these cars are intended to be retired by the Viewliner order placed in 2010 for delivery starting in 2012.

Aside from Wikipedia which supplied the roster of Amtrak equipment and brief fleet notes, there are several excellent website devoted to documenting the history of Amtrak in its many incarnations. One excellent site is:

<http://www.hebners.net/amtrak/>
"Amtrak Photo Archives"

established and maintained by Jim Hebner, Jim has tried to create a photo record of everything Amtrak related.

**Heritage Fleet Roster
(Not including baggage cars)**

1450-1455	Baggage Dormitory	SLC 1952	4	
1610-1617,1628-1633	Baggage Dormitory	SLC 1952	14	Some renumbered from 1400 series
1618-1627	Baggage Dormitory	Budd 1946-1950	9	
2050-2056	Slumbercoach (16 Single, 10 Double Slumbercoach)	Budd 1949	7	
2080-2097	Slumbercoach (24 Single, 8 Double Slumbercoach)	Budd 1956-1959	18	
2220-2222	Sleeper (11 Bedroom)	Budd 1952-1956	3	
2230-2235	Sleeper (11 Bedroom)	PS 1956	6	
2430-2482	Sleeper (ADA 10 Roomette, 6 Bedroom)	Budd 1948-1952	40	
2500-2524	Dormitory Lounge	Budd 1949-1950	25	Rebuilt from 2800-2900 series sleepers
2871-2997	Sleeper (10 Roomette, 6 Bedroom)	Budd 1949-1956	36	
3100-3105	Lounge	SLC	6	

Fleet numbers	Type	Builder and year built	Number built	Notes
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		1954		
3106-3127	Lounge	Budd 1948- 1952	20	
4000-4023	Coach (ADA 44 Seat)	Budd 1950- 1954	21	
4600-4626, 4646-4647	Coach (44 Seat)	SLC 1960- 1964	29	
4627-4645, 4648-4649	Coach (44 Seat)	Budd 1950- 1961	21	
4700-4742	Coach (48 Seat)	Budd 1948- 1953	43	
7000-7007	Coach (ADA 85 Seat)	Budd 1952	8	
7600-7629	Coach (85 Seat)	Budd 1952- 1953	29	Some cars rebuilt from 4700 series
8500-8532	Diner	Budd 1948- 1958	32	Some cars rebuilt from 8700 series
8550-8559	Diner Grill	Budd 1948- 1958	10	Rebuilt from lower 8500 series
8600-8603	Table Car	SLC 1960- 1964	4	Rebuilt from 4600 series
8700-8716	Cafeteria	Budd 1950- 1956	12	
8750-8752	Kitchen	Budd 1949	3	Rebuilt from 8500 series
9300-9302	Dome Lounge	Budd 1955	3	
9310-9312	Dome Lounge	PS 1952	3	
9400-9412	Dome Coach	Budd 1955	13	

Slumbercoach Sampling



Long Island City NY Slumbercoach ex NYC
from the collection of Jim Hebner



2028 Loch Tarbet part of the Broadway Limited ex BN/ NP 329 nee MP
699 Southland
Bob Schmidt



2029 Loch Katrina Long Island City NY Slumbercoach built 1959as B&O
"Restland" Then BN 330 "Loch Katrina"
from the collection of Jim Hebner



2030 Loch Lockey Long Island City NY Slumbercoach Built in 1959 as
B&O 7704 "Thrifland" sold to the NP In 1964 ex BN / Northern Pacific
332 later Amtrak number 2091
from the collection of Jim Hebner



2095 Silver Repose Nashville TN on the [Tennessee Central](#) built by Budd
1956 for the Denver Zephyr - ex BN ex CB&Q 4903 ex Amtrak 2023 -
renumbered 2095 when converted to head end power - 24 single rooms 8
doubles
Photo by Jeff Lubchansky

Norfolk Southern
Track Repair Equipment
September 2010 – Johnson City TN

