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SPECIAL EDITION NO. 15

TRAINS of the 1940s

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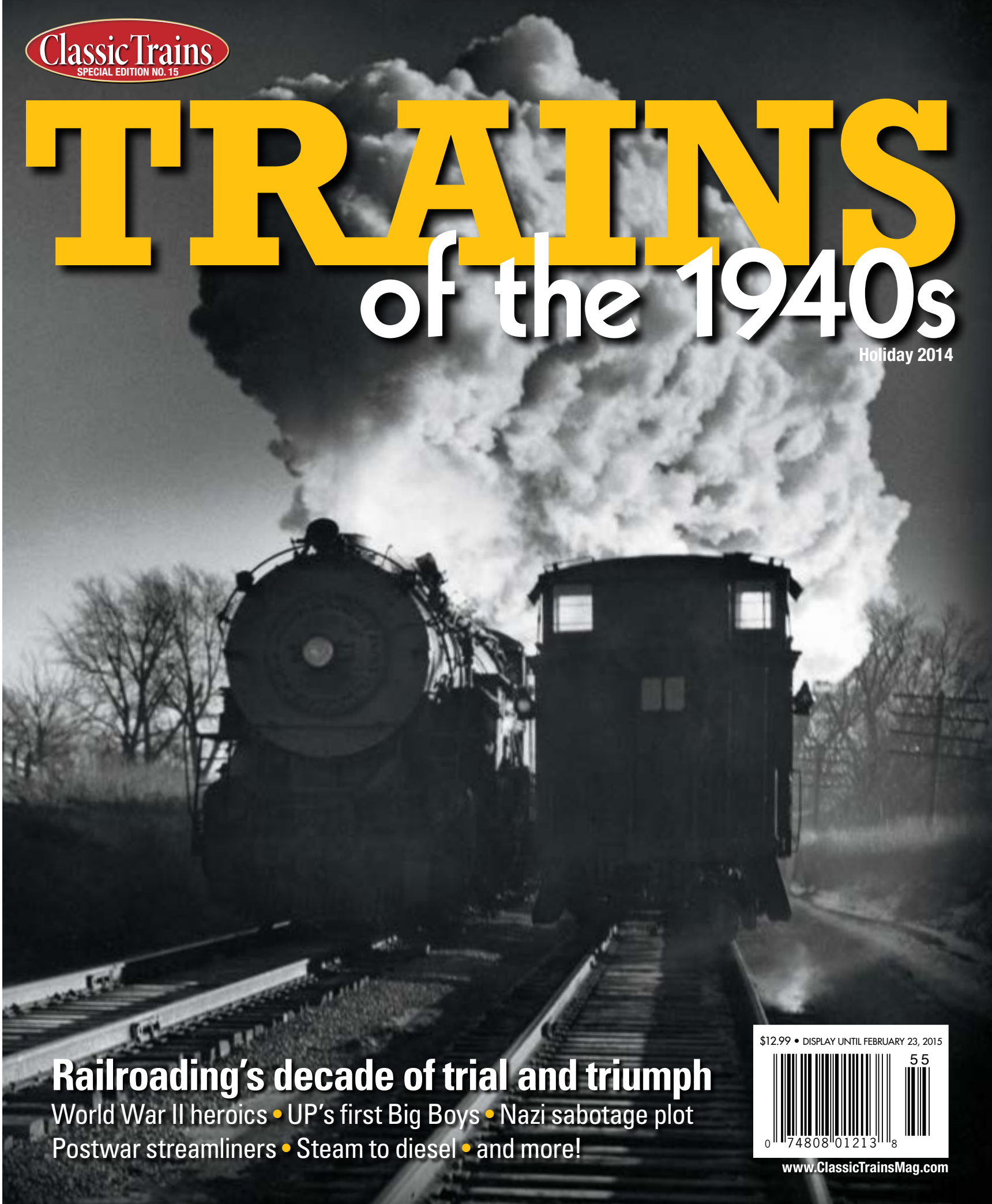

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TRAINS *of the 1940s* • CLASSIC TRAINS SPECIAL EDITION NO. 15

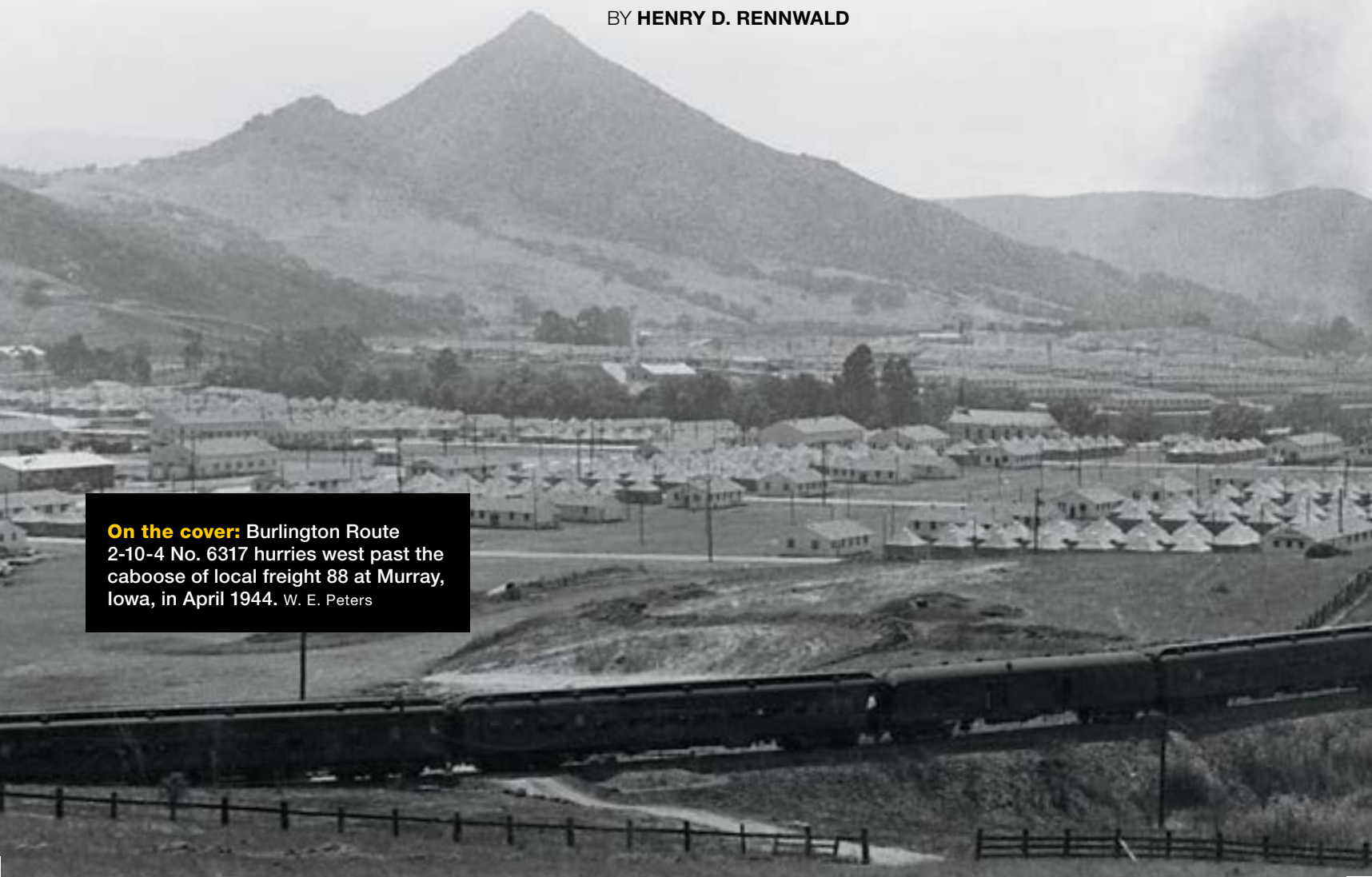
A Pennsylvania K4 Pacific rolls into the station at Fort Wayne, Ind., with the *Golden Arrow* for Chicago in October 1946, when travel was still heavy in the wake of World War II. Allen Bauer

TRAINS of the 1940s

Railroading's decade of trial and triumph

Edited by Robert S. McGonigal

Contents



On the cover: Burlington Route 2-10-4 No. 6317 hurries west past the caboose of local freight 88 at Murray, Iowa, in April 1944. W. E. Peters

A doubleheaded troop train passes the Army's Camp San Luis Obispo as it climbs Cuesta Grade on Southern Pacific's Los Angeles–San Francisco Coast Line sometime in the early 1940s. Southern Pacific

A time of trial and triumph

Welcome to Trains of the 1940s, Classic Trains' third decade-themed publication. Like its predecessors covering the 1950s and '60s, this edition is composed mostly of articles from Trains and Classic Trains magazines. The covers of the issues in which the stories were originally published appear at the start of each article. Most of these stories have been completely redesigned, with additional photos added, or with color photos in place of the original black-and-whites.

Like the nation as a whole, America's railroads were still recovering from the Great Depression when war came in 1941. Industry, including the railroads, had been lifted by U.S. aid to the Allies fighting Germany in Europe, but after Pearl Harbor, America was all-in. With a crushing load of traffic and restrictions on new-equipment acquisitions, the carriers curtailed or suspended dieselization, streamlining, and other initiatives not essential to the war effort. But they got the job done.

At mid-decade, the railroads joined a victorious nation in looking ahead to a new era of abundance. The carriers resumed their switch from steam to diesel — the industry's greatest technological change, before or since — with a vengeance. They bought thousands of sophisticated new passenger cars in hopes of retaining at least some of the millions of travelers they had gained during the war.

Alas, this optimism, particularly about passengers, proved false. But we recall with fondness a time when the railroads, having helped win the greatest war in history, faced the future with pride and confidence.

Robert S. McGonigal

TRAINS of the 1940s

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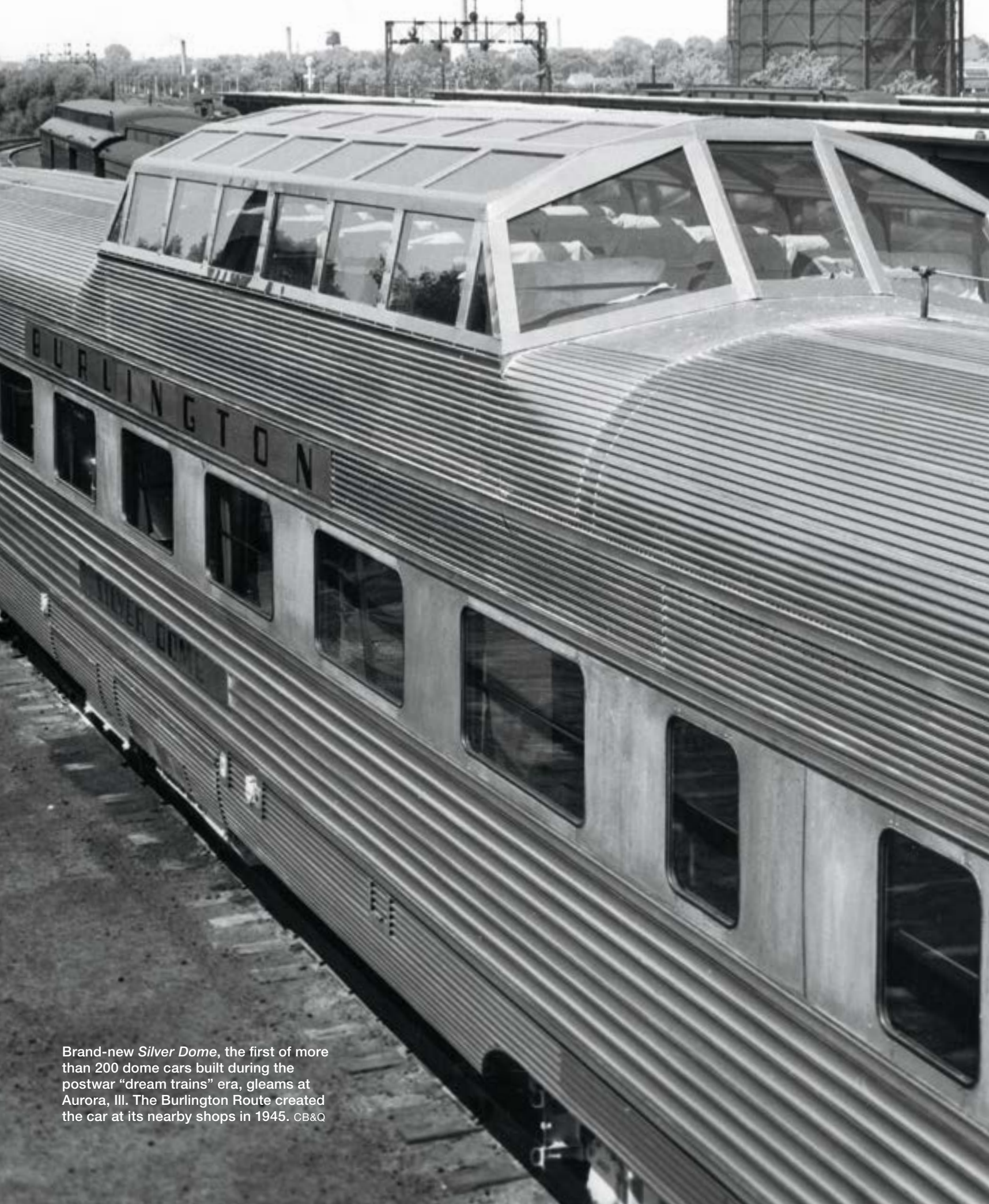
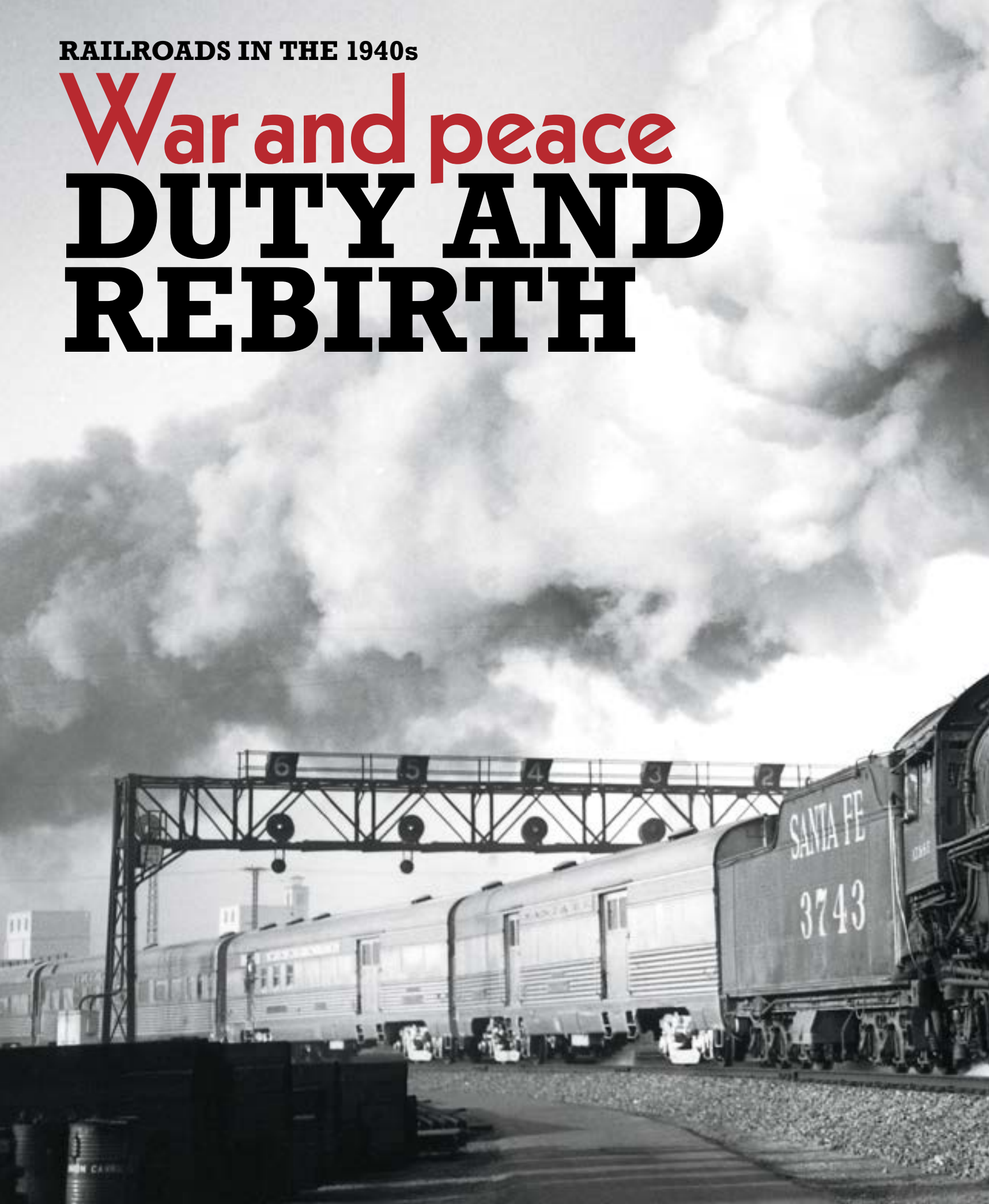


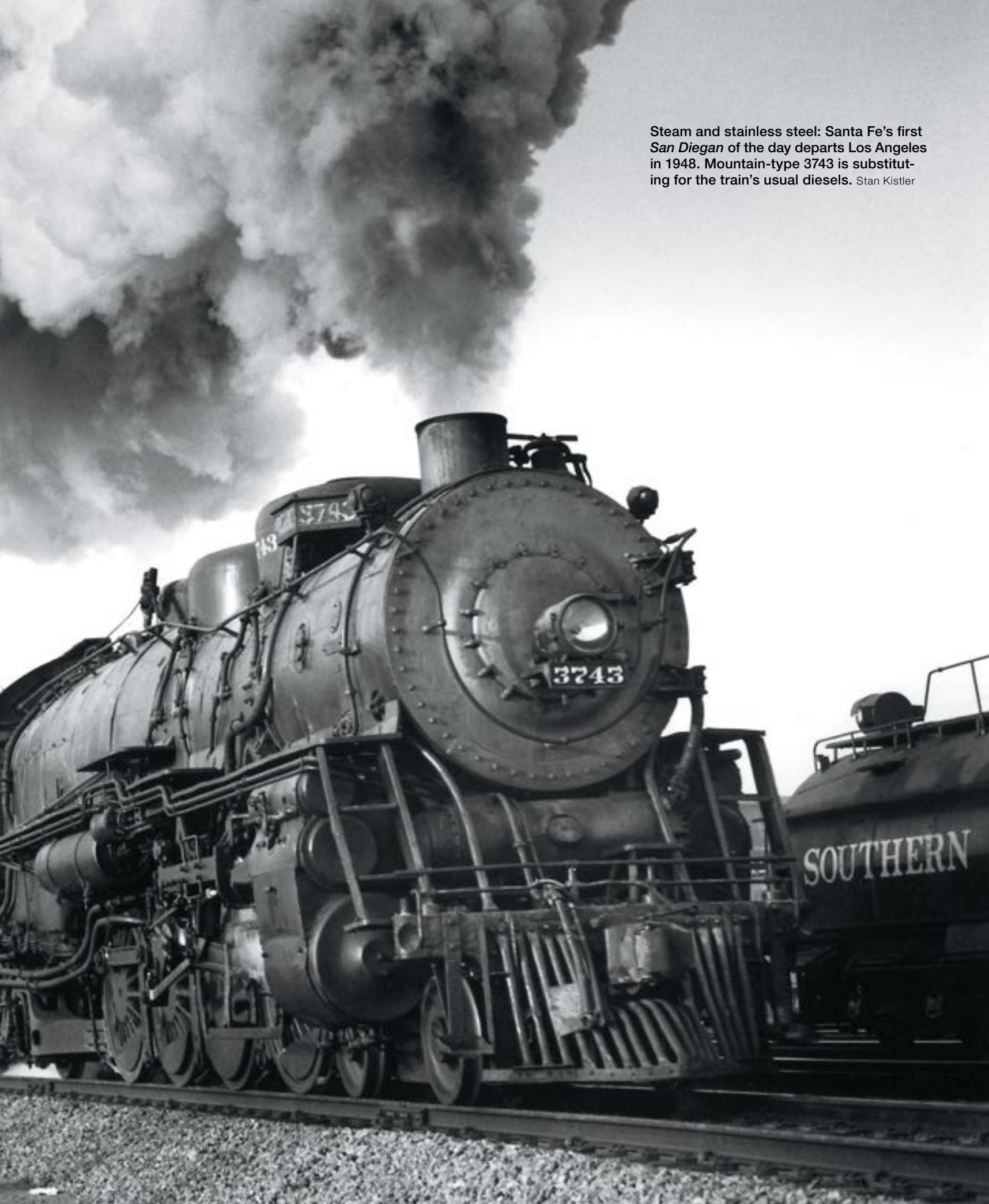
Brand-new *Silver Dome*, the first of more than 200 dome cars built during the postwar "dream trains" era, gleams at Aurora, Ill. The Burlington Route created the car at its nearby shops in 1945. CB&Q

RAILROADS IN THE 1940s

War and peace

DUTY AND REBIRTH





Steam and stainless steel: Santa Fe's first *San Diegan* of the day departs Los Angeles in 1948. Mountain-type 3743 is substituting for the train's usual diesels. Stan Kistler

After giving their all during World War II, the railroads looked ahead to a bright future of diesels and streamliners

BY **H. ROGER GRANT**

Railroads were the primary means of moving men and materiel within the U.S. during the war. Above, a freight conductor walks past a line of M3 Lee tanks at an unknown location. Below, soldiers transfer from a Nashville, Chattanooga & St. Louis train to trucks at Camp Forrest, near Tullahoma, Tenn., in 1942. Two photos, U.S. Army Signal Corps

Railroading in America during the 1940s hardly looked like railroading in the 1930s. "It has been either feast or famine," remarked an official of the Erie Railroad in 1944. "We've experienced that long depression when traffic fell, workers were furloughed and our company went bankrupt, and now every resource is being taxed to the limit. We're being forced to hire high-school lads and pull men out of retirement." And, he could not resist saying, "We're paying dividends on our common stock."

Following the surprise attack by the Japanese on Pearl Harbor, America's entry into World War II triggered a memorable decade for its steam carriers and remaining electric interurbans. The war years proved to be the finest hour of the railroad industry, when carriers responded to the unprecedented demands necessary to ensure victory against fascist forces in Asia and Europe. "Without transportation we could not fight at all," contended Joseph B. Eastman, director of the Office of Defense Transportation, in 1943; no one challenged his observation. Railroads, which remained privately owned and managed during the conflict, accomplished far more than most politicians and others expected, a sharp contrast to World War I when chaotic conditions forced Washington to federalize most steam roads and strategic interurbans under the United States Railroad Administration.

Because gasoline, tires, new equipment, and replacement parts were rationed, airline, bus, and truck companies could not maintain their prewar levels of service, let alone expand. Yet the railroads could. Between 1941 and 1944 railroads managed to carry 83 percent of the increase of all traffic, and they moved 91 percent of all military freight and

98 percent of all military personnel. Freight traffic, measured in ton-miles, soared from 373 billion in 1940 to 737 billion in 1944. It took the industry until 1966 — two decades of prosperity and population growth later — to surpass the latter figure. Passenger volume, expressed in revenue passenger-miles, skyrocketed from 23 billion in 1940 to 95 billion in 1944, a peak number never again attained. Individual companies commonly set all-time traffic records; for example, in that hectic year of 1944 the Southern Pacific experienced its highest average number of revenue freight tons per train and its highest average number of passengers per intercity train (326.7).

MAKING EVERY CAR COUNT

With the crush of wartime business, management realized that its job was no longer how to find new traffic but how to handle it. Carriers large and small sought to locate, refurbish, and build much-needed rolling stock. Unlike trucking and bus companies, railroads had surplus equipment standing idle because of slack business during the Great Depression. Take tank cars. Thousands were out of service, but because of German U-boat attacks against American shipping during the early part of the war, the flow of petroleum from Gulf Coast oil fields to refineries and tank farms along the eastern seaboard was disrupted, making every tank car needed, even those slated for the scrap heap. It would take time before major pipelines could be installed to help move this vital commodity.

The demand for additional passenger equipment also seemed universal, and the carriers returned to life thousands of unused and derelict cars. What occurred on the Georgia & Florida Railroad was not unusual. To manage troop extras and increased ridership, G&F shop forces in Douglas, Ga., scrambled to meet these pressing needs. In November 1942 a local newspaperman inspected the shops and chatted with the foreman. The facility hummed with activity.

"[D]uring the depression several cars were taken out of traffic, as they were in bad shape and unsafe to use. Now it is a different story. All cars are needed and more, so now [G&F] is pulling these old cars out and reworking them from the rails up." He continued. "But the marvel was an old coach that had been on the siding for years and looked like it was only fit for the junkman. Well, the G&F just put that coach in the work house, took the wheels from under it and put the workmen to rebuilding it, and when it came out it looked fit to run on the fast specials. Nine coats of the best paint available had been put on the outside. The inside had been cleaned of all old paint and varnished with the best of varnishes. The seats had all been rebuilt and electric lights installed." This was an impressive accomplishment for a woebegone road like the G&F.

Pennsylvania Railroad public timetables from 1943 (right) and '44 carried a message typical of the war years: military needs come first. Classic Trains collection

Whether moving tank or passenger cars, railroads required adequate motive power. Diesel-electric locomotives began to appear on flagship passenger trains during the mid-1930s, and in late 1939 the General Motors subsidiary Electro-Motive Corp. introduced the first truly successful freight diesel — the FT. This revolutionary replacement technology arrived just in time to help move war traffic on several roads. In October 1944, for example, the Erie took delivery of six 5,400 h.p. four-unit FT sets, and placed them on the rugged main line between Marion, Ohio, and Meadville, Pa.

Yet steam was hardly dead. Not only were older locomotives refurbished, but some new ones were purchased. Many were built to existing plans, as the War Production Board discouraged the development of new designs. For example, the Pennsylvania's J1 2-10-4s of 1942–44 were based on a 1930 Chesapeake & Ohio engine. The WPB rationed diesel production, too, so some roads that might have preferred to get FTs had to settle for new steam locomotives. For greatest flexibility of assignment, the WPB generally forbade the construction of purely passenger engines.

