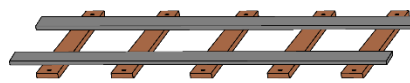


On Track



Vol. 4, Number 2/3, February/March 2025

If you are receiving this newsletter for the first time, welcome to the fold! We continue to catalog our visitor logs (some from several years past!), and your email appeared! If you wish to be taken off our list, just let us know, but we hope that you will stay with us, follow us online, and return as a visitor sometime soon. **Additional financial support will never be turned down (maintaining and operating a steam locomotive is expensive)!** Previous editions of this newsletter may be found on our [website](#). If you have comments on the newsletter, please send them to nmheritagerail@nmheritagerail.com or to your humble editor, [John Taylor](#).

FROM THE PRESIDENT:

We still need your support to help us accomplish some of the goals we have for the restoration site and the South Rail Yards. As I mentioned in last month's newsletter, we have a critical need to fund some specific projects. An inexhaustive list of projects and costs include:



- PTC hardware \$20,000!
- ~~New driver brake shoes \$10,000~~ (a big Thank You to George T. for his generous donation that will cover this expense!)
- Concrete work at the Rail Yards for public safety \$5000
- Metal shipping container (i.e., a conex) \$6000 for on-site storage
- Dumpster service \$2400/year (a big Thank You to John J. for sponsoring this for the first year!)
- ADA concrete work at the restoration site \$2000
- Quincy compressor cylinder head repairs \$2000
- Dual-stage locomotive compressor \$10,000
- New washout plugs \$10,000

NMHR held its Annual Membership Meeting on 22 February. John Cekala made a presentation for the Annual Safety Refresher; John Roberts gave an update on what's been happening in the organization for the Membership portion meeting; and Albert Leffler gave a presentation regarding his collaboration with ASU's Department of Architecture on a project to have their students create conceptual renderings of a rebuilt roundhouse. Mr. Leffler is going to condense his presentation and present it to the City of Albuquerque's Rail Yards Advisory Board at their next meeting in early April.

NMHR has two big maintenance projects going on now (and a bunch of smaller projects). We are working with Bob Kittel, of the San Bernardino Railroad Historical Society (SBRHS), to obtain a second dual-stage compressor. We will either use it for spare parts or refurbish it for a complete spare (or both!). We have also obtained quotes from Strasburg

Railway and Next Generation Rail for the cost to fabricate 14 new washout plugs so that we can replace our aged and worn ones. Regarding our progress on the PTC hardware, we continue to make headway with Wabtech to purchase all the necessary equipment.

Soon, NMHR and SBRHS will work together to restore two dormitory cars. NMHR will share the shipping costs with SBRHS to get the cars to Albuquerque. SBRHS will select the car it wants to have Amtrak certified and NMHR will perform \$30,000 of non-specialized labor (at \$30/manhour) on the SBRHS car; SBRHS will be responsible for all supplies and specialized labor. Once the SBRHS car becomes Amtrak certified or NMHR documents \$30,000 of sweat-equity work on the SBRHS car (whichever comes first), NMHR will take ownership of the second car, and we can renovate it to best support NMHR's mission. The cars will be stored either at the south railyards or at our restoration site when we are working on it.

Mr. Walter Dixon, who recently acquired a Southern Pacific economy baggage car, and which is currently located in Deming, NM, is making a generous donation of its contents to NMHR. The contents include full air brake control valves for 3 to 4 railcars; brackets for air brake valves; brake pads for disc brake on passenger cars; and a spare axle for a passenger car. NMHR personnel travelled to Deming to pick up the donation.

NMHR has a CRITICAL need for someone to take the lead as a Membership Coordinator as our current coordinator had to resign from the position. The duties of the position include:

- Tracking incoming new memberships by coordinating with the treasurer for mail-in applications, store personnel for in-person applications, and online (PayPal)
- "Welcome" new members with basic information and the New Member Handbook.
- If they desire safety training, finding out what the member is interested in and/or interested in doing.
- Encouraging new member to take one of the many needed positions detailed in the "Job Descriptions..." document.
- Coordinate with Henry Roberts to keep his MailChimp email addresses up to date so that he can send a New Member Welcome email.

