

# STAYBOLTS, STOLEN PARTS & SUPERHEATERS A STATUS REPORT ON THREE MAJOR SUBJECTS

Two years ago, refurbishment and reinstallation of the 2926 roller bearings and side rods was nearing completion. Many other tasks, some small, some larger and more difficult were moving along quite well. At that point, the volunteer restoration crew turned their attention to the locomotive's big boiler.

First was a task that seemed to be never ending. It involved the hundreds of staybolts used to stabilize the inner and outer walls of the boiler. All required close inspection, many required rebuilding, and more than a few required complete replacement. The last issue of this newsletter depicted staybolt deterioration and described the many hours of cleaning, grinding, replacement parts preparation, and welding of staybolt sleeves.

As if the time consuming staybolt task wasn't enough, in August 2012 the site was the subject of a burglary that added more work just as the staybolt welding was getting underway. Lost in the burglary were brake parts and components of the radial buffer connecting the locomotive to its water/fuel tender. Although staybolt work continued, many hours of machining and welding had to be redirected to replicate the stolen parts.

Thanks to support from the owners of AT&SF 2912 in Pueblo Colorado, BNSF Railway, Welch Welding Service, and many other supporters, both tasks were near completion at the end of the first quarter of 2014. The 2912 group loaned radial buffer parts to serve as pattern to refabricate parts for 2926. Welch Welding Service donated the services of skilled welders. BNSF provided a grant to hire additional skilled welders to continue work on the staybolt task. Other 2926 friends provided financial support to purchase materials, and of course, active members of the Society provided many hours of on-site labor. Now, with the staybolt task near completion, here is a recap of that task, a major interruption, and a look at what is coming next.

### LONG RUNNING STAYBOLT SAGA—THE CHALLENGE

Steam Locomotive No. 2926 was delivered to AT&SF Seventy years ago this spring. It operated for ten years in the American Southwest. At that time, staybolt service and repair was routine. It was considered a normal part of the locomotive's regular maintenance. There were excellent facilities such as the Albuquerque Backshops equipped with the necessary cranes, machine tools, and hand tools. The shops were staffed by skilled workers to perform that maintenance. As with all other tasks related to the restoration of 2926, to the members of the Society and their many supporters, the current situation is as different as can be imagined.

The primary difference at the start was skill level and infrastructure. The members forming the 2926 restoration crew obviously had an interest in the history and technology of the steam era,. The group represented a wide range of knowledge and skills—in just about every discipline *except steam locomotive repair and maintenance*. Another major difference was the restoration facility—*a* vacant paved lot with no equipment.

Add the fact that all the work was done outside in all kinds of weather. With the volunteer workers building infrastructure and in a constant learning curve, the challenge of staybolt repair and replacement becomes obvious.







A look inside the boiler reveals the purpose and function of staybolts. The rectangular cutout was necessary to replace a part of the outer wall that had become too thin due to corrosion.

### (Continued from Page 1) LONG Running STAYBOLT SAGA—THE SOLUTION. Planning, Learning, Manual Labor And A Variety Of New Parts

Once the jacketing removal and asbestos abatement was completed in March 2008, the restoration crew got a first look at hundreds and hundreds of staybolts. It wasn't a pretty sight. A half century of corrosion had destroyed many staybolts, and damaged most. It was obvious that staybolt work would be a labor intensive, costly, and time consuming task. Work proceeded on other tasks such as appliance removal, flue tube removal, ultrasound testing of the boiler, et al. *But the staybolts were always there, right in the face of the work crew*—as more immediate tasks drew the most attention.

Meanwhile, the upcoming staybolt challenge was discussed, parts sources were explored, and needle scaling was performed to remove rust and corrosion. Then came January 2012, and the staybolt task repair and replacement and reinstallation began. (Photos On Page 1 and below). At the end of the first quarter of 2014, everyone, especially the crew members spending their time cleaning, grinding, fitting, and welding staybolts are happy to see then end of the staybolt saga.



