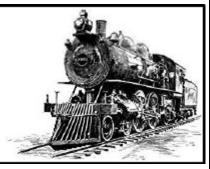


# Maricopa Live Steamers STACK TALK

#### **AUGUST 2019**

The official newsletter of the Adobe Mountain Railroad in Phoenix, Arizona. Operated by the Maricopa Live Steamers Railroad Heritage Preservation Society.





President's Page

Wow, what happened to the DRY HEAT? It's 105° and the dew point is 71°. This is just like the Midwest weather. Oh, well, it might be a good thing because, if it wasn't so hot, this place would be like Los Angeles with 36 million people. One thing is, this heat tells me where I need to distress the rails to keep the kinks out of the track. As of August 1st, I have 7 heat kinks to repair, but I have finished East Werner and it is open. **THANK YOU**, Terry, Daniel, Scott and Frank. Just let those little termites bite into that 3500 psi concrete now. Bet it will dull their teeth. Bob Douglas has finished the rail and ties within the end of the Bobberg loop and I have filled in, tamped, leveled and watered it, and Saturday we will put the last ballast on it. Finally, as soon as I change the Balloon switch, it will be open. Should be done by Wednesday, August 8th. This will leave Far Flung as the only branch still closed. We have quite a large rehab project scheduled to start, so as to be done by the Fall Meet. Joe Fego has started making the panels for the outbound Arntchoo rehab project starting at where West Werner crosses. There will be sixty-six 20-foot panels to replace (1,320 feet of track – a 1/4 mile).



Vice President's Page

Once done, it should make it a lot smoother to go out to Pardee point, where I hope we can get started replacing the yard from the floods.

Ray and Charlotte Hughes finished the westbound main at Martins Ferry and were working on the spur tracks when they had some medical problems. We wish you well, and please don't come back too soon as to hamper your full recovery. Our thoughts and prayers are with you Ray. Do what the nurses tell you.

This just brings up the other subject of the heat and humidity we are experiencing here. Remember to bring plenty of water with you if you are going to be out working in the heat, not only here at the club, but elsewhere because we can not afford to lose more of our workers to heat related illnesses.

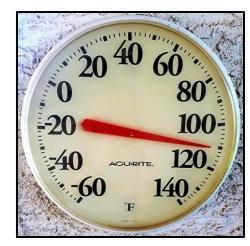
I have noticed a few people out cleaning up around their containers, and it looks really good. Every little bit helps, so if you feel froggy, grab a rake and start clearing next to the track for about 3 feet on each side. I was surprised how easy the weeds come up, and there was bare dirt, which looks different. **THANK YOU**. Every little bit helps.

We have been clearing next to the track where we have been doing welding or grinding, and that is so important to avoid starting a fire in these thick weeds that burn so easily. Remember, NO SMOKING out along the track!

This is NOT a club rule — IT IS A COUNTY PARKS RULE — NO SMOKING except in designated areas. **THANK YOU**.

This was started by the County Parks department and will be in effect until we get the all clear from the Parks Dept.

I guess by now most of you have heard of the passing of Bill Unglaube. The club was blessed with all of the railroad stuff donated by his brother Joe. Pete, Perry and Mike went over there and helped him clear out the place. **THANK YOU** guys for helping him out. His brother went back to Wisconsin, and did not plan any services here. Bill was one of the founding members from Scottsdale, and came over here in the split so that he could build and be part of the new and bigger MLS. He helped me out with machine work to keep my work train rolling, and did some things for the club when all other resources were busy. A few of the members and myself have spent some Saturday evening dinners with Bill at the Cracker Barrel, and he will be missed. **Joe** 



Nothing but admiration for the track crews and maintenance crews who are working in this heat.

- Mick Janzen

I hope you will attend the Ice Cream Social on the second Saturday in August. There might be a real break in the heat by then and get down into the low 100s.

**Further discussion:** Donna Hohm, Jerry & Sandy Grundy, Mike Russell and I are the ones showing up at the monthly Lights Committee meeting. Donna heard members mention we would get better attendance if we had the meeting after the General Meeting at 1pm. We have to reiterate that the income allows us to keep the dues low, and without the large donations generated, the dues WILL have to go up. Pete is inviting the Boy Scouts to help set up lights, but we will have to plan on a day when we will have all of the decorations put out and ready before scheduling the kids. – **Hank Gallo** 

**Ed.** – This isn't a problem unique to MLS, as shown on the following 2 pages. I submit that it won't be the BoD (or the members who have consistently come out to work the Holiday Lights program) that will make the decision to cancel the Holiday Lights, but the inaction of the members who choose not to help and won't do a "fair share for the good of the club" that will cause the decision to be made by default. To those who do give their best,

THANK YOU!

**Ken Giordano** Stack Talk Editor

Committee Chairman

**John Bergt** 

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## **Ghost Train Cancelled by Los Angeles Live Steamers Board of Directors**

Posted on September 17, 2016.

2016 brings a lot of change to Halloween in Southern California. Sadly, not all of that change is *good* news. Case in point, Ghost Train, an incredible family event that has thrilled guests of all ages for the past 15 years in Griffith Park will not be returning. In an executive decision made by the Los Angeles Live Steamers board of directors this summer, it was decided that the beloved Halloween event would not return this year.

The word of Ghost Train's sudden demise came in the form of public announcements from LA Live Steamers Railroad Museum on their official website as well as <a href="Facebook page">Facebook page</a>— which fans immediately spoke up against. As a result, those early posts (and a slew of public outcry) were deleted, and a much more abbreviated and under-the-radar announcement is all that's left on the website, offering no explanation regarding the situation or decision.

Shortly after it was announced that the Board had done away with Ghost Train, Theme Park Adventure was contacted by Jay Carsman, who appears to be an active member of LALS.

Mr. Carsman was very concerned that people would read about Ghost Train on TPA and be confused, thinking it would return this year; he asked us to remove all Ghost Train content from our site — which we declined, of course. Since Jay reached out to us about the matter, I asked him why the club had opted to do away with its most popular event of the year; one that brings a lot of income to Los Angeles Live Steamers and keeps the trains operating year-round for people to enjoy. Mr. Carsman was very kind to respond with a detailed explanation of the organization's decision, which everyone should be privy to.