GREATER EFFICIENCY

Notwithstanding the critical need for more and better equipment, American railroads by the time of World War II had become much more efficient than they had been during the previous global conflict, and that enabled greater productivity. During the intervening two decades, average tractive effort of steam locomotives had grown by more than 50 percent; average freight car capacity had risen 22 percent; and average rail weight had increased by about 20 percent. Other betterments such as Centralized Traffic Control and electrification also had been made.

The human demands during the war were enormous. "Keep 'em rolling" became the battle cry of both labor and management throughout the 234,000-mile national network. It took more than companies hiring under-draft-age or military-exempted workers, asking employees not to retire, and encouraging retirees to return, but also bringing thousands of women into the workforce — the railroad equivalent of "Rosie the Riveter." Between July 1941 and July 1944, employment expanded 25 percent, from 1.3 million to 1.63 million.

No matter the individual or background, the war years meant long hours. "With the outbreak of war in the Pacific," recalled a Santa Fe trainmaster at Williams, Ariz., "what had been merely a hard job became a nightmare." In late 1942 journalist John Grover aptly described the situation: "Paperwork was multiplied as freight piles up and must be moved. The pressure on yard and roundhouse repair crews increases as equipment is speeded up and wears out. From the Big Guy worrying his brains out in the main office to the last gandy-dancer on the end of a pick on a branchline right of way, railroaders are working the hours its takes to move the freight that's got to move." He went on to

Workers at MP's Sedalia (Mo.) Shops line up in a "V for victory" formation in August 1942 in a ceremony in honor of the last of 25 Sedalia-built 4-8-4s. Missouri Pacific, Joe Collias coll.

B&O's 30 EM-1 2-8-8-4s might not have been built but for the war emergency. No. 7620 crests Newburg Grade in West Virginia with eastbound coal in 1948. William P. Price

relate a conversation between two Erie employees he'd heard in Marion, Ohio:

"Yay, Smitty, how y' doing? Playing the horses lately?"

"Playin' 'em, hell. I'm the horse. I've had only one day off since April."

"Ya big sissy. What's a day off? I don't remember."

The domestic economy failed to satisfy most blue-collar railroaders. Yes, workers did not have to worry about layoffs, and for many overtime employment became an option, even a requirement. A rise in the cost of living led to wage hikes during the early months of the war, but soon heightened inflation made matters worse, prompting operating personnel to call a strike for December 30, 1943. To guarantee uninterrupted railroad service the Roosevelt administration seized control of the carriers (largely in name only) until a settlement could be reached. An agreement came quickly, ending the government takeover. The carriers, though, did not receive from the Interstate Commerce Commission much of a rate boast to offset these raises. This wage issue flared up again after the war. In 1949 operating unions demanded a 40-hour week with 48 hours' pay and other concessions. It took months before workers agreed to a settlement orchestrated by a Presidential Emergency Board.

INDIAN SUMMER

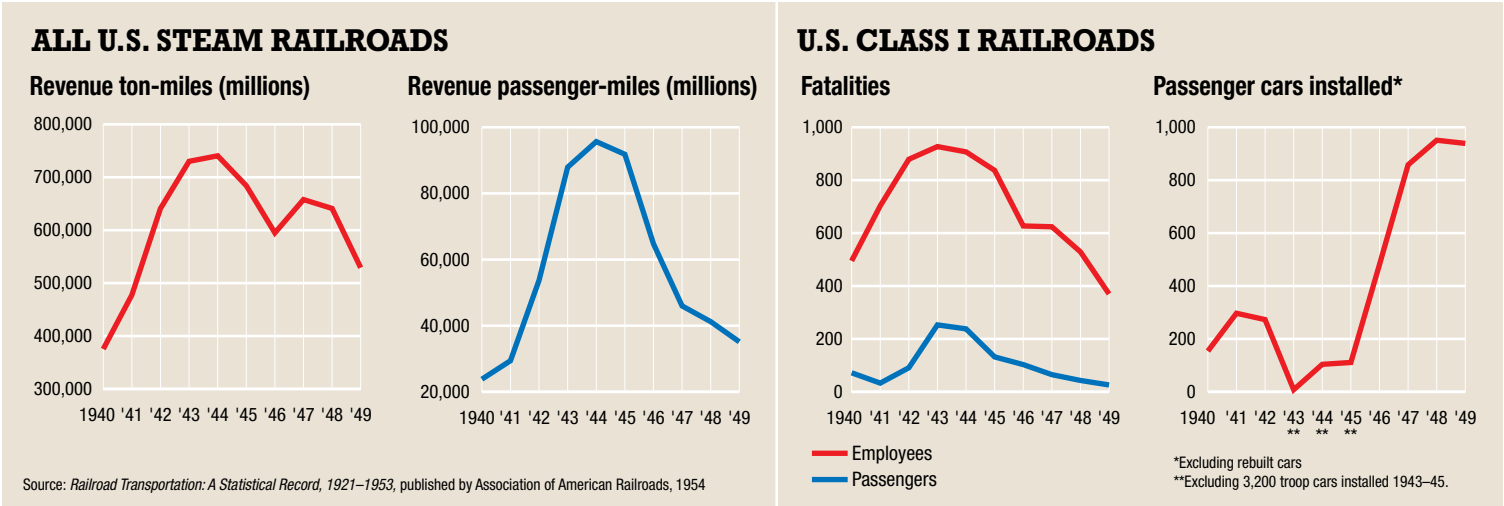
Americans realized that their railroads had done much to make victory possible. Yet passengers often had unhappy memories of their wartime rail journeys. The Office of Defense Transportation, a less cumbersome and far-reaching bureaucracy than the U.S. Railroad Administration of World War I, encouraged civilians not to travel, and toward the end of the war restricted the use of Pullmans for trips of less than 500 miles.

Those who did travel found trains that lacked their peacetime glamor. Coaches, diners, and sleepers were usually crowded and services restricted, including the availability of meals. "During the war our passenger trains were filled to overflowing," recalled a Santa Fe official. "Everyone, it seemed, was on the move, especially the servicemen. Their wives and children traipsed back and forth across the country trying to keep up with them. I saw many women with tiny babies stand in a vestibule, or sit on a suitcase, from Chicago to Los Angeles." For that privilege civilian passengers paid a 15 percent excise tax on their tickets.

The war years for many Americans meant the ubiquitous troop train. During the 45 months of conflict, the railroads handled more than 113,000 special troop trains and transported 43.7 million members of the military. These may not have been pleasant experiences — meals of franks and canned peas hardly ranked as epicurean delights, and a peaceful night's rest was not likely with two servicemen squeezed into every lower berth. Perhaps these less-than-desirable accommodations planted the seeds of the eventual demise of privately operated passenger trains. Said one railroad officer shortly after the war, "I believe for many GIs that being herded onboard troop trains during the war convinced them that they never again would travel by rail." Others agreed.

Railroads were nevertheless optimistic about their future, anticipating a prosperous peace. Notwithstanding burdensome state and federal regulation, although with modest concessions provided in the Transportation Act of 1940, the industry entered what might be considered an "Indian Summer" before

Electro-Motive FTs—miracle machines of the early 1940s—stand at the Rio Grande's Denver engine terminal in February '48. R. H. Kindig



Rail traffic—and fatalities—increased during World War II, after which the carriers spent big on passenger cars. Classic Trains: Rick Johnson

suffering from intense modal competition and other problems.

Even before victory on the battlefield, the Association of American Railroads expressed positive expectations. In a widely distributed advertisement, "There's a Great Day Coming!," this trade group said in part, "Yes, the war will be over. But our work won't. We will have many things to do — for [servicemen], for you, for the finer future we're fighting for — and it is our aim to do them. You want, and we want to give you, finer cars, better roadbeds, faster, more modern motive power to replace the hard-working equipment now rapidly wearing out under war's double load." Concluded the AAR, "The big thing is that the great day that's coming can be more than a day of victorious reunion. For him you are waiting to welcome home — for you who have been so patient with war-imposed travel limitations — we intend to do our share in making it just such a day."

The poster child for the "great day" of the future was the diesel-powered streamliner.

Symbols of postwar optimism: The *Freedom Train* (left), drawn by a new Alco PA, toured the 48 states with historic documents and artifacts during 1947–48. The Chicago Railroad Fair of 1948–49 was a celebration of railroading that included modern equipment displays and a pageant featuring a reenactment of the Golden Spike ceremony. Left: Bob Milner; right, B. L. Stone, Krambles-Peterson Archive

The dome car was *the* postwar passenger-train innovation, and the *California Zephyr*, launched in 1949 (here in the Rockies), was the greatest of all dome trains. Gordon Odegard

Company after company sought the latest motive power and rolling stock, and each was willing to spend handsomely to regain passenger traffic lost to the highways and to create new business. The Santa Fe, for one, in 1946–47 reequipped its *Super Chief* that sped between Chicago and Los Angeles. The Burlington ordered two *Twin Zephyr* equipment sets that allowed these trains to trumpet the first Vista-Dome cars, giving passengers spectacular views of the upper Mississippi River valley. The dome car became an instant hit, and the company immediately ordered 40 more for its fleet of *Zephyrs*. When in 1949 the Burlington introduced its *California Zephyr*, which rolled between Chicago and Oakland in conjunction with the Rio Grande and Western Pacific, each trainset contained at least five dome cars. After all, this *Zephyr* was aimed at scenery-seeking vacationers.

Near war's end, the New York Central signed contracts for more than 700 pieces of passenger equipment from the nation's principal builders: American Car & Foundry, Budd, and Pullman-Standard. NYC also accepted its first passenger diesels, E7A units from EMD. With the latest equipment, the Central's signature train, the *20th Century Limited*, restored its 16-hour running time between New York and Chicago, and then in early 1947 cut it to 15½ hours. NYC and its chief competitor, the Pennsylvania, participated in the proliferation of through transcontinental sleepers that began in 1946.

While lesser Class I roads like the Chicago Great Western rarely joined the postwar rush to add state-of-the-art passenger trains, they almost universally dieselized their passenger operations as quickly as possible while modernizing their existing car fleets. This was also the decade when the Rail Diesel Car (RDC) made its debut. Remarked TRAINS editor David P. Morgan in 1949: "The Budd Company has welded together the doodlebug idea and the streamliner technique into a modernized version of the rail-motor car, christened the RDC-1." Later additional RDC types became popular for local and commuter service.

To facilitate faster and safer freight and passenger trains, major carriers upgraded their signaling and communications systems. In the 1940s Centralized Traffic Control was greatly expanded, allowing a single track to carry 70 percent of the traffic of a conventional double-track line. Such upgrades permitted conversions of double-track routes to less costly single-track arteries. Although railroads continued to use their telegraphic equipment, telephone usage increased, including installation of thousands of miles of carrier telephone wires. Companies also began to install radio-telephones in yard offices, locomotives, and cabooses, a harbinger of the communications revolution that swept the industry after mid-century.

CENTENNIAL CELEBRATIONS

During the immediate postwar era nearly all Class I railroads were free from bank-

ruptcy courts and had money in the till. They were in the mood to finance centennial and related celebrations. The most popular of these events occurred in Chicago, spearheaded by the Chicago & North Western, whose earliest predecessor had turned its first wheel in 1848. On a mile-long strip along Lake Michigan, 35 railroads and the Pullman Company joined with the North Western to sponsor the Chicago Railroad Fair in the summers of 1948 and '49. This extravaganza, with its equipment displays and daily "Wheels a-Rolling" pageant, attracted more than 2.5 million visitors the first year and more the second year.

Americans certainly were train-conscious during the time of the Chicago Railroad Fair. Even if they did not attend that Windy City gala or ride a diesel-powered streamliner, perhaps they witnessed the excitement of a presidential campaign special. In the months before the 1948 election, Democratic and Republican nominees Harry Truman and Thomas Dewey "whistle-stopped" extensively.

As the presidential election specials of 1948 crisscrossed America, rail enthusiasts, who earlier had been limited by their own military obligations or employment demands and hampered by wartime security and the shortage of photographic equipment, especially film, appeared at trackside to capture these historic events. And throughout the postwar years railfans snapped countless photos of new freight and passenger diesels and the always photogenic streamliners. As diesels increasingly replaced steam locomotives, and narrow gauges and other flavorful operations succumbed to progress, many fans documented the passing of the old order.

Although the diesel revolution was in full progress, the Super-Power era of steam continued. Said one confident manufacturer: "Steam [will be] the dominating power for railroad transportation for a long, long time to come." A fine representative of the last surge of replacement steam power was the 2-6-6-6 Allegheny-type that the Chesapeake & Ohio began to acquire from Lima Locomotive Works in 1942, eventually amassing a fleet of 60. The Pennsylvania, with Baldwin's encouragement, became enamored of rigid-frame duplex drives, acquiring 52 class T1 4-4-4-4 duplex-drive passenger engines and 27 freight duplexes between 1942 and '46. Complex machines that arrived just as the PRR was committing to dieselization, the duplexes led short lives. C&O and PRR, both major coal-haulers, also tried steam-turbine locomotives in the 1940s, with spectacularly unsuccessful results.

Other roads stuck with steam of more conventional designs. They could be found hauling coal out of the Pocahontas region of West Virginia, pulling fast freights in the Midwest, and handling heavy ore trains from the Mesabi Range to Lake Superior. And a wide range of short lines continued to rely on steam. Yet the end of the Age of Steam was widely expected. Alco built its last steam locomotive in 1948; Baldwin ended production for the American market in 1949, and also that year Lima became the final domestic company to produce a steam locomotive commercially. The last holdout, Norfolk & Western, kept building its own steam power until 1953.

After the war, railroads advertised heavily to fill their new passenger trains, as seen in these PRR timetables from 1946 (above) and '48. Classic Trains collection

CHANGES ALL AROUND

Not only would trackside observers experience the old and new on railroads, they would begin to see changes along the railroad corridor. With roads becoming dieselized, water and coaling structures began to disappear, and customized diesel facilities led to the abandonment or removal of roundhouses. Some small-town depots also vanished as companies won permission to end agency service or to retire trackage. Those depots that were replaced were usually highly functional and often of cinder block construction. A few urban depots appeared; in Ohio, Akron and Toledo by 1950 received utilitarian union stations, labeled "inept" in their styling by architectural historian Carroll Meeks.

Thousands of depots were still needed. Since approximately one out of two American households did not own an automobile, trains still found passengers, and these runs also handled the U.S. mails and Railway Express Agency shipments. Carriers found to their dismay that they lacked the regulatory freedom to eliminate these often uneconomical runs.

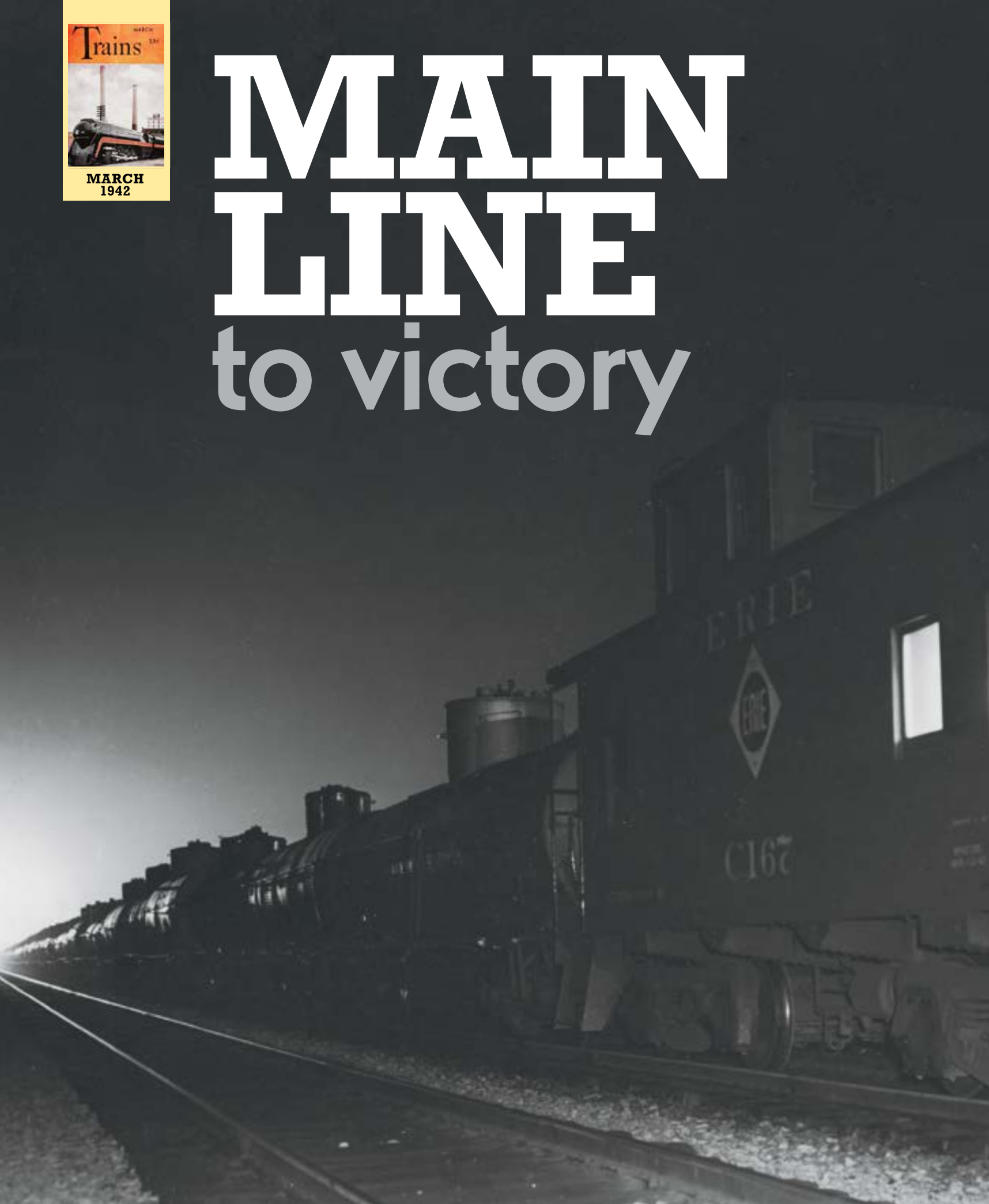
As the first half of the 20th century ended, railroaders could look back at a decade of patriotic and modernization achievements. A brave new world seemed beckoning and was nicely represented by the determination of certain railroads to meet anticipated needs for long-distance passenger trains. But their optimism was in some ways misplaced. As Jervis Langdon Jr., who later served as president of the B&O, Rock Island, and Penn Central, reflected in the 1980s, "We [railroads] did our part to defeat our enemies between 1941 and 1945 and to respond to needs for freight and passenger transportation in the postwar era. What many of us thought would happen in the ensuring years at times just did not happen. We'd have to wait until a more understanding government gave us the opportunities that we so badly needed and had so long wanted."

Probably most railroad executives during the 1940s misunderstand what was happening in domestic transportation. Most of all, they failed to grasp that their fellow countrymen had resumed their love affair with automobiles, had the financial wherewithal to acquire them, and would have better roads to enjoy them. ■

H. ROGER GRANT is a professor of history at South Carolina's Clemson University. He has written or edited 30 books, mostly about railroads, and has had six articles in Classic Trains publications. Grant is president of the Lexington Group in Transportation History.

MARCH
1942

MAIN LINE to victory



Quietly, railroads are doing vital war work in moving men and materiel to the Pacific coast

BY **VICTOR H. WHITE**

WAR! Japanese attack Pearl Harbor! Seize Thailand! Land in Philippines! American flier sinks battleship *Haruna*! Churchill arrives in Washington, confers with Roosevelt!

These are recent headlines. History and heroes are being made and our people are saying, "America was unprepared for this treachery, but when she gets rolling …"

Our citizens were talking like this that final week in 1941 when the Japanese were landing in increasing numbers preparatory to the attack on the Philippine capital of Manila. They are even now saying hopefully, "If we can hold Singapore, if we can get help to the Dutch East Indies, to Australia, soon enough …"

Our own citizens do not realize how America is already rolling, rolling as she has never rolled before.

Although no headlines announce it, cruisers and destroyers that wait today in the shadow of the great San Francisco-Oakland Bay Bridge will be gone tomorrow, convoying men, guns, and tanks — a complete and fully mechanized army already in motion across the broad Pacific before we ourselves seem to realize it can be done.

And how is it being done? The American railroads were ready for this emergency.

On the evening of December 28, 1941, I stood on the rainswept steps of a passenger station in a railroad division town of 45,000 population and talked with a man who had charge of locomotive maintenance for the Union Pacific. He was strongly built, a clear-eyed fellow of perhaps 45. He had just come off duty and he smiled when I asked, "How've you been able to do it?"

"Do what?" he grinned evasively.

"Put so many trains through to the Coast," I said bluntly.

"Have there been quite a few?" He smiled and would say nothing more on this secretive subject except, "Every one of us railroad men feels he's in this war as much as the boys in uniform. All we can do to help those boys through with proper equipment won't be half enough."

"You'll never get the credit you'll deserve," I suggested. "If we do save Singapore and Australia or even keep submarines or worse away from our West Coast, it'll be the railroads that made it possible. It wouldn't be easy to make the people realize that."

I went on to bet him that no other nation could move half as many men and as much equipment half the distance in twice the time.

The railroad man said, "To hell with any credit for it. A soldier's business is fighting. My business is moving trains. Whatever your business is, you do it the best you

The railroads helped the war effort in a thousand ways. When German submarines menaced Atlantic Coast shipping, oil from the Southwest bound for East Coast refineries took to the rails in solid tank car trains. Erie

Army half-tracks are loaded onto flatcars at an unidentified location during World War II. This image is from the 1943 Office of War Information film *Troop Train*, a 10-minute short depicting the movement of an armored division to the West Coast. Classic Trains coll.

can. And that's all there is to it." Then he walked off in the rain.

This report is being penciled on scratch paper in a San Francisco hotel on December 31, 1941. By the time it reaches print what is happening will no longer be a military secret. Gen. Douglas MacArthur is fighting desperately in the Philippines; Singapore is menaced; the Dutch East Indies lie in the path of conquest. What is being done by the railroads at this moment might not be recorded if I failed to do it now.

Heroes are struggling in rain, sleet, and snow this New Year's Eve in America as well as in the heat of Malaya and in the Philippines, on every mile of the Southern Pacific, Santa Fe, and Western Pacific that feed into San Francisco. They are laboring along every other mile of railroad in the country.

A soldier, with full war kit and fixed bayonet, stands lonely vigil night and day at every tunnel, at every bridge. The wind shrieks around him. Ice and snow drive against him. There is no excitement for him, little glory. In many a location it is a real hero's job.

And trains move. How they move!

Let us take the short stretch of track down Cajon Pass between Barstow and San Bernardino, Calif., used jointly by Union Pacific and Santa Fe. Here is 81 miles of vital double track that is normally one of the busiest stretches of hazardous mountain railroad in the western United States. Westbound the track dips toward the coast on as much as a 3 percent grade.

My information is off the record, entirely unofficial. There have been no war department communiques on the matter and never will be. But the railroads brought as many as 22 troop trains in one day down that treacherous Cajon grade. And this in addition to handling regular freight and passenger service efficiently.

A train of 18 passenger cars (overweight in any railroad man's language) sparked and squealed into San Bernardino headed by a single, monstrous freight engine. (I had no time to check type and numbers.) The car wheels had literally been burning up. Fourteen red-hot brakeshoes were replaced, and the train moved on. One car came in with four-inch flat spots on its wheels, was jerked onto a side track in no time at all, and the troops rolled on.

These trains carried cars from railroads

Part of the Army's 35th Division boards a troop train in preparation for leaving Camp Robinson, Ark., on December 18, 1941, 11 days after Pearl Harbor. U.S. Army Signal Corps

all over the country. There were a few wooden coaches. There were hundreds of Pullmans. And there were cars still lighted with oil. All of these and more might finally be coupled behind an SP engine that had recently helped boost the *Noon Daylight* over the Coast Range, perhaps within sight of Japanese submarines in the Pacific beyond SP's Coast Line tracks.

Trains moved. How they moved!

I asked a ticket agent I know how the dispatchers were holding out on his division. "They're going crazy," he admitted. "We carried one out night before last. He collapsed at his desk; nervous strain too great."

"Any wrecks?" I asked. "Confidentially, of course?"

He grinned. "Pig-headed hogger ran into a sidetracked freight engine in one of the yards; nothing serious."

Nowhere could I find record of an accident, not the loss of one life, or even an injury.

From the windows of Southern Pacific's *Morning Daylight*, a streamliner that cost a million dollars and makes the 470 miles from San Francisco to Los Angeles in 9½ hours, I saw special crews combatting treacherous clay cliffs that had been loosened in a rainstorm. In places the tracks had been nearly washed out. On another stretch a slide had been cleared almost in a matter of minutes. Everywhere men were deepening ditches to carry off floodwaters. They were digging small relief trenches to stop any possible trickle of water starting across the right of way between the ties. They were not trusting to any luck in keeping this vital defense unit entirely open 24 hours of every vital day.

The *Daylight* carries a special passenger agent who makes announcements from time to time through this ultra-modern train's public address system. As we left San Francisco he informed us that the train would likely arrive somewhat late in Los Angeles. "Our government's needs at this time," he said, "must come first. Some of our trains are temporarily canceled. Traffic is exceedingly heavy. This condition necessarily makes some delay unavoidable."

The train's reserved seats were practically all filled. It carried extra coaches. But it arrived in Los Angeles only an hour and 15 minutes late. Our return train five days later was a half hour late into San Francisco. Three days later, with better weather and the greatest rush of troop movements already behind them, trains were on time again. But from sunset to sunrise all trains on the West Coast run with drawn blinds and blue vestibule lights in deference to blackout regulations.

Southern Pacific did cancel some passenger trains to relieve congestion, and it likely canceled some because it needed the engines. I believe every engine that could efficiently pull or push or boost or shove was pressed into active service.

I don't pretend to know where our navy is, but perhaps by the time this is printed it will be no secret that where steel rails ended at tidewater, great ships took over — transports, convoys, warships — disappearing seaward in the red glow of winter sunset westward beyond the Golden Gate bound for a great adventure.

It will go on and on. A continuously increasing flow of men and guns and tanks and planes. Already the flood backs up inland. At division points, in public parks sheltered beneath innocent-appearing groves of shade trees, our reserves pile up in ever-increasing readiness for the journey over the sea. Supplies to Australia, to the Dutch East Indies, to Malaya, and to our great new base in Eritrea. Also to Russia, to Britain, to North Africa, to Singapore.

The click of steel rails that every railfan loves so well becomes suddenly the very

Few railroaders would talk on the record or say anything of substance, but a ride on SP's *Daylight* along the California coast gave author White a first-hand look at a busy line, including fast and furious repair efforts. Classic Trains collection

pulse beat of a nation's lifeblood: men, guns, supplies. America rolling, rolling, rolling.