Repair and Replacement parts: (1) A selection of new staybolts. (2) New staybolt cap parts. Lower picture shows installation of copper gasket that was used in staybolt cap assembly. (3) Flexible staybolt assembly (4) Completed staybolts alongside original flexible and fixed staybolts.



On top, on the side, or underneath, staybolt work was slow and tedious. It was also subject to a variety of weather conditions. Access, especially to those staybolts on the bottom would have been much simpler when 2926 was operating. In the bakshops, a large crane would have lifted the boiler from the locomotive frame, facilitating access to all staybolts without climbing or working in cramped spaces.

### STOLEN PARTS—A COSTLY INTERRUPTION

A few months after the staybolt task was underway, the 2926 site was burglarized. The thieves cut a hole in the chain link fence and helped themselves to anything they could grab. The parts that were stolen had to be replicated at considerable cost and time lost on other tasks. It meant borrowing parts from AT&SF 2912 in Pueblo, CO. The parts were hauled to Albuquerque, and used to create patterns for refabrication of those that were stolen. The original buffer plate that was stolen was a sandcasting. Without casting capability, the 2926 crew, helped by local metal fabricators built the replacement with a lot of bending and welding.

The NMSLRHS Newsletter, (3rd Quarter 2013) covered the replication process, and had pictures of the parts that were reproduced. On the following page of this newsletter, are pictures of the refabricated parts being installed.

The cost of the parts alone was more than \$10,000. There was also a lot of lost time, diversion of skilled welding from staybolt work, and the expense of additional security for the site. When viewed in toto, it is easy see that the burglary had a serious negative impact on the restoration.

#### (Continued from Page 2)

Replacement of the refabricated parts resulting from the burglary, and the long running staybolt task are coming to an end in a virtual tie. With only a few staybolts left to do, the radial buffer parts are being reassembled and installed.

The drawing at the right (a view from the top) shows location of the big spring, its retainer cones, threaded shaft and other buffer parts.

Picture 1 shows the front of the buffer pocket above the two drawbar pockets. The retainer cones are at the bottom of picture, and the retaining nuts are on top of the buffer pocket.

Pictures 2 and 3 show the insertion of the retaining nuts, and tightening to compress the spring.

Although members of the 2926 crew have always welcomed visitors to the restoration site, they are now considering an exception. With all the parts that had to be replicated, wasting critical money and time, there is a different attitude toward a certain type of visitor—those that enter the site uninvited under cover of darkness. After such a costly interruption, is easy to understand that the 2926 crew members do not consider such visitors welcome.

Now let us look to the next long task. Hopefully, it will take far less time than the two year staybolt task.

### SUPERHEATER TUBES—ANOTHER BIG TASK

Like most steam locomotives in the latter part of the steam era, Santa Fe 2926 uses a superheater system to convert saturated steam to dry steam. The purpose is to increase thermal efficiency, avoid condensation, and produce more power. To do this, each of the 220 large flue tubes carrying hot gases from the firebox to the smokebox contains two one inch diameter superheater tube bundles approximately 20 feet long.



The double back feature (3) at the firebox end forms a pair. Two pairs are then connected before linking to the superheater header. That means four tubes (1) connected only at the smokebox end must be pulled at once. To clear the front flue sheet and smokebox they must be pulled directly forward their entire 20 foot length. A scaffold was positioned at the front of the locomotive, to allow a straight pull. The cumbersome, sooty assembly of four tubes required several pair of hands to be moved down from the scaffold.

The small tubes are connected to a superheater header that is mounted against the front flue tube sheet in the <u>smokebox</u>. The saturated steam is introduced into the superheater tubes via the 'cold' or intake side of the header.

Each tube then continues almost 20 feet to the rear flue tube sheet at the firebox where it doubles back, becoming a superheater tube pair. It then exits the flue tube back at the smokebox end. There, it is linked to another pair and connected via a combined fitting to the 'hot side' of the superheater header.