Mr. Carsman said, "The LA Live Steamers Ghost Train's popularity finally outgrew our volunteer club's ability to manage it. Of course, there were other issues too. For 2015 [sic], we really did not plan to have a Ghost Train at all because of the water pipeline project underway on Zoo Drive. The pipe was huge and due to the tunnel boring and the collapse of part of the old pipe, a fairly long stretch of our railroad began to sink in the ground. Just a few weeks before Halloween 2015 [sic], the city's contractor for the pipe project shored up

the mess and injected cement into the ground to stop the sinking. We went ahead and did the Ghost Train but everything was very rushed and stressful. We managed to do it, but the small group of volunteers who really made it happen were exhausted."

(continued next page)

#### **GHOST TRAIN** (cont'd)

Mr. Carsman continued, "Compounding the problem for future Halloween Ghost Trains were some financial issues, the city advising that our Ghost Train had become a major safety issue for the park due to the crowds, traffic on Zoo Drive, and parking issues. Last, they said absolutely no more flames, torches, and exposed hazardous electrical wiring. Then there was the continuing problem that the scale-model railroad is just not designed for such concentrated heavy use. The trains are models, not amusement park machines and the track is a very small scaleddown version of real train track. Carrying ten or fifteen thousand people on the little railroad during a 10-day period is just brutal for such small machines.

"I guess a decent summary would be that it was great fun for many years, but it became too popular and complex for us to continue. Maybe someone might try convincing the Travel Town train concession to do a Halloween event. They run the train at Travel Town and at the park entrance near Los Feliz Blvd. Their trains are much larger than our models and were designed to carry heavy loads.

"As you know, I'm not a spokesperson for the club and I'm not a member of the board of directors. However, I think I've given you a pretty accurate description of what happened." We thank Jay for being so open with us and appreciate the look into what has taken place within the LA Live Steamers organization.



This is likely more information than we'd have received if we had requested an "official" statement from the group, so we appreciate Mr. Carsman's willingness to help us understand this situation and pass it on to our readers, and the thousands of Halloween fans affected by this decision.

As residents of Los Angeles with jobs in Burbank, we often pass through Griffith Park – along Zoo Drive past Travel Town, LA Live Steamers, the Zoo, and Autry Museum. There rarely is a crowd at LALS, except for Halloween, when people come out in droves to appreciate and love what the club has done.



From an outsider's point of view, it's pretty mind-boggling that a non-profit organization that lives or dies by donations would kill off the single-largest money-maker they host each year. Theme Park Adventure has covered a lot of non-profit attractions and events over the years; not once have we ever seen one turn its back on a financial windfall. That being said, it doesn't change the fact that Ghost Train has been shut down by its board of directors, and the entire Southern California community has suffered a tremendous loss because of it. We personally know people who come from great distances – much further than the Greater Los Angeles area – who look forward to this event year after year. In the past 15 years, families have made Ghost Train a tradition that is cherished and enjoyed by thousands and thousands of people. Of all the Halloween events Theme Park Adventure covers, Ghost Train is one of our favorites, and we looked forward to it each season; losing it is heartbreaking to us.

Post shared by Geronimo Vidales – I also fly model airplanes, and I think this "type of situation" can also happen at the train park, since I have seen many people working or riding alone.

Stan Alexander shared a post to the group: National Association of Scale Aeromodelers. Everyone take a look at this please!

Bill Sorrell to Smoky Mountain Aero Club - July 6 at 10:00 AM

We had an incident at the field yesterday that almost cost one of our members his life. Thank the good Lord that Alan went out yesterday afternoon and noticed Bob's gear and car were there, but Bob was not.

Bob was flying around 8 am and lost his plane off to the right side of the field. No one else was out, so he went into the high grass by himself looking for it. He was overcome by the heat and passed out sometime around 9 am. By the time it was discovered he was missing and 911 was called, he had been out there over 9 hours in 92 degree heat.

Sevier County Emergency response agencies including the Sheriff's department, Pigeon Forge FD, Sevier county FD, and Sevier County Rescue Squad (and others I'm sure I am missing) began an extensive search and he was located close to midnight. He is in the ICU at LeConte, but should recover ok. This could have ended tragically. Thank God they found him.

So with all this, I am requiring 2 new things, lessons learned if you will,

- 1. ALL MEMBERS need to provide an emergency contact name and number to Randy to add to the club roster.
- 2. If you are at the field flying by yourself, do not leave the short cut grass area without notifying someone first. Make sure they know what you are doing and the area you will be in. I would highly recommend not going off field without someone with you for safety purposes.

#### **SAFETY FIRST** – Use the Buddy System

Ed. – The Boy Scouts teach the Buddy System to decrease risk during times when the Adult Leaders are not able to keep a close watch on all of the kids, such as when they are swimming, boating, hiking and camping. The system is based on the principle that nobody ever leaves the safety of the group alone, without their "buddy," just in case of danger, accident or getting lost. Not even to pee in private. The buddy must be within sight or hearing at all times.

Hopefully the personalities of the two/three "buddies" will complement each other, such that any critical decisions that need to be made will be made rationally, with the benefit of shared

knowledge and with the least amount of emotional exaggeration. And, if one of the buddies is incapacitated, then there is at least one other buddy to neutralize the danger, render first aid and go for help.

Since kids tend to forget and not pay attention, the Adult Leaders must continually reinforce the "buddy behavior" through frequent and unexpected "Buddy Checks." When the kids hear a whistle blown and "Buddy Check" yelled out, they have 30 seconds to get to their assigned buddy and stand together where the adults can see them. Anyone who is without their buddy obviously stands out, and a search is begun to find the missing buddy. No matter how innocent the circumstances, it is always taken very seriously, to avoid escalating into an emergency.

#### Saturday Public Runs - currently being debated within the club - to be discussed on 8/10/2019

#### **Background information:**

From the Minutes of the General Membership Meeting 5/11/2019

A proposal was made to change the Sunday run hours **FROM** Noon to 4:30 pm **TO** 11 AM to 3 pm. After discussion, it was voted and approved with 3 dissenting votes. Changes now need to be made on the website, the entry sign and on the advertising cards.

