



A publication for the Pacific Southwest Railway Museum members

September 2024

SUMMER TRACKWORK COMPLETED BY VOLUNTEERS



Left to right on the ground: Christopher Baker, Chad Baker, Tim Wamsley, Ryan Hodge, James Caestecker, Kerry Hebert.

Left to right on the locomotive: Tom Ulrich, Colin Atwood, Rich Paulus (all of whom plus Ryan Hodge were on train crew the day of the picture.

Photo by Christian Mergliano 8/3/24



**Pacific Southwest Railway Museum
Association, Inc. WWW.PSRM.ORG**

619-465-PSRM (7776)

Museum and Train Operations

Campo Depot
Highway 94 at Forrest Gate Rd, Campo
619-478-9937

La Mesa Depot Museum & Office

4695 Nebo Drive, La Mesa, CA 91941

PSRMA Board of Directors

Meetings are held on the 3rd Friday of the month except Dec at 6:30PM. A link to join the Zoom meeting will be provided on our website at members.psrn.org.

Museum Directors

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Facilities Dept: Frank Denison
Museum Services Dept: Travus Clark
Operations Dept: John Cenkner

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Gift Shop Manager: Alex Fiori
Hot Scoop Editor: Jim Lundquist
Membership: Carl Brooker
Social Media Mgr: Jason Drenkow
Station Master (La Mesa): Timothy Miller
Steam Foreman: Jim Baker
Volunteer Coordinator: Jenn Brooker



Special Events:

September 2 - Member early access for North Pole Limited tickets

September 14 & 21 - Brakeman Training Class in Campo

October 5, 6, 12, 13, 19, 20, 26 & 27 - Pumpkin Express in Campo

October 5, 12, 19 & 26 - Sip & Scare Sunset Special (21+) departs at 6:30 .

November 14 - Membership Meeting. "Spreckels Empire". 6:30 p.m. in La Mesa Police Dept Community Room. The speaker for the lecture will be Dr. Sandra E. Bonura and she will be presenting her book Empire Builder: John D. Spreckels and the Making of San Diego.

Regular Schedule:

At our Campo Facility

Saturday and Sunday, 9 a.m. to 5 p.m. - Museum open to public.

Saturday - Golden State train rides at 10:30 a.m., 1:00 p.m. and 2:30 p.m.

Saturdays and Sundays - volunteer work days.

Wednesdays and Saturdays - Library open from 9 a.m. to 5 p.m. Call Bruce Semelsberger at 619-264-7282 for an appointment

La Mesa Depot Open:

Tuesday & Thursday Noon - 3 p.m. Saturday: 11 a.m. - 2 p.m.

Volunteers are at both locations during the week as well. For more information, please email: volunteer@psrm.org

Track Work Completed to Restore Train Service!

By James Caestecker

Over the course of about 10 weeks, an all-volunteer track maintenance crew completed work in order to return the railroad to operation at Campo. On May 18, a minor derailment had occurred, which caused one half of one axle on the trailing coach to hit the ground. This incident caused around 500 feet of track to need to be repaired as the axle that derailed had rolled one of the rails over and damaged several railroad ties. The following week, Volunteers re-railed the car and returned it to the museum for inspection and return to service. During the next several weeks, volunteers organized 9 work days during which a total of 23 different volunteers contributed time, including several new and first time volunteers, totaling about 70 person-days, or well over 500 volunteer hours.

On each work day, a locomotive and caboose were loaded up with tools and supplies in order to complete the work. Unlike many of our previous work days, we decided this time to use a locomotive and caboose in order to transport the large number of volunteers and equipment (as many as 10 people) to the work site. Fortunately, this allowed us to continue training some of our new train service volunteers, many of whom are very near becoming qualified on our operating crews. Upon arrival at Milepost 64.8, train crew members attached air hoses to the locomotive to power our air tools to complete the repairs.

Our track inspectors measured the track gauge, marked ties for change, and identified the locations where work was to be completed. In order to correct the issues with the track, the rolled rail was unspiked and returned to its upright position. Then, the old spike holes were filled with small pieces of wood called plugs and new spikes were driven in to hold the rail down to the ties. Most work days also yielded about four to six new railroad ties being installed to supplement the existing ties under the track. Special tools were purchased to measure the track gauge and to adjust the distance between the rails.

After our work day on July 27th, the tracks were returned to service. Approximately 50 railroad ties were replaced, nearly 1,000 spikes were installed, and almost 500 feet of track were repaired. Crews also identified a few additional work sites on which to focus our future work, including finishing a couple of repairs near the West Campo Yard Limits sign, installing some new drainage pipes under the fire access road near the Chicken Ranch, and beginning on two areas in or near the rail yard at the museum. Our track crews work constantly throughout the year to keep our riders safe and our trains running smoothly.

August 3rd marked the first revenue train to return over the work area, which was commemorated with a group photo including several volunteers who worked on the project. We are incredibly pleased to again offer the Golden State train rides to the public.



The *Hot Scoop*® is a publication of the Pacific Southwest Railway Museum Association, Inc.

The opinions expressed in the *Hot Scoop* are those of the individual writer and do not necessarily reflect the opinion of the Pacific Southwest Railway Museum Association, Inc., (PSRMA) its officers or staff.

PSRMA Mission Statement:

PSRMA is dedicated to preserving the physical legacy and the experience of rail transportation. Programs address the historical, social, economic and technical impact of railroading with particular emphases on railroads of San Diego County and the systems with which they connected in the United States and Mexico.