And speaking of critical needs, we are still in desperate need of a Board Secretary. The duties of this position include:

- Responsible for the preparation and submission of notices of all meetings and other activities to the members;
- Responsible for keeping minutes from the Board of Directors and all membership meetings;
- Maintain a file of corporate correspondence and other records;
- Certify and keep at the principal office of the Society the original, or a copy, of the Bylaws;
- Keep a book of the minutes of all meetings;

- Be responsible for maintaining the current list of Society members;
- Provide administrative support for annual audits;
- And probably a few others.

This is one of many positions we need filled so please consider donating your talents to the organization so that we can continue to move forward.

Capital Outlay Corner

The City of Albuquerque released Notices of Opportunity to qualified bidders regarding the turntable repair work under the \$475k of 2023 Capital Outlay funds that were appropriated to us. The city is working to select an awardee and begin work. The \$200k of 2024 funding is being worked with the county and NMDOT because it involves work on the 1st St grade crossing. NMHR submitted a request for 2025 capital outlay funds and the proposal includes performing structural evaluations of the historic auto shop and the washhouse buildings.

Regarding the \$475K of capital outlay funds, Mr. Roberts was recently informed that the city must use one of their approved contractors who will, in turn, subcontract to the company selected to perform the work. Therefore, the city's contractor will impose a fee to cover the cost of administering the contract and subcontractor. This fee will be covered using the capital outlay funds, which reduces the amount of money we have to do work on the turntable

Profile of a member: Several husband-and-wife teams have been a part of our restoration effort over the years. This month we feature another of these power couples—Rick and Marsha Marsden. Both Rick and Marsha hail from the Washington, DC, metropolitan area. He graduated from Our Lady of Good Counsel High School in Wheaton, Maryland (home of the Falcons), in 1968, and attended Montgomery College and the University of Maryland, graduating in 1972 with a BS in Administration Marketing and Finance.

Rick put his business acumen to work right away, performing management and financial oversight in such diverse areas as ceramic product manufacturing, architectural specifications and designs, managing product distribution facilities, and managing local and regional sales forces. Some of these included multinational involvement in Canada and Spain.

Marsha went to Sherwood High School in Sandy Spring, Maryland (home of the Warriors), graduating in 1966. She also attended Montgomery College where she met Rick. She graduated in 1970 with a degree in general education.



Rick and Marsha married in 1975 and are rapidly approaching their 50th (that is **GOLDEN!**) wedding anniversary.

After a short stint working for Sears, Roebucks' regional offices, Marsha joined the ranks of the Civil Service, working as a program analyst for 32 years for the National Bureau of Standards, the Nuclear Regulatory Commission, and the Department of Energy's Office of Science.

Both Rick and Marsha retired from their respective jobs in 2013 and moved to the Land of Enchantment to be closer to family in Colorado, New Mexico, and Arizona. In 2016, the couple happened to be at a dinner whose featured speaker was Dr. Mike Hartshorn. You can finish that thought!

Since being "shanghaied" in 2016, Rick has been a backbone of our organization, turning wrenches, driving Lurch, serving on the Board of Directors, and acting as the NMHR liaison to our neighbors from the Bureau of Indian Affairs and the General Services Administration. He also ran the store, making it an important revenue stream for the organization. Meanwhile, Marsha also worked in the store and has labored behind the scenes, organizing records in the reefer and coordinating the lists of our important donors.

Rick notes that he has been a train fanatic since he was a small child. His great-grandfather was the general manager of the Emmitsburg Railroad Company, a short line that carried passengers, freight, and mail from Emmitsburg to Thurmont, Maryland, between 1898 and 1940. Rick still has several artifacts from the railroad. He notes that, "If it's steam and a train, I'm in!"