This was prompted by the steep reduction in riders during the later hours of Sunday afternoons. The run hours is one issue, but the bigger Issue is that ridership is down on Sundays. The warm weather was mentioned, but ridership has been going downhill for months and months. In December, it is due to the Holiday Lights program. Our attendance shows that our guests are bored, with Paypal showing 95% being first time donations. During this past year, guests were commenting that the wooden train (on which the kids would climb) was enjoyed and is now being missed. Beanbag toss games, etc. were discussed to replace the wooden train. Getting 500 guests for 2 hours on a summer night, with one week notice (Trains and Fireworks), is pretty telling of what our guests want. The volunteers for Memorial Day (and 4th of July) did it as a one-time event, not weekly, which is becoming too much of a burden for many of the regular Sunday volunteers. With 6 to 8 unpaid volunteers standing around at the park on Sundays for 5 hours and going home bored is telling us that what we have been doing for 50 years doesn't work anymore. — **Various contributors** 

#### From the Minutes of the General Membership Meeting 6/8/2019

A proposal was made to change public runs from Sunday to Saturday, 11 AM to 3 pm. A long discussion ensued. A motion was made to change Public Runs from Sunday to Saturday. It was voted and passed with 12 yes votes and 9 no votes. Changes will have to be made to the website, Facebook and the sign out front.

#### Rebuttal submitted by Joe Schnyder (approved by Pete Pennarts):

The vote was 12 to 9 to move the public runs from Sunday to Saturday. I understand the people who want to see more ridership than what has been showing up on some Sundays. Maybe Saturday is the answer, but quite a few volunteers do not want to give up on Sundays. I understand the ones who want to do Saturdays, so they have Sundays with the family or for work schedules.

On the other side of this conversation are the people who are here in the Winter and did not know about this vote, and there are a few of these members who come out to the park on the weekends because the park and club members are the only family they have left, and if you do not understand this, I can not teach you about losing a spouse and what it does to you. If a group of people get together and open up to do Sunday runs, it would be just like the group who opened on Memorial Day for the

fireworks. Besides, Sunday runs have been done for the last 50 years here at MLS. You can participate if you wish, but if you don't want to, stay home. If you don't want to do Sunday runs, it is simple, do not show up.

Many of the old members came here from Scottsdale because the city required us to do Saturday AND Sunday runs. We are not Scottsdale and will not ask volunteers to do so. Now, this is an opinion, and I can see that sword dividing this club and striking it down. I believe we need to revisit this issue and give all members a chance to respond and vote on an issue this large that affects so many people. Maybe it is time for a mail-in vote, so that all the snow bird volunteers can be heard, too, since all winter they are there to help. Remember this is just my opinion and come November, you can vote me and Pete out.

#### Saturday Public Runs (cont'd)

#### **Polling the Riders:**

Based on the results of the vote, birthday parties would have to be moved to Saturdays, with Sunday being pretty much off limits. Dennis Beatty did some research and only found two other clubs that do birthday parties, and the donation is \$200 for 2 hours! We have to listen to the public, while thinking of our volunteers. – **Various contributors** 

After the vote on June 8, a poll was taken on Facebook to determine what the Public would prefer.

"After 50 years, the club is discussing the option of moving our public train ride days to Saturdays.

Beginning October 5th, 2019, the schedule would be changed to Saturdays from 11 AM until 3 pm for your train rides. I don't think we can run both Saturday and Sunday every week. If it is one or the other, what would be your choice?"

This poll has ended. 166 Votes Saturday – 66% Sunday – 34%

Tracy M. – "We would attend either way! Do what works best for your volunteers."

Stacie K. – "We truly appreciate you either way!"

#### **Further Discussions about Saturday:**

Several members suggested that Public Rides on Saturdays would allow us to tap into the group of members that do railroad stuff on Saturdays and stay home on Sundays. It would be easier to recruit members who are already at the Park working, when extra help is needed with Public Rides. Some volunteers with families can only help at the Park once a week. Members who voted for Saturdays said they wouldn't mind arriving in the morning to help around the Park with maintenance projects, and then help with the Public Rides during the afternoon. One trip satisfies both needs. Also, it would eliminate daytime rides during December, when Sunday ridership goes down during the Holiday Lights program, since the guests don't want/need to visit twice. Board and Membership Meetings will have to be moved from the Saturday, 11 AM – 3 pm timeframe.

We discussed running both Saturdays and Sundays, but we thought that two days a week is asking too much. A few members suggested alternating between Saturday and Sunday each week, but that's asking too much of members and guests to remember which week is which day. In addition, it seems we're just open too much. Other clubs limit their days to 1 or 2 per month during their season, which is only the nice summer months (for them). We are open 7 months, with 4 or 5 Sundays per month. So guests don't worry about planning their visits, since we're almost always here. But if the days were limited, their visits would be planned out and consolidated, once everyone gets used to the new schedule. — **Various contributors** 

#### MARICOPA LIVE STEAMERS

#### **Business Page**

#### Saturday Public Runs (cont'd)

#### **Further Discussions about Saturday AND Sunday:**

Other clubs in the US that were researched are only open once or twice per month. If we are open too much, then guests can visit anytime, or not. There is lack of commitment. If opening times are limited, it is a more special experience. Overall, we should have greater rider counts and more income with less days open, less staffing and less volunteer burnout. Further discussions generated the idea that we should open for Public Rides ONE weekend per month (first or fourth) on both Saturday and Sunday, cutting our workload from 4 or 5 Sundays per month to just 2 days per month. It would add value, since guests would have to make an effort to visit, since we're open on limited days. If we could staff it, maybe this schedule could be tried for a 7 month season and see whether Saturday or Sunday has better attendance. Not only would both the Saturday-preference and Sunday-preference GUESTS be accommodated, but both flavors of VOLUNTEERS would also be accommodated.

All totaled, that would be 7 months times one 2-day weekend per month, plus 3 Summertime "Trains and Fireworks" events, plus 5 or 6 weeks times 2 "Holiday Lights" nights equal a maximum of 30 Public Runs events per year. Very manageable! Several of the current Public Runs crews thought this was a better idea. We would have to start advertising it now to allow for this new run season schedule to "take hold." Perhaps Birthday Parties will need further consideration, since one weekend per month might be insufficient. — Various contributors

#### **Further Discussions about Voting:**

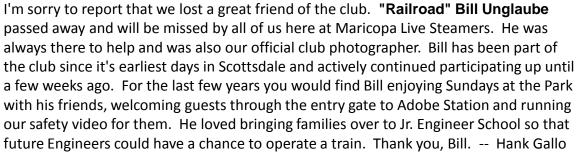
Maybe only the active Public Runs crews should vote, so that the result isn't skewed by members who don't even participate in the Public Runs. However, since we are always requesting additional help for Public Runs from the general membership, ultimately a vote that doesn't reflect their preferences may prevent them from ever being able to volunteer due to schedule conflicts. Maybe a club-wide, mail-in questionnaire should be initiated to solicit the conditions under which each member would consider volunteering for crewing Public Runs or working on a maintenance project team (Sat. vs Sun., morning vs afternoon, length of work shifts, total work hours per month, etc.) so that the club "environment" can be made to be more volunteer-friendly.