PSRMA is a non-profit educational organization operating under section 501(c)3 of the tax codes. Donations may be tax deductible.

PSRMA is a member of the Heritage Rail Alliance.

Submission guidelines: All articles should be single spaced and submitted in Microsoft Word format. Photographs are also welcomed. Please include photographer and date of photo. Send all submissions to Editor@psrm.org

The *Hot Scoop* is available in color via email. To receive the electronic version in PDF format, send an email to editor@psrm.org and include your name, membership number and email. Note that if you opt for the e-mail version, you will no longer receive the printed copy.

Comments are always welcome. Send your feedback to: editor@psrm.org

From the Back Platform

By Stephen Hager, President

It's still summertime, but autumn is just around the corner and it's time to start thinking about special event season. At the Pacific Southwest Railway Museum Association, the fourth quarter of the year is always the busiest as we run our two largest special events; Pumpkin Express in October, and North Pole Limited in November and December. These two events, while only running for the equivalent of about two months or one-sixth of the year, bring in about 75% of PSRMA's annual operating income. This income sustains our organization throughout the following year and helps us pursue our mission of preservation, interpretation, and education.

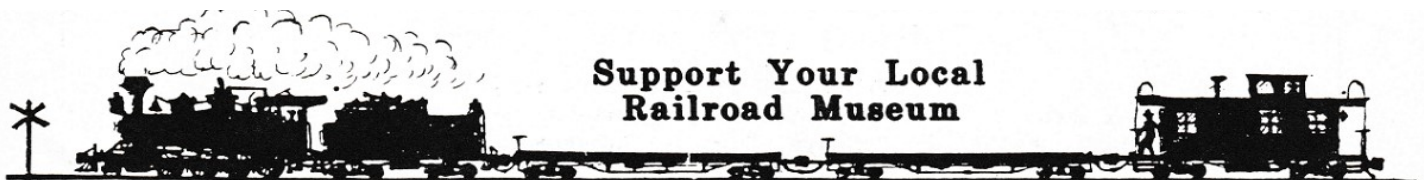
It should come as no surprise that the successful execution of the fourth quarter special events is critical to our organization's success. Preparations for these events actually start in the spring as we begin lining up our hired help for the North Pole Limited trains. Next comes volunteer recruitment. It takes a much larger complement of volunteers to operate a special event than it does to operate the museum on a normal weekend. In addition to operating the special events, each event comes with its own setup and breakdown requirements.

Each special event calls for different decorations in our train cars. The Campo Depot and surrounding grounds also get different decorations for each event. For Pumpkin Express, the Exhibit Hall is transformed into a pumpkin patch, pumpkin decorating area, and the train cars inside the building are transformed into spooky haunted trains. For North Pole Limited, the outlying "Canyon Station" on the railway is transformed into Santa's Village at the North Pole. The setup and breakdown before and after each event need to be done quickly and efficiently. Otherwise, our train cars and museum grounds would be left in a half-decorated state for weeks or even months on end! The period between Pumpkin Express and North Pole Limited is particularly tight as we only have three

weeks to transition the museum and trains from a Halloween theme to a winter wonderland.

Operating the events themselves takes a small army of volunteers. Of course, train crew and gift shop staff are a must on any day that we operate trains. Special events benefit from larger train crews to help with loading and unloading passengers and keeping an eye out for their safety while enroute. When we operate trains with first-class service (as with all special events), a bartender is needed on ATSF 1509. For Pumpkin Express, volunteers are needed to operate the pumpkin patch, pumpkin decorating stations, and haunted train cars. For North Pole Limited, volunteers are needed to help with parking in the parking lot, handing out tickets, preparing hot chocolate, directing and leading the elves (students from local high schools), ferrying Santa Claus and Mrs. Claus around, operating the electrical and lighting systems on the train cars, and many other tasks. Special events are great opportunities for new volunteers to get involved, especially for those with a creative side or who only have seasonal availability to help. Emails are already going out to the volunteer email list and the general membership email list to solicit volunteers to help with special events; expect to see many more!

Another annual task that gets lumped into the special events efforts is the annual maintenance, inspections, and testing of our operating train cars and locomotives. This work typically starts in August and continues through November. During this time, our train equipment gets a top to bottom going-over to make sure that it's fit for safely and comfortably carrying passengers. Many of PSRMA's operating passenger cars have been in continuous excursion train service since the museum first began operating trains for the public in Campo in 1986. The equipment was already old and well-worn then, and it hasn't been getting any newer since then. The equipment department held a planning meeting in late August to lay out the known maintenance and inspection needs for each piece of equipment.



From the Back Platform - Continued

A rough schedule was also developed that we will continue to refine as work progresses. Regular emails will be going out to the volunteer email list to solicit volunteers to help with this work.

Did you know that there is a publicly accessible volunteer activities calendar on our website? Visit <https://www.psrn.org/volunteer/> and scroll down to view

the calendar. It displays recurring volunteer activities at the museum as well as one-off activities where additional volunteers are needed.

If you're interested in volunteering, please send an email to our volunteer coordinator, Jenn Brooker, at volunteer@psrm.org and let her know how you'd like to help. As always, if you would like to get in touch with me, please send a note to president@psrm.org. Until next time, keep it on the high iron!