It is secret work now. Our quick efficiency must strike the enemy with the sudden force of complete surprise. But when it has soon become an old story, every railroad man, every American, must feel a little thrill of pride in the quiet, efficient, businesslike way it was done.

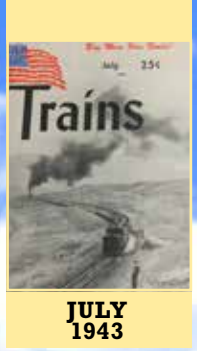
I can think of no better conclusion than to quote from a notice recently displayed in many of the railroad passenger stations throughout the country:

"In all the world no job is being better done today than by the American railroads." *— Hon. Clarence F. Lea, Chairman of Committee on Interstate and Foreign Commerce, House of Representatives.*

VICTOR H. WHITE wrote numerous adventure stories published in magazines such as True West. *He contributed half a dozen articles to* Trains *between 1941 and 1952.*

Centralized Traffic Control was a blessing for some western roads, whose single-track main lines could not have coped with war traffic without the new technology. Here a dispatcher works the CTC panel for UP's Las Vegas–Yermo line during the war. Union Pacific

Stuart tanks and crated loads on flatcars tell of the herculean effort of American industries, including railroads, to mount the war effort. Largely unrecognized at the time, U.S. railroads' contribution would mean victory for the nation and its allies. Classic Trains coll.



JULY
1943

Union Pacific's BIG BOYS

Giant 4-8-8-4s are at work in Wyoming and Utah

An early color publicity photo shows new Big Boy 4015 climbing UP's Wahsatch grade near Emory, Utah. Delivered in 1941, the first 20 4000s arrived just in time to help with heavy war traffic. Union Pacific

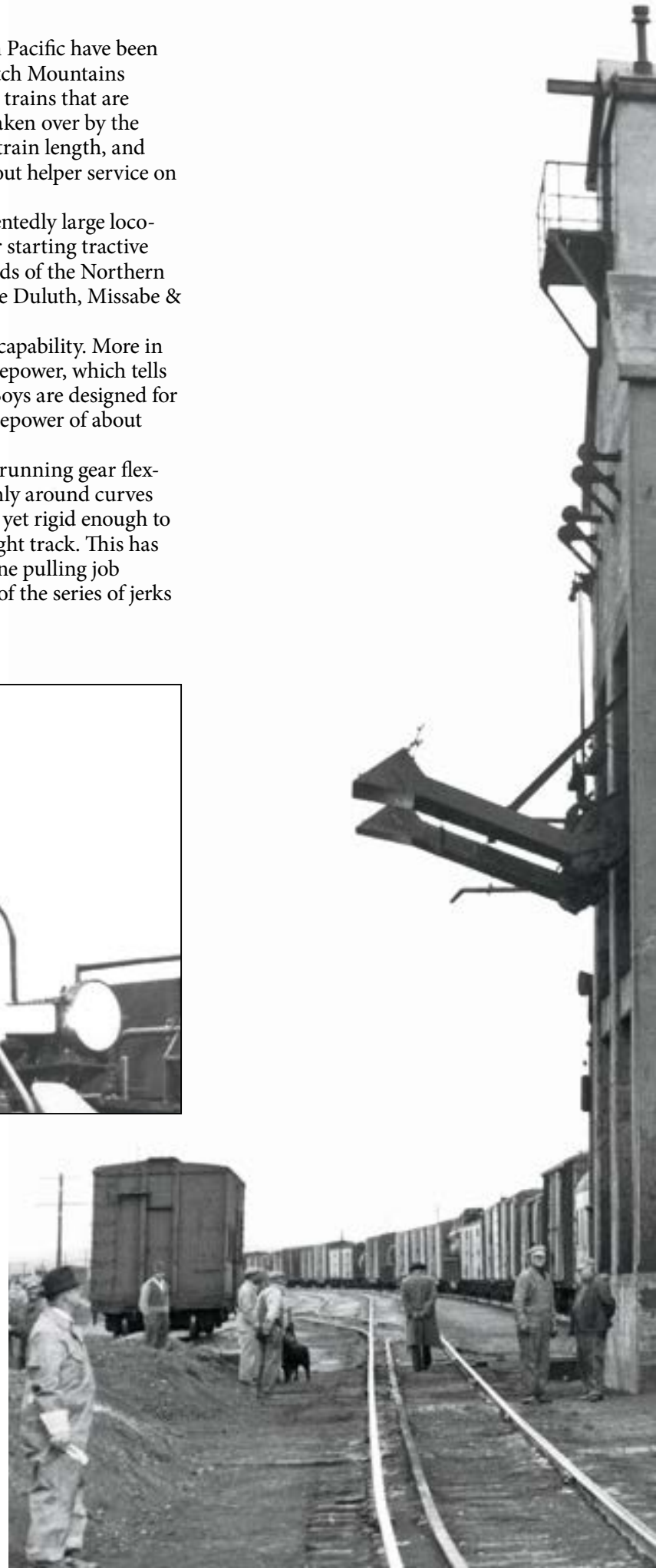
For more than a year the 20 "Big Boys" of the Union Pacific have been pulling unbroken full-length freight trains over the critical Wasatch Mountains crossing between Green River, Wyo., and Ogden, Utah. The same trains that are hauled by lighter engines on other portions of the road are now taken over by the 4000-series 4-8-8-4s without expensive switching and cutting of train length, and these world's most powerful steam locomotives do the trick without helper service on the 1.14 percent grades.

It was in fall 1941 that the UP took delivery of these unprecedentedly large locomotives. In absolute pulling power, they are not quite No. 1. Their starting tractive effort, 135,375 pounds, is surpassed not only by the 140,000 pounds of the Northern Pacific 2-8-8-4 Yellowstone type, but by the 140,000 pounds of the Duluth, Missabe & Iron Range 2-8-8-4.

But tractive effort is old-fashioned as a measure of locomotive capability. More in accord with present-day operating practice is the measure of horsepower, which tells how much work can be done within a limit of time. The UP Big Boys are designed for a maximum speed of 80 mph, and they develop a maximum horsepower of about 7,000 at 70 mph.

The major problem in designing the 4-8-8-4s was to provide a running gear flexible enough to take the immense length of the locomotive smoothly around curves and over vertical curves (at the beginning and end of grades) and yet rigid enough to keep the locomotive from nosing when running at speed on straight track. This has been done so successfully that the 4000s not only are doing the fine pulling job expected of them, but ride around curves with complete absence of the series of jerks characteristic of many steam locomotives. ■

The 4-8-8-4s' nickname was set when an anonymous Alco employee chalked Big Boy (with the "Y" forming part of a victory "V") on the unpainted smokebox of No. 4000. Trains' editors at the time thought the name undignified, and suggested "Champ" in recognition of the engines' superlative statistics and rank on UP's roster relative to the smaller 4-6-6-4 Challengers.



On September 1, 1941, during its first trip west, No. 4000 attracts the attention of railroaders during a water stop at Hanna, Wyo., 77 miles west of Laramie. None of the men could know that the 4000s would have only an 18-year career, and that in 2014 work would begin to restore one to service. Two photos, Union Pacific


X4000
4000

WINTER 2001

HITLER'S rail-wreckers

Some of America's great railroad landmarks were prime targets in a daring Nazi sabotage plot conceived by the Fuehrer himself

BY **PETER A. HANSEN**

America's war was barely six months old. Lieutenant Commander Hans-Heinz Linder brought the U-202 to the surface off Long Island, shot the sun to determine his position, and slipped beneath the waves again. He was 20 miles south of Amagansett — almost exactly where he thought he should be. Thick fog had followed him down the coast from Nova Scotia, so he had navigated by dead reckoning for two days.

Linder waited for darkness. His unusual mission was almost accomplished, but for four passengers aboard his submarine, it was just beginning. Graduates of a Nazi sabotage school near Berlin, these men were the vanguard of what Hitler hoped would be a small army of hell-raisers, sent to wreak havoc on America's war-making capacity and morale. Their targets included power plants, aluminum factories, Jewish-owned department stores — and railroad installations such as Hell Gate Bridge and Horseshoe Curve.

Shortly after midnight on June 13, 1942, Linder nudged his boat as close to the beach as he dared. Scraping the bottom about 50 yards from shore, he opened the hatch and looked around. The fog had descended again, and to his relief, he couldn't even see the beach. Two sailors emerged next, then the passengers. Using a rubber raft, the sailors

A photo taken at the submarine pens at Brest, France (right), shows U-584, one of two U-boats that brought to U.S. shores the eight German saboteurs, pictured below. U-584: Bundesarchiv Bild 101 II/MW 4906/6A; mug shots: National Archives & Records Admin.


George John Dasch


Ernest Peter Burger


Richard Quirin

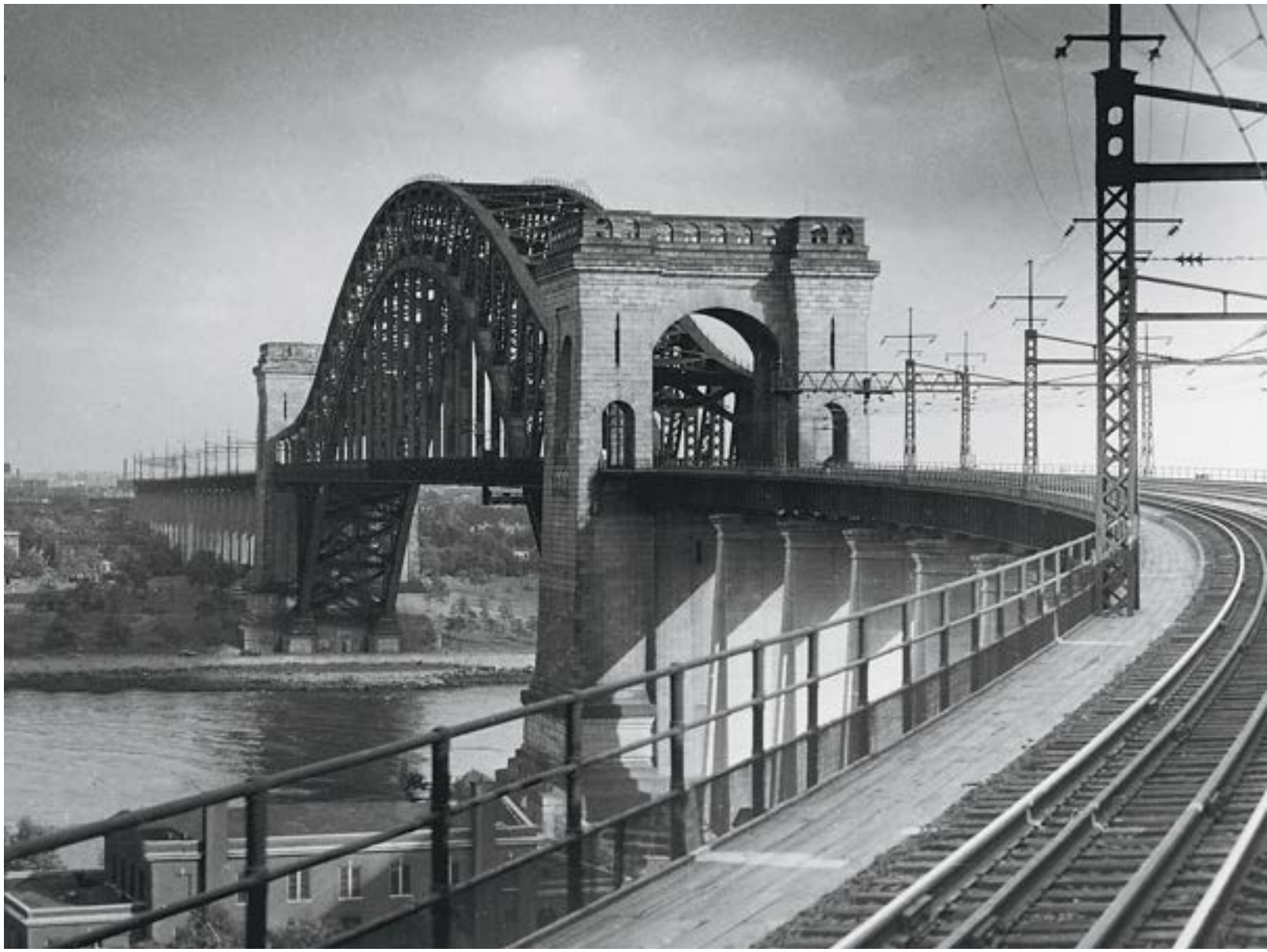

Heinrich Harm Heinck

Edward Kerling

Werner Thiel

Hermann Otto Neubauer

Herbert Hans Haupt



helped the others ashore, along with four wooden crates, each about twice the size of a shoebox. The crates contained fuses, timing devices, and TNT — some of it disguised as lumps of coal, suitable for causing explosions in locomotive fireboxes.

Confident they hadn't been seen, the group's leader, George John Dasch, ordered his men to bury the crates; they would return for them later. The sailors scurried back to the submarine, eager to leave enemy soil. Dasch and his men were most vulnerable to capture while landing, so they wore German naval uniforms, knowing they wouldn't be executed if they posed as combatants. Now, believing the worst was over, they began changing into civilian clothes and burying their uniforms with the crates. They were still changing when a man with a flashlight appeared over the dunes; he was John Cullen, Seaman 2nd Class, U.S. Coast Guard — unarmed, and alone.

AMERICA'S INDISPENSABLE CONVEYOR BELT

Horseshoe Curve and Hell Gate Bridge weren't their only rail targets. Also on the list: Pennsylvania Station in Newark, N.J.; unspecified targets on the Chesapeake & Ohio; Cascade Tunnel on Great Northern's home stretch into Seattle; and the Pennsylvania Railroad's tunnels at Gallitzin, Pa., just up the hill from Horseshoe.

The Nazis had good reason to target American railroads, and the PRR in particular. Much has been written about World War II on the home front, of victory gardens and shared sacrifice and Rosie the Riveter. But for all the attention justifiably accorded those subjects, little has been written about the wartime role of the railroads.

Quite simply, the war couldn't have been won without them. In the Arsenal of Democracy, they were the indispensable conveyor belt. The mills and factories of a thousand Pittsburghs would have been useless without a way to transport their raw materials and output. Even before 1941, railroads were the biggest players in American transportation, but the war made them bigger still. Gasoline and rubber were strictly rationed, thus curtailing highway travel, and fears of U-boats in coastal waters kept most tankers in port, forcing Texas crude onto the rails for the trip to East Coast refineries.

The numbers are astonishing. More than 95 percent of all the freight, 90 percent of passengers, and 97 percent of military personnel moved by rail during the war. In the peak year of 1944, some 737 billion ton-miles of freight moved on America's railroads — a per capita level only recently exceeded. More than 910 million passengers were carried that year, racking up a total of nearly 96 billion passenger-miles — more than 720 miles for every U.S. citizen.

A disproportionate share of this traffic

Targets: Hell Gate Bridge (left), photographed in 1948 during a New Haven railfan trip; and Great Northern's Cascade Tunnel (above), pictured in the 1940s. Among the material confiscated from the saboteurs (below) were safety fuses, 10 blocks of TNT, and four bombs resembling coal. Left, Kent W. Cochrane; above, Great Northern; below, National Archives

was handled by the Pennsy. Operating less than 5 percent of the industry's route-mileage, the company carried about 18 percent of the passengers and freight. With its strategic route through the middle of coal and steel country, Pennsy was bound to be a big player — and no place on its 10,000-mile system was more important than Altoona, Pa.

Home to a major classification yard and to PRR's principal shops, Altoona was the Railroad Town writ large. During the war years, the yards classified nearly 6,000 cars a day. Every 20 minutes around the clock, another train was dispatched west, up around Horseshoe Curve, and through the Gallitzin tunnels. The output of the shops was equally impressive: every day, they performed class repairs on 6 to 10 locomotives, repaired 4 passenger cars and 16 freight cars, and built 16 boxcars and 10 gondolas. PRR even built many of its own locomotives — about 20 per month at the Juniata shops.

If the Nazis could cripple the Pennsylvania Railroad in Altoona, they would put a serious kink in America's ability to wage war.

ON ORDERS FROM HITLER

The plan originated with Hitler himself, and as his orders worked their way down the chain of command, they involved a pair of patrician spymasters, a motley collection of street thugs and propagandists, and several German-American recruits — two of whom were naturalized U.S. citizens.

Within days of Germany's declaration of war in December 1941, the Fuehrer sent for Wilhelm Canaris and Erwin von Lahousen, the top two men in the Abwehr, Germany's military intelligence. Like many aristocrats and career military men, these two had little use for National Socialism. Even more than most people in the wartime intelligence trade, theirs was a delicate balancing act. Now, enduring one of Hitler's famous tirades, this one triggered by the roundup of Germany's best U.S. spies a few days before, they were commanded to begin rebuilding operations in America. "No doubt," the Fuehrer sneered, "the gentlemen of the Abwehr were unaware of the fact that plenty of loyal German-Americans . . . would be only too willing to return to the United States on such a mission, and if need be, give their lives for their Fuehrer and their Fatherland."

Thus was born Operation Pastorius, named with perverse irony for Franz Daniel Pastorius, a Quaker who led the first group of German immigrants to America, in 1683. As Hitler ordered, it would be carried out by Germans who had each spent years in the U.S., who knew the culture and the slang, and who spoke with little or no accent. They were not professionals in sabotage or intelligence, however, and therein lay the critical weakness in the plan.

A steam-era photo of Horseshoe Curve shows the Pennsylvania's four-track main, Kittanning Point station, Altoona's city reservoirs, two since-abandoned branch lines, and, on the upper (right) side of the Curve, an eastbound passenger train passing a freight. PRR

About a week after the meeting with Hitler, a newly commissioned Abwehr lieutenant named Walter Kappe appeared outside Colonel Lahousen's office and, as the spymaster himself later recalled, "spoke to me as though he were selling me a washing machine." Despite his military rank, Kappe's background was in propaganda and the Party. He had come to tell Lahousen that he had recruited 10 German-Americans to carry out Hitler's orders, their names culled from the records of the Ausland Institut, a government agency established to track such persons. He had even made arrangements for the U-boats to take the men to America.

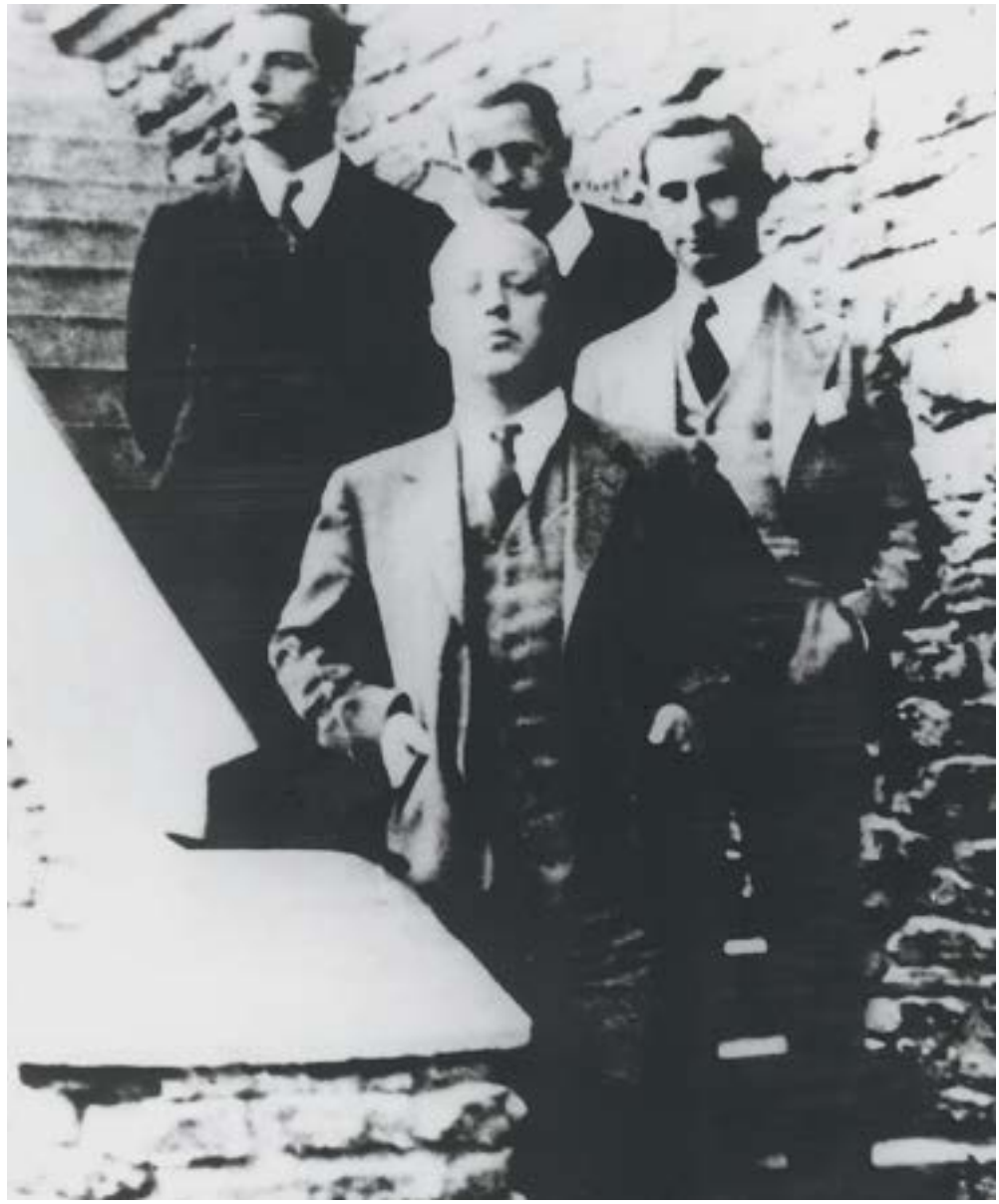
Privately, Lahousen was enraged by this end run, but as Canaris noted later that day, "Those clever boys in the Party have taken the whole thing out of our hands." Though Kappe was only a lieutenant, his Party connections trumped any considerations of mere rank.

Pastorius was Kappe's work more than anyone else's. He was a true believer in Hitler, and a Nazi from the Party's early days. But things had become uncomfortably hot in the months after the "Beer Hall Putsch," Hitler's abortive 1923 attempt to seize power. Seeking a refuge from Germany's democratic Weimar regime, Kappe emigrated to America in 1925 and lived here for 12 years. Still the devoted Nazi, he became prominent in the German-American Bund, an organization dedicated to anti-Semitism and keeping America neutral. Its membership never rose above 25,000, but it represented a vocal element, complete with rallies and homegrown Hitler Youth camps. In the kind of spectacles of which Nazis seemed inordinately fond, the Bund held rallies in major U.S. cities — often featuring torchlight parades by uniformed members, spellbinding oratory by Kappe and others, processions of American and Nazi German flags, and even 50-foot portraits of George Washington behind the rostrum. The juxtaposed symbols seem surreal today.

And now Kappe, this impudent party loyalist, stood before the aristocratic and professional Lahousen, and all but ordered him to make his training facility available to prepare the Pastorius recruits.

A SCHOOL FOR SABOTEURS

Quenz Farm didn't look like a school for saboteurs. Located on the far outskirts of Brandenburg, it had formerly belonged to a wealthy Jewish businessman, the kind of place that today is sometimes called a hobby farm. It had a large main house, a variety of



Operation Pastorius mastermind Walter Kappe (foreground) and "spy school" instructor and former Long Island Rail Road draftsman Reinhold Barth (back row, center) pose with two associates somewhere in Germany. National Archives

outbuildings that couldn't be seen from the road, and several acres of fallow fields, suitable for demolition dress rehearsals. Full-size bridges and railroad tracks had been built on the property, just for that purpose.

The place was run by Abwehr II — Lahousen's command, and the part of German military intelligence responsible for sabotage and subversive activities. Its most famous class began to assemble on April 7, 1942, for a three-week curriculum of incendiaries, explosives, chemistry, and assumed identity. Classroom training was supplemented by field trips to the I. G. Farben aluminum works at Bitterfield, to various canals and locks, and to the railroad yards in Berlin; in each place, experts showed the saboteurs how to disable and destroy their targets.

A final exam was held at Quenz Farm. The men were divided into small groups and assigned a target someplace on the property. They were to determine the best means of destroying it, return to the lab to prepare fuses and charges, then go back to the field to take it out — without being detected by their instructors. Their enthusiasm was unmatched by any previous class.

The instructor for the railroad portion of the course was Reinhold Barth, a 34-year-old native of Stuttgart, and a resident of the U.S. from 1929 to 1938. He had worked as a draftsman for the Long Island Rail Road during his entire stay in America, and he was also active in the Bund, where he had come to know Kappe. His tenure with the LIRR, a Pennsy subsidiary, may explain the prominence of PRR and New York-area targets for Operation Pastorius. An FBI memo pegged him as "an expert in the sabotage of railroads and [he] would be expected to concentrate his activities in that field should he successfully return to the United States."

Barth was never to return to the U.S., but eight of his students would. They were men of diverse intelligence, politics, and motivations, ranging in age from 22 to 40. Most notable among them were Dasch and Edward John Kerling, leaders of the two landing parties, and Ernest Peter Burger — a man whose stormy past almost makes him a tragic figure. As much as any other factor, their personalities set the stage for the failure of Operation Pastorius, so a little background is in order:

• Dasch, 40, once studied for the priesthood, enlisted in the Kaiser's army in World War I, and lived in the U.S. from 1922 to 1941. For most of his two decades here, he drifted from job to job — mostly as a waiter, but he also served in the U.S. Army for a year

Ernest Peter Burger, one of the spies who landed on Long Island, contemplates his fate during his trial before a military commission at the Justice Department. His cooperation won him a life sentence; he returned to Germany in 1948. National Archives

and received an honorable discharge. Eventually he applied for citizenship, and his application was granted. But on the day he was scheduled to take the oath, he left to return to Germany. His politics, to the extent he had any, leaned toward communism, which makes his return to Hitler's Germany even more mystifying. He was an unlikely character for the kind of mission with which he was entrusted.

• Kerling, 33, had both the politics and the cussedness to make Pastorius succeed. He joined the Party at 20, and though he migrated to the U.S. within a year, he arranged to have his Party dues paid by relatives. He lived in the U.S. from 1929 to 1940, was active in the Bund, and never applied for citizenship. He got married during his time in the U.S., but was estranged from his wife and had taken a mistress — facts that would lead to a break in the case.