In regard to the Public Run vote, it is a done deal! The members made a motion, and the majority voted to pass it. Therefore, we're a Saturday Public Run club from now on! Whether it was hasty or well calculated . . . it passed. Why is it still being debated? Likewise, the membership may make ANY motion and cause a vote, with a majority rule. That includes the membership making a motion to "vacate and replace" a prior motion and vote, causing another vote, if the majority rule feels that an error was made and should be fixed. "Democracy is King! Or should we vote in a Monarchy?" (Please forgive the double oxymoron.) — Various contributors

**Ed.** – I hope I have included in these pages a fair representation of everyone's views, for a better understanding of the issues, so that maybe someone will see an alternative or compromise that others have missed, and everyone can make an informed decision if another vote is taken. This is my ultimate duty as the Club's Chief Communications Officer, and why I spent an extra 4 days gathering the information and trying to get it all put down on paper correctly and intelligently. I hope it helps. Good Luck! – **Ken** 





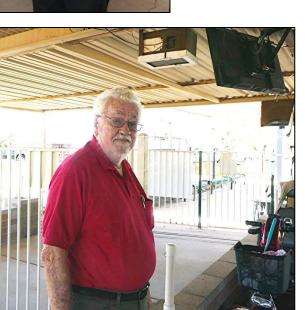


So sorry to hear about Bill. I knew him before he was a member of MLS. He just missed his upcoming birthday on July 14, 1936 - Babe Netz

Rest in peace. Prayers for the family. -- Edie Arntz

My thanks to all of our guests who have posted messages of sympathy on the website. I'm so happy to hear that Bill touched their lives in such a positive way as he did mine, my family's and our club members'.

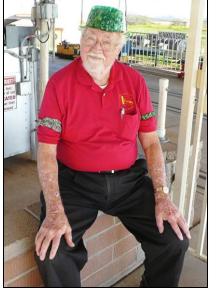
-- Hank Gallo

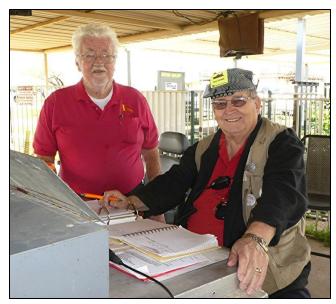






#### Railroad Bill





#### **Bill Unglaube** (cont'd)

#### Story and photos by Tom Harrington

Of course my favorite tale about Bill is the infamous trip in June of 2018 to haul my UP F units from PHX to their new home in Muskogee, OK. Bill graciously offered to haul them by himself without any prompting, since he was going to be heading to northern Illinois to attend a wedding. It was a super offer. I countered by saying that I would fly to PHX to help him load and then would ride back with him to Muskogee, if he wanted. He said that would be great. The rest is history. As shown in the pictures, the locos and both Bill and I arrived safely and unscathed to unload the cargo. I will always remember his kindness and our enjoyment in doing it. It was a fun time and makes for a great memory. Rest In Peace, Bill.

#### Steps in transfering from truck to track

1





3



4



5



6



7



8



9



10



#### Page 11

Bill Unglaube (cont'd)

On July 9th, Pete Pennarts was notified that 46-year member (nearly founding-member) **Bill Unglaube** had passed away. Bill's family is from Wisconsin, so a Phoenix memorial service has not been planned. But they have made several generous donations to the MLS of Bill's truck, railroad equipment and lot's of cool shop machinery and tools.

I was able to do a high-level search for Bill's name within my Stack Talk Library and came up with the following partial history of his first 25 years with the MLS. During his most recent years of service, he has been working as Gatekeeper during the Sunday Public Runs. I'm sure many of us have very fond memories of Railroad Bill, a dear friend. He will be missed. — Ken Giordano

Bill joined MLS sometime in 1972-1973.

1975 -- Bill headed up the MLS's first Auction.

1976 -- Bill headed up another Railroad Auction.

1979 -- Secretary

1980 -- Bill headed up the AZ Hobby & Craft Show.

1980 -- President and Stack Talk Co-Editor

1981 -- President and Stack Talk Co-Editor

1982 -- Director at Large and Stack Talk Co-Editor

1983 -- Director at Large

1984 -- Director at Large

1985 -- Director at Large

1992 -- Vice President

1993 -- President

1994 -- President

1995 -- Director at Large and Stack Talk Co-Editor

1996 -- Secretary



#### From the Editor's Desk

- 1. One of the benefits of using the Google Cloud to send the Stack Talk each month is that anyone with the LINK has access to the newsletter. In plain English, YOU can forward a copy of YOUR email LINK to anyone else and they will also have instantaneous access to a copy of that one Stack Talk from the Cloud. And THEY can then forward it to other people, too. It is not necessary to ask me to send a copy to anyone for you.
- 2. From now on, the official publication date of the Stack Talk will be the 5th day of the month. I have been told to set a deadline for newsletter article and photo submissions of the 15th of the month, to avoid the all-nighters during the fourth week to finish by the 1st. But I refuse to do that. Each newsletter is supposed to be a report of the previous <u>complete</u> month's issues and events. Since it gets difficult during the fourth week to finish by the 1st, especially when there's a Meet or Public Rides on the last days of the month, I'm officially giving myself until the 5th to publish. Thank you to all of my readers for your patience and understanding.



This is the short video that our visitors watch before boarding a Public train. It was recorded at Mad Monster Party Arizona on June 30, 2019, and it's narrated by Kane Hodder, AKA Jason from the "Friday the 13th" movie series.