Operations Volunteers

by Rich Paulus, Chief Operations Officer

Train Service - those who are qualified train crew members, speeder operators/crew, and trainees who have helped us run 12 Golden State trains and the number of days they have volunteered through August 24: Colin Atwood 3, Alyssa Andersen 1, Kevin Anderson 1, Paul Bandemer 1, Carl Brooker 1, James Caestecker 2, John Cenkner 1, Stephen Hager 2, Ryan Hodge 4, Randy Houk 1, Dave Little 1, Christian Mer-

gliano 1, Mike McIntyre 1, Julio Ornelas 1, Rich Paulus 1, Duke Schweikert 1, Tom Ulrich 2.

MOW - maintenance of way volunteers who have assisted Roadmaster Glen Rogers and Track Foreman James Caestecker in maintaining tracks and right-of-way this period: Colin Atwood 2, Carl Brooker 2, David Choy 1, Linda Eskin 1, Stephen Hager 1, Ryan Hodge 1, Rich Paulus 1, Glen Rogers 1, Duke Schweikert 1, Tim Wamsley 2, Cass Witkowski 2.

There were a total of 40 volunteer-days this period.

It's Pumpkin Season!

Volunteers Needed for the Pumpkin Express and NEW Sip & Scare Sunset Special

By Jennifer Brooker, Special Events Coordinator

Starbucks just released the Pumpkin Spice Latte, so that means fall is almost here. And fall in Campo means Pumpkin Express time and our brand-new offering, the **Sip & Scare Sunset Special!**

The Sip & Scare is a new adults-only event occurring Saturday evenings in October with cocktails, music, costumed characters, and a guided tour of our haunted train cars (complete with scare actors!). Learn more about the Sip & Scare at www.psrn.org/signscare. To make this new event a success, PSRM needs **YOU!** No experience necessary and no age limitations for most positions.

Please review the available positions below and email volunteer@psrn.org to sign up for one or more positions. Thank you for all that you do to make our museum, and our special holiday events, the absolute best they can be!

Available Volunteer Positions

For Pumpkin Express (Saturdays and Sundays in October with departures at 10:30am, 1pm, and 2:30pm):

1. Decorators (8-10 people needed): Unleash your creativity and transform our iconic vintage train cars and depot area into a frighteningly delightful wonderland! Put your decorating skills to the test and help us create a spooky atmosphere with creepy crawlies, cobwebs, and other frightful delights. **Decorating begins Sunday, September 29th, with 1-2 days needed during the week.**

2. Clean-up Crew (2-4 people needed): Be our unsung heroes! After the Pumpkin Express excitement is

over, help us keep the museum sparkling clean. This role involves tidying up the craft area, storing tables and chairs, removing and storing décor, and cleaning up any remaining pumpkins. **Clean up begins after 5pm on Sunday, October 27th and must be complete by Friday, November 1.**

3. Craft Area Volunteer (2-4 people needed): Get ready to unleash your inner artist! Lead our young guests in creating hauntingly fun Halloween crafts, such as pumpkin decorating. This is a perfect opportunity to interact with families and share your love of creativity. **Needed Saturdays and Sundays from 10:30am to 5pm.**

4. Pumpkin Delivery (1-2 people plus forklift operator): Looking for a physically active volunteer role? Become part of our pumpkin delivery crew! Need a licensed forklift driver as well! **Needed Fridays in October.**

5. Pumpkin Patch Volunteer (2-4 people): Not all scarecrows are spooky! Ensure our pumpkin patch is fully stocked and ready for our eager young trick-or-treaters. Help families navigate the patch, pick the perfect pumpkin, answer questions, and ensure a spooktacular time for all. **Needed Saturdays and Sundays, 10am-5pm.**

6. Gift Shop Assistant (1-2 people needed): Welcome visitors to our charming gift shop! Answer questions, recommend souvenirs, and make their shopping experience delightful. Strong communication skills, a friendly demeanor, and retail experience are beneficial but not required. **Needed Saturdays and Sundays 9am-5pm.**

7. First-Class Snack Bar Attendant (1 person each day): Fuel the fun as a snack bar hero aboard our First-Class car! Ride the rails as you greet guests with a smile, prepare soft drinks efficiently, hand out snacks and candy, and ensure excellent service and a clean workspace. **Needed Saturdays and Sundays, 8:30am-4:30pm.**

Volunteers Needed for NEW Sip & Scare Sunset Special

For Sip & Scare (Saturday, October 5, 12, 19 & 26 with departure at 6:30pm):

1. First-Class Snack Bar Attendant (1 person needed): Fuel the fun as a snack bar hero aboard our First-Class car! Ride the rails as you greet guests with a smile, prepare soft drinks efficiently, hand out snacks and candy, and ensure excellent service and a clean workspace. **Needed Saturdays only, 5:30pm-8pm.**

2. Licensed Bar Attendant (1-2 people needed): As the resident mixologist, whip up craft cocktails, beer and wine to thirsty guests. Bar server license is required, but easily obtained. Ask for more info! Cocktails will be pre-mixed prior to loading onto train based on a provided recipe. **Needed Saturdays only, 5pm-8pm.**

3. Costumed Bar Servers (2-4 people needed): Haunt the halls of the train in costume and take orders and serve drinks to thirsty guests. Bar server license is required, but easily obtained. Ask for more info! **Needed Saturdays only, 6pm-8pm.**

4. Haunted Car Actors (4-6 people): Calling all thespians and drama enthusiasts! Join our Spooky Squad and bring our Halloween characters to life. Dress up in costume and interact with guests, creating a hauntingly fun atmosphere. **Needed Saturdays only, 7pm-9pm.**

5. Haunted Tour Guide (1-2 people): Calling all thespians and drama enthusiasts! Join our Spooky Squad and lead guests through our haunted train cars while telling spooky tales. Dress up in costume and interact with guests, creating a hauntingly fun atmosphere. **Needed Saturdays only, 7pm-9pm.**

SIP & SCARE SUNSET SPECIAL

THE PACIFIC SOUTHWEST RAILWAY MUSEUM

A 21+ SPOOKTACULAR
ADVENTURE WITH
COSTUMES, COCKTAILS,
AND CHAOS!