The trip down and back through the superheater tube immersed in hot gases flowing through the flue tube converts the saturated steam to dry steam at a much higher temperature. In the 2900 series locomotives, the temperature of the steam that is then available to the locomotive's cylinders has been raised to near 700° F.

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# **BANGING ON A 2900**

### FEATURING—BRIAN CAVE **ROLLER BEARING SPECIALIST** THE TIMKEN COMPANY



In a previous issue of this newsletter, we discussed the valuable support we received from the Timken Bearing Company and several of the Timken bearing experts. Because one of those individuals came out of retirement to provide his very specific knowledge and experience with steam locomotive bearings, we decided return to the issue. We asked him to tell us how he came to be involved in the arcane world of steam locomotive bearing technology. Here, in his own words, is his story.-Editor

# MY "STEAMY" PAST

By Brian Cave

Boyhood in post-WWII lower middle class England meant finding ways to amuse oneself which didn't cost much money. In my case the fascination with steam engines from the dawn of memory made for an ideal way of blowing the entire school summer holiday and many weekends.

All one needed was a bicycle and a 5 shilling copy of Ian Allen's 'British Railways Locomotives & Loco Shed Book' in which to record one's 'catches'. I recall father's usual warning on returning from a sunny day's lounging by the mainline, about "my head being full of bloody trains foretelling my total failure in life".

Sadly, steam began to disappear during my late teens, and other interests (sports and girls) became a distraction. But fortunately, I never got the coal dust out of my nostrils as I embarked on a Timken apprenticeship and co-op engineer-ing school venture at age 17. Emerging as a fledgling engineer 6 years later, I'd become hooked on roller bearing application analysis.

This chosen field and support from influential allies in Timken management resulted in additional specialized training... culminating in a permanent interna-tional transfer to the USA in 1966 and gainful employment for the next 43 years.

While my staff engineer and subsequent manager roles spanned all kinds of industrial and mobile equipment ... construction, mining, farm machinery, rolling mills, machine tools, aircraft, highway trucks, automobiles, somehow railroad applications eluded me. But I was able to make some useful contacts with the very knowledgeable people in what was for many years, a separate Railroad branch of the Engineering Division.

Several of these 'since passed' gentlemen worked on the post-Timken 4 Aces roller bearing conversions during the war years and which advanced in the later 1940s to include crankpins, crossheads, rods and pistons. This got my attention because it had not taken root in the U.K. So, from that time forward, a watchful eye was kept on the where-a-bouts of the now obsolete technical drawings and files especially since housekeeping policies decreed that they were not to be mi-crofilmed and were likely awaiting the dumpster at some future date. My appointment as Chief Engineer, Bearing Applications in 1985, brought rail under my wing for a short time but the records were a vital resource in permitting necessary restoration work on the N&W J-611 crosshead & crankpins.

This was done outside of normal channels and the watchful eves of those whom may not have approved allocation of resources to a project having limited business potential. But this was more or less where it all began as regards personal involvement. An invitation to the N&W Steam HQ in Irondale Alabama, gave me my first look-see at this magnificent loco stripped down and wheels dropped. The host work team was cleaning up the main driver bearings at the time and doing an exemplary job. Subsequently, I was able to back-door a complete new set of crosshead wrist pins and rollers from scratch and to assist with re-engineering the main crankpin assemblies. The "J" went on to deliver memorable excursion service until being retired several years later.

As word of my interest in Timken rail heritage got around, I became connected with others engaged in preservation such as the Fort Wayne NKP Berkshire #765 people which led to important inspection and timely reclamation work on the main driver bearings. Shortly thereafter, Mr. Ross Rowland of ACE 3000 fame was running his former C&O Greenbrier #614 on excursions in the NJ-NY area when another 'opportunity' came the way of our 'underground steam network' with the repair of the crosshead components.