CLICK: https://www.facebook.com/TrainRides/videos/707063703069473/

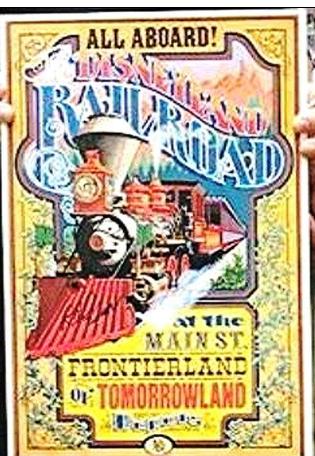
## MEMBER CONTRIBUTIONS

#### Story by Hank Gallo Photos by Dave Pulver

Jr. Engineer Trainer Ethan and his dad visited LALS (Los Angeles Live Steamers) today. Disney Imagineer Legend Bob Gurr was there and signed a Disneyland Railroad poster and posed for a photo with Ethan. Awesome!!















# TRACKING TRACKSIDE PROGRESS 2019





#### Story and Photos by Joe Schnyder

After the last 60 feet of Werner concrete ties are ballasted, tamped and watered, East Werner will be ready for trains again. Many **THANK YOU**s to the Macks – Scott, Daniel and Hanna for their help, and **THANK YOU** to Terry Liesegang for putting in 1000 ties while I was gone, so that when I got back, I could get started leveling and tamping. This should be done by the time the Membership meeting is held in August.

#### Story and Photo by Perry McCully

The Boy Scouts gave us permission to hang this sign on the saw mill in honor of Bob Alkire. Bob is doing well in Missouri, where he is living with his daughter.





# STEAM LOCOMOTIVES BOILERS

**STAY BOLTS** 

by Dave Griner

Well, we're almost two-thirds of the way through the summer, and really looking forward to some relief from the seasonal heat. That being said, we're going to take a look at stay bolts.

As we all know, when we inflate a balloon, it wants to assume a spherical shape, no flat surfaces. A boiler is much the same in that it wants to make flat plates become round, and those in a boiler not properly supported begin to bulge. In order to prevent this, we use what is commonly referred to as a stay bolt or "stay".

The primary function is to provide support to a flat surface, thus preventing the plate from distortion. Shown here is a common stay bolt as screwed through both the wrapper and firebox plates. If we imagine pressure being applied between the plates, it becomes apparent that the load from one plate is transferred to the other plate, thus supporting each other.

To fully appreciate the event at work here, we need to understand exactly WHY it can do its job. This can be easily shown by the use of **vectors**. Remember those from high school? Well, here's a simple one. This is not plotted on an x/y graph, since the efforts applied are only on the x axis. So, N being 100 lbs., we find 500 lbs. being applied in one direction and 500 lbs. applied in the exactly opposite direction, with the end result being no movement in any direction. Hence the plates stay where we first put them. The sum of the applied loads is zero.

There are a number of methods of providing holding power through staying. Many of them are illustrated on the following page:

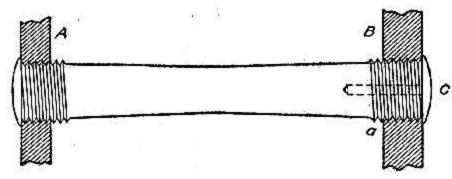
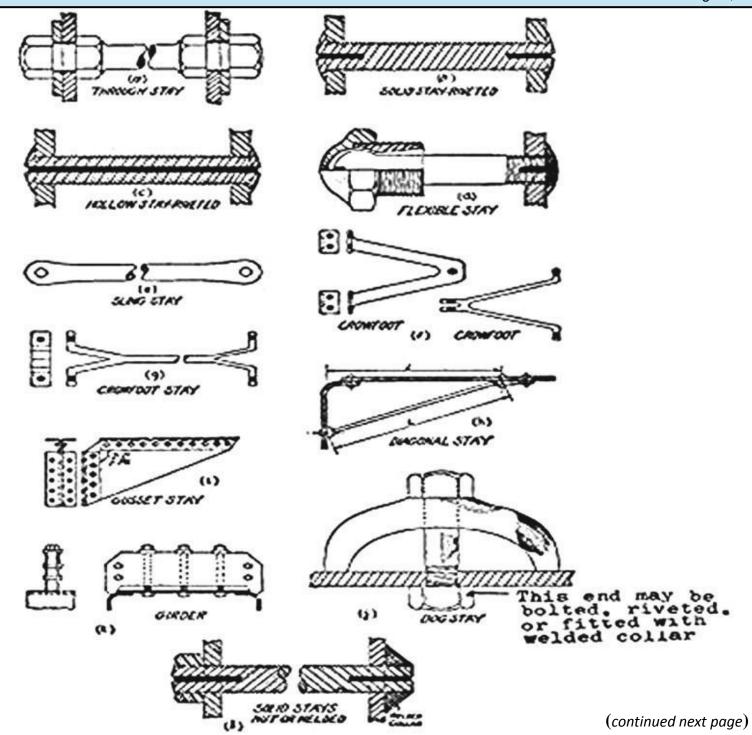


Fig. 40. Screw Stay-Bolt.



Image Source: 2005 Science Standards Support Document

STAY BOLTS (cont'd)



#### **STAY BOLTS** (cont'd)

So now the questions begin to arise, how many and what size should we use?

#### From the ASME Code, Section I (Power Boilers), Part PG

#### **PG-49 DIMENSIONS OF STAYBOLTS**

**PG-49.1** The required area of a stay bolt at its minimum cross section shall be obtained by dividing the load on the stay bolt, computed in accordance with PFT-26, by the allowable stress value in accordance with Section II, Part D, Subpart 1, Table 1A.

When developing the size of bolt, the allowable stress value is 7,500 lbs. per square inch (psi), as specified in Part PL (Boilers for Steam Locomotives), instead of that found in Section II. This value has a very old history evolving from the use of wrought iron material for bolts. The typical tensile strength of wrought iron is 45,000 psi, that number, divided by 6 (a factor of safety) is how the value was determined. After extensive investigation, research and discussion, it was decided to continue using this value. The primary reason being, that locomotive fireboxes many times develop broken bolts, which then loads up its neighbor. If the value used a lower factor of safety, the likelihood of a cascading failure would be much more likely.



**PG-49.2** The diameter of a screw stay shall be taken at the bottom of the thread or wherever it is of the least diameter. In addition, the diameter of the tell-tale hole shall be deducted from the final cross sectional area.

The load on a given bolt is determined by the area to be supported in square inches times the pressure in psi.