• Burger, 35, is probably the most interesting figure of all. A Party member for 20 years at the time of Pastorius, he was an early Nazi brawler and an active participant in the Beer Hall Putsch. He entered the U.S. in 1927, became a citizen in 1933, and returned to Germany later that year. His early Party membership was enough to get him a staff position with Ernst Roehm, the head of Hitler's Storm Troopers who was soon to be killed in an intramural Nazi purge. Burger somehow managed to survive the so-called "Blood Purge," but he served 17 months in a concentration camp, where he nursed a simmering hatred for his Gestapo captors. Military Intelligence shared his antipathy, and he was recruited for Pastorius after his release. Burger was caught up in the swirling riptides of Nazi rule and world politics, and the excitement in his life was just beginning.

"I WOULDN'T WANT TO KILL YOU"

Dasch and his men, including Burger, weren't captured on the beach at Amagansett. Dasch explained to Seaman Cullen that they were fisherman who had run aground in the fog. Cullen invited them back to the Coast Guard station to wait for daybreak, and when Dasch refused, Cullen became suspicious. He became even more skeptical when Burger, unaware of his presence, called to Dasch in German. Dasch offered Cullen $50 to forget he had seen anything, and when the Coastie hesitated, Dasch stuffed $260 in his hand. (Each group in the Pastorius mission had about $80,000 in genuine U.S. bills.) "I wouldn't want to kill you," Dasch said. Unarmed and not knowing how many men he was up against, Cullen took the money and ran back to the station.

By the time Cullen returned with three others, Dasch and his men were on their way to the LIRR's Amagansett station, eager to get the first train into the anonymity of New York City. Still blinded by fog, the Coasties did smell diesel fumes, and they heard the rumble of the engines as Linder freed his U-boat from the beach, but with only small arms, there was nothing else they could do. They found the crates after daybreak, and the FBI was notified that morning.

The heightened vigilance that ensued wasn't enough to prevent the second landing, four days later. This group, commanded by Kerling, crossed the Atlantic on the U-584 and made landfall near Ponte Vedra, Fla., about 20 miles south of Jacksonville. More than Dasch's group, this party had orders to destroy the rail targets: Horseshoe, Hell Gate, and Newark's Penn Station all were on their list. Within hours, Kerling and his men were on separate trains, bound for Cincinnati and Chicago, where they could blend in with large German-American communities.

Eight Germans had now been landed from U-boats, but the FBI had no idea who they were, what they were up to, or where they had gone. For that matter, they didn't even know about Kerling's group at all, so skillfully had they buried their crates. The Bureau had made little progress in the case when Dasch himself spilled the beans.

To this day, his motives are questionable. It's hard to say if he ever intended to go through with the plot, or if he got cold feet from his close call on the beach. In his rambling, detailed 254-page confession, he claimed he had been appalled by conditions in Germany when he returned in 1941, that he had planned to betray Pastorius all along, and that he had seen the operation as a means of returning to America and helping fight Hitlerism. Given his nominal left-leaning

politics, he may have been telling the truth.

(Of interest in light of the 9/11 terrorist attacks, Dasch also claimed he had lost stomach for the mission when he learned that trains filled with civilians might be among the targets.)

Within 24 hours of their landing, Dasch confided his thinking to Burger, who, whether from his own disillusionment with the Third Reich or from his remarkable knack for self-preservation, agreed to keep Dasch's secret. On Thursday the 18th, Dasch took a Pennsy train to Washington, where he insisted on speaking with J. Edgar Hoover himself. Hoover had known about the Amagansett landing almost since it happened, and he did see Dasch briefly, but the confession was taken by other agents. Burger and the other two members of Dasch's group, Heinrich Heinck and Richard Quirin, were arrested in New York on Saturday, exactly one week after their landing. All of them had fake Social Security and Selective Service cards, except for Burger: as a naturalized citizen, his documents were real. They were in a wallet with the ironic words, "Bucyrus-Erie Company Safety Contest — Always Be Careful" stamped in gold.

Thanks to Dasch's confession, the FBI now knew about Kerling's group and they knew there weren't any other landing parties — at least for now. But they still didn't have any idea where Kerling and his men had gone. The Bureau might have remained in the dark — and the rail targets might have been hit — if they hadn't worked the case hard, and had a little bit of luck.

Dasch had carried a handkerchief with him on which were written the names of German spy contacts in the U.S. However, the names had been written in disappearing ink, and Dasch couldn't remember the formula to make them visible again. After five frantic days of testing in the FBI lab, it was discovered that ammonia would do the job, and the Bureau immediately assigned an agent to follow everyone whose name appeared.

One of them was Helmut Leiner of Astoria, Queens. Only hours after the lab discovery, Leiner left his house and met a man at Penn Station in Manhattan. From a description supplied by Burger, the FBI knew the man was Kerling. His presence in New York was both business-related and personal: he had to find a place to hide the explosives, once they had been dug up from the beach, and he wanted to see his wife and his mistress. The agents followed Kerling and Leiner all day, hoping in vain they would lead to the other Pastorius members. Finally, late on Tuesday the 23rd, they moved in. Kerling offered no resistance, and his three comrades were arrested in New York and Chicago by Saturday.

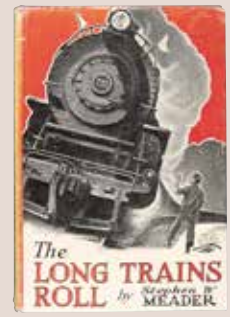
"THE GREATEST LOSS"

It was a close call — for the FBI and for Kerling's rail targets. Unlike Dasch and Burger, there was little doubt of Kerling's commitment to his mission. Ever the fervent Nazi, Kerling didn't provide any more detail than necessary after his arrest, but Dasch and Burger both gave long confessions. These documents provide the best description of how the Nazis selected the targets and what they intended to do to them.

Most of their intelligence about rail matters came from Reinhold Barth, the ex-Long Island Rail Road employee. Burger's confession is particularly helpful on this point: "During the [training] course, a man named Reinhold Barth gave a lecture on the American railway systems. He used . . . photographs, plans and drawings, which he showed around the class. A lecture about railroads consisted . . . of a description of the main railroad lines of the United States. All of the major terminal points . . . were shown to us, and we were given information as to the condition of the rolling stock on the various railroad lines. Barth also illustrated . . . the different types of engines used, their average speed, and the average speed of freight trains used in general throughout the United States. In addition to this, Barth pointed out . . . the important bottlenecks in the railroad systems in the United States in order that we would know the important points to damage and where we could create the greatest loss.

"Subsequent to the lecture, [Barth] took us to Berlin for a personal inspection tour of the railroad equipment there, [and] he dem-

THE LONG TRAINS ROLL



If the story of intended Nazi sabotage on Horseshoe Curve rings a bell — but you can't figure out why — you may have read *The Long Trains Roll* as a kid. Loosely based on the intrigues recounted in this story, it was the 1944 work of Stephen W. Meader, an award-winning author of juvenile fiction.

The story is set in fictional Gaptown, Pa., a railroad burg astride a four-track main line at the foot of the Allegheny summit. Gaptown is home to a huge shop and yard complex, and to Randy MacDougal, the teenage son of a railroading family. Together with his friends and coworkers, he foils a Nazi attempt to disrupt traffic on "the big curve" near his home. Without giving away the plot, suffice to say the Nazis get a lot further in Meader's book than they did in real life.

The Long Trains Roll is a great adventure yarn for kids, but it also depicts a railroading life that's long gone. From the banter of the characters — heavily laced with railroad slang — to the brakemen riding the roofwalks of boxcars, to the grimy boarding houses, the book evokes a lost world. And through it all runs a young man's devotion to the iron road and his easy camaraderie with its people. We can well understand why he feels as he does, and why he strives to protect them. — *Peter A. Hansen*

At Amagansett beach on Long Island, the first group of German infiltrators used a wooden cross to mark the spot in the sand where they buried crates of explosives, which the Coast Guard quickly uncovered. National Archives

An atmosphere of tight security surrounds the sabotage trial as motorcycle police and soldiers in an armored vehicle escort a procession of trucks carrying the Pastorius defendants from the Justice Department building. National Archives

onstrated to us the weak spots in boxcars and freight trains in general, as for example, the bearings and the oil systems, the brakes, the engine, the tracks, the block signaling portion, the switching devices, and also how to run an engine.

"On the last day of the school . . . we were shown a photograph of Hell Gate Bridge in New York City, which, we were told, carried the main traffic into New York City from the north. Barth described to us the structure of Hell Gate Bridge, and . . . explained that it was constructed of metal plate and not structural iron. Barth explained how easy it would be to damage this bridge."

The late William D. Middleton, a civil engineer, historian, and author, confirmed that Hell Gate's principal structural members are built largely of very heavy steel plate and angles, from the arches to the deck to the suspenders in between. But it would not have been easy to disable the bridge: a great deal of explosive would have been needed to compromise the arches or the deck, and the more explosive required to be spirited onto the bridge, the greater the chances of being caught.

The most bang for the buck — literally — would have been to take out the suspenders. Middleton said, "This would have resulted in failure of the floor system, something that would have taken some time to repair." But nothing in the FBI files indicates whether that was the saboteurs' intention: the interrogators seemed more concerned with the "what" than the "how" of the plot.

Dasch volunteered a bit of detail about methods in his confession, however, even as Bureau agents were asking him general questions about objectives. "The attack on the railroad system . . . was to be carried out by fixing an exact spot in the rails of a trunk line, whether a tunnel, a bridge, or a big curve like . . . Horseshoe Curve in Pennsylvania. A small fuse was to be put where the

two rails came together, and this little fuse would, when the front wheels of the locomotive touched it, ignite the whole works and with the momentum of the oncoming train would wreck everything." Much of Horseshoe rests on a high fill and the rest is carved out of the mountainside, so a charge in No. 1 Track — the innermost of four — could have put a train and some of the mountain itself in the valley below.

Horseshoe was selected for obvious reasons, Hell Gate Bridge because it carried much of the traffic between New York and New England, and Newark's Penn Station because its elevated tracks sit on a choke point in what is now called the Northeast Corridor. Judging from the confessions of the Pastorius Eight, those were the only rail targets mentioned by name during their training. However, some of the men offered Great Northern's Cascade Tunnel and the Chesapeake & Ohio — with its huge volume of export coal — as the kinds of targets they might have hit. They were told to use their judgment in selecting further objectives.

The FBI wasted no time advising its field offices in New York, Newark, Cleveland, and Seattle, who contacted senior officers of the New Haven, the Pennsy, the C&O, and GN, respectively. In some cases officials were reached at home, so great was the urgency.

"NO SENTIMENTALITY FOR SPIES"

Always alert for a good headline, J. Edgar Hoover was happy to make the case public once all the saboteurs were caught. Americans might not be unnerved at the thought of Nazis in their midst, but maybe they needed to be: now everyone would know that "Loose Lips Sink Ships" was more than just a slogan. Besides, the FBI had caught the saboteurs before they could carry out their mission, and that would reassure people and boost the Bureau's prestige.

When the case was made public on June 27, the reaction was swift and predictable. "If Spies — A Rope!" said the *San Francisco Chronicle*. "No Sentimentality for Spies," urged the *Milwaukee Journal*. "Prompt Execution Needed," said the *Fort Worth Star-Telegram*. There was little inclination for mercy anywhere.

But while there was great value in making the case public, hardly anyone at the Justice Department wanted a public trial. Too many sensitive details might end up in the papers — and death sentences, though probable in any court, could not be assured. The eight men were thus tried before a military commission — which amounted to a court martial, except that the defendants were not U.S. military personnel. There was a single, 77-year old precedent for such a trial: the conspirators in the Lincoln assassination had been declared enemies of war, and were tried by a commission for the same reasons used in 1942. Few in government, the press, or the general public disagreed with the idea of such a trial.

The court convened on July 8, meeting in an FBI training room in Washington's Justice Department building — the better to ensure privacy and physical security. Attorney General Francis Biddie himself prosecuted the case, and the Army assigned three colonels to the defense team.

The outcome was all but certain, the only surprises being a detour to the Supreme Court to hear arguments on the constitutionality of a military trial (upheld by the high court in a special session), and the speed with which the proceedings ended. The defense rested on July 27, less than three weeks after the trial began, and the court found all eight defendants guilty. Under terms of the military tribunal, it was up to President Roosevelt to fix the punishment: six of the eight were condemned to death. Only Dasch and Burger received lighter sentences because of their role in foiling the plot: Dasch got 30 years and Burger a life sentence. (Both were repatriated to West Germany in 1948.)

Kerling and the other five were electrocuted in the District of Columbia jail on August 8 — less than two weeks after the trial ended, and less than seven weeks after their capture. They were buried at Blue Plains, the District's cemetery for indigents.

Before their executions, they were allowed to write last letters home. Kerling's letter to his estranged wife said, "Where I am going I am with our friends — in Valhalla … Heil Hitler, Your Eddy." Herman Neubauer's letter to his parents concluded, "So I shall walk down my last stretch proudly, firmly and courageously, as your son, as Germany's son." Letters to parents were accompanied by a note from Father E. J. Gracey, a U.S. Army Chaplain: "Dear Parents, I want you to know your son was reconciled to his Church."

DODGING A BULLET

Operation Pastorius was daring in concept, flawed in execution — as were so many of Hitler's grandiose plans. Still, even in retrospect, it's hard to say failure was a foregone conclusion, Dasch's confession notwithstanding.

Kerling's group already had landed unnoticed by the time Dasch turned himself in — and the railroad targets were on Kerling's list. If the FBI had taken just a few hours more to uncover the names on the handkerchief, Kerling might have eluded them — and Pastorius could have turned out differently.

If so, the implications would have reached beyond these eight men. During questioning by the FBI, several of the saboteurs revealed that Pastorius was intended to be an ongoing mission, that others were being trained even while events in the U.S were unfolding. With the failure of the first eight, however, all future sabotage missions were canceled. A successful Pastorius might have made little difference to the war's outcome, but the history of that war — and of America's railroad landmarks — might have been much different. ■

PETER A. HANSEN has had numerous bylines in Classic Trains *and other publications. He is editor of* Railroad History, *the journal of the Railway & Locomotive Historical Society.* *He thanks Ed Brinkel of the Altoona Railroaders Memorial Museum, Martina Caspers of Germany's Bundesarchiv, Fred Romanski of the National Archives, and Karen Pearson for her translation services.*


Trains
JANUARY
1944

TRAIN TRAVEL, 1943

Was it as bad as the newspaper columnists have pictured it? It depends upon what train you rode and when you rode it

BY **A.C. KALMBACH**

It was in the year 1943 that train travel again became part of the American experience. In this past year everyone, and his sisters, cousins, and aunts, traveled by train. Hundreds of thousands of young people rode trains for the first time. Hundreds of thousands of oldsters rode again for the first time since they gladly forsook the dirty, uncomfortable coaches of a generation ago. What sort of impression did the railroads make on these newcomers, and on the onetime customers brought back by force of circumstances? Admittedly the railroads, bedeviled by wartime shortages of labor and materials and inundated with many times their normal traffic, did not maintain the high standard of travel service to which regular train riders became accustomed in the years just before the war. And certainly the wartime service is far from what train-travel neophytes will find if they return to the rails after the war. But was train travel in 1943 as bad as the newspaper columnists caricatured it?

No one train ride can be taken as typical, nor can even one series of rides. The service runs the full gamut, from prewar excellence to an opposite extreme of crowded, dirty cars, and late trains with impolite trainmen.

In a scene typical of 1943 train travel — what author Kalmbach called "the greatest mass moving of people that has ever taken place" — passengers stream off Baltimore & Ohio (left) and Pennsylvania trains at Washington Union Station. Harold M. Lambert

Certainly my pleasant 1943 experiences on the *Denver Zephyr* and *20th Century Limited* are not a measure of the average. Both ran on time; both maintained a prewar excellence of dining-car service and food, although of course with limited menu; the Pullman porters were pleasant and considerate, the trainmen helpful and polite. The rides were smooth and comfortable, and I found about the usual freedom of the lounge cars in spite of the Burlington's sale of some lounge chairs as parlor-car seats on the *DZ*. But both these trains are the sacred cows of their respective railroads, and, what is more pertinent, they are all-reserved trains that always did carry a good load, so now they are carrying just their rated capacity, about as always.

For a typical experience we will have to look elsewhere, but not to my ride in a coach on the Pennsylvania's *American* the Friday before Labor Day. This ride was a near extreme example of one of our largest and best-equipped roads being smothered under a flood tide of passengers. The trainshed of PRR's station at Richmond, Ind., is too large for a usual depot in a city of 33,000, but it is in keeping with all the activity under its black steel arches, for Richmond is a primary crossroads of PRR's western lines.

Here the New York–St. Louis main crosses the Chicago–Cincinnati route and also meets the line going north through Fort Wayne into western Michigan. Years ago, before war made all stations centers of bustling activity, I took delight in watching the 3 o'clock and 6 o'clock rush periods at Richmond, during each of which five passenger trains arrive

Atlantic type 281, an 1899 Alco, stands at the Monon's Hammond, Ind., station, ready for the 8:45 a.m. departure on October 5, 1946, of the C&O's local for Cincinnati. L. B. Herrin

and depart with much switching and transferring of through cars. Passengers by the hundreds climb off one train and onto another. Are you going to Columbus via Piqua or via Dayton? Will you leave for Chicago via Indianapolis, via Logansport on the direct route, or via Fort Wayne? The switchers pull the rear cars off one train and attach them to the front of another, with perhaps cars from somewhere else sandwiched in between.

Yes, Richmond is always a busy spot, but it was especially so that Friday afternoon in early September. The first section of the *American* for New York was reported 17 minutes late. I was riding it to Columbus, and as I watched the crowds getting on and off No. 11, the St. Louis section of the *Golden Arrow*, I wondered if I would even find room to stand. Fresh engine crews climbed on to the doubleheaded K4 Pacifics at the front. Young firemen were on both engines, men that I thought I'd seen come in on a doubleheader from the east only a few minutes before.

I did find room in the train — just barely. When 25 to 30 people stand in the aisle of one coach, there isn't much space left. Mainline coaches are not built, like subway cars, for maximum standing room. This car, though, was modernized, well air-conditioned, and passengers were in a friendly mood. The trainmen, apparently having found the usual ticket-collecting routine impractical under the circumstances, took tickets at the stepboxes as we boarded.

We started out with some good-natured huzzahing, but not more than four carlengths out, we stopped and stood for 45 minutes while one engine was taken off because of trouble and another one put on, fresh from a quick turnaround in the Richmond roundhouse. Then we were off on a spirited dash to Columbus. Put a K4 doubleheader on the front of one of those long PRR trains and you travel with real zip. During a momentary stop in Dayton a few passengers got off, but seemingly hundreds of khaki-clad young men besieged the train. Many of them managed to squeeze in, but some were left behind for the second section following us. Between Dayton and Columbus I was fortunate enough to "sublet" a seat from a young soldier who went to the dining car. I chose to wait and eat in Columbus's station.

The large, efficient Union Station reminded me of Times Square at 5:15. The train-announcing loudspeakers were calling departures with the regularity of interurbans in the old days. "Pennsylvania train for Pittsburgh, Harrisburg, Philadelphia, New York, Baltimore, and Washington on Track 5." Another 10 minutes and there'd be a similar announcement for another train. The process seemed endless, and still the crowds came in the front door and poured through the waiting room to be seemingly absorbed by the suction of the stairs down to the platform.

FUN ON THE C&O OF INDIANA

That was just before Labor Day, and on a busy portion of a busy railroad. That same day, though, I had come down to Richmond on the Chesapeake & Ohio of Indiana. This is a well-built line from Chicago to Cincinnati, but because it is not as well established as either of the older and more popular PRR and New York Central routes and goes through only smaller cities, C&O sends its through cars over NYC's Big Four and runs only a local passenger train on its own line. This all-day local doesn't even serve Chicago. It begins on the doorstep at Hammond, Ind., the busy rail junction town that hasn't had a bank robbery in years because whichever way any bank robbers tried to escape, they would find a train blocking a grade crossing!

I left Chicago early that Friday morning on the Chicago South Shore & South Bend to hunt up the C&O train in Hammond. My ticket read Chicago to Richmond, Ind., via C&O. The young South Shore ticket collector was dubious, since he probably had not seen a C&O ticket, but the conductor approved it. The South Shore M.U. train was comfortably full, as most commuter trains seem to be nowadays. We left on the dot and pulled into Hammond on the dot.

A short taxi ride, dodging freights at grade crossings, and I was at the Monon's Hammond station. An Erie freight went east behind a heavy Mikado, and the *Erie Limited* paused briefly on its home stretch into Chicago. Then out from the yard to the south backed C&O train 18 — a coach and a combination smoker, mail, and baggage car behind a high-wheeled Atlantic. About a dozen of us climbed on board to share a car and a half of seating space.

A train ride is usually comfortable, and sometimes luxurious, or it can be just plain fun. This one was fun, starting at Hammond as smoke and steam from locomotives of many railroads rose into the sky and expressmen bustled back and forth with truckloads of express off the *Erie Limited* and for our train and Monon's Louisville train, due any minute. All this railroad atmosphere created a pleasant feeling for the start of a pretty day's journey. The feeling deepened when the conductor took my ticket, grinned, and said, "This must be your own routing. No ticket agent ever routed you this way. Well — welcome to our train." The brakeman had no objection to my standing on the back platform, watching the right of way, and the conductor, not forgetting me, was back after a bit to inquire if he should wire ahead to have a cab waiting at C&O's Richmond station to take me to the Pennsy station.

After taking water in the yard at Peru, Ind., we pulled up to the station, on the banks of the Wabash River next to the lonesome-looking abutments of the onetime interurban Indiana Railroad bridge. "We've 15 minutes for lunch," said the friendly conductor. "I'll show you where to go. I'm going over there myself." Two of us passengers sat down to a meal, and I had a sinking feeling as I watched a real country-boarding-house-style dinner being put on the table in front of me. Fifteen minutes to eat all this? It couldn't be done! With one eye on my watch, I was less than half through when the time was up and I started to rise. "No, no," motioned the conductor from the nearby counter where he was enjoying a Coke. "We've lots of time; finish your lunch." And I did. We were into Richmond on time anyway.

CONTRAST ON THE PENNSY

Most of passenger business can't be handled in such friendly little trains, though. This moving-people-about is essentially a mass production job. Labor Day weekend on the Pennsy was obviously an exception to even the wartime rules. On a more normal

Soldiers enjoy a meal on one of Baltimore & Ohio's elegant colonial dining cars. The author did the same, on a more modern car on the *National Limited*, but his table companion did not! Such was the variety of wartime rail travel. B&O Railroad Museum; Bob Withers collection

evening I started east from Chicago on the *Pennsylvania Limited*. The train was backed in to Union Station only 10 minutes before it was due to leave, obviously fresh from a quick servicing in the coach yard. The passengers were loaded, and we pulled out right on time, but the quick loading was deceptive, for we waited 20 minutes outside the station while the head-end cars were picked up.

After a good night's sleep I awoke to the feel of the sharp curve entering the Pittsburgh station and to the unmistakable sounds of the busy trainshed. We were right on time. A few minutes later while looking out of the washroom window at the green mountainsides east of Pittsburgh, I was overcome again with that warm, friendly feeling engendered by pleasant traveling. Our American countryside, any of it, is always good to see. Breakfast on the Pennsylvania was leisurely, with no undue crowding of the diner, no undue hustle and bustle. Horseshoe Curve looked the same as usual and, in fact, under the influence of the passing scenery and the warm sunlight coming in the window, I found myself relapsing into a strange feeling that this was several years ago and that the war was all a bad dream.

But not for long. As we swiftly took the curves down the Juniata River, we passed freight train after freight train, dozens of them and long ones too, with hundreds of flat and gondola cars loaded with huge olive-green or plain wood boxes. The railroads are really moving freight these days. That must be clearly evident to anyone who rides the trains, especially on multiple-track main lines leading to the eastern seaboard or the incredibly congested single-track lines of the West.

The *Pennsylvania Limited* is what might be called an off-hour train between Chicago and New York. It leaves at 8 in the evening and takes all the next day to get to New York, so it's not one of the most popular trains. Further, Pullman passengers, once they get reservations, seldom realize if the train is crowded, because crowding is in the coaches.

How about coach travel on a really crowded run, such as on the Pennsy between Philadelphia and New York? I stood, one evening, on the North Philadelphia station platform watching the fleet go west. Brashly I decided to board the 5 p.m. "clocker" for New York. Here there should be a crowd, and there was, in the fifth and sixth coaches, which stopped opposite me. People were standing in the aisles. I walked forward, and in the modern coach immediately behind the locomotive was many a comfortable, tubular-framed reclining seat completely vacant. I sat there watching the rear end of the GG1 bob around up front

and reflected on that curious inertia of human nature that causes people to stay in a crowded car rather than walk through the train to find a seat.

DINING-CAR DIFFERENCES

The most crowded place in the country, if we are to believe the funny papers, is Washington, D.C. In late afternoon and early evening, when through trains are leaving, the concourse of Washington Union Station gets really crowded in spite of its monumental dimensions. The dozens of regular and temporary ticket windows are all busy. I left this scene on a Saturday evening aboard B&O's *National Limited* in space I had reserved two weeks previously. On the next track were the coaches of the second section of the *National*, filled but not crowded, with a comfortable seated load. Washington passenger men told me the travel volume fluctuates from day to day, but is near capacity at even its lowest point. Onboard the train, I had to wait about 15 minutes for a seat in the diner and the service was a bit hurried, but the meal itself seemed reasonably up to standard. Not so to the man who shared the table with me, however. He complained about everything, and it's to the steward's credit that he did not once excuse anything on the grounds of the war.

Now, perhaps I haven't gotten into a real jam with my train traveling, for although my business normally takes me to all parts of the country, I have purposely avoided the far West and the South ever since the war broke. Thus I have not had the experience of an old gentleman friend of mine who, on a trip west, could not get any meals the first day out. Soldiers were served first, and there were simply so many on board that civilians didn't have a chance at the diner. Mid-morning of the second day my friend was in a bad way. He complained about his lack of nourishment to a friendly colonel in the opposite Pullman section . . . who complained back about his inability to get a drink.

"I have some whiskey in my suitcase that I was taking out west," said the older man.

"You give me a drink and I'll get you something to eat," replied the colonel.

The whiskey was unpacked and uncorked, and shortly the two started back to the diner. Just as the steward was putting his arm down between the colonel and the civilian and about to say, "No civilians are being served," the colonel turned and said, "Now, father, would you like to ride facing forward or backward?" My elderly friend had no further trouble getting a meal.