With the Timken Centennial approaching and given 614's resemblance to the 4-Aces, the idea was floated of bringing it to Canton for special customer excursions as part of the company's 100 year anniversary celebration. In spite of high level interest, the project unfortunately didn't materialize mainly due to the cost. But from thereon, it seemed that whenever a steam loco flag went up, I received a



Anyone doubting Brian's passion for steam loco-



Above: Brian inspecting some big tapered bearings. Below: Standing alongside C&O Greenbrier #614.



call or e-mail. One fortunate outcome of all this was of course, the survival of the essential steam application records. They were officially purged but a safe haven for them was found.

Thus, the refurbishment and re-engineering of steam locomotive roller bearings wove itself innocuously into a most gratifying half century in the bearing business, yet broadening the opportunity for travel and meeting interesting people from all walks of life. Ever ready to mix pleasure with a little business, my peregrinations throughout North America and the world frequently led me into museums, tourist railroads and maintenance workshops, never needing enticement to crawl underneath or climb into the cab.



Two more pictures of Brian with the objects of a passion that led to his "...blowing the entire school summer holiday and many weekends." as a youngster in post WWII England. Brian's passion led to the rescue and retention of valuable knowledge that has proved to be very useful to big steam operations throughout the U.S. The help that Brian and Timken as a whole, provided to the 2926 crew is greatly appreciated.

As regards my career choice, I probably couldn't have picked one more suited or signed on with a better company. My spouse of 44 years has been tolerant and forgiving, both of her being forced to ride solo in vintage rail cars getting grimy, while I had fun up front getting filthy; and for the many high speed white-knuckle car chases, one hand on the wheel and the other holding a video camera with screaming kids in the back seat.

Shortly before he passed, my father did concede to having been mistaken with his earlier 'bloody trains' prediction which gave me some satisfaction. I have often told people that having led a sinful life, my only chance of salvation rests with the Good Lord having a sense of humor and a passion for his awesome invention, the steam engine. If so, perhaps my modest contribution to its survival might be taken into consideration?

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### <u>HOW THE MONEY ROLLS IN</u>

by Mike Hartshorne

My father makes book on the corner, My mother makes illicit gin, My sister sells kisses to sailors, My God how the money rolls in.

Pete sells some really nice T-shirts, You may need a few for your kin, Ernie will lighten your check book, My God how the money rolls in.

I remain constantly amazed and gratified at the depth and breadth of support for the AT&SF 2926 restoration. With our modest fundraising campaign's ups and downs we continue to draw the interest of people all over North America and overseas. Most of the funds we receive are in the form of small donations. A few bucks in the box by the World Head Quarters as visitors drop by; a check or PayPal for a hundred or two in response to our superheater tube sponsor campaign; a check sent in response to the Christmas card appeal; small profits on stylish merchandise at Pete's Convenience Store on site; memberships/renewals with a minimum annual contribution of \$29.26 individual or \$48.40 family. None of these make us rich but they keep us going while the Fundraising guys like Ed Kibel, Chuck Mangold, and others try to chase down bigger bucks from foundations and philanthropic organizations.

The fascinating thing over the last year or two is the recruitment of numerous supporters from places I've seldom been and from people I may never have the pleasure of meeting. Wisconsin, Nevada, Ohio, Florida, Alabama, Kentucky, Alaska, California, Ontario, Germany, Australia.....how did they decide to help us here in Albuquerque (where Bugs Bunny took a wrong turn)? Some are relatives of members, many found us online at our up to date website, and a good number connected through Facebook. We certainly don't have a slick publication in the mass mail like the 611 campaign. We don't get the attention of the Union Pacific's Big Boy 4014. We get an occasional mention in the local news and now and then in a trade publication like <u>TRAINS</u>. Until 2926 runs under her own power we won't have real excitement. One thing is for sure. All of our backers must love steam locomotives in general and the 2926 in particular! And they have confidence in our ability to deliver a fully restored 4-8-4 locomotive.

According to Bob DeGroft we may be within "just" a few hundred thousand dollars of completing the restoration but there are also costs associated with operating the restoration site. Liability insurance, annual audit\*, porta-potty, security system by the Albuquerque Armed Response Team, computer maintenance, telephone service, a yearly business license, and other cost of living bills keep arriving. We need about twelve grand a year to stay in business.