So, if we elect to support an area of 4" x 4", the total area is 16 sq. in. and using a pressure of 200 psi, we have a total load of 3,200 lbs.

Using a 1" bolt with 12 threads (V) per inch with a root diameter area of 0.878 sq.in., the area  $A = D^2 \times 0.7854$  or 0.605 sq. in. Then we deduct 0.027 for a 3/16" telltale hole, which then gives us 0.578 sq. in. stay cross sectional area.

Lastly, the load divided by the area 3200 / 0.578 = 5536.332 psi. This being less than 7,500, we find that this size bolt is acceptable to support 16 square inches as defined by our layout.

We'll tackle the next part of stay calculations next time. But, for now, take care.

#### **Dave**

Here is a good example of a stay bolt layout, the new bolts being headed over.

**SP 4449** 

by Tom Bentley July 15, 2019 reprinted from POPULAR MECHANICS

You can't keep a good locomotive down — especially when it has the momentum of history behind it. No matter how many times they've been repainted for how many purposes, retired and then rehired, vandalized or oxidized, some trains just won't die. The Southern Pacific 4449 is one such locomotive.

Hop aboard for a little history: 4449 is a GS-4 (Golden State / General Service) class locomotive, which started its first roll on the rails in 1941. That "Golden State" designation is telling, because it was originally assigned to the premier Coast Daylight run, pulling passenger cars between San Francisco and Los Angeles. The 4449's original "Daylight" orange, black, and red livery might be the best

use of Halloween colors we've had, but the train was destined for many different handsome, historic coats — and coasts — to come.

That 1941 birth date clues you in. The SP 4449 is a steam locomotive, with enough push from its 300 psi boiler to run at a brisk 100 mph. But Southern Pacific was an all-oil-burning railroad, so there wasn't any coal firing that boiler.

Though the 4449 is a considerable 110 feet long and 16 feet tall, and no shrinking violet at 433 tons, there's a sleekness to the design that still pleases the eye. And when it turned into or moved out of a station, heads turned or moved with every roll of its big 4-8-4 wheels.

#### Sometimes It Takes a Village, Sometimes It Takes a Holst

In 1955, with the economics of diesel-electrics making steam trains less profitable, the 4449 was removed from its Daylight designation and line, repainted black and silver, and moved into occasional passenger and freight service. The locomotive was officially retired in late 1957 and put in storage in Southern California.

Retirement wasn't particularly kind to the 4449. Donated to the city of Portland, Oregon in 1958, the engine was placed not far from downtown on outdoor public display at Oaks Amusement Park. But it wasn't formally maintained, and thus was repeatedly vandalized, including having its whistle stolen.

There was one rail fan, however, who took it upon himself to personally lubricate the engine in the hopes it would one day run again. The 4449 is a fabled train; Jack Holst is one of the truths that make the fable.

"Jack Holst periodically ran the mechanical lubricators while the locomotive was on display at Oaks in the hope that someday it might be returned to service in some capacity," says Pat Tracy, president of the <u>Friends of 4449</u> organization, a non-profit dedicated to restoring, maintaining, and operating the engine. "His work kept oil going to all of the bearing points on the locomotive while it sat for 17 years. This was invaluable to the restoration process."

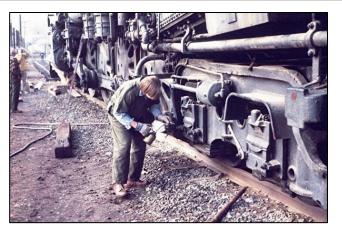
We'll get to the wherefores of that restoration process in a minute, including a further homage to Holst and the work of the Friends, but first let's look at it from the lonely perspective of the static engine itself. Long years of neglect in an amusement park didn't add a whisper of promise that the 4449 would soon be whistling down any rails, except in memory.

All it took to fulfill that unspoken promise was a 200-year anniversary.

(continued next page)



The 4449 on display at Oaks Amusement Park in Portland, Oregon, August 1971.



Workers getting the 4449 ready to be pulled from Oaks Amusement Park and moved to the Burlington Northern Hoyt Street Roundhouse in Northwest Portland, December 1974.

#### Freedom Is a Full Head of Steam

In the mid-1970s, the U.S. was moving toward its bicentennial. What more fitting a celebration than a Freedom Train to crisscross America, since trains had been that country's connectors for so long? What more fitting than a line of display cars on that train carrying treasures of Americana, like George Washington's copy of the Constitution and Wilt Chamberlain's basketball shoes?

And what more fitting a train than the 4449, slumbering in obscurity those long years, but robustly willing to do the work it was designed for?

Willing, but needful of some serious TLC.

So the locomotive was evaluated in 1974 for restoration as a Freedom Train. Thanks to its inherently handsome streamlined look — a product of the tail end of the Art Deco design period — its considerable size and power, and its preserved bearings and rods, the 4449 made the cut. Enter Doyle McCormack and an able-bodied crew, working out of Burlington Northern's Hoyt Street roundhouse in Portland.

McCormack, a Union Pacific engineer, was 32 when he was designated the Chief Mechanical Officer on the restoration project.

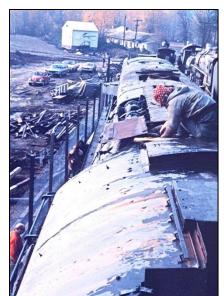
Little did he know he'd be tinkering with the 4449 for more than 40 years to come. On the restoration, there were six full-time paid members — and hundreds of volunteers — with varying backgrounds, collectively logging over 9,000 man-hours of work over five months. The restoration wasn't without challenges, but the crew was up to it.

"There are challenges and surprises that come with every restoration," McCormack says. "You just have to figure out how to deal with them and move forward. We tried to use original specs when available for any replacement parts we needed. But many times we would have to reverse-engineer things to make them or have them made. We also used modern materials and methods when available in making replacement parts," he says.

And when it comes to steam, an engineer's work is never done.

"Having worked around the 4449 for the last 45 years has been a real education," McCormack says. "You learn to do research on how things work and why they work in order to keep her in good running order. Some of those lessons were learned the hard way. If I live to be 100 years old, I will never learn all the lessons she has to teach."

(continued next page)



Looking down the skyline casing as workers ready the engine to be moved, December 1974.