6:30PM
SATURDAYS IN OCTOBER

WWW.PSRM.ORG/SIPNSCARE

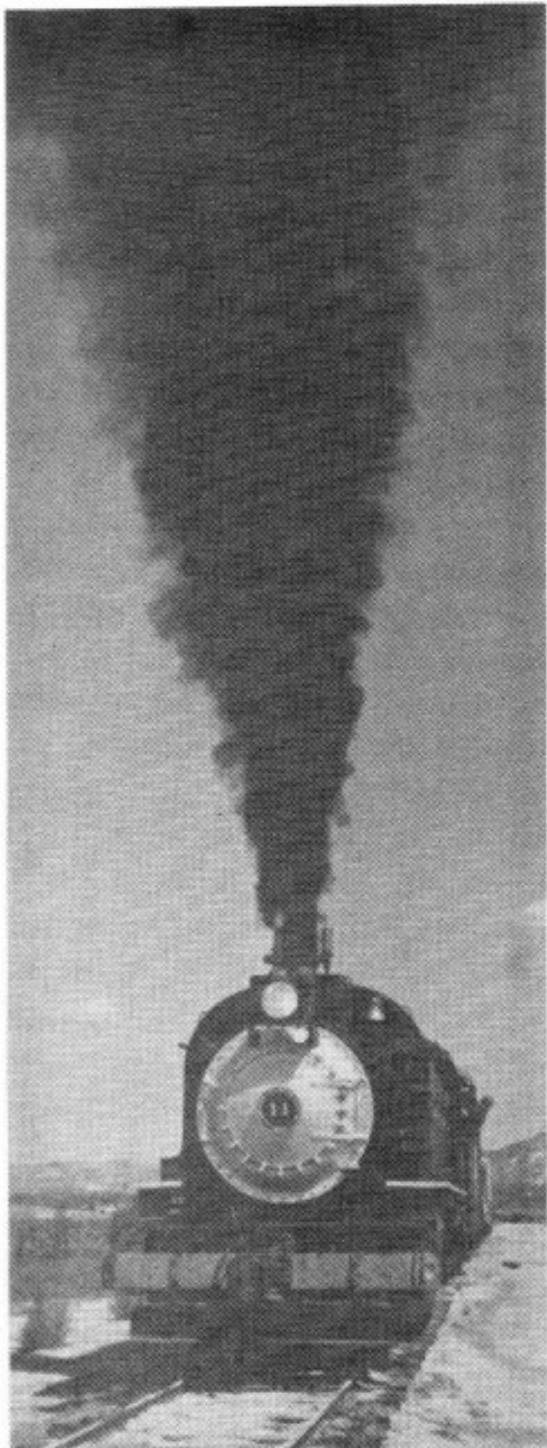


Museum History. Looking Back this month by Decades

1974 - Private car "Victoria" was donated to the museum. The car has been repainted and wears its original name Robert Peary today. <https://www.psrn.org/trains/passenger/pullman-robert-peary/>

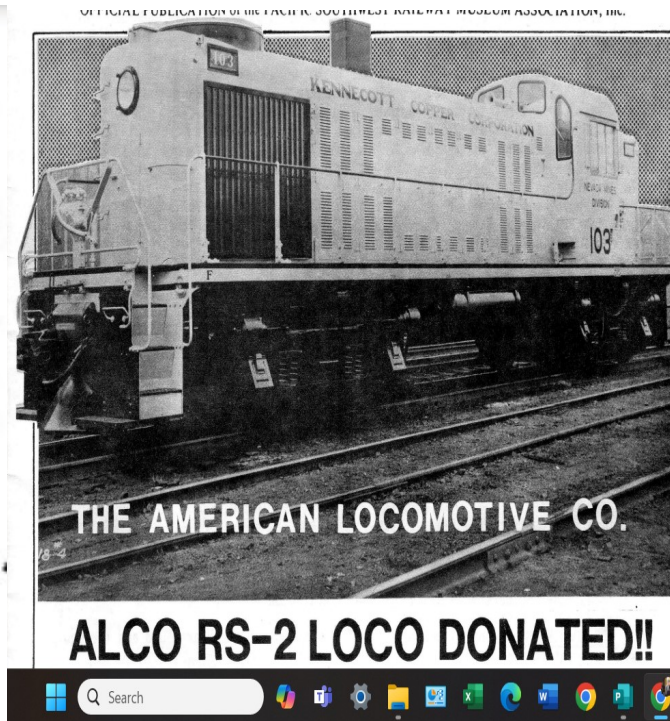
Tours started for school children at NAS Miramar.

1984 -



Coos Bay Lumber Company #11 operated under steam at Campo.