Soon enough we'll need money to fill the oil bunker and water cistern. Operating insurance, I'm told, can be tens of thousands of dollars each year. Some of that will be recovered through passenger fees for excursions. But the NMSL&RHS will continue to need wide support. Every contribution is and will be welcome as we finish the 2926 rebuild and start steam operations. Thanks always to everyone who helps us with donations large and small. We need 'em all!

### (Continued from page 3)

The 2926 restoration team first encountered the superheater tubes (and accompanying soot) in late 2007 when the smokestack and related smokebox elements were removed.

To gain access for flue tube removal and replacement it was necessary to first remove the superheater tubes residing inside the flue tubes. The only way to remove them was forward through the smokebox and out the front of the locomotive. Several wheelbarrow loads of soot were first removed from the smokebox, but removing the superheater tubes was still a very dirty job.



Left, After Removal: A number of superheater pairs are arranged in a neat stack next to the fence. Right, 12/29/2007, Last Work Session Of The Year: Six not-so-neat members of of the superheater tube removal crew. Referred to as the "Dirty Half Dozen", rumor has it that the group didn't finally get clean until well into the new year.

First quarter 2014, the superheater tube reassembly is getting underway. As with many tasks, the preparation alone has been quite a task. With no infrastructure for reassembly in place, and facing a lot of measuring, fitting, swaging, grinding, and welding, the crew had to develop that capability. Welding tables with clamps, jigs, and even shade for the welders is now in place. The reassembly and reinstallation of the superheater tubes is starting. Hopefully, it will move much more quickly than the long running staybolt task. Progress will be tracked in future newsletters, and on the NMSLRHS web site.

# **THE TRUTH ABOUT AT&8F 2926** No. 2926 is no longer a rusting relic on an Albuquerque park. It is nearing a new life as New Mexico's Flagship Steam Locomotive

A dozen years ago, when 2926 arrived at the 8th St. restoration site, few people noticed that it had left Coronado Park. Likewise, it drew little attention as the volunteer restoration crew and supporters from around the U.S. and abroad began the lengthy process of bringing the giant locomotive back to operating condition. At first, the restoration crew worked in almost quiet isolation.

As work proceeded, a brochure was printed and disseminated, this newsletter was introduced, a website was established, and there was an occasional mention in local media and rail fan publications. Visitors began to drop by to tour the site. The increased publicity generated new members, new sponsors, and more visitors.



During the past few years, the 2926 restoration site has gradually become somewhat of a tourist attraction. A recent check of an 18 month period of visitor log revealed that visitors from all U.S. states and 15 foreign countries had toured the site to view the restoration progress. The locomotive had become a tourist site well before its first steam-up.

By any standard of tourist volume, the number of 2926 visitors to date has been relatively small. That is about to change in a major way. Once 2926 is operating and ready to pull excursions, it will become a major tourist attraction.

Looking toward operational status in a couple of years, the Society is growing in a new direction. The volunteers will no longer be just a work crew addressing their 'full scale' model locomotive with tools and equipment. As the owners/ operators of one of the world's largest steam passenger locomotives, there will be an added role as one segment of the New Mexico Tourism scene.

Since 2926 will be a mobile tourist attraction, it will occupy a unique role in the state's overall tourism activity. In addition to its role as an icon of New Mexico's rail heritage, it will also provide a link between the state's other tourist venues.

To address the role as a segment of New Mexico's overall tourism industry, the Society is establishing liaison with local, state, and federal tourism and transportation organizations. Promotional materials, such as the rack card pictured at left, are being updated. The heading on the new rack card—*New Mexico True*—highlights the New Mexico Tourism Department's statewide effort to raise the state's profile as a great tourist destination.

Look for additional information related to the Society's outreach program in future issues of the newsletter and on our website. And feel free to drop by the site for a close look at a returning icon of New Mexico's rail heritage.