Emmitsburg Railroad locomotive Number 2

Most recently, Rick has been selected as the new Executive Director of the Friends of the Cumbres and Toltec Scenic Railroad, a job of critical importance and interest to all of us in New Mexico's vintage railroading community. Congratulations, Rick, but please don't forget your friends back here at the 2926!



A short historical note: Trains, like people, have distinct personalities: all railroad passenger trains had identification numbers, but many also had names that either reflected or helped create their personalities. This statement was certainly true of the most famous trains on the Santa Fe line, including the El Capitan, Chief, and, of course, Super Chief. But this statement was also very true of a small motor-car train, affectionately known as the Doodlebug.

The Doodlebug got its unusual name because, like the bug of the same name, it scampered back and forth with seemingly limitless energy. In this case, the Doodlebug ran between Belen and Albuquerque, with stops in Los Lunas and Isleta, starting as early as 1934. Hispanic residents called it *La Marranita* (the little pig). According to the late A.S. Torres, the train was often called the little pig because it was small, compact, and moved around so quickly.

The Doodlebug was different from other trains that ran through Valencia County because it was local and it was so small. With an engine and passenger car combined, it was like a bus on tracks. Two models of Doodlebugs ran through Valencia County in the three decades that the commuter train operated—M-148s and Rail Diesel Cars (RDCs). The first M-148s were gasoline-powered. They were seventy-five feet long and had a seating capacity of fifty-seven. The all-steel motor car also carried mail. A second passenger car was sometimes coupled to the lead car to accommodate additional travelers and light cargo. At the height of their operation in the late 1940s, they made four daily round trips between Albuquerque and Belen, in addition to a single round trip between Albuquerque and El Paso that passed through Los Lunas and Belen.

A train ticket on the Doodlebug was inexpensive (less than a dollar, round trip), and it saved on gas, especially during World War II when gasoline was strictly rationed. Railroad families, using free passes earned as a benefit of Santa Fe Railroad employment, were often the Doodlebug's most frequent passengers. A trip from Belen to Albuquerque took about 45 minutes. The train made as many as four round trips daily, with the first run leaving in the early morning and the last shuttle returning in the late evening. By the early 1950s, diesel engines had replaced all the gasoline-powered

Doodlebugs, and the number of round trips had been reduced as a cost-saving measure, first to two and then to a single run per day.

Color combinations varied from black and white to yellow and red. The Belen-to-Albuquerque Doodlebug had a diagonal design painted in white on a dark background.



The Doodlebug in front of the Belen Harvey House

No longer able to compete financially, the Santa Fe Railroad announced plans to shut down all passenger service in Valencia County in 1968. Despite eleventh-hour efforts by concerned civic leaders, the railroad proceeded with its announced plans in Valencia County and throughout the state. The last scheduled passenger train stopped in Belen on April 9, 1968.

A Doodlebug much like the one used on the Belen to Albuquerque route was placed in storage, awaiting restoration at the California State Railroad Museum in Sacramento, California. Finding it at the museum, many Belenites hoped it might be returned to New Mexico. In 2007 Governor Bill Richardson and California Governor Arnold Schwarzenegger helped arrange the train's transport by flatcar to Belen. It is now displayed, and often visited, at Doodlebug Park, about a block west of the Belen depot. It was cosmetically restored in 2013 by local railroad enthusiasts and the stage crew of "The Last Stand," an action movie largely made in Belen and starring former governor Schwarzenegger.



The restored M-190 Doodlebug on display in Belen

An interesting set of antonyms:

A ferroquinologist is a lover of all things railroad (from the Latin: *ferro* meaning iron, *equino* meaning horse, *-ology* meaning the study of)



A siderodromophobe is someone who is afraid of trains (from the Greek: *sidero* meaning iron, *dromo* meaning running, *phobia* meaning fear)



I think I prefer the Latin!