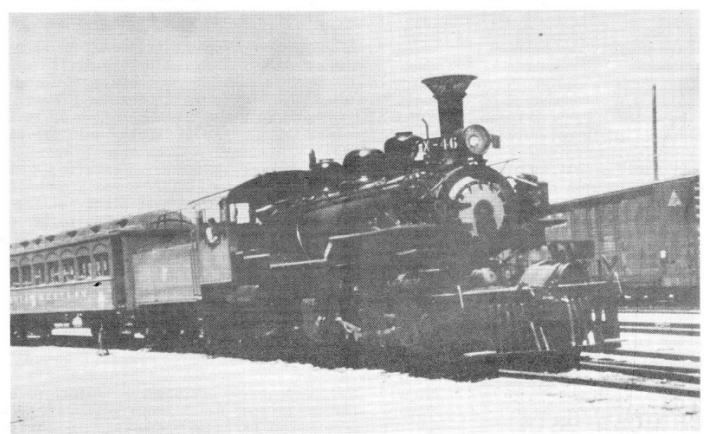
Hot Scoop



In addition to the ALCo locomotive donation, the Santa Fe gantry crane was moved from downtown San Diego to Campo by volunteers.

Our first grant ever: \$30,000 grant received from the County of San Diego.

Southern Pacific Railroad donated caboose SP #1351.



**ARTICULATED STEAM POWER FOR PSRMA!
CALIFORNIA WESTERN No. 46 DONATED!**

September 2024

8

A woman dressed as Mrs. Claus, wearing a red velvet hat with white lace, a red velvet cape with white fur trim, and white gloves. She is smiling and holding a large silver bell in her right hand. The background is dark with some bokeh lights.

Experience the Magic of the
North Pole Limited!

Member early-access begins
September 2nd, 2024.

Password: JosephJolly
www.psrn.org/npl

WELCOME NEW MEMBERS We are happy to announce that the following people have joined as either new individual, student, senior, or family members and we are grateful for their support – Douglas Dunker; David Harvilla; David Little; James Nys; Ruben Rivera; Ashley Smith; Mariusz Sulek; and Ralph Swartwood. **Welcome all!**

San Diego County Railroad History Talk Well Attended by Dave Tomeraasen

The quarterly membership meeting featured Travus Clark presentation on San Diego County railroads and light rail, from the 1850's through 2024. His presentation was 3 1/2 hours in length and the many pictures, maps, and written information that was accurate, amazing and professional. Travus scanned over 3,000 pictures from our Southwest Railway Library. He also obtained many pictures from the Internet and other sources. Beverages and snacks were provided to the 25 attendees by the Pacific Southwest Railway Museum.

Photo by Dave Tomerrasen 8/9/24



LIBRARY UPDATE By Bruce Semelsberger

Even as the dog star rises in the night sky to tell us that summer is winding down and the dog days are upon us with all the heat and doldrums, work goes on. The trains are running again and events are unfolding all over your museum. New grants mean new projects as the vision for our future begins to come into ever sharpening focus. As the new is always dependent on what has gone before, there will always be a need to preserve an accurate record of that past and that is where we come in. The museum as a whole and the library in particular exists to maintain that record so we can relate it to the present and into whatever future awaits us. We salute the efforts of many in our community and especially our volunteers in taking the trouble to save our historic resources and make them as available as possible for the next generations.

A key factor in history is interpretation. If we are to interest those who may not share our particular interest in rail technology and its relation to our culture, we have to provide the context in a way that piques that interest. To that end, we would like to ask everyone who has a story to tell about railroading and life on the railroads to take a little of their time and share that story with us. We understand that not everyone is a writer, but a story simply told or some photos from a family album with the names and dates make that history personal in a way that touches a future reader in a way that a professionally written book or video never can. It is then then the responsibility of

our staff to save each of those gems so that they are accessible down the road.

To that end, we continue to explore the best ways to carry those stories forward using technology to make them available to the widest audience while assuring that the technology employed will not be obsolete by the time we are done. Richard Finch has striven mightily to perfect a framework for storing and sharing in a searchable way the information in our archive, beginning with issues of the museum's newsletters. Eventually we hope to encompass other correspondence, oral and written interviews and some photographs so that all of our members will be able to do their own research from the comfort of home.

Otherwise, we continue to accession previous donations that have been stored for too long at the same time we endeavor to keep up with current acquisitions. We have now organized and bound the agendas and board minutes of the MTDB from the inception of the San Diego Trolley so those are available for research. A large number of additions to the collections in the areas of ephemera, ATSF and SP records, newsletters and railroad passes need to be sorted and stored and these are jobs that require only a little time and patience to accomplish, so if you can spare a little of your time to help out please drop us a line: library@psrm.org and Richard and I will be happy to have the help (thanks to our president Stephen Hager for setting up the Google Groups to make the email address work).

Centralized Traffic Control on the AT&SF Surflines

by Chadwick Baker MIRSE

Editor's comment: This article covers how multiple trains operate on tracks while staying out of each other's way into and out of San Diego on the former AT&SF Railway. Chad is our volunteer signal maintainer at Campo and extremely knowledgeable in signaling systems as a member of the Institution of Railway Signal Engineers.

Before 1944, the Atchison Topeka and Santa Fe Railway's San Diego Subdivision, aka Surflines, was controlled by timetable, train orders, and Santa Fe's version of Automatic Block Signals (ABS), known as Automatic Permissive Block (APB), between Fullerton and San Diego. In the early 1940s, the Santa Fe Signal Engineering Department began to draft plans to install Centralized Traffic Control (CTC) on the Surflines. This ambitious project was made possible by Santa Fe's collaboration with the Union Switch and Signal Company (US&S), known by signalmen simply as "Switch." US&S was already supporting the Santa Fe signal forces with CTC projects between Redondo and Fullerton with crossovers at Bandini and Double Track (DT Junction), making US&S technology and equipment a logical choice for the AT&SF Signal Engineers.