### **NEW MEXICO RAIL HERITAGE REDUX Restoration Of Historic Harvey House Heralds A Resurgence Of Interest In Rail Heritage**



La Castenada Hotel in Las Vegas New Mexico, built in 1898, was one of the first of Fred Harvey's chain of AT&SF based facilities that provided comfortable rest and good food for rail travelers throughout the Santa Fe Railway system.

#### **Recreating Las Vegas Rail History**

The recent purchase of the La Castenada Hotel in Las Vegas, New Mexico by Allan Affeldt was exciting news for the City of Las Vegas and the entire State of New Mexico. It was especially exciting news for the volunteers working to restore AT&SF 2926. With 2926 nearing operational status, the question of where to operate tourist excursions is paramount. Although there is an invitation to pull an excursion to the Grand Canyon in 2016, chances of running even occasional excursions on the east-west 'Transcon' are slim to none, because of heavy freight traffic.

The potential for operating 2926 passenger excursions north to south holds promise. But there are still many steps before a historic passenger excursion can roll between the Harvey House in Belen and La Castenada, in Las Vegas.

First, the restoration of 2926 must be complet-Once completed, steamed up and ready to oped. erate, there will be several months of testing, shakedown, adjustments, etc. before the proper authorities will approve passenger service.

Together, completion of the restoration, and performing the necessary shakedown runs is expected to take a couple of years. Two years might seem like a long time, but it is not a bit too soon to start planning for the day when 2926 will be in operation as the largest steam passenger locomo-tive in world. The planned restoration of La Castenada is encouragement to the 2926 volunteers to work hard to meet that two year objective.



The Belen Harvey House at the crossroads of the east-west and north-south rail lines.

The renovation of La Castenada is expected to take... TWO YEARS! What a coincidence!

It would be a world class rail heritage event to dedicate the reopening of one of the historic Harvey Houses by having a locomotive that once brought travelers to La Castenada with famous Santa Fe passenger trains such as The Chief and The Grand Canyon Special, steam up to La Castenada once again with a string of classic passenger cars loaded with tourists enjoying a trip back in time.

### The La Castenada Vision

One only has to look westward to Winslow, Arizona to see what the planned renovation of La Castenada means to Las Vegas, the State of New Mexico—and yes, to the 2926 crew. Allan Affeldt and his wife, artist Tina Mion have an amazing track record in bringing the Harvey House history to a worldwide tourist clientele. That is evidenced in their success with La Posada, the famous Winslow, Arizona Harvey House. After a \$12 million renovation about 15 years ago, such esteemed tourist guides as Conde Naste, Trip Advisor, National Geographic, and major news media travel writers place La Posada near the top of the list of places to stay. The new owners expect to give La Castenada the same careful loving treatment in its renovation.

La Castenada and La Posada are only two Fred Harvey's establishments that lined the Santa Fe Railway from Chicago to Los Angeles. Guests who have stayed at the famous hotels reads like a worldwide who's who of the early and mid twentieth century. They included Theodore Roosevelt, Clark Gable, Will Rogers, Albert Einstein, The Crown Prince of Japan, Shirley Temple, Dorothy Lamour, Bob Hope, and many other celebrities from the world of entertainment, politics, business, sports, et al. At the time those folks enjoyed the hospitality of the Harvey Houses, there was little or no air transportation. Their coast to coast travel was by passenger service powered by 2926 and the rest of the AT&SF high speed fleet The string of Harvey Houses between Chicago and Los Angeles provided world class rest stops on their cross country trips.

The resurgence of interest in rail heritage fits well into New Mexico's current tourism policy of branding our entire state as a tourist destination with many interesting sites. A made-to-order role for NMSLRHS and Santa Fe 2926 is to help bring several of those interesting sites together by providing a transportation link between them. . . . in the same transportation mode that existed more than a half century ago. (Continued discussion of this subject in future newsletters....Editor)

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Fundraising Ed Kibel
e
MAIL ADDRESS
NMSLRHS
P. O. BOX 27270
Albuquerque, NM 87125-7270 Restoration Site: 1833 8th St. NW
Tel: (505) 246-2926 Web: www.nmslrhs.org

### **ELECTION OF BoD MEMBERS**

Chairman of the NMSLRHS Election Committee, Frank Gerstle, is reminding members that the annual election for positions on the Board of Directors is nearing.