Without a doubt, the western lines, with all their single track and the huge percentage increase in both freight and passenger traffic, are having real difficulty in keeping the service anywhere near on time and in furnishing enough equipment to reasonably

St. Louis Union Station, which served 17 Class 1 railroads, is busy with NYC, B&O, and Chicago & Eastern Illinois trains in this wartime view from atop the trainshed. Beyond the station tracks, men stand alongside a troop train. Wayne Leeman

supply the demand. While the *Denver Zephyr* comes into Denver right on time, such isn't so with the transcontinental standard-equipment trains like the *Exposition Flyer,* which bear more the brunt of excess travel and especially of furlough travel. It is not uncommon to see these through transcontinental limiteds posted four to six hours late. Furthermore, if Washington Union Station is crowded, the smaller stations in western cities, especially those that are near army camps, are even more so. Five years ago one could not have imagined a situation that would even partly congest Denver Union Station, and yet now, at 4 p.m., elbow room in its great hall is at a premium.

NORTH SHORE TRICKERY

For top honors of crowded stations, however, I nominate the Milwaukee terminal of the North Shore Line electric on Sunday evenings, when sailors are returning to Great Lakes Naval Training Station in Illinois after a weekend leave in the city. The technique of loading the crowds is simple. A train of empty cars is backed alongside a platform, and some of the sailors get aboard . . . but most stay on the platform, bidding farewell to their girlfriends. Finally, at a word from the superintendent, trainmen call, "All aboard, last train to Great Lakes, all aboard!" There is a jingle of the platform bell and the motorman edges the train slowly forward a few feet and stops. The sailors on the platform quickly disengage, climb on board, and the train pulls out. Another train of empties is shunted to the platform and the process starts all over again.

The normal trains between midwestern centers like Chicago and Milwaukee are not so crowded. The nonstop expresses of the Milwaukee Road and the *Commuter 400*s of the North Western usually carry comfortable seated loads, only once in a while with a few passengers standing. The through trains for the coast are another story. I have left Chicago late at night on Milwaukee's *Olympian*, and stood all the way to Milwaukee, alighting from the train with a dozen or so other passengers only to see perhaps 75 to 100 people waiting behind the train gate.

It is these through trains that carry the bulk of added travel, and it is difficult to increase accommodations on them because one added car per train will mean five or six additional cars total as the cars are out for five- or six-day round trips. Short-distance expresses carry mostly normal business travel, with increased loads owing to the tire and gasoline rationing. The long-distance trains, though, carry their normal traffic plus businessmen forced off the roads — as well as, likely, hundreds and thousands of soldiers on furlough. Moreover, sometimes families and friends of the soldiers also ride, to visit them or to bid them goodbye.

The influx of new travelers has, seemingly, made coach travel more friendly than ever before. The American soldier is not noted for his inhibitions, and a few soldiers in a car livens things up more than a little. On a New York Central train between Cincinnati and Cleveland, I enjoyed some high-class free entertainment. A soldier and his wife in front of me were joined by another soldier, all apparently of Italian descent, and they started singing in harmony with soft, sweet voices. After a bit they ran out of songs and, noticing I was listening, asked me to suggest some more. They ran through all the old favorites, and we were in Cleveland surprisingly soon after we left Cincinnati.

On a Washington-to-New-York train of the Pennsy, I sat down next to a young man who shortly started a conversation. New York was his hometown, and he was on his way back home before induction. A Marine across the aisle was returning to his home from Guadalcanal.

Human drama is enacted for the train traveler these days, too. The Laurel Line interurban filled up at Scranton, Pa., with inductees whose families waved goodbye from the station platform while a band played patriotic airs. Lehigh Valley's *Black Diamond* stopped at Geneva, N.Y., and several hundred about-to-be sailors marched past my car window from the special coaches up forward and climbed into buses on their way to boot camp. Almost any regular train may have a load of inductees at any time. And almost any regularly assigned equipment may at any time be taken over for special troop service.

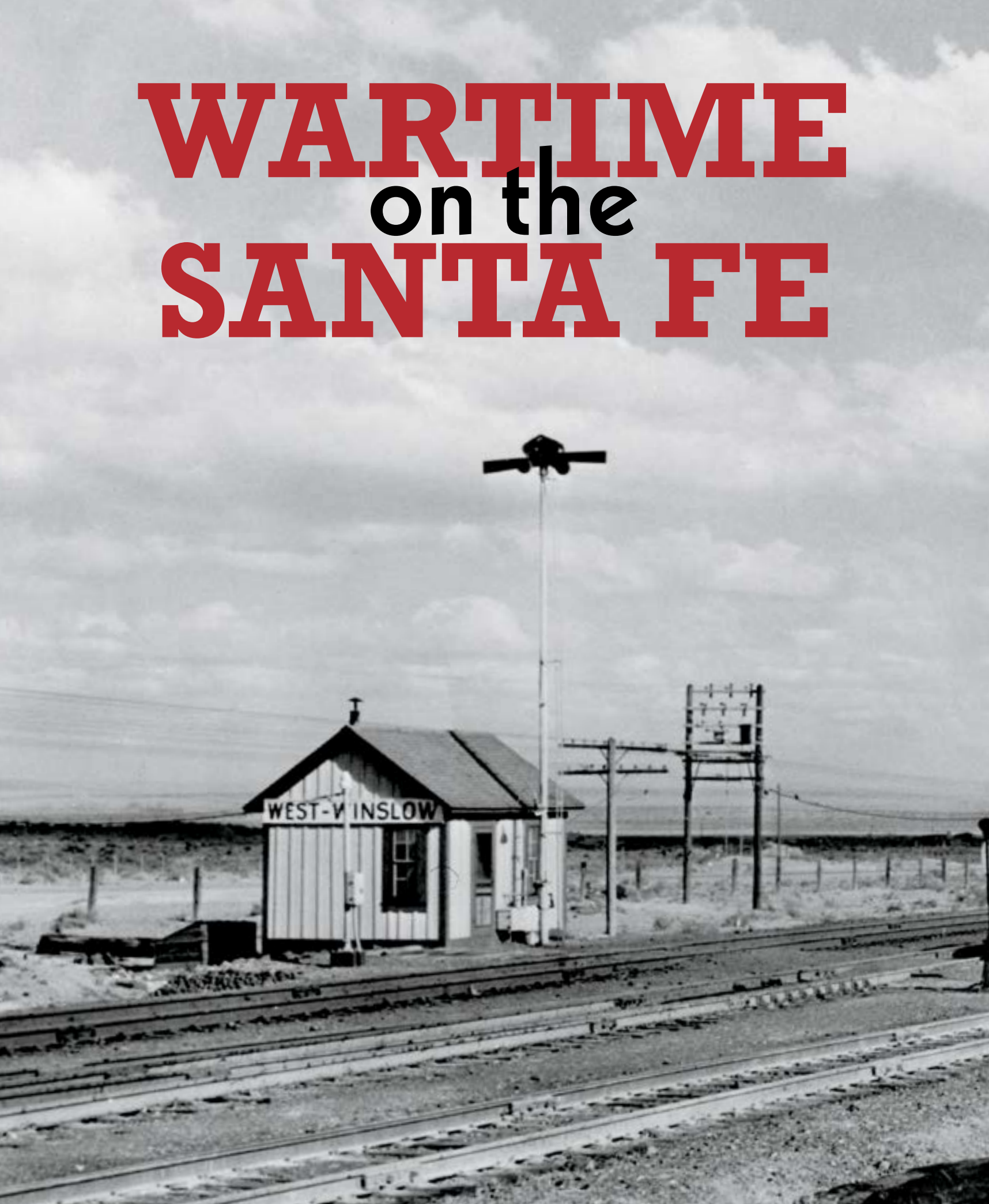
The whole situation is full of the unexpected. The train traveler in these war years takes his gamble with the gods of chance. He may stand, as I have, on No. 5, and the very next week, after an unsuccessful attempt to get a parlor-car seat, unexpectedly find nearly a whole empty coach on the same train. He may hit the *Erie Limited* as I did when, one evening out of Chicago, there were only two of us taking dinner. Or he may take it on another evening when, as the steward told me, he is sometimes at his wits' end to provide meals for a large movement of soldiers.

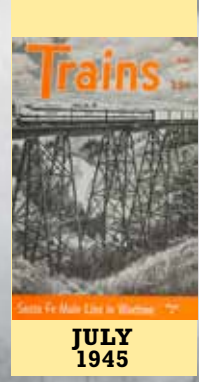
Train travel in 1943, then, is not always what those who have regularly used the trains have come to expect, but it can hardly be said to lack interest. The thousands of new passengers who unfortunately ride mostly at infrequent intervals are sometimes getting extremely bad impressions, or, sometimes getting good impressions, of railroad passenger service. If the railroads could give their best brand of service to *all* of the new passengers, it would be a remarkable advertising accomplishment. That is not, alas, humanly possible. In fact, with much more of an increase in traffic, the railroads couldn't be doing the job at all, for they are obviously operating practically at capacity in the passenger business.

The country is fortunate that, in spite of the slim railroad passenger patronage during the 1930s, the roads have the equipment and facilities and experience to accomplish today what is undoubtedly the greatest mass moving of people that has ever taken place. ■

ALBERT C. "AL" KALMBACH, a Milwaukee printer with a passion for railroads of all sizes, launched The Model Railroader *magazine in January 1934, followed by* Trains *in November 1940. "A.C.K." was publisher of* Trains *and chairman of the board of Kalmbach Publishing Co. at the time of his death at age 71, of Parkinson's disease, in 1981. Today the company he founded publishes 15 print magazines and a variety of digital content.*

WARTIME on the SANTA FE





JULY
1945

Diesels and extensive line improvements help handle a 175-percent increase in freight traffic on a vital route to the West Coast

BY **HENRY D. RENNWALD**

One of the women operators at West Winslow, Ariz. — a new office set up to expedite heavy wartime traffic — hands up orders to Extra 139 West, a 3,500-ton train drawn by four FT diesels. Santa Fe

In the Winslow yards, engineer George Bertino climbs aboard one of the FT freight diesels so crucial to keeping Santa Fe's Winslow–Barstow main line fluid during the war.

On a clear, cold, mid-December 1944 night, conductor Ed Parry walked into the Santa Fe office at West Winslow, Ariz. Chatting for a moment with second-trick operator Dorothy Schroeder, he picked up his train orders and clearance card, climbed into the cab of his four-unit FT diesel locomotive, and read them over with engineer Frank Merrifield. After comparing watches, Parry left the engine and started walking back to the caboose. Merrifield handed the orders to fireman Bob Abel for his information, whistled off, and Extra 118 West rolled slowly off the lead and out onto the main, bound for the Pacific Coast with 54 cars and 3,400 tons of wartime freight.

Scenes similar to this take place throughout the day and night at West Winslow, as train after train moves through Winslow, headquarters of the Atchison, Topeka & Santa Fe's Albuquerque Division. Traffic on this line is up approximately 175 percent since January 1942.

The division's main line extends 429 miles from Albuquerque, N.Mex., to Seligman, Ariz. There are two branches — one of 194 miles from Ash Fork south to Phoenix, and another of 64 miles from Williams north to the Grand Canyon. The Division Superintendent is A. B. Enderle, who has 4,356 employees under his jurisdiction. Of the 1,078 persons employed in the maintenance-of-way department, the majority are Navajo Indians, with a sprinkling of Mexican nationals, working under contract with the Mexican government and the railroad during the wartime emergency.

During the past four years Winslow has become one of the most important points on the Santa Fe, for it is here that all through westbound freight trains change from steam to diesel power. The run west from here over the Albuquerque and Arizona divisions to Barstow, Calif., is handled by 5,400 h.p. four-unit FT locomotives, of which 68 sets currently are in service with 17 more on order from Electro-Motive.

1,100 CARS A DAY — EACH WAY

In November 1944, a total of 3,258 freight cars was the daily average quantity all railroads moved into California. Of this, Santa Fe handled one-third, an average of 1,068 cars, all of which went through Winslow. On one of two randomly chosen November days, the westbound figures for Winslow were 1,127 loads and 42 empties. For the second day, the figures were 1,644 and 39. Contrast this with 1942, when the daily average loads westbound were 511. This figure had risen to 684 in 1943, and for 1944 — up to, but not including November — to 877 cars. With the heavy traffic of November and December, the daily average for the entire year 1944 ran more than 1,100 cars per day. Eastbound traffic is almost as heavy in number of cars, but a big portion is empties going back to their home roads.

During the season when the citrus crop is rolling, the division gets really busy. Starting early in February, solid trains of fruit move from the productive groves of California toward eastern markets.

Barstow, Calif., is another important division point. Here the westbound freight is split up — about 40 percent going north over the Tehachapis to Fresno and the San Francisco Bay Area, with the remainder continuing south over Cajon Pass to San Bernardino, Los Angeles, and San Diego. Some of the eastbound fruit comes from Pomona, Upland, and other points in Southern California, while grapes and potatoes originate to the north around Bakersfield, Famosa, and Fresno. All comes into Winslow and goes on east to Belen and Clovis, N.Mex., where traffic for Texas points is diverted, with the majority continuing on to Kansas City and then Chicago.

Between Kansas and New Mexico, most of Santa Fe's freight moves on the southerly main line, the so-called "Belen Cutoff," avoiding two stiff passes — Glorieta and Raton — in northern New Mexico on the route used by the principal passenger trains. East of Belen toward Clovis, the grade is less rugged, a maximum of 1.25 percent versus a stiff 3.5 percent on Raton.

The fireman on Extra 109 West looks over his train near Williams, Ariz. The FTs' dynamic brakes will come in handy in the miles ahead.

West of Winslow, the average grade westbound is 1.4 percent. The toughest portion is a 20-mile descent, with a maximum 3 percent grade, from Ash Fork to Supai.

While the entire main line from Dalies — the junction of the two routes 10 miles west of Albuquerque — to Barstow is double-track, there are certain points where the eastward and westward tracks are as much as 3 miles apart. Supai Hill is one example. After leaving Supai, the line divides, and the two tracks do not come back together until just before Ash Fork. When the Santa Fe decided to double-track its main line here, it was found that an easier grade could be achieved for the second track to be north of the original main. So at all points where grades were encountered, the line of least resistance was followed. The same holds true between Needles and Barstow on the Arizona Division. At times a westbound train will travel for more than an hour before rejoining the eastbound track.

The yard at Winslow, consisting of 33 tracks, can hold 1,600 cars. While not much switching is required here, the yard at times is well-populated with through trains. On a recent Monday, between 6 and 6:30 p.m. four freights came in from the east, were inspected and serviced, had their engines changed, and were on their way west by 8 o'clock.

DIESELS IN THE ROUNDHOUSE

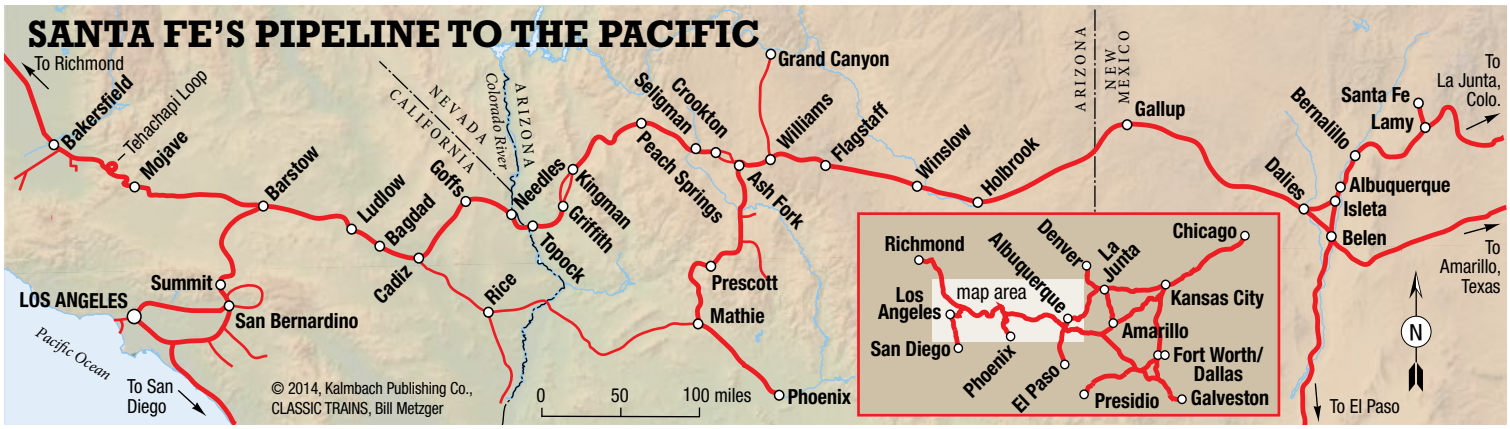
Winslow has a huge roundhouse and shop. The roundhouse is divided into two parts, one of 27 stalls for steam engines and the other with 14 stalls to house the diesels, with an asbestos fireproof wall separating the two.

The overall length of a four-unit FT is 194 feet 4 inches. Outside the roundhouse are three tracks capable of handling a complete quartet, with pits with lights for night work underneath. Then come three tracks without pits, each of which will handle two diesel units. Inside the house are eight stalls with pits that also handle two-unit diesels, so the facility can accommodate a total of 34 units.

The roundhouse was remodeled when the diesels came, and work is still going on to make servicing more convenient. For example, the floors alongside the pits inside were built up to cab level, to make the units

Near Ash Fork, Ariz., westbound FTs encounter a rarity on Santa Fe's Winslow–Barstow line: a steam-powered freight.

Three photos, Jack Delano, National Archives



Crewmen kill time between runs in the Harvey House at Seligman, Ariz. This and other photos in this article were made by Office of War Information photographer Jack Delano during his March 1943 trip from Chicago to L.A. Three photos, Jack Delano, National Archives

more accessible to the workmen. A diesel can arrive in the house with a bad traction motor. The carbody will be jacked up, the bad motor removed, a new motor put in, and the engine readied for the road again in less than three hours. The bad motor goes to the shop, is repaired, and then placed in the storeroom until it becomes necessary to replace a motor on a different locomotive. The same holds true for all bad-order parts on a diesel. Instead of holding a unit in the shop until the defect is repaired, the part is simply replaced.

Another factor enabling Santa Fe to move heavy tonnage with a minimum of delay is the superior availability of the diesels as compared to steam. They run 2,000 miles — two round trips from Winslow to Barstow — before complete servicing is necessary. Usually within two hours after arriving at either terminal, an FT set is ready to return to the road.

Most of Santa Fe's FTs carry 4,800 gallons of diesel fuel (25 of the latest versions carry 5,400 gallons), 580 gallons of lubricating oil, and 980 gallons of cooling water. This is enough for one run from Winslow to Barstow, with a good margin of safety. Should something develop to cause excess use of oil, facilities at Seligman and Needles can replenish the supply. A new distilling plant has been built at Winslow to handle the diesels' water supply. The plant is completely automatic, uses steam from the roundhouse, and has a daily capacity of 23,000 to 25,000 gallons of water.

Maintaining a water supply along the main line has always been difficult because the Albuquerque and Arizona divisions traverse remote territory, both mountainous and desert. In the desert, in addition to supplying water for the locomotives, it is necessary to bring in drinking water. Two years ago, Santa Fe hauled 1.25 million gallons of water each day to care for both locomotives and people. When the divisions were dieselized, this daily need was cut to 200,000 gallons. Today only passenger trains and local freights use steam engines, and the diesels get what little water they need at Winslow and Barstow.

MAGIC OF DYNAMIC BRAKES

The diesels' territory has the appearance, on a profile map, of a roller coaster. Winslow is at an elevation of 4,856 feet, while 65 miles west at Riordan it is 7,250 feet. The line then drops to 5,143 feet at Ash Fork, climbs gradually to 5,242 feet at Seligman, then begins a descent to 483 feet at Needles, Calif., just beyond the Colorado River bridge. Upon leaving Needles, the line starts a 32-mile climb to Goffs, at 2,585 feet, then drops to 789 feet at Cadiz (junction with a line from Phoenix), and climbs once more to Barstow, at 2,106 feet.

To handle trains safely down these grades, Santa Fe pioneered use of dynamic braking on its FTs. Also called regenerative braking, dynamics operate on a principle akin to running an automobile engine in second gear down a hill, where the compression of the engine acts as an auxiliary brake. The FTs' electric traction motors act as generators, dissipating their heat through resistance grids.

With the use of dynamic braking, a big saving in damage to overheated car wheels is realized, and much time is saved by elimination of stops necessary to cool wheels when using conventional braking on long grades. Air-brake retainers are still used, but dynamic braking gives the engineer firmer control over his train and lessens the menace of a train getting out of control on a steep grade.

While the FTs are doing a grand job of

In a view from the caboose cupola of a westbound train near Nelson, Ariz., 31 miles west of Seligman, M3 Lee tanks follow doubleheaded steam locomotives east.

A California-bound troop train has halted near Peach Springs, Ariz., about 5½ miles beyond Nelson. Between 4-6-2 No. 1329 and the caboose are three sleepers, a baggage car serving as kitchen, two more sleepers, and two flatcars and a boxcar for equipment.

moving wartime freight for the Santa Fe, the men on the line are also doing yeoman service. Under ordinary circumstances, those in engine and train service are limited to 3,800 miles a month. Owing to the current steady flow of commerce, train-service employees are putting in up to 5,700 miles a month. From 17 to 25 freight trains a day move west out of Winslow, and each one requires a crew of at least five men. As in all other industries, the manpower supply on the railroad is at low ebb, with 11,000 Santa Fe employees in the armed forces. Consequently, the men remaining on the job must work extra hard.

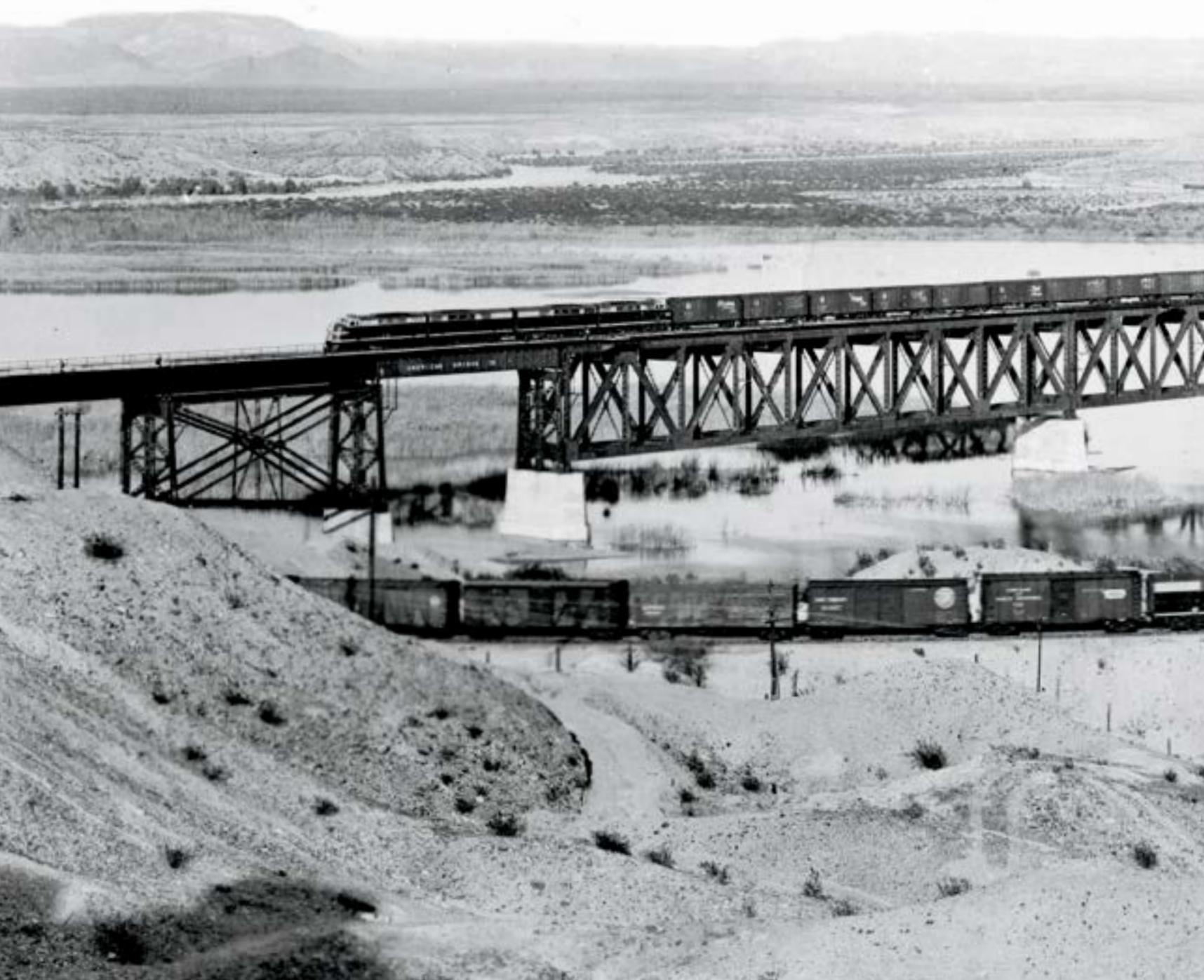
Freight crews run from Winslow to Seligman, 142 miles, so in working 5,700 miles a month, a crewman will make 20 round trips instead of the 13 under normal traffic conditions. Eastbound from Winslow to Gallup is 128 miles, so trainmen make 21 round trips. However, since train crews (not engine crews) work both directions out of Winslow, some men put in a full 30 days' work before getting a day off. Winslow engine crews work only one direction, either to Gallup or Seligman. Despite the long hours, the men are not complaining. Engineer Merrifield seems to speak for all when he says, "I figure the more stuff we get over there, the quicker it will be over and my boy will be home again." And since most employees have sons, brothers, or other relatives in the armed forces, they do their part as "soldiers on the home front" to supply those soldiers overseas with their needs.

A RIDE IN THE CAB

Let's rejoin engineer Frank Merrifield on Extra 118 West out of Winslow. After he receives his train orders, we move to the end of the yard at West Winslow and wait for Second 3, the *California Limited*, to pass.

Back in the caboose conductor Parry, whose son is a sergeant in the air forces overseas, is busy on his train book and with other tasks. At 9:10 p.m., Second 3 rolls by behind a big 4-8-4 and head brakeman Harry Samelson opens the switch for us to enter the main. Rear brakeman Jimmy De Rosa closes it, gives a highball, and Merrifield begins to roll. He and fireman Abel start figuring how far they will go to head into a siding for the next westbound first-class train they need to clear, the *Chief*. They decide to try to make Williams, 92 miles west.