What's CTC?

Centralized Traffic Control (CTC): A method of operation by means which the movement of trains over routes and through blocks on a designated section of track or tracks is directed by signals and switches controlled from a designated point without the requirement of train order authority and without regard to the superiority of trains.

Why CTC on the Surflines?

Before 1941, the traffic between Los Angeles and San Diego was relatively light, with trains operated primarily by locals handling both passenger and freight traffic. However, the traffic began to surge in early 1941,

growing so rapidly that the existing facilities couldn't keep up, leading to congestion. To manage the increasing wartime passenger traffic between Los Angeles and San Diego, new lightweight, streamlined cars and Diesel-electric locomotives were purchased to operate four San Diego trains in each direction daily.

The surge in traffic led to a significant increase in train movements, rendering the existing timetable and train order method of authorizing train movements inadequate. In many cases, trains had to wait at terminals, yards, or sidings for hours for the dispatcher to issue orders quickly enough to keep up with the rapid changes in train operating conditions. This was further complicated by the need for numerous locals and helpers to support the traffic on the line. The Surflines experienced significant delays when waiting for orders to return light engines to the bottom of the grades.

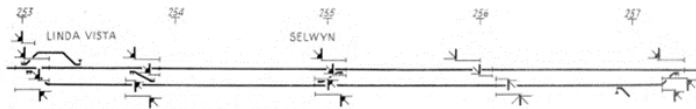
Therefore, a substantial improvement in railroad transportation between Los Angeles and San Diego was crucial in the overall war-winning efforts of World War II. With the WW-II in full swing, construction of a subdivision-wide second track would have required large quantities of scarce materials, and no men were available for such programs. Moreover, the additional track might not be justified after the War. For these reasons, Santa Fe decided to make strategic track capacity improvements and additions, as well as to install Centralized Traffic Control CTC, including power-operated switches and signals for authorizing train movements, thus eliminating the delays inherent in the timetable and train order system and reducing the delays caused by the use of hand-throw switches at passing tracks.

Changes to the Surflines

To support the installation and cutover of the newly selected CTC method of operation Santa Fe needed to make changes to the tracks and sidings along the Surflines. Previously, some of the passing tracks held about 48 cars, and therefore, to handle longer trains, nine of the principal sidings of the time were lengthened, the names of the sidings, previous car capacity

Signaling System - continued

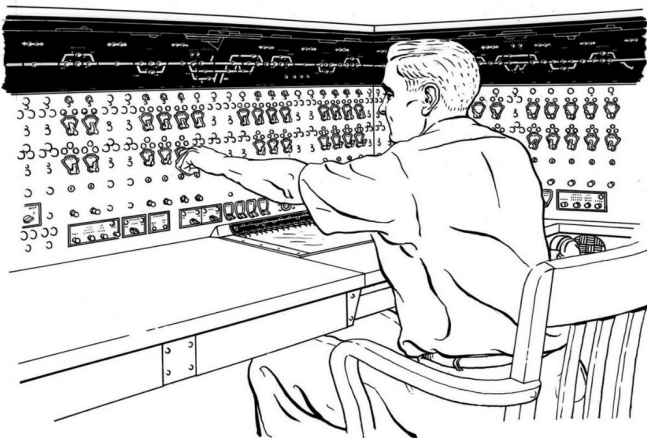
and the new CTC capacity being as follows: Venta, 52 to 87; Irvine, 47 to 112; El Toro, 51 to 82; San Juan Capistrano, 44 to 80; Serra, 72 to 92; San Onofre, 64 to 92; Agra, 49 to 90; Ponto, 46 to 102; and Encinitas, 32 to 85. To increase the track capacity on the heavy grade at Linda Vista (today we know as Miramar), a new second track was added on 4.2 miles between Linda Vista and Elvira. A new number 20 turnout was installed at the Elvira end of this second track, and a number 14 turnout at the Linda Vista (Miramar) end. Including number 10 non-powered crossovers installed, one at the west end of Linda Vista and one at Selwyn.



Track Layout from what is today's Miramar and Rose Canyon – Railway Signaling December 1944

Philosophy and Technology Changes

The collaboration between the Santa Fe signal engineers and US&S brought many new signaling philosophies and technological changes to the Surflin, with power switch machines, searchlight signals, code lines, track circuits, concrete bungalows, lead acid batteries and modern CTC machines.



US&S Graphic depicting a Dispatcher at a CTC Machine – US&S Image

Two CTC Control Machines for the Surflin

The AT&SF Railway's Surflin between Fullerton Junction and San Diego covered one hundred and two miles between milepost 165 and 267. Due to the technology limits of the forties, the AT&SF divided the dispatching duties of the Surflin in two.

The northern (RR West) CTC control machine was located at the Fullerton depot and controlled the territory from Bandini through Fullerton and south as far as El Toro.

The southern (RR East) CTC control machine was located at Oceanside and controlled the territory from El Toro to San Diego. The machine and dispatcher were situated in a concrete building adjacent to the south of the depot.

Each machine controlled a code line extending in each direction via the pole line along the track, and they were independent of each other.