BoD members serve terms of three years. The terms are staggered so that all members are not up for election in the same year.

This year, there are three members whose terms are expiring. They are Mike Hartshorne, Ernie Robart, and Don McCornack (serving out the balance of the term of Andy Rutkiewic, who passed away last year.)

The Society's By-Laws state that nominations for the three postions must be received two months prior to the Annual Meeting on July 12, thus the deadline is May 12 this year.

Petitions for nomination to stand for a BoD position must be signed by two members in good standing, and include a narrative statement explaining why the petitioner wants to become a BoD member.

BoD eligibility requires the member to have worked on the project for at least 500 hours. This requirement may be waived by a 2/3 vote of the current BoD.

If the number nominees equals the number of open positions, an election is unnecessary.

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### SUPPORT NEW MEXICO'S FLAGSHIP STEAM LOCOMOTIVE

During the past fifteen years, our work to restore AT&SF 2926 to operating condition has received wide support. We have received support from individuals, businesses, and other organizations throughout New Mexico, the U.S. and several other countries.

We always acknowledge the support with a letter of thanks. Unless a donor wishes to remain anonymous, we recognize that support in a web site list, and often include mention of supporters in the newsletter articles.

With this issue, we are beginning a regular newsletter feature highlighting a new supporter from the business community. First is Starline Printing Company LLLP in Albuquerque.

Starline produced the new **New Mexico** *true* rack card pictured in this issue. Starline joined the 2926 support team by producing the attractive card at deeply discounted cost.

Thanks, Starline for helping spread the word about a New Mexico rail heritage icon that will soon return to action.

### **CROSSHEAD UPDATE** Thanks To Our Good Friends In Arizona, The Fully Refurbished 2926 Crossheads Will Return Soon

The crossheads provide the link between the main drive rods and the piston rods. When the crossheads are reinstalled, the main rods and the Walschert gear can also be installed. That is a major step in the restoration.



The photo above, from a previous newsletter depicts the critical role of the locomotive's crossheads. The crosshead shoes have a Babbitt surface that moves fore and aft on the crosshead guide.

When removed from 2926, the crossheads were in need of professional attention. They were warped, and the crosshead shoes needed Babbitt service. NMSLRHS was not equipped for such maintenance and repair. That is when the crew at Grand Canyon Railway stepped up to help. The crossheads were hauled to the GCRY. The GCRY machinists then contacted Horizon Metals in Tempe for help with the Babbitt issue.

Finished a few weeks ago, the return of the crossheads to Albuquerque has encountered some delay. Illness of one of the GCRY machinists caused a first delay, and then the reconstruction of restoration site siding caused a further delay. While the siding track work is underway, members of the restoration crew will journey to Williams to haul the crossheads back for reinstallation.

### TRACK REPAIR AT THE SITE

When 2926 was rolled into the restoration site in May of 2002, it was obvious that repair of the siding would someday be necessary. A part of the siding was built in 1937, and the 'new' portion a decade or so later. Rotted crossties and related sinking of the rails as they bore the weight of 2926 revealed a need for replacement before the locomotive could be moved out to the main rail spur.

As mentioned in the last newsletter, planning began some time ago on repair and replacement of the siding, and ultimate placement of a cover to protect the locomotive. A grant was received from an anonymous donor to begin the process. A bid went out to local contractors for track repair and replacement.

Klinger Constructors, LLC, submitted the winning bid, and work on the track will done during May. The site will not be open for work or visitors on Wednesdays until the track work is complete.



*Track Repair, Looking West From 8th St:* Siding repair will limit restoration work and visitor access until about the end of the month of May. The locomotive and tender were moved west toward 12th St, next to the GSA warehouse.