On the steady climb to Canyon Diablo, the 118 with its 3,400 tons rolls along in style. At Moqui, we meet Second 24, the *Grand Canyon Limited*. Approaching the Canyon Diablo bridge, the signal aspect is yellow. Merrifield explains that the track on the bridge is a gant-



let, and an eastbound train is in the block. We slow down, and soon we get a green, meaning the eastbound has cleared the gantlet. Soon an FT doubleheader led by No. 140 thunders toward us, with No. 137, with its own engine crew, coupled behind. The eight units total 10,800 horsepower, and they seem to be pulling all the cars in the state.

This is, however, merely the first of a long string of trains our Extra 118 West will meet during the night. Merrifield now shuts off, and drifts onto the Canyon Diablo bridge — a steel-arch span 531 feet long over the 222-foot-deep canyon. Watchmen are stationed at both ends at all times. Rolling off the bridge we pick up speed, and at 10:35 we observe Extra 123 East at Angel, then more: 110 at Riordan at 12:05 a.m., 136 at Nevin, and then just west of Maine a rarity, Extra 3853 East, a steam locomotive. Merrifield brings the train to a stop at Williams station at 12:53. We disembark for a quick cup of coffee at the Harvey House, and at 1:35 a.m. No. 19, the *Chief*, thunders past. Then Extra 149 East pulls by with 103 cars, and at 1:39 a.m., we are again on our way, just as Extra 147 East comes in to town. That's seven eastbounds in about 4½ hours.

At Supai, the top of the hill, Merrifield brings the train to a stop and whistles out his flag. Brakemen Samelson and De Rosa bundle up in heavy clothing, then walk the train, setting up retainers on 34 cars. They'll ride the roofwalks down the hill.

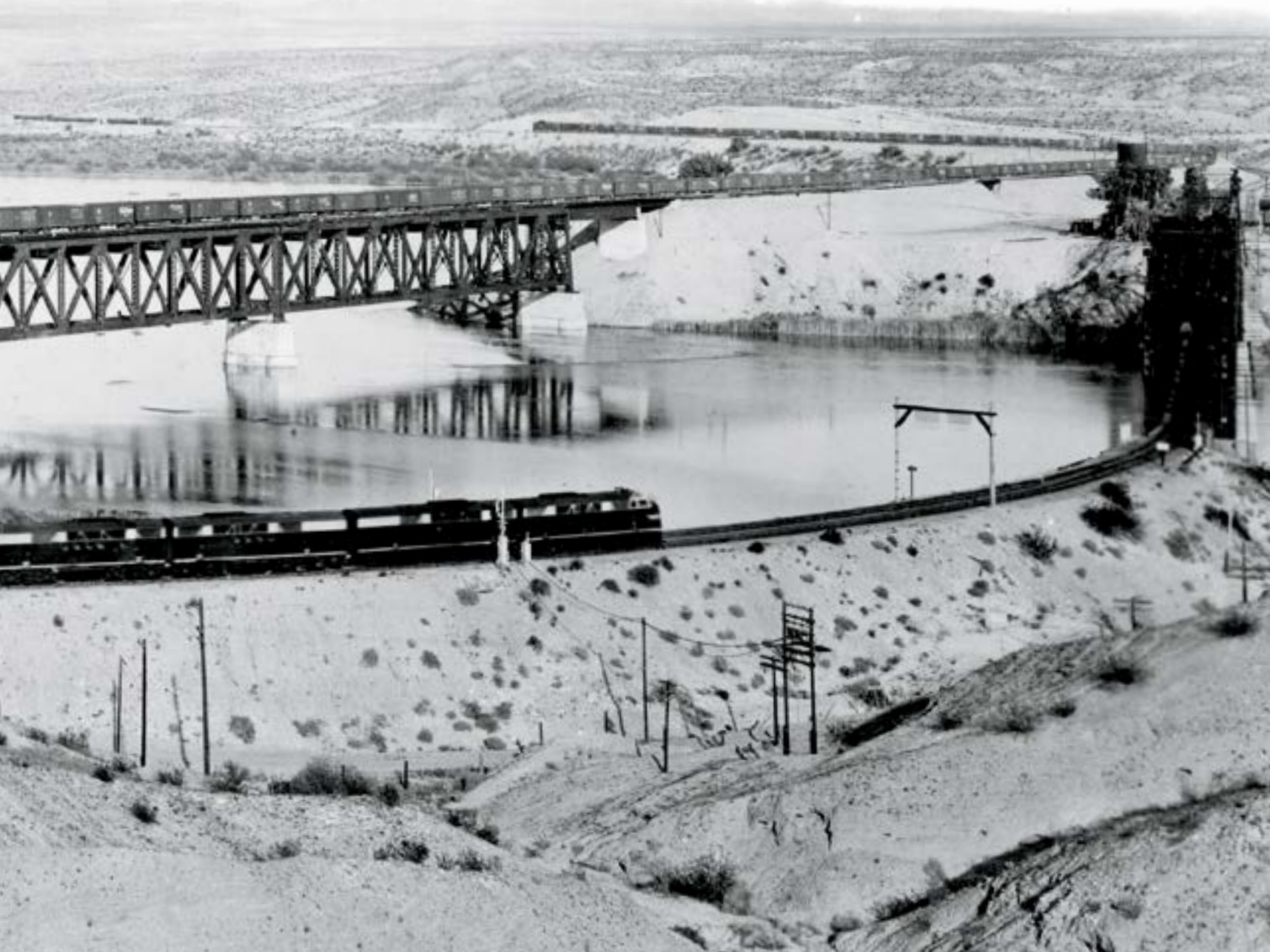
After the inspection, Merrifield calls in flagman Boyd Skinner, gets a highball, and starts down the 16-mile grade. Supai is where the east and west mains separate, and we roll down single track, with the dynamic braking in operation. Speed limit on the hill is 15 mph, and the needle on the lighted indicator hovers between 12 and 15. When it gets close to 15, Merrifield makes an application with the air brake, augmenting the dynamic, and the train slows almost immediately.

The temperature is a chilly 22 degrees, and Samelson and De Rosa are out in it! We wind around curves, slip through one short tunnel, take more curves, and at 3:24 we're in Ash Fork. It has taken 1 hour 32 minutes to come down the mountain, a distance of just 19 miles. With the retainers set back to normal, Merrifield pulls out and heads for home, arriving in Seligman at 4:45 a.m. Mountain Time. The 143-mile run from Winslow has taken 7 hours 30 minutes.

CREW CHANGE AT SELIGMAN

Setting our watches back one hour to Pacific Time, we head into the Harvey House

During November 1942–July 1944, Santa Fe replaced its 1890 through-truss bridge over the Colorado River with a double-track deck truss, a major improvement. Here, sets of four-unit FTs pose with west- and eastbound trains on the new and old bridges. Santa Fe



Santa Fe's mostly Navajo track gangs, like this crew at Needles, did their part for the homefront war effort. Jack Delano, National Archives

Crewmen wave and the extra flags are taut as FTs speed a westbound freight through the desert west of Needles. Wendell H. Kinney

for more coffee, while the new crew takes over and the car inspectors again go over the train. They find one bad-order car and send for a switch engine to cut it out while we meet the Arizona Division crew: engineer J. L. Ballard, fireman W. R. Crocker, conductor C. F. Shepherd, and brakemen Smiley, Anderson, and Hays. With the bad-order set out and an air test made, Ballard eases the 118 out of the yard at 4:41 a.m., less than hour after arrival. From here to Needles, the line is a descending grade all the way. At 6:38, first 4, the *California Limited*, hurtles past us on the double track. Ten minutes are required at Walapai for another train inspection.

Just before reaching Kingman is a beautiful sight. The track curves gracefully to the left, then to the right and enters an 18-mile stretch without a curve. We can see eight green signals in a row, each one showing the track ahead to be clear. With dawn just breaking behind us, and the "emerald necklace" stretched out ahead, it is one of the prettiest sights on the trip. We get stuck at Kingman at 7:45 a.m. while waiting for No. 8, the eastbound *Fast Mail*, to load and unload seemingly endless trucks of mail. Kingman is the site of an army camp, so the volume of mail handled here may well be imagined.

At Yucca we stop another 10 minutes for inspection, and the train is in fine shape. At Topock, a flagman waves us down, saying a steel gang is working ahead and to proceed with caution. Topock is the last station in Arizona, and here we encounter another gantlet bridge, over the Colorado River dividing Arizona and California. The steel gang is busy finishing a new double-track bridge. As Ballard moves us slowly up to the gang, we see a long line of trains ahead on the California side of the river. Speculation rises in the cab as we wonder who will get the board first. We hope it will be us, and it is. The signal at the bridge goes green, Ballard calls in the flag, and the crew is on the last lap of their run. As we pass the waiting eastbounds, we count four freights and Second 8 in a line that stretches for several miles. Soon, at 11:02 a.m., the 118 stands "at ease" in the yard at Needles, having made the miles from Seligman in 6 hours 21 minutes.

Here the 118 will get not only a new crew but a new train. Another consist is on the track next to us, and with the new crew on board, the 118 is cut off, runs ahead through the switch, and backs onto its new train. Conductor H. H. Hansmire tells us we've got 61 cars totaling 3,239 tons. Fireman Johnny Walters goes into the FTs' engine rooms to look over things, engineer G. H. Forsyth reads his orders, and at 11:34 a.m. Extra 118 West heads out of Needles, having been idled at this division point only 32 minutes.

ACROSS THE DESERT

Out of Needles the 118 really works. The climb takes us from an altitude of 483 feet at

SANTA FE HIGHLIGHTS, 1942–44

1. Purchase of additional diesel-electric locomotives so that its diesel fleet now consists of 15 passenger, 68 freight, and 123 switch engines — a total of 524,960 diesel horsepower, the most of any railroad. Complete dieselization for freight service Winslow, Ariz.–Barstow, Calif. (459 miles).

2. Construction of new diesel shops and repair facilities at Winslow, Ariz., and Barstow, Calif.

3. Construction of new bridge across Colorado River near Topock, Ariz.

4. Acquisition of 30 Northern-type and 25 Texas-type steam locomotives.

5. Santa Fe track work during the past two years, in addition to normal maintenance, has been geared to producing a railroad good for speeds of more than 100 mph by the reduction of curves and grades, the laying of heavier rail, and the insertion of new ties. New mainline rail is 131-pound steel. Some 6,000,000 new ties have been inserted during the past three years.

6. Extension or relocation of existing sidings and passing tracks at 246 locations, involving a total of 128 miles of new sidings and passing tracks, and the laying of 81 miles of new double track at strategic locations, making a total of 209 miles of new track in the three years since January 1, 1942.

7. Enlargement and extension of yards at 24 terminals, and, at eight of these, the building of new heading-out and auxiliary tracks.

8. Installation of 346 miles of Centralized Traffic Control.

9. Enlargement and improvement of communications system to the point where the Santa Fe now has the largest private communication system in the world.

A brakeman hangs special hooded blackout markers — required for trains operating near the West Coast — on his caboose at Ludlow, Calif. Jack Delano, National Archives

Flatcars hold a landing craft on its side and other materiel in the big yard at Barstow, Calif., junction of Santa Fe's lines to Northern and Southern California. Just east of here, at Daggett, Union Pacific trains join the Santa Fe parade for the run to the L.A. Basin. Santa Fe

Needles to 2,585 at Goffs, 32 miles west. Just as Forsyth has us rolling, we see a yellow board, and the next one is red. A work train is busy spreading ballast, and we get stabbed eight minutes. Despite being on the hill, the 118 starts without a quiver after the work train clears the main. There is no slack, no jar — we just begin to walk up the hill. We reach the top at 1:45 p.m., and after the usual inspection, Forsyth begins to "go to town." The needle on the speed indicator stays between 45 and 48 mph as we speed through the hot California desert. By this time the temperature has reached 85 degrees, but the diesel just keeps rolling along, with of course, no stops for water. We stop for another inspection at Cadiz and then take siding at Amboy for First 23, the *Grand Canyon Limited*, to go around us.

Soon we encounter an ironic touch. In the midst of the desert, with heat waves rising in tiny rivulets and the sun beating down unmercifully — in December, mind you — we pass in succession points named Siberia, Klondike, and South Klondike! Apparently the railroader who named these points had his tongue firmly in his cheek.

At Ludlow, while waiting for Second 23 to overtake us, we see two engines of the old Tonopah & Tidewater standing on a side track. Several flatcars of the extinct mining short line also stand in the yard. The rails of the T&T have been torn up, and soon the two little locomotives will be headed for the scrapper.

As the sun goes down, we begin to wonder if Siberia and the Klondikes weren't named correctly after all, for the atmosphere now is very much on the chilly side. As the sun sinks completely, it gets noticeably colder. At Newberry No. 7, the *Fast Mail*, runs by us. This is the last passenger train we have to look out for, and the run now to Barstow will be easy. But at Daggett, where the Union Pacific from Salt Lake City comes onto the Santa Fe to go over Cajon Pass, we're delayed by a switching crew. They clear, and we ease into the yard at Barstow at 7:15 p.m., ending

At Summit, Calif., brakemen on the cartops of a westbound freight train prepare for the descent of Cajon Pass. On the eastbound track, 4-8-4 No. 3770 passes with the streamlined Los Angeles–Chicago *Chief*. Jack Delano, National Archives

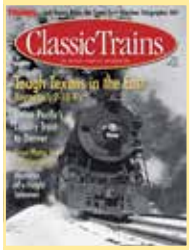
a run of 6 hours 19 minutes from Needles, another 167 miles under the 118's belt.

As we climb down from the cab and Forsyth moves the locomotive toward the house track, the diesel has been on the road 23 hours, covering some of the most gruelling territory on any railroad. And yet, the possibility is that by midnight the 118 will be headed back to Winslow with another freight. Servicing starts at the washing platform, where men with steam jets remove the grease and grit from the running gear. During this process, the fuel tank of each unit is filled and the radiators filled with distilled water. From this point the diesel moves to the maintenance house for service and light repairs.

Consider this key part of the Santa Fe at the end of 1944. Traffic is up 175 percent, with 1,068 daily loads arriving at Barstow, train crews putting in 5,700 miles per month, and diesel locomotives working 23 hours out of 24. Crews are building new bridges without interrupting the flow of traffic. With the war in the Pacific becoming more acute, and U.S. forces concentrating on that theater of action, what will the 1945 bring? Whatever it may be, Santa Fe and its employees will do the impossible . . . and do it well. ■

HENRY D. RENNWALD wrote about railroads in a variety of settings, including newspapers, books, and Trains, *in which he had at least five bylines between 1943 and 1958.*

A guard keeps a lonely vigil on the Santa Fe's bridge at Devore, Calif. Discovery of a Nazi sabotage plot [page 26] gave weight to such precautions. Jack Delano, National Archives



WINTER 2000

By train to ANAHEIM, AZUSA, and CUCAMONGA

An old radio-show gag was just a collection of L.A.-area place names — or was it?

BY **CURTIS L. KATZ**
ILLUSTRATIONS BY THE AUTHOR

Anyone acquainted with radio's old *Jack Benny Program* knows the routine — Jack and his friends are at a train station waiting to depart on a journey, when an announcement echoes through the waiting room:

"Train leaving on track five for Anaheim, Azusa, and Cuc . . . amonga."

First heard on the Benny broadcast of January 7, 1945, this line — intoned by versatile voicemaster Mel Blanc — became one of those running gags that made the Benny show so delightful.

Actually, the joke behind the line was more than just a litany of funny-sounding place names. With the stolid solemnity usually reserved for calling transcontinental limiteds, the train announcer was describing a train that apparently wandered aimlessly among rural suburbs lost in the orange groves that surrounded Los Angeles in the days before urban sprawl.

Anaheim, 28 miles southeast of downtown L.A., was settled in 1857 as a German agricultural colony. Its name means, essentially, "home by the Santa Ana River."

Azusa, located some 23 miles east of downtown Los Angeles, was laid out in 1887 as another agricultural community. It took its name from that of a nearby hill, a name that came from a local Indian word that turned out to mean "skunk place." In later years, civic boosters construed this unpromising name to mean "everything from A to Z in the USA."

About 20 miles beyond Azusa is Cucamonga, the oldest of the three settlements, having originated as a Spanish rancho in the early 1800s. Its "kooky" alliterative name came from a Shoshone Indian word meaning "sandy place." (Cucamonga may be a funny-sounding place, but at least it's not a funny-smelling place.)

I don't believe anyone on the *Jack Benny Program* ever actually rode the train to Anaheim, Azusa, and Cucamonga, although there was one show in which the train announcer plaintively pleads for people to ride the train then sullenly announces it has been cancelled for lack of patronage.

IF JACK HAD MADE THE TRIP

But could one actually travel by train from Los Angeles to Anaheim, Azusa, and Cucamonga? Let's imagine that Jack Benny's curiosity has been piqued by this possibility, and find out. It is nearly 66 years ago, February 14, 1949, a pleasant day in L.A. Benny has just turned 39 (again), and he is cheerfully humming "Love In Bloom" as he saunters across the waiting room of Los Angeles Union Passenger Terminal. Despite the heavy wartime traffic of recent years, this grand building, with its unique blend of Spanish Mission and Art Deco architecture, still looks as new as the day it was opened, for it is only 10 years old — the last of the great stations.

As Jack approaches the ticket windows, he calls to one of the agents, "Oh, Mister . . . Mister!"

"*YEEESSS?*" comes the unctuous response of the ticket agent (played, of course, by Frank Nelson). "May I help yooouuu?"

"Yes," replies Jack evenly, "you may help me. I've heard so much about your train to


UNION STATION

Anaheim, Azusa, and Cucamonga that now I'd like to take it."

"Well you can't!" comes the inevitable retort. "It belongs to the railroad!"

"Now cut that out! You know very well what I mean."

"All right, all right," whines the agent. "It's getting so a guy can't have a little fun anymore." Whereupon Nelson reaches under his counter, producing a prodigious pile of timetables and a thick copy of the *Official Guide of The Railways*, through which he begins paging earnestly.

After several hummed choruses of "Love In Bloom," and a Lucky Strike cigarette commercial from the Sportsmen Quartet, the ticket agent finally resurfaces from his research.

FRANK: Well, I've planned your itinerary. You'll go "Santa Fe all the way," leaving Los Angeles at 10:10 a.m. eastbound on train 42, which arrives Azusa at 11:22 a.m., Cucamonga at 12:11 p.m., and continues on to San Bernardino.

JACK: I presume this is one of those deluxe streamliners, like the *Super Chief*. I always go first class, you know.

FRANK: It's the doodlebug local.

JACK: The what?!

FRANK: A doodlebug. A self-propelled gas-electric passenger car that also carries mail and baggage. You'll love it.

JACK: Hmmm …

FRANK: Now, you'll arrive in San Bernardino at 12:50 p.m., where you'll spend the night . . .

JACK: Spend the night in San Bernardino?! What happened to Anaheim? And why can't I just come back on the diddleybug?

FRANK: Doodlebug. It doesn't go back until the morning. And it doesn't go to Anaheim. So you'll stay overnight in "San Berdoo," then leave westbound at 7:10 a.m. on train 51, the morning milk run, arriving Fullerton at 8:37 a.m.

JACK: Wait a minute! Can't I travel on something a bit classier than milk trains and jitterbugs?

FRANK: That's *doodlebug!*

JACK: Doodlebug, doo-wah-diddybug, what difference does it make?

FRANK: Well, if you insist, you can wait until 8:45 a.m. at San Bernardino and take train 23, the *Grand Canyon*, our inexpensive tourist train from Chicago.

JACK: Inexpensive, did you say?

FRANK: How in the *world* did I know *that* would get your interest? Now, No. 23 arrives Fullerton at 9:51 a.m., but it's a flag stop, so you'll have to ask the conductor, and he'll put you off. And if you're nice, he might even stop the train, too.

SPEND THE NIGHT IN SAN BERNARDINO? WHAT HAPPENED TO ANAHEIM? AND WHY CAN'T I JUST COME BACK ON THE DIDDLEYBUG?

JACK: Well, I should *hope* so.

FRANK: Then you wait for train 70, the southbound Surf Line mail train, which leaves Fullerton at 1:09 a.m. and arrives Anaheim at 1:19 a.m.

JACK: You mean I have to stay all day in Fullerton to catch a mail train in the middle of the night?!

FRANK: Well . . . Fullerton *is* only two-and-a-half miles from Anaheim. You *could* take a taxi from Fullerton to Anaheim and catch train 75, the northbound Surf Line local at 4:56 p.m. and reach Los Angeles at 6 p.m. the same day . . .

JACK: Hmmm . . . cab fare in Fullerton is so *expensive* . . .

FRANK: . . . or you could hitchhike . . .

JACK: *I'll do it!*

FRANK: . . . but that would be *cheating!*

JACK: All right, all right. How do I go the rest of the way by *train?*

FRANK: You take train No. 70, like I said, arriving Anaheim at 1:19 a.m., and wait there all day for train 75 at 4:56 p.m., which will get you back to Los Angeles at 6 p.m.

JACK: Wait a minute! If I've got this right, are you telling me that it'll take two-and-one-third days for me to travel from Los Angeles to Anaheim, Azusa, and Cucamonga and back, riding on four different trains, one of which is some kind of gas-electric *insect* to San Bernardino?

FRANK: Well, of course you could go the other way, leaving Los Angeles at 12:30 midnight on train 70, arriving Anaheim at 1:19 a.m., then taking train 75 from Anaheim at 4:56 p.m. arriving Fullerton at 5:08 p.m., connecting at 6:13 p.m. with train 54, the evening local arriving 7:50 p.m. at San Bernardino where, after spending the night, you'd take train 45, the morning diddleybug . . .

JACK: That's *doodlebug!* So there!

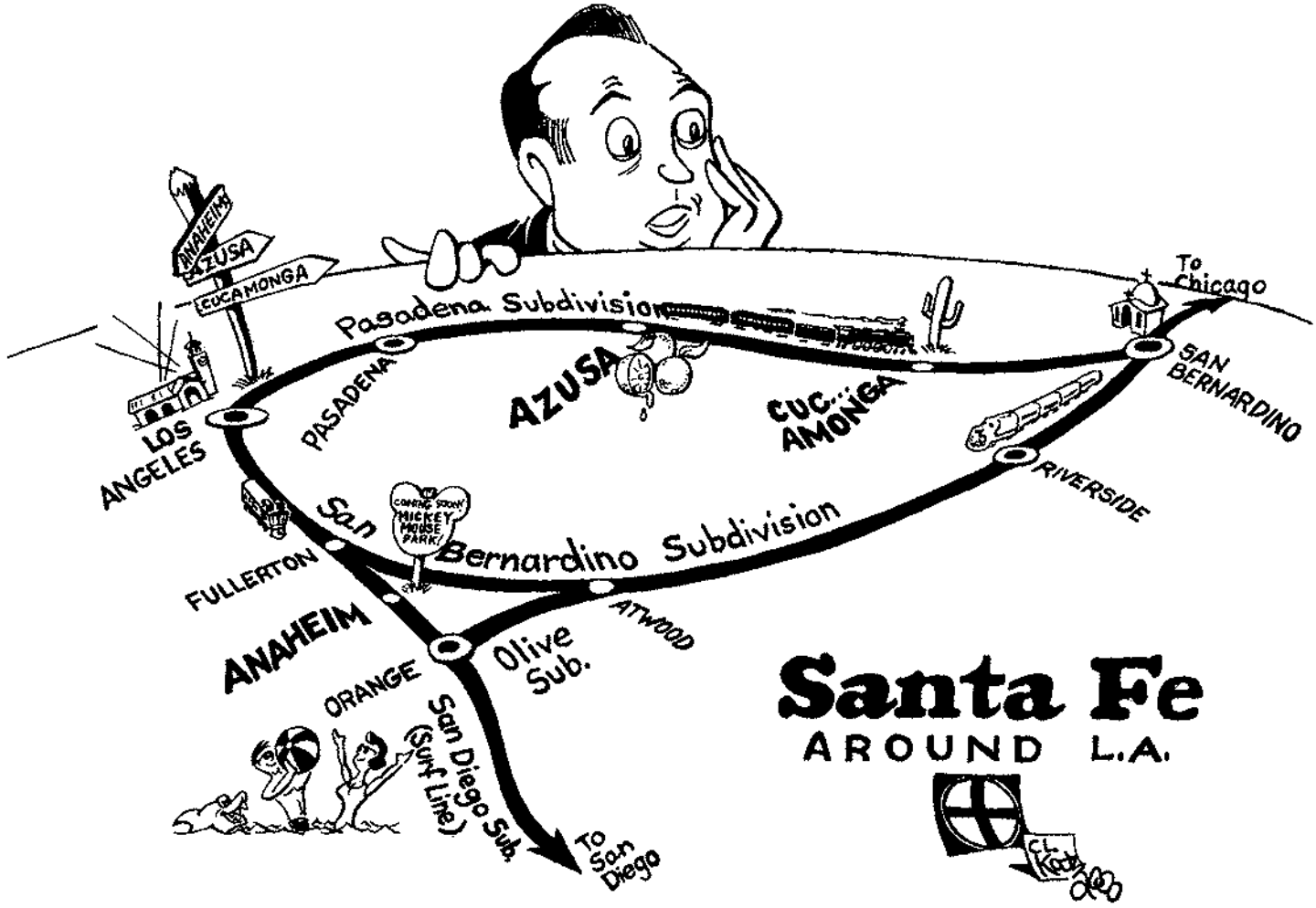
FRANK: . . . leaving San Bernardino at 6 a.m., making a 6:25 a.m. flag stop at Cucamonga, a 6:57 a.m. regular stop at Azusa, and arriving L.A. at 8:15 am. That's four trains in only one-and-a-third days. But who'd want to leave Los Angeles at midnight?

JACK: Well, I certainly can't imagine.

FRANK: So, are you ready to travel?