How Does It Work (with thanks to Steve Bradford): This month we continue with the discussion of cutoff and tractive effort:

As stated in last month's edition of "How Does It Works," all the Santa Fe's modern steam power used a feature called limited cutoff. This affects how starting tractive effort is calculated. But it needs a little further examination. What is limited cutoff? What were the benefits of limited cutoff? Why did Santa Fe use it?

Limited cutoff reduces the amount of time steam is admitted to the cylinder from the boiler and increases the amount of time that the piston is pushed by steam expansion only when starting and slow speeds. On Santa Fe 4-8-4s that is 60% of the stroke versus 80-90% of the stroke for an engine without the limited cutoff feature.

Limited cutoff was an essential part of the Lima Locomotive company's "Superpower" design concept. This concept used a large boiler with large fireboxes, often syphons in the firebox to improve boiler convection and increase direct heating surface area, a four-wheel trailing truck to support the firebox, a small two-cylinder steam booster engine geared to one of the trailing truck axles, higher boiler pressures, larger superheaters providing higher levels of superheat, use of feedwater heaters, use of cast steel cylinders and tandem side rods to reduce weight, and limited

cutoff. It was demonstrated by the first 2-8-4 in 1925 with Lima's famous demonstrator, the A-1. Limited cutoff increased the efficient use of steam in the cylinders when starting and at slower speeds, thereby increasing water and fuel economy. When it hit the rails, the A-1 toured the country and demonstrated Lima's "Superpower" concepts. It had a huge impact on all following steam locomotive designs.



Boston and Albany (New York Central) A-1a 2-8-4 #1408

The A-1 was tested on the Boston and Albany (New York Central) and the design was soon stretched into a 2-10-4 type for the Texas Pacific. Within a couple more years the 4-6-4 and the 4-8-4 wheel arrangements had been born, and "Superpower" principles drove steam locomotive design from the late twenties until the end of domestic steam locomotive production.

As it turned out, Santa Fe was the third US railroad to order the 4-8-4 type (after Northern Pacific and the Lackawanna). It was a single locomotive designed by the Santa Fe and produced by Baldwin, ATSF #3751. Today it is owned and operated by our friends in the San Bernardino Railway Historic Society. It did not use a booster engine on the trailing truck but otherwise embodied a large boiler and most of the superpower principles, including limited cutoff. The Santa Fe's first fourteen 4-8-4s were known as the 3751-class and were built with limited cutoff between 1927 and 1929.

The 3751-class was smaller (small being a "relative" term here) than the Santa Fe's "big" 4-8-4s. There were three classes: the 3765-class (11 engines in 1938), the 3776-class (10 engines in 1941), and the 2900-class (30 engines 1943-44). These were all built to the same basic design specification. All these engines had 60% limited cutoff.

So, what is so important about limited cutoff? In a nutshell, potential increased efficiency and economy of operation. In theory, limiting when the valve shuts off steam to the cylinder when

starting and running at slower speeds uses less water and fuel. This idea became popular on the Pennsylvania Railroad in 1916 starting with their I1 class 2-10-0 Decapod designed to have its cutoff restricted to 50% even when starting. Railroads operating many hundreds of miles in the desert southwest in areas with extremely poor water, or no water at all, explain a large part of Santa Fe's interest in limited cutoff and its use on all the railroad's modern locomotives, including #2926.

How you can help and other tidbits: If you are interested in donating to our cause (because operating a steam locomotive is expensive!) go to our [GoFundMe](#) and [Venmo](#) links! Be sure to check out our [Facebook](#), [YouTube](#), and [Instagram](#) pages as well! Other potential sites of interest: our friends at the [Wheels Museum](#) and activities at the [Albuquerque Railyards](#). Please see our Membership page to discover our other volunteer opportunities.

*Happy President's Day, Valentine's Day, and
St. Paddy's Day!*