#### A Bit of the Red, White, and Blue

A Bicentennial Freedom Train can't wear just any old getup. The 4449 was freshened up in sparkling red, white, and blue duds, pulling 10 displays with gusto around much of the continental U.S. from 1975 – 1976.

Millions of people lined the tracks to get a glimpse of history steaming by. Richard Lamm, a Southern Pacific engineer from 1974 to 1985, regularly worked the Dunsmuir, California to Klamath Falls, Oregon track and was an extra-board engineer on the Freedom Train when it came through.

"Everywhere we went, tens of thousands of people were lined up," Lamm says. "The cab was filled with officials and press. I was so impressed by its incredibly polished brass valves. The locomotive was like a beautiful old vintage watch that you could look into and see the gears moving."

A worker welding on the SP 4449's boiler tubes during the rebuild in 1975 for the American Freedom train.



Those gears kept moving. After its Freedom gig, the engine pulled an Amtrak special, the Transcontinental Steam Excursion, a name worthy of the locomotive. After a couple of years on the road, the 4449 got some deserved rest back in Portland, and this time it was given a well-earned roof over its head.

But there was more work to do. The locomotive, back in its Daylight colors, did a warm-up appearance at the first Rail Fair in Sacramento in 1981. Then it was time to truly stoke the boiler.

To publicize the 1984 World's Fair, the 4449 pulled a Daylight-garbed train from Portland to New Orleans and back, a tidy 7,477-mile round trip that went into the books as the longest steam-train excursion in U.S. history. (And that was *after* a 1983 poll in *Trains* magazine had already voted the 4449 as the most popular locomotive in the nation.)

A star is a star, and the 4449 got some screen time to prove it. Burt Lancaster and Kirk Douglas didn't have the traction of a 5,500-horsepower steam engine when they all appeared together in the 1986 Disney production of *Tough Guys*. Doyle McCormack, of course, helmed the locomotive down the celluloid tracks.

The 4449 continued to add to its wardrobe over the years. Repainted black and silver again for a Burlington Northern employee appreciation day, the terrorist attacks of September 11, 2001 prompted its return to the Freedom Train Old Glory colors. But some classic fashions remain classic, and the engine was returned to its Daylight ensemble in 2004.

(continued next page)

#### A Little Help from Your Friends

Railfans' enthusiasm runs deep. Some of the volunteers who helped with the 4449's restoration for its Freedom Train runs, like Tracy, stuck around. He volunteered on the 4449 in 1978, and continued to do so through its storage in various Portland spots, including a long stint at the city's Brooklyn Roundhouse from 1981 to 2012, after which it moved with a couple other old steamers (SP&S 700 and OR&N 197) to the new Oregon Rail Heritage Center.

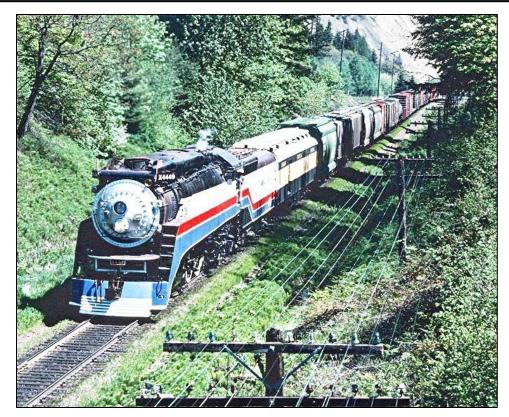
"Prior to formally establishing the Friends, we were just a locomotive crew," says Tracy. "Friends of SP 4449 was established in about 1991, and I've been here in some capacity since its inception."

It pays to have friends, especially ones who can help with housing. The 4449 wasn't publicly exhibited at the Brooklyn Roundhouse, which was a shame for such a fine train. But the Oregon Rail Heritage Foundation, a partnership of nonprofit organizations, worked some long years with the city to build a restoration center and public interpretive center for the three historic trains, and the Oregon Rail Heritage Center (ORHC) opened in the fall of 2012. McCormack served as the Foundation's president until his recent retirement.

The ORHC is a working shop and museum. Since moving to the ORHC, the 4449 and the other trains are available to the public in the afternoons from Thursday to Sunday.

"We have a robust crew of knowledgeable docents that interact with visitors, allowing the crew to continue maintaining the locomotive and equipment," Tracy says. "The public has expressed keen interest in actually getting to see the work as it's performed."

Vintage steam trains can't be put on ice, particularly if they're expected to get out and stretch their legs now and then.



The 4449 at Home Valley, WA on its break-in run on the Burlington Northern, May 1975.

"The crew continues work on improving and maintaining the locomotives," says Tracy. "The ORHC facility is a radical improvement over the Brooklyn Roundhouse, allowing us to better maintain the locomotives on site. There's a machine shop, maintenance pit, and drop table, all designed for maintenance of heavy steam locomotives."

The museum gets thousands of visitors a year, with rail enthusiasts coming from all over the world specifically to see the 4449. As Tracy says, it's become a popular spot for children's birthday parties, retirement parties, and meetings. And when the 4449 gets out steaming on the public lines, people line up by the hundreds to get a photo ... or just to see a big, vintage engine let loose in the wild.



**SP 4449** (cont'd)

#### Bells, Whistles, and Honorary Plaques

The 4449 exiting the Deschutes Canyon just below Moody, Oregon approaching the bridge at Celilo, September 2006.

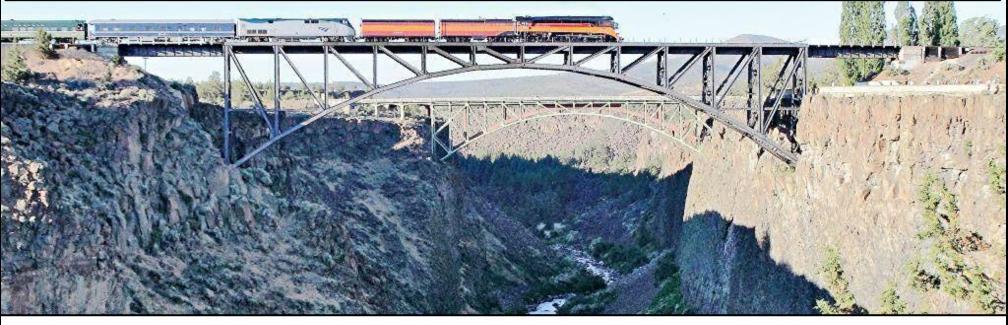
Speaking of engines stretching their legs on the open road, McCormack has probably spent more time than anyone in the cab of the 4449, whether while stationary or racing down the rails. As he explains, there's both a practical side and intuitive side to running a steamer.