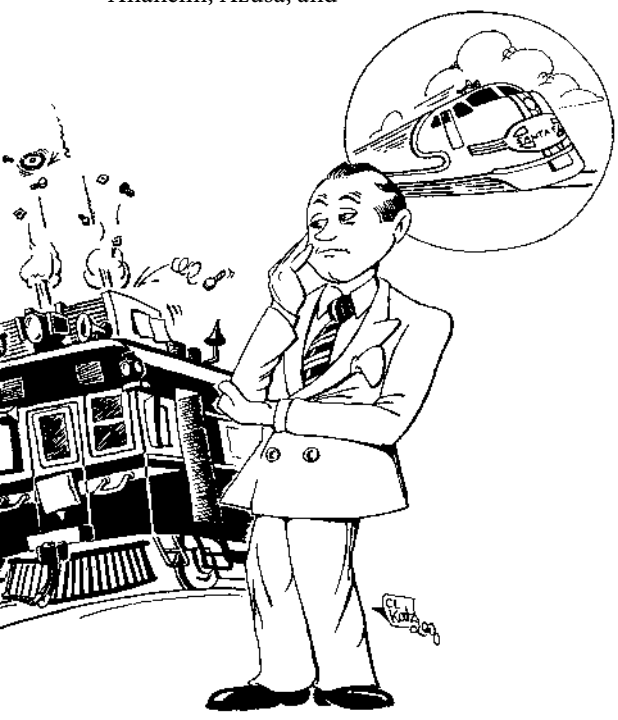
JACK: Yes, I believe I am.

Whereupon our Jack turns and calls across the waiting room, "Oh, Rochester! Rochester! Go get the Maxwell!"



ANAHEIM WAS THE PROBLEM

Jack Benny's circuitous itinerary is not just another fit of pique typical of Frank Nelson's radio persona — Frank is actually offering Jack the best railroad routings connecting Los Angeles with Anaheim, Azusa, and Cucamonga that were available in 1949. The problem is Anaheim. It is not on the same Santa Fe line as Azusa and Cucamonga, and at that time it was shunned by all but one train each way per day on the otherwise busy Surf Line to San Diego.



Yet despite these details, there incredibly once was a train from Los Angeles to Anaheim, Azusa, and Cucamonga!

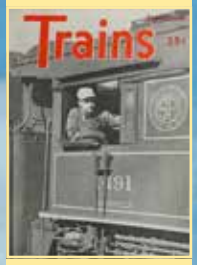
The Santa Fe's "Daily Motor No. 42" — the doodlebug (via the Pasadena Subdivision) to Azusa and Cucamonga in our story, originally did not remain overnight in San Bernardino. Rather, it lingered in "San Berdoo" only for the lunch hour, and at 1:30 p.m. it became "Daily Motor No. 53," returning to L.A. on a different route (the San Bernardino Subdivision) via Fullerton with a dog-leg detour (over the tiny Olive Subdivision and the northern extremity of the San Diego Sub) that included a 3:05 p.m. stop at Anaheim.

The train reached Los Angeles at 4 p.m.; the entire round trip took only 6½ hours. Alas, sometime early in World War II the detour through Anaheim was bypassed, so by the time the famous "Train leaving on track five . . ." was first announced on January 7, 1945, it was just a radio gag-writer's whimsy.

By 1949, only the Santa Fe had passenger trains that stopped at Anaheim, Azusa, and Cucamonga. The far-flung Pacific Electric system served all three communities, but only Azusa, on the Glendora line, was actually reached by train. Pacific Electric *bus* lines served Anaheim and Cucamonga. The obscure Whittier branch of the Union Pacific once hosted a modest local that called at Anaheim, but by the late 1930s this had become a bus service ferrying suburbanites to UP's streamliners.

The scene between Jack Benny and Frank Nelson is the author's invention, but the timetable information it incorporates is absolutely authentic, thanks to the resources of the Northwestern University Transportation Library, of railroad historian Mike Blaszak, and of the author's own library of arcane information. ■

CURTIS L. KATZ, who died in 2011 at age 57, enjoyed a 30-year career as an Amtrak car attendant out of Chicago. An avid rail enthusiast, historian, and writer, Curt had articles published in Passenger Train Journal, Nostalgia Digest, *Trains, and Classic Trains. Curt also penned the "Railfun" comic strip, which ran monthly in* PTJ *and later,* Railfan & Railroad *magazine.*



SEPTEMBER
1945

Postwar STREAMLINER DREAMS

Burlington's Vista Dome car and General Motors' *Astra Liner* train are forerunners of the radically different designs we may expect in postwar passenger equipment

BY **A. C. KALMBACH**

The Burlington Route is now operating in experimental service a stainless-steel coach remodeled to incorporate the most radical innovation in railroad passenger travel since air conditioning. A glass-enclosed upper deck seating 24 passengers has been built into the roof of the car. This "Vista Dome," as the CB&Q calls it, allows a view completely around the horizon and upward as well. The only thing comparable is the view from a diesel locomotive cab or a caboose.

The center aisle of the upper deck has full headroom, but the seats are somewhat elevated above the aisle, and the lower floor has side aisles with full headroom under the upper deck seats. Under the depressed center aisle of the upper deck the headroom is shy, and in this central space of the lower floor, seats have been placed facing outward. In postwar cars of this type the lower floor of the car will be depressed between the trucks to allow more headroom under the upper deck, but the Burlington's experimental car had to be done as a reconditioning of an existing car because of material restrictions, and a lowering of the floor was, of course, impossible.

The original car provided seats for 52 passengers, not counting seats in the women's lounge and the men's smoking room. The revised car, named *Silver Dome*, has seats for 58. Total height of the original car (called *Silver Alchemy* before conversion) was 13 feet 6 inches; the height with dome added is 16 feet 2 inches. Clearances are ample to allow this car to operate almost anywhere. The upper deck is 22 feet 6 inches long and the full 10-foot width of the car. The passengers are heads and shoulders above the roofline, permitting them to see forward over the train. Owing to the unavailability of curved glass or suitable transparent plastics in wartime, the windows and roof of the dome are constructed of flat double-pane glass. The outer pane is a heat- and sunray-resisting glass separated by an air space from the inner pane of safety glass.

All lights in the dome except those illuminating the aisle floor can be extinguished at night to give passengers a better view of the track ahead or the passing landscape in the darkness.

For the present at least, the Burlington does not plan to charge any extra fare, although officials fear nearly

The "*Astra Liner*" referred to in this 1945 article had been named the *Train of Tomorrow* by the time it hit the rails in 1947. In this classic publicity view, farm folk wave as the futuristic train passes. General Motors

Burlington Route created the first dome cars by rebuilding two lightweight coaches, built by Budd in 1940, at its Aurora (Ill.) shops. ***Silver Dome***, pictured on tour at Wichita Falls, Texas, was first, in 1945, followed by ***Silver Castle*** in 1946. *Wichita Times-Record News*

Before CB&Q's ***Silver Dome***, views ahead were enjoyed only by crews in diesel cabs and caboose cupolas. Classic Trains collection

everyone will want to ride upstairs and some method will be needed to apportion the preferable seats. The car is being tried on various trains, including the *Exposition Flyer* through the Colorado Rockies on the Rio Grande and Feather River Canyon on the Western Pacific, to test it under varying conditions. Postcards are handed to passengers on which opinions of the dome can be expressed and sent to the management.

THE Q ACTS ON GM'S IDEA

President Ralph Budd and other CB&Q officials got the idea of the dome car when they were ushered in spring 1945 into an old automobile showroom in Oak Park, Ill., that had been remodeled into a display room of new ideas in railroad passenger equipment developed for Electro-Motive Division by styling engineers of parent General Motors.

Here Ralph Budd, and the presidents of 55 other railroads at other individual showings, sat down in a darkened room and watched a huge aluminum-bound book open to show in words and pictures an entirely new concept of railroad-car design. In another room Budd saw the designs in three dimensions by means of large scale models. The roofs could be removed to permit study of the interior arrangements. The walls of the display room were decorated with dozens of colored sketches showing scores of clever alternate arrangements and ideas that could be incorporated into postwar passenger cars.

EMD calls its new-style train the *Astra Liner.* Neither GM nor EMD will go into the

All four of the *Train of Tomorrow*'s cars had domes. Material shortages precluded use of the planned curved glass, so Pullman-Standard settled for flat panes, a style P-S stuck with in its subsequent domes. This view is in the chair car *Star Dust*. General Motors

Two-pages from a *Train of Tomorrow* booklet show features of *Star Dust,* including semi-private rooms under the dome. Greg Palumbo coll.

Diner *Sky View*'s main seating area, to the rear of the dome, sat 24. The kitchen was on the main level ahead of the dome, not under it as originally planned. General Motors

carbuilding business; instead the designs were prepared as a move to help sell diesel locomotives. EMD offers the ideas free to any railroad or car manufacturer as a means of attracting more passengers to the rails. That's where the "more locomotives" come in.

The *Astra Liner* designs were developed under the direction of Harley Earl, GM's vice president for styling. Artists, sculptors, and designers in the GM Styling Section were given a free hand to suggest improvements in train travel that they themselves would enjoy as passengers. The results were screened through an engineering committee, which accepted those deemed in accordance with Interstate Commerce Commission requirements and susceptible of successful engineering and operation. Contracts provide for a four-car demonstration train.

The dome in *Sky View* contained places for 18 diners at tables for two and four in a "roof-garden" atmosphere, plus a dumbwaiter, refrigerator, and storage. General Motors

FOUR CAR TYPES

GM plans four car types for its demonstration train: coach, diner, sleeper, and observation car. All will have revolutionary changes in shape and interior arrangement, as well as in such details as seats, berths, entertainment facilities, and sanitary provisions. The designs are based upon two major inherent advantages in railroad travel over all other forms of land transportation: First, the better opportunity to view scenery from a train; and second, the greater opportunity to provide more comfort and enjoyment due to the less severe restrictions upon size and weight in a railroad car than in airplanes, buses, and automobiles. This second point also gives the railroad car designer greater opportunity to achieve useful and beautiful effects with new postwar metals, plastics, and textiles.

A reserved seat in the astra dome of the sleeping car goes with each space in a room on the lower deck. In the scale model of the sleeper prepared by the GM designers, the astra dome has 24 seats. This feature adds the

Some of the area below *Sky View*'s dome was devoted to a private dining room that could seat 10 in two groups of 5; the pantry occupied the rest of the space. General Motors

The *Train of Tomorrow*'s *Sky View* was the first all-electric dining car. UP was the only railroad to adopt dome dining. Greg Palumbo coll.

Sleeper *Dream Cloud* contained two drawing rooms at the front, three compartments under the dome, and eight duplex roomettes. Two of the compartments could be joined *en suite*; here a porter makes down a bed in one as a couple sits in the other. General Motors

Dream Cloud had berths for 20 people, all lengthwise to the train. Upstairs in the dome there were 24 seats. Greg Palumbo collection

charm and luxury ordinarily associated with a deck chair on an ocean liner, with the greater attraction that the scenery from a train is much more interesting. Laminated glass, proved under gunfire in windshields of thousands of warplanes, is to be used for the gracefully curved roof of the astra dome.

Beneath the dome are three bedrooms on a level lower than the rest of the car floor. The usual side aisle is depressed in the area beneath the dome to provide 6 feet 6 inches of head clearance. The three rooms beneath the astra dome are reached from this depressed portion of the aisle by two steps downward.

Passengers mount to the dome by a stairway that leads upward from a lateral hallway placed between rooms about one-third of the distance from one end of the car. The stairway is deliberately made narrow enough so that passengers will naturally grasp the handrails for ascending or descending. Steps are illuminated like those in modern theaters.

The design for the observation car suggests it will be one of the most interesting vehicles in the world. It should give passengers such a variety of delightful little surprises that they will never have a dull moment, even if on the train for two or three days.

The car has *five* levels: the regular car floor, a center ramp, a lower cocktail lounge, a rear observation lounge, and the dome. This permits a fascinating array of sights within the car itself, to say nothing of the enjoyment of moving into several totally different atmospheres by merely stepping around a gracefully curved corner or going up or down a few steps. The car has 75 comfortable places to sit, at least 40 of which are movable.

As in the sleeper, the observation car's dome has 24 seats and is in approximately the center of the car. The seating may be varied. It has been suggested that it would be possible on transcontinental trains to equip the dome with seats for sunbathing or napping.

The space beneath the dome is used as a cocktail bar. The low ceiling and built-in nooks give it an intimate air. A more formal cocktail lounge is located on the regular car floor level at the forward end of the car. This room is entered either from a door at the front of the car or by three steps that lead up out of the lower cocktail lounge.

The observation lounge at the rear has a floor 18 inches higher than the main car floor level. Windows are unusually wide and deep. Most of the furniture in the room is movable, permitting passengers to form their own groups as in a private living room. The astra dome stairway leads from this lounge.

COACH AND DINER OPTIONS

In the coach, extra space gained by the addition of the dome may be used to increase seating capacity. This arrangement might be followed for suburban or other short-run trains. However, use of the space under the dome for special facilities for added passenger comfort and enjoyment is suggested for those runs taking several hours or overnight.

***Dream Cloud*'s compartments featured two lower berths instead of the more usual upper and lower. The berth at left converted from a sofa, while the one by the window folded down from the wall. Note the blankets with *Train of Tomorrow* markings.** General Motors

In one alternative, the under-dome space is divided between an extra-large women's lounge and a nicely isolated children's playroom. Heavily padded sides for the playroom and playthings devoid of sharp corners are suggested. A diaper-changing table unfolds from a wall. A high chair, securely fastened to the floor, sits in a corner of the lounge. Mothers may be free to perform their own toilet by strapping babies in the high chair.

Space beneath sinks in the women's lounge would be enclosed to cover what sometimes becomes unsightly, refuse-catching plumbing. The fronts of these enclosures would be hinged at the bottom. Slots at the top would receive soiled towels. The towels would fall into a large disposal rack on the inside of the hinged panel.

Another suggested use of the under-dome space is to divide it into "family coach sections." These would be private rooms, equipped with five reclining seats. A family party could have such a room by payment of an extra charge. Odd spaces left over between family coach sections could be utilized as automat snack bars or card rooms.

Rollaway coat and hat racks that disappear into a nook have been designed. One new type of coach seat suggested would have a shelf underneath the seat for a suitcase.

The GM Styling Section has suggested two new types of dining cars. One, which has the same roof contours as standard cars, is distinguished by upper wall and rounded roof construction of the same thermopane glass used in the astra dome. The glass portion of the roof extends over the section of the diner occupied by tables. Plastic shades may be adjusted underneath the glass roof sections in case sun glare becomes objectionable. This gives the dining car the characteristics of a fashionable outdoor cafe, or of a roof garden. Two end tables may be removed and folded into slots in sidewalls, leaving an intimate space in which five or six couples may dance.

Linen storage space and partitions are so arranged at the kitchen end of the diner that waiting passengers may see the table seating situation without crowding into the aisle and getting in the way of waiters passing to and from the kitchen. A small service bar is lo-

Observation car *Moon Glow* seated 68 people on four levels, including the 10-seat "Top o' the Rail" cocktail area under the dome.

Moon Glow's rounded observation lounge featured extra-wide windows, covered here by drapes. Two photos, General Motors

Full-page artwork in the *Train of Tomorrow* booklet shows a desk to the right of the dome stairway in *Moon Glow*. Greg Palumbo collection

cated at one side of the entrance to the table space. A cocktail lounge waiting alcove, seating 10 persons, is provided at the end of the dining car opposite the kitchen. The partition separating this space from the table space is low enough to permit occupants to see into the dining area without getting into the aisle.

The other dining car, the type to be included in the *Astra Liner* that will be built, departs completely from conventional diner design. This car will have an astra dome that will serve as part of the dining space. Tables will be located in both ends of the car and in the dome, while the kitchen will be located in the depressed central portion of the car underneath the dome. A service pantry will be adjacent to the kitchen toward one end of the car and on the regular floor level.

In addition to its appeal as a highly unusual place in which to enjoy food, this car will have a number of practical operating advantages. It will seat at least 10 more persons than standard dining cars, and all patrons will have more "elbow room." Serving will be expedited by the service pantry arrangement. Whereas dining-car waiters now go back into the kitchen for food, they will have their orders filled from the service pantry over a counter in the dome-type diner. This counter is in a passageway that runs along a car wall, giving easy access to the dining rooms in both ends of the car. The waiters serving the astra dome will dispatch used dishes and receive food via a dumbwaiter from the kitchen immediately below.

FANTASTIC, BUT SOUND

Sounds a bit fantastic, doesn't it? But it is all within the limitations of sound engineering practice. It is simply the result of turning loose on railroad-car design men who have been catching the public attention with automobile, refrigerator, and appliance designs.

Add to the known advantages of rail travel — speed, economy, all-weather performance, and plenty of room — the spicy seasoning of modern design, and there is every reason to believe that wartime passenger loads may be carried over into peacetime years. The General Motors designs created to help encourage the sale of Electro-Motive locomotives are only one item in a postwar parade of progress that is now being developed by America's railroads and their suppliers. ■

GM's *Train of Tomorrow* gets a final polishing in SP's Los Angeles coach yard before a public display session. After the tour, Union Pacific bought the train's E7 locomotive and four cars. L. O. Merrill

FEBRUARY
1946

Railfans' SATURDAY NIGHT

Spend an hour in late 1945 at Englewood Union Station on Chicago's South Side, where the trains of four railroads keep the tracks busy

BY **D. W. "DOC" YUNGMEYER**

Midday trains of Pennsy and New York Central, behind Baldwin Sharknoses and EMD E7s, respectively (left), prepare to "race" east from Englewood in the late 1940s. A westbound PCC streetcar on 63rd Street (above) ducks under the NYC tracks in an afternoon view from the Rock Island platform. Left, Robert Caflisch, Helen Caflisch collection; above, H. M. Stange, Krambles-Peterson Archive

The lights on the diagram board in the dimly lit tower on Chicago's South Side shift positions as the second-trick man moves his levers rapidly for a new line-up. The obscure outlines of the tower become distinct when a light from behind suddenly shifts to the right, swiftly contracting from a cone to a solid beam, and in that instant an iron monster thunders in from the south. It's a train arriving at Englewood Union Station.

Sparks fly from the brakeshoes as a 4-8-4, followed by a head-end buffet car, six coaches, a diner, a parlor car, a parlor-buffet car, another parlor car, and two extra coaches, roar across the Pennsylvania tracks and come to a stop along the west platform of the station. The rear brakeman drops off with his lanterns and Rock Island No. 10, the eastbound *Chicago Limited*, discharges passengers onto the station platform. Some train! Making nine stops, it averages 49.4 mph for the 358-mile run from Des Moines, Iowa, to the Windy City's La Salle Street Station.

Three minutes earlier, at 8:15 p.m., you watched Pennsylvania Railroad No. 2, the *Pennsylvania Limited*, K4s-powered, swing around the curve to the west and, still working steam, smack the three Rock Island tracks at a snappy clip, its long string of head-end cars, coaches, and two Pullmans coming to a smart stop on the station's south side, just clearing the derail lock east of the Rock Island diamonds. This comfortable old lady still retains some of the dignity of the 19th century *grande dame*, whose garments were fashioned by Pullman and whose prestige was challenged only by the upstart *Broadway Limited* of 1902. Nowadays she sometimes appears as twins, in which case the first section, the gravy load of mail and express, runs slightly ahead of schedule, while the second edition, the plush load, runs to time.

FOUR RAILROADS, ONE STATION

You came tonight to Englewood, the three-sided depot 6.7 miles south of La Salle Street Station on Chicago's Loop, because you knew you would see the passenger-train activities of four railroads: Rock Island, New York Central, Pennsylvania, and Nickel Plate. A little study of their timetables told you that this hour would be pretty busy if everything were on time, and tonight the board says it is. But you forgot that there were other moves through the station, so don't let this easy beginning fool you. If you want to see all the show, you'd

PRR Q2 6196 passes Englewood Tower with an eastbound freight; the station is hidden behind the 4-4-6-4. Robert Caflisch, Helen Caflisch coll.

A westbound PRR train led by two K4 Pacifics pauses at Englewood. Note the Rock Island tracks and numerous interlocking throw rods in the foreground. J. Schmidt, Krambles-Peterson Archive

No. 5526, one of the Pennsylvania's 52 sleek T1 4-4-4-4 duplex drives of 1942–46, is in charge of a midday eastbound train at Englewood in the late 1940s. Barney L. Stone, Krambles-Peterson Archive

Two Fairbanks-Morse Erie-builts, rare on PRR varnish, head up a morning eastbound at Englewood. Robert Caflisch photo, Helen Caflisch coll.

better be fleet of foot and strong of wind, for they'll be coming at you from all directions, and the platforms are long.

Already the loudspeakers are calling New York Central No. 80, the *Maumee*, for 8:24. Far up the tracks to the north, beneath the endless vista of color-light signals, a pinpoint of light rapidly grows to blinding brilliance, makes a left and right jog at 61st Street, and then leans into the long curve which forms the third side of the station. You're going to have company as you hurry down to the east end of the platforms, for as Rock Island No. 10 cleared the interlocker you saw a headlight on the PRR underneath the signal bridge at Wentworth Avenue, and from the sound of the exhausts you know there was a whale of a freight train getting under way. You get to the end of the platform canopy just in time to see the last of the head-end business go aboard NYC 80. Then the air whistle peeps in the cab of the 4-6-4 and the engineer responds with a touch of the booster, a widening of the throttle, and a slight adjustment of the valve gear. The approach-lighted signal changes from green over red to red over red, blinking out as the last car passes, while the Hudson makes a run for the slight hill up to Grand Crossing, where the parallel NYC and PRR tracks bridge those of the Illinois Central.

In the next few minutes anything can happen — and it does. As NYC's *Maumee* blasts her way up the hill, a pair of red markers moving in from the east passes her at the same time the Pennsy freight train rumbles by, an M1 4-8-2 with a solid string of low-side gondolas, all bearing the road's keystone herald. The M1 has them rolling briskly, the tempo of the exhausts increasing with every turn of the drivers. You don't try to get a count but it's an odds-on bet that there are at least 100 in the train. Turning back to the red markers noted a moment ago, you discover from the tail sign that this is the *Nickel Plate Limited* backing from the coach yard to La Salle Street. You've but a moment to admire the small Hudson shoving the limited when your view is blotted out by a Nickel Plate eight-wheel switcher curving eastward through the station with loads from the Stock Yards.

One of Pennsy's redoubtable K4 Pacifics rolls into Englewood with a train for Chicago Union Station circa 1948. PRR had 425 of these engines, built 1914–28. Barney L. Stone, Krambles-Peterson Archive

Soon after, a pair of PRR caboose-hops from Colehour Yard at the Indiana state line roar through in quick succession. The position-light signals guarding the Rock Island diamonds change quickly from vertical to horizontal and Herman, the towerman, proceeds to "lay some track" in a hurry, for an outbound Rock Island varnish run, No. 23, the *Colorado Express*, is due in the station at 8:28.

As you gallop back west along the platform, you see another handsome Rock Island M-50a 4-8-4 come to a power stop with No. 23 well across the Pennsylvania tracks. A furious burst of speed by the baggagemen while the passengers crowd aboard . . . then the air whistle speaks twice, and the locomotive quite casually leans into the work of taking the *Colorado Express* into the night. You watch it disappear

Hudson 5414, one of NYC's 50 superb J-3a 4-6-4s built by Alco in 1937–38, departs with an eastbound. B. L. Stone; Krambles-Peterson Arch.

Another J-3a, No. 5442, approaches the station from the east. The eastward track is white from sand deposits left by engines grasping for traction in as they depart. Robert Caflisch, Helen Caflisch collection

One of just two NYC passenger F3 sets, 3501/3600/3500, is in its original paint scheme as it pulls out of Englewood with the *New England States* for Boston. Barney L. Stone; Krambles-Peterson Archive

around the curve to the south: seven head-end cars, three coaches, a sleeper, and, carrying the markers, a buffet car running backward as a club car.

Two headlights are coming right on the tail of No. 23. The one on the middle track is a suburban train with one of Rock Island's ever-present class P-31 Pacifics up front, but the other one, on the far track, is a puzzle, until the last car of the "dummy" has cleared. You rock back on your heels as an old C-43 Consolidation comes through with a most unusual drag: a shop transfer bound from 47th Street for Burr Oak yard in Blue Island, consisting of a dead M-50, a dead C-43, a wheel car (the chassis of an old locomotive crane) with three pairs of driving wheels aboard, a boxcar, and, bringing up the rear, a six-wheel switcher, also dead. What a shot for the old shutter-box if this could be seen during daylight!

As the shop train wheezes past, the loudspeakers go to work again calling attention to the imminent arrival of Rock Island No. 43, the *Californian*, at 8:42. A lot of passengers are waiting for this all-coach train (except for two Kansas City sleepers), which is pulled by yet another M-50a. This one stops right on the PRR diamonds, seemingly asking your admiration, which it well deserves. You look back along the train and estimate the chances of some fireworks once the air whistle "peeps." No such luck. The engineer, a cautious man, lets the engine sag back gently for a moment before putting the valve gear into forward motion. You watch as the long train starts to roll past: a head-end car, a dormitory car for the crew, five coaches, a diner, five more coaches, the two Kansas City Pullmans, and a couple of tourist sleepers carrying troops.

By the time the last car clicks over the diamonds they are really stepping along, so you think you'll check the time it takes for the markers to disappear. Yet before that happens, you are startled to see a headlight that seems to be tumbling off the right of way at 65th Street. Don't get alarmed. This is the local switching job from Blue Island heading into the Rock Island-Pennsylvania connection. In all

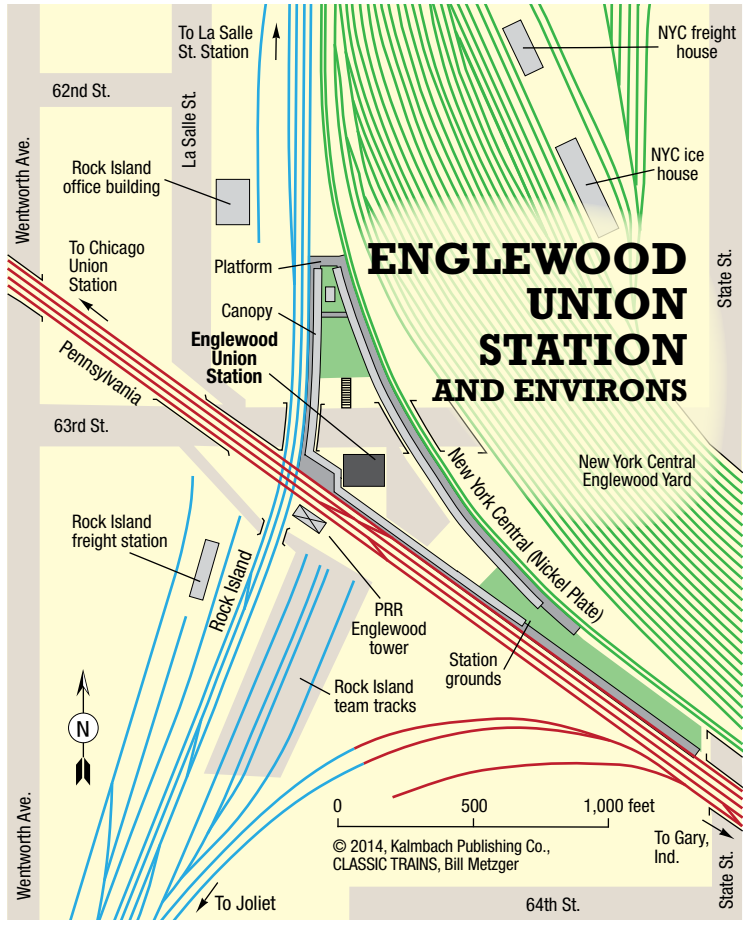
NYC Pacific 4713 saunters into Englewood from the east with an afternoon local passenger train. Robert Caflisch, Helen Caflisch collection

the rush, roar, and rumble that has been going on you have neglected this connection. Now you look closer and discover that a troop train is standing there, waiting for an engine. This curving double track was a vital interchange during the war years, and many a soldier and sailor rode over it as his outfit passed from one training area to another, and, nowadays, on his way back home.

MORE FAST FOOTWORK

A glance at your watch tells you some fast footwork is in order. Look to the east. Here come two headlights down the hill, hell-bent for leather. They'll be the Central's *Twilight Limited* and Pennsy's *Red Bird*, both from Detroit, due here at 8:46 and 8:45, respectively. You have to do a quick job of choosing where to spot yourself first. You decide to go to the north end of the Rock Island platform to see what the *Twilight* has on the smoky end, because there is another dummy due on the Rock at 8:47, which will probably stab the Pennsy train. The *Twilight*'s Hudson pulls clear up to the signal in order to spot its long string of coaches and parlor cars properly at the platform. Sure enough, here comes a P-33 Pacific hauling a Rock Island mainline suburban train tailed by a baggage car, with the Pennsylvania crossing lined for him.

Now you know you'll have time to see the *Red Bird*, so you watch the *Twilight* get going, then turn to see the tail lights of the RI dummy pass under the signal to the south of the crossing, and dash down to enjoy the show the K4 puts on for you. The *Red Bird* gets a nice start, but the engineer is a little too anxious, allowing the 4-6-2 to lose its feet briefly as it hits the diamonds. With the head end under control, you take a look at the train. The *Red Bird* is normally so arranged that the coach passengers can have the rear observation view, but for a time it ran backward westbound, the result of a wartime restriction that saved switching at Detroit. Behind the engine are the baggage car, a parlor car, and the drawing-room-parlor-solarium car for the first-class trade, then the diner, followed by six



E7 633 and an AB6 cross the PRR diamonds with Rock Island 7, the ***Rocky Mountain Rocket***, in 1948. B. L. Stone; Krambles-Peterson Archive

Rock Island 4-8-2 No. 4060, a 1929 Alco that was the next-to-last of RI's 62 passenger M-50s, leaves Englewood with a short westbound in late afternoon. Barney L. Stone; Krambles-Peterson Archive

Having stopped at Englewood about 3 miles back, Rock Island Alco DL103b No. 624 passes Root Street interlocking on the way to La Salle Street Station with a Peoria ***Rocket*** in 1946. E. T. Harley

coaches, and, bringing up the rear, a coach-observation.

You watch the *Red Bird* get away to the west, hoping for a last view of the markers as it passes around the curve, but no dice, for under the signal bridge at Wentworth Avenue are two headlights looking you right in the face. These should be WS-4, merchandise for the east via Fort Wayne, and the yard job that works the ice house at State Street. With a great snorting they come up to the crossing, WS-4 a little in the lead with an M1 laying into the work. With WS-4's cars blocking the view, you miss the yard job's engine, probably a 2-8-0 or 0-6-0. Well, you can't have everything. WS-4, a solid string of boxes plus two container cars, is hitting it up at a great rate and as the cabin car shimmies across the diamonds. You watch it for a moment and then notice the towerman moving up and down his long bank of levers and turn to see the detector bars rise and fall on the Rock Island rails and relax as a northbound dummy tools easily toward you and over the crossing with, in the lead, another of the numerous light Pacifics the road uses in suburban service.

CENTRAL SURPRISE

Whoo-o-o-osh! That was New York Central's X-80, really a second piece of the *Maumee*, which, not being on the public timetable, does not stop at Englewood. This move caught you flat-footed so you recall only the flash of siderods in the platform lights and a long string of express and mail cars, with one lonesome coach tagging along. Was it a Hudson or a Mohawk in the lead? Undecided, as the dummy moves out, you follow it up the platform to wait for the Central's No. 609, the *Prairie State*.

Right on the advertised at 9:11 she sweeps around the curved station track and comes to a stop just as the Rock's *Golden State Limited* comes in from La Salle Street. A sizeable group of passengers awaits the western train, so you watch No. 609 get a start and then hike back to the crossing once more for a good look at the big 4-8-2, your fourth M-50a of the evening. This one, the 4055, is a bit differ-

About 9:45 a.m., Hudson 172 pauses with Nickel Plate 8, carrying through cars for Hoboken via DL&W. Robert Caflisch, Helen Caflisch coll.

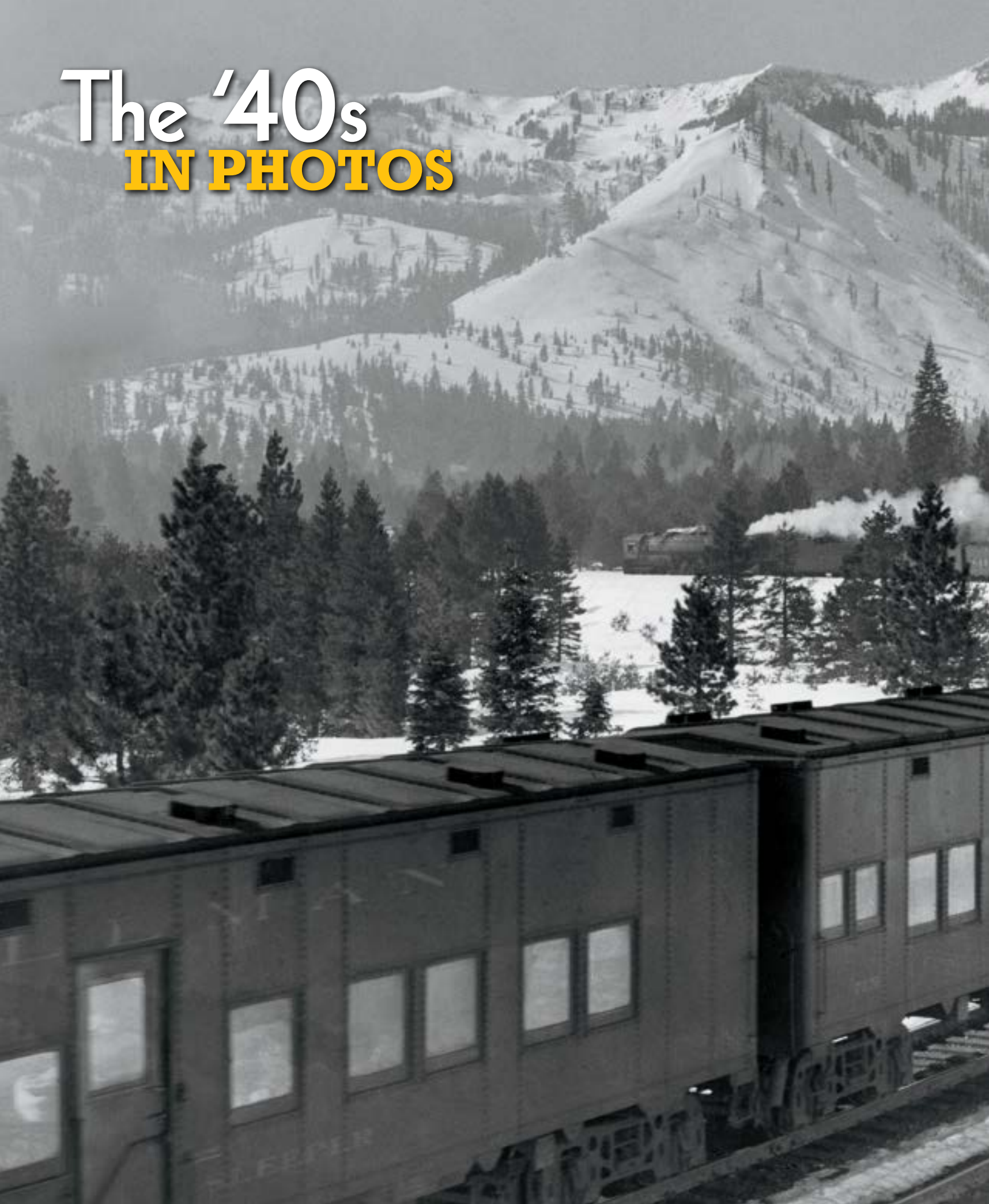
ent, for the boiler and cylinder jacketing sport a bright coat of *Rocket* red, and atop the shiny gray smokebox are two green lights brightly gleaming. Rock Island No. 3 is the road's top-flight steam-operated train, all-Pullman, with all types of sleeping accommodations. As the train moves out you see passing in review a head-end car, four tourist sleepers, a parlor-lounge car, a diner, and four sleek gray Pullmans. One track over, almost even with the departing *Golden State*'s last car, is a K-64 Mikado with the second section, consisting of strictly head-end business, moving past, with the hind man leaning far out the right side swinging a highball to the head end.

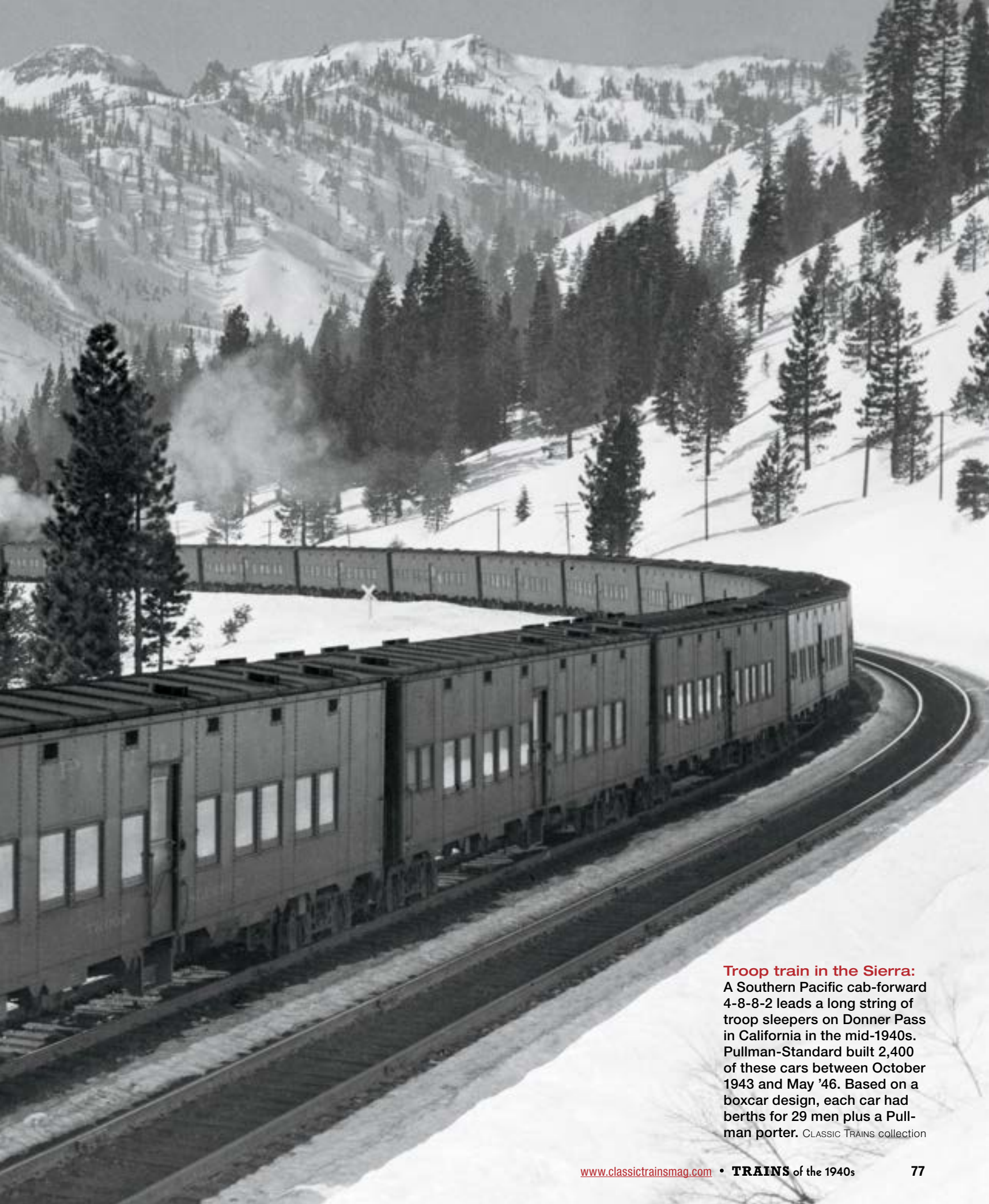
Now what? Suddenly you remember there was another headlight behind Second 3. Don't move. Coming at you is another Rock Island C-43 with everything this side of 12th Street behind him. As he moves from track 6 to track 5 and over the Pennsy diamonds, you get a chance to really listen to the theme song of the evening. The wheels on the diamonds give out the reiterant staccato melody, complemented by the other sounds incidental to a moving freight train, while the thunderous *basso ostinato* of the cars rolling through the girders of the 63rd Street overpass supports the whole. Heavy loads, light loads, flats, gondolas, reefers, and all the rest add their share to the variety of pitch and tone, and when the transfer caboose rips by, you know you have heard the real McCoy in railroad music.

But subconsciously you were thinking of other things — how many, many miles these cars have traveled in the last four years, loaded most often right up to capacity; how in the press of manpower needs for the pursuit of war they were neglected in their common servicing; how the older ones came through with flying colors in spite of many being past retirement age; and lastly you reflect that there is but little trackage anywhere on the North American continent upon which these cars cannot roll. Then you remember an observation that Dan, the Rock Island crossing watchman at Grove Street in Blue Island, made one evening, and the recollection brings the evening to a most satisfactory close. What he said was: "Without all them wheels rollin' there wouldn't be no United States." Amen.

NKP "Bluebird" PA 185 and a sister lead No. 7, the *Westerner,* into Englewood in March '49. George Krambles, Krambles-Peterson Archive

D. W. "DOC" YUNGMEYER was a Chicago rail photographer, author, and historian active in the 1930s and '40s. A leader of the Railway & Locomotive Historical Society's Chicago Chapter, Doc was among the first group solicited by A. C. Kalmbach for support when he was ready to launch Trains *as a companion to* Model Railroader.


The '40s
IN PHOTOS



Troop train in the Sierra: A Southern Pacific cab-forward 4-8-8-2 leads a long string of troop sleepers on Donner Pass in California in the mid-1940s. Pullman-Standard built 2,400 of these cars between October 1943 and May '46. Based on a boxcar design, each car had berths for 29 men plus a Pullman porter. Classic Trains collection

New power, old train: Two Pere Marquette E7 diesels pull out of Chicago's Grand Central Station with nameless, heavyweight train 6 to Grand Rapids, Mich., on June 21, 1947, two weeks after PM merged with longtime parent C&O. In August '46, PM fielded America's first new postwar streamliners, the *Pere Marquettes.* Dave Wallace, Frank and Todd Novak collection

***City of L.A.* at dusk:** Union Pacific train 103, the *City of Los Angeles*, skirts the south shore of the Great Salt Lake at Lake Point, Utah, one evening in 1941. Launched in 1936 with a single trainset making weekly "sailings" from Chicago and L.A., the streamliner went to every-third-day with the delivery of a second consist in '38. W. B. Wolverton, W. H. Wolverton coll.

Tradition on the IC: A genuine brass-railed parlor-observation car—complete with tail sign—was already a rare treat at the time of this August 31, 1946, photo. This is Illinois Central's St. Louis–Chicago *Daylight*, departing Clinton, Ill., where IC's St. Louis line crossed its original "charter line" up the center of the state.
B. L. Stone, Krambles-Peterson Archive

C&EI bird: Parlor-observation car *Chicagoland* brings up the rear of Chicago & Eastern Illinois' Evansville, Ind.–Chicago *Whippoorwill*, crossing the PRR as it pulls out of Terre Haute, Ind., on August 28, 1947. Launched in 1946, this train and C&EI's Cypress, Ill.–Chicago *Meadowlark* were among the first postwar streamliners.
Frank and Todd Novak collection


PARCEL
ROOM

Hurry up and wait: Scores of draftees get a taste of military life as they wait for their train at Pennsylvania Station, New York, in August 1942. Office of War Information: Marjory Collins

Train time at Rico: A Rio Grande Southern "Galloping Goose," working as train 371, the daily run from Ridgway to Durango, Colo., is loaded during its stop at the battered old frame depot at Rico in 1941. William M. Moedinger

NH steam and diesel: Two sets of Alco DL109 diesels, modeling two shades of green, stand out amid steam yard and road power in the New Haven's yard at Maybrook, N.Y., on March 16, 1946. Produced throughout the war years, NH's 60 DL109s were dual-service engines, hence their presence at this major freight yard. Frank and Todd Novak collection

Snow and stainless steel: Two silver E5 diesels knife through the snowflakes on the triple track at Downer's Grove, Ill., with the Burlington's westbound *Morning Zephyr* on January 13, 1948. CB&Q's Chicago–Minneapolis *Zephyrs* were among the first trains to get dome cars, and No. 21's six-car consist has four, including a dome-obs on the rear. CB&Q

Strangers on the SP: This tripleheader of CB&Q engines is even more unusual than it seems at first glance. The location is San Gabriel, Calif., on Southern Pacific, which leased the midwestern hogs—Prairies 1955 and 1907 and Pacific 2974—to help with a spike in traffic early in the war. Still carrying Burlington markings but fitted with SP train indicators and West Coast blackout hoods, the trio powers freight First 824 in April 1942. Gerald M. Best


1-82

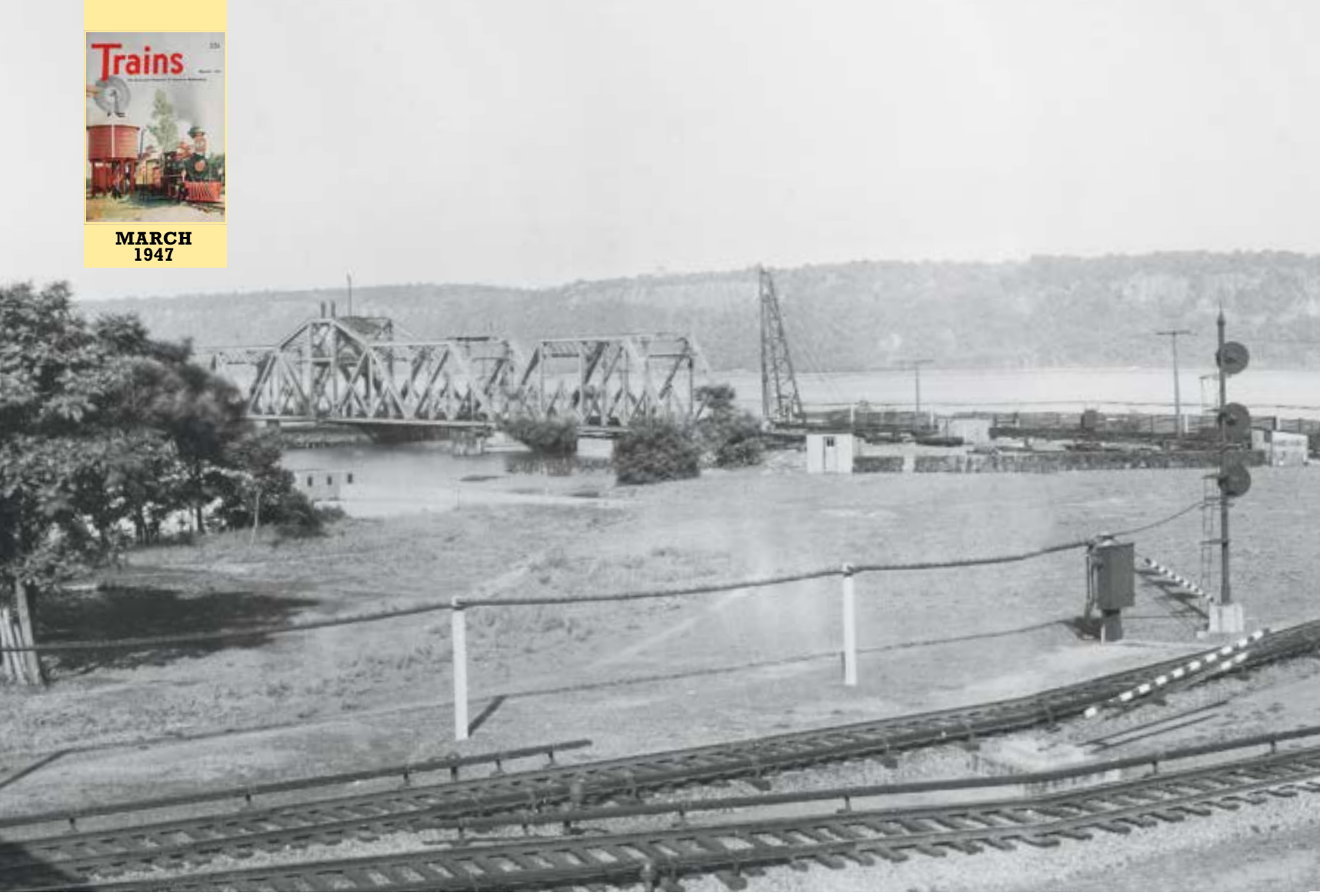
End of the line: The motorman looks out as he backs single-ended Milwaukee Electric car 1119 onto the wye on the west side of Oconomowoc, Wis., 37 miles west of Milwaukee, on July 12, 1941. Interurban service here ended July 21 when the line, which went to Watertown until February '40, was cut back to Waukesha.
B. L. Stone, Krambles-Peterson Archive

Big Red Car: Pacific Electric's sprawling Southern California interurban network was in its postwar decline on September 11, 1949, when car 1133 passed through Sierra Vista on the four-track segment of PE's Northern District. The car is en route to Pasadena via the Oak Knoll line, which PE abandoned 13 months after this photo.
H. M. Stange, Krambles-Peterson Arch.

Streamliners at rest: Chesapeake & Ohio 492, one of four 1914-vintage Pacifics the road rebuilt as streamlined Hudsons in 1946, rests between runs at Ivy City engine terminal near Washington Union Station in September 1948. A few tracks over, eight-year-old Pennsy GG1 electric 4892 also stands at the ready.
H. M. Stange, Krambles-Peterson Arch.

CNJ local: The crew of a local freight prepares to make a move somewhere on the Jersey Central's four-track main line east of Bound Brook N.J., on October 29, 1948. The train's power is heavy 0-6-0 No. 115, built by Alco in 1923; preserved sister 113 steams occasionally at Minersville, Pa.
Frank and Todd Novak collection

MARCH
1947



Third trick at SPUYTEN DUYVIL

An interlocking tower on NYC's Electric Division routes passengers to Grand Central Terminal and freight down the West Side Line

BY **HERMAN RINKE** • PHOTOS BY THE AUTHOR

A composite view produced by joining two photos shows some key features of Spuyten Duyvil, including the West Side line's bridge over the Harlem River, the South Wye, DV Tower, and the tracks into the passenger station, out of view to the left.

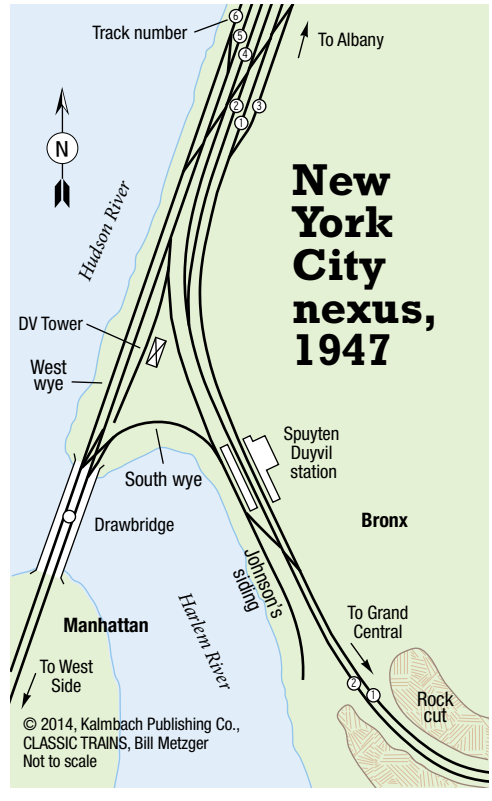
Come with me while I work the third trick at DV Tower, an important operating point 10½ miles north of Grand Central Terminal on the Electric Division of the New York Central System. This is where New York City-bound freight and passenger trains part company, the freights continuing south along the east bank of the Hudson River while passenger trains turn southeast to skirt the east bank of the Harlem River to Mott Haven (MO Tower) at 149th Street, there to join the Park Avenue line of the old New York & Harlem Railroad for the last short lap to Midtown Manhattan.

I'm due on the job at midnight, but we will get there a few minutes ahead of time and you can look the layout over while the second-trick man explains to me what freight cars are at hand, what trains are overdue, and any other uncompleted work. But first let me tell you a little about DV, so you can better understand what goes on here.

DV is at Spuyten Duyvil, at the confluence of the Hudson and Harlem rivers at approximately 225th Street in the Bronx. Its name (from *te spijt den duivil*, meaning "to spite the devil") is indicative of the difficulties of early Dutch mariners negotiating the location's heavy tidal currents. Today Spuyten Duyvil is a three-way rail intersection.

DV Tower is an historic spot in American signaling. In 1874, when there were already 13,000 interlocked levers on one railway in England, DV was the location for the first interlocking in the U.S. That installation was of the mechanical type; today DV contains a General Railway Signal all-electric machine.

To the north is the six-track main line along the Hudson. The two tracks nearest the river are the freight line, which continues south behind the tower (which faces away from the Hudson), crossing the Harlem River over a drawbridge, and going on to Manhattan's West Side. The four passenger tracks merge to two as the railroad turns southeast over the old Spuyten Duyvil & Port Morris line, which was constructed in 1871 to join the New York Central & Hudson River Rail-



road with the New York & Harlem Railroad. This reduction is necessary because of a narrow rock cut just east of the station. The line becomes four tracks again east