The CTC machines had illuminated track diagrams on the machines, including a lamp to repeat the occupancy of each OS switch detector section, each passing track, each section of the main line opposite a passing track, and each section of the single-track main line between two passing tracks. The switch and signal levers and the indication lamps above these levers were standard features across most railroad CTC machine arrangements of the time.

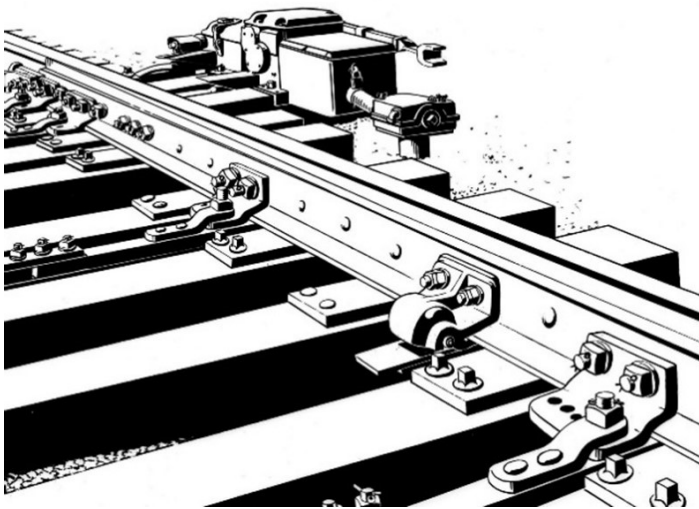


US&S Engineer Testing the Oceanside CTC Machine at the US&S Factory in Swissvale, Pennsylvania.

Signaling System - continued

Power Switches

Low-voltage DC electric switch machines with dual control were installed at the double track sections, crossovers between main tracks, junctions, and at the ends of sidings, which were used regularly for the meeting and passing of trains, a total of 58 switch machines had been installed between Fullerton and San Diego. At each switch, insulated gage plates and adjustable rail braces were used. Typically, the switch machine is located on the side of the track adjacent to the normally closed switch points. To this day, the San Diego subdivision has a variation of the same switch machines deployed in 1944, a testament to the design and longevity of the US&S switch machines.



US&S Graphic depicting an M Series Power Switch Machine – US&S Image

Signals

Between 1931 and 1944, the Surflines utilized automatic block signaling (ABS) with US&S Model-R color-light signals. As a part of the CTC installation project, signals requiring relocation or replacement, US&S supplied Santa Fe with type H-2 and H-5 searchlights. However, some of the 1931 color-light signals were reused at intermediate locations. These signals were

located at the right of the track they governed. At one end of each siding, the track was shifted over to 18-ft. centers to locate the leaving main-line signal at the right of the main track. At Oceanside, Sorrento, Linda Vista, and other places on the double-track sections, overhead cantilever-type signal bridges were installed, and the signals were mounted over the right rail of the track governed. Each semi-automatic CTC-controlled signal has one searchlight head and could display three aspects: red=STOP, yellow = REDUCE SPEED, PREPARED TO STOP AT NEXT SIGNAL, or green = PROCEED. Just as today's signals on the subdivision, the absence of a number plate designates these signals as absolute (controlled) stop signals. The last 1931 color-light signal known on the Surflines was located on the Escondido Subdivision at Coast Highway. It was used as a hold-out signal to prevent trains from blocking crossings in Oceanside if the San Diego Subdivision could not move the local onto the San Diego Subdivision at CP Escondido Junction. The Model R color-light was retired in 2007 as part of the SPRINT project.



In this view, we see US&S Searchlight Signals, Bungalow, and Pole Line with Code Line – AT&SF Image

Signaling System - continued

CTC Circuits

The onset of the forties CTC technology brought a new circuit arrangement philosophy to the Surfliner. A circuit with only two-line wires was used to automatically control signals for one direction or the other, depending on the direction for which traffic is established when the CTC code control is sent out from the office to clear a signal at a remote location. The two-wire, either-direction circuit was a technological advancement of the time, thus reducing the number of pole line circuits needed along the right of way. Some of the intermediate signals displayed a fourth aspect, yellow-over-yellow, or flashing yellow = MEDIUM SPEED, as discussed previously. In each such instance, a separate two-wire line control circuit using existing line wires was provided to control this fourth aspect.

Two two-wire line circuits, one for westward and the other for eastward, control the track occupancy indications on the CTC machine and motor car warning indicators at various locations along the track.

The CTC project, including the new sections of double track, longer sidings, and centralized traffic control, accomplished satisfactory results in saving travel time

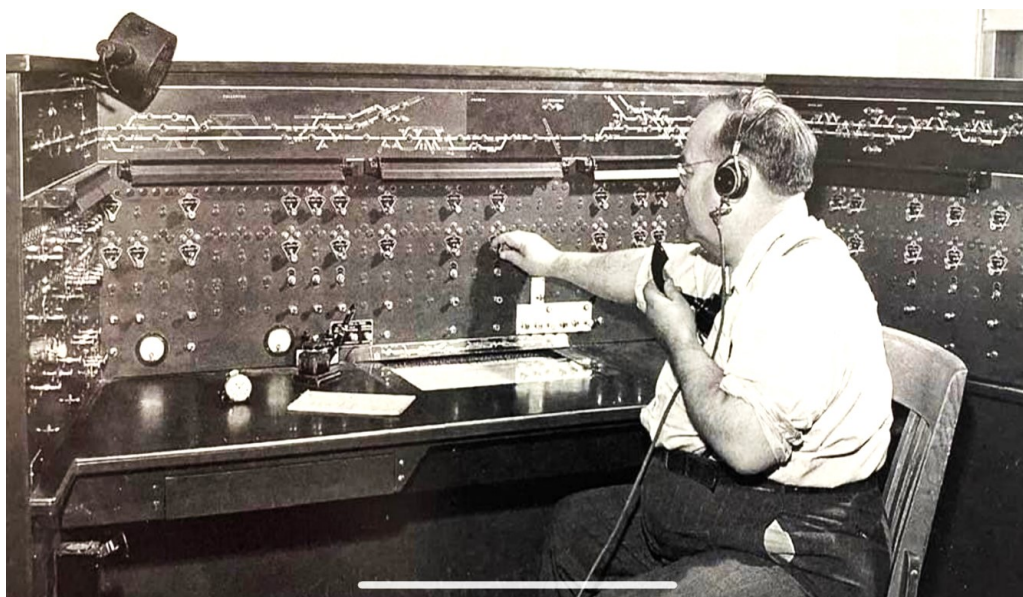
and increasing the track capacity so trains could be kept moving without delay. AT&SF forces planned and constructed the track improvements and centralized traffic control, with the Union Switch & Signal Company furnishing the major components of signaling equipment and CTC machines.

Centralization

After 15 years of dispatchers in both Fullerton and Oceanside handling traffic between Fullerton and San Diego, AT&SF consolidated its dispatchers into a centralized location in San Bernardino. The advancement of code lines, phone line improvements, and a philosophy of people and resources located in the same region became the norm. The Fullerton and Oceanside CTC machines were relocated in 1959. The concrete building in Oceanside that housed the dispatcher and CTC machine became the Special Agent and signal maintainers shack before demolition to make way for the Oceanside Transit Center we know today.

Under AT&SF control and ownership, the dispatching and CTC would again be moved to a centralized location in Schaumburg, Illinois, before the line was sold to NCTD in 1992. Under a joint use agreement between NCTD and SCRRA, Metrolink would assume the CTC and dispatching responsibilities from its operation center,

which was located in Glendale, California, just off the Coast Line on San Fernando Road (1992 to 2000). In the early 2000s, SCRRA relocated its dispatching and CTC to Pomona, California (2001 to 2012). In 2010, NCTD devised a plan to take the dispatching service and CTC in-house and took over the CTC and dispatching responsibilities in May 2012. Today, CTC is controlled out of the SPRINTER operations facility in Escondido.



In this view, we see an AT&SF Dispatcher at Fullerton – AT&SF Image

Signaling System - continued

Today on the Surflines

Today, the trains, tracks, sidings, signals, and switches are controlled via a CTC system known as Computer-Aided Dispatching (CAD). Today's system comprises integrated virtual servers and PC workstations with static and dynamic databases that reach the remote control points via fiber optic lines, 900 MHz data radios, and phone lines. Control Points (CP) are microprocessor-based vital logic controllers with LED signals and dual-controlled power-operated switches. The last AT&SF relay logic control point, CP Friar, was retired and updated to a vital logic controller in August 2014. Dispatchers are now located in Escondido at the Sprinter

Operation Facility for all CTC moves from CP SONGS to CP Ash. On the north end, CP SONGS to Fullerton Junction, SCRRA dispatches remotely from Pomona using the same technology and equipment as NCTD.

In closing, I hope you found this article informative and interesting. I was honored to serve as NCTD's Contracted Project Manager and Systems Integrator when the San Diego Subdivision dispatching and control was transferred from SCRRA to NCTD in 2012. On a gloomy Saturday night in May, we switched from Pomona to Escondido in just four hours.

Are you interested in signals? We would welcome the help and enthusiasm at the museum. Please reach out to me at brcrail@aol.com



Left: Richard Finch reports progress on the Jacumba cars. The first half of the new fascia boards are finish and the install of them and the drip edge is in progress.

Right: There is a new sign for the La Mesa Depot Museum.



Fundraising By Donna Spevack, Administrator of Fund Development - fundraising@psrm.org

What a hot summer it has been, but our great volunteers finished up the track work and the train is running again. Can't wait for fall and the Halloween Train-Watch for tickets to go on sale!

A Great year: Thank you so much for your generous donations to the Pacific Southwest Railway Museum's Restoration Fund. Your contributions have already made such an impact to our mission of preserving railway history and being able to share this history with you. We cannot thank you enough!

Donors for July/August: James Nys; Douglas Dunker; Manley Golson; Mark Wilson; R.J. Warner; Helen M. Ofield; Jackson M. O'Lexey; Alyssa Andersen; Ralph Swartwood; Howard Hickman; David Little; Gregory Tyree; Randall Duffett; Bruce L. Deck; Dennis R. Crile; Jacklyn Willford; Lourdes Gibson; Helen Lopez and Ashley Smith

An easy way to double your impact is through your employer, who may offer a matching gift program that can increase your gift! Matching gift programs are a form of corporate philanthropy where businesses match the donations their employees make to charitable organizations



Kyle Railways was the contract operator of the San Diego & Arizona Eastern Railway after the purchase of the line by the San Diego Metropolitan Transit Development Board (MTDB). MTDB is now known as Metropolitan Transit System (MTS), and continues to be the owner of the SD&AE Railway. Kyle Railways left town in 1984. This locomotive was a regular passing through Campo during the early years of the museum in Campo.