"Running the train is 90 percent of the job, and running the locomotive is the other 10," McCormack says. "Having been an engineer for 38 years, I don't have to concentrate on running the train and can then concentrate on running the locomotive.

Unlike modern diesel locomotives, where the systems manage themselves, on a steam locomotive you have to be able to listen to the locomotive and interpret its sounds and feel, says McCormack. "That's where the pleasure is, sort of like a race car driver when he's in a race trying to get the most out of the car."

The crew wasn't trying to get the most out of the 4449 — they were just cruising — when they celebrated the 40th anniversary of the American Freedom Train at the Heritage Center in September of 2016. Passengers got to take a short, steamy trip from ORHC to Oaks Park, where Holst's loyalty to old steam trains had made such a difference so long ago.

Sadly, Holst never got to see the fruit of his significant contributions to the life of the 4449; he passed away after an illness at the age of 38, a few years before the 4449 was chosen for Freedom Train restoration. But there's a brass plaque mounted in the cab that attests to his dedication to steam locomotives and all things rail, now forever part of the long legacy of SP 4449.



#### **Blocking the Tracks**

That legacy, however, is in stasis for the moment. There are heavy insurance costs for organizations like the OHRF, which greatly relies on excursion runs to fund its operations. As McCormack explains, "The whole issue is liability insurance to cover the railroad. Over the years the cost of this insurance continued to increase until we — and most all of the other excursion train operators — could no longer afford to buy the necessary insurance. This meant we then needed to operate under the Amtrak umbrella for insurance."

However, Amtrak instituted a new policy in 2018 that severely hampers the ability of the OHRF and others to organize and run excursion trains, pulled by historic engines like the 4449. In Amtrak's words, such "operations caused significant operational distraction, failed to capture fully allocated profitable margins, and sometimes delayed our paying customers on our scheduled trains." Thus, "one-time trips and charters are immediately discontinued."

The 4449 crossing the Crooked River Gorge at Terrebone, Oregon, June 2017.

The Friends of the 4449 and the OHRF disagree with these conclusions, and of course are distressed by the implications. "Amtrak was paid to run these trips — it wasn't free and it wasn't cheap," Tracy says. "Many privately owned passenger car owners were affected by this, and many have had to sell their cars or store them."

It's not clear what the future holds for the steam locomotives and vintage cars under regular restoration at the OHRF; it would be a sharp shame to not have a chance to see them under steam again. Tracy says it well when he reflects on the 4449's legacy.

"SP's original streamlined design has held up though time — she's as good looking today as in 1941," he says. "SP 4449 was retired in 1957, restored in 1975, and has been a serviceable locomotive since that time — thousands of miles since the Freedom Train. She has been an operational locomotive for 44 years in 'retirement.' Few locomotives have that kind of history. She is one of a kind."

It's a busy retirement that many hope never ends.

After all, you can't keep a good locomotive down.



# HAPPENINGS PAST /

#### TRAINS and FIREWORKS

Story and photo by Hank Gallo

Just a note to say **THANK YOU** to those volunteers who came out to help on our special events nights. For the first time in recent years, we opened the Park during the summer on both 5/29/19 and 7/3/19, with plans on opening again on Sunday, 9/1/19 at 6pm. Around 500 visitors came to each event. July 3rd also included an ice cream truck and a tortilla truck. Dakota Clemens set up 3 wireless speakers and played a 4th of July songlist. No one really noticed, but people sat around the food trucks eating and listening to the music. A nice, unexpected touch. Cliff Fought, Pete Pennarts and Perry McCully got the white LED string lights and hung them in the entrance walkway, which was a big help, since it was dark last month. Boy Scout Troop 526 helped by supplying water. They suggested that they set up by the station exit gate for the next event. Maybe we should use the Trolley to make it more visible. Besides the Public Runs/Facebook regulars, we saw many new faces, which was fantastic. The sign of success is when we can put money in the bank during the summer, make folks happy and introduce more people to what we do here.

Dakota saw many folks that parked in our lot and walked over to the ball field car show. We were thinking of trying a \$10 donation per carload at the gate for the 9/1 event. We would need to have at least two phones equipped with PayPal for folks without cash. For safety patrolling, Bill and Susie Pardee staffed one of the golf carts and Dakota drove the second. No incidents were reported. Bill decided not to run his steamer. The Pardee-donated tractor was serviced and used by several members to cut down as many weeds as possible by the tracks AND IN THE PARKING LOTS, to prevent flare-ups from catalytic convertors.

For the first time, we dropped passengers at the Museum and allowed them to return to Adobe on a later train, since trains were run in a continuous loop — about every 10 minutes. Since people were allowed to spend as little or as much time as they needed to enjoy the Museum, Larry Allen saw an unexpected increase in donations, making him happy. We used Bobberg branch outbound and Pottsville branch inbound, returning through the tunnel, so as to minimize traffic. The route was pre-run as a test, and no major issues occurred.

Facebook comments included "tortillas were expensive at \$10", but the ice cream was appreciated. Comments also suggested more kid-friendly food like burgers and dogs, so we'll try that next time. Our FB fans liked the tickets, suggesting that they would even donate a small amount to guarantee their admittance. Concerned that many people didn't get tickets and still wanted to visit, we announced a few days before the event that we would have a standby line, of which 300 visitors took advantage. We distributed 700 tickets on FB, but only 219 checked in. Maybe, since we later added "standby line will be available," the free tickets had less value! I asked my helpers (Dennis Beatty, John Bergt, John Broughman, Tim Freeman and Dakota Clemens) if we should do tickets for Sept 1 and maybe VIP tickets for Holiday Lights.

Looking ahead to Halloween/Holiday Lights, if we were to set up the Megatree, singing faces and North Pole (which would be a haunted house by changing the memory cards in the projectors) during the first weekend in October, we could do a Halloween train ride on October 25 and 26. We're talking about hanging 8 strips of LED's from the Megatree (8 used strings) in Adobe station (lights only under the roof out of the sunlight for UV protection) and leave them up permanently, and they would be any color for any show. We could just have them vary color gently, not flash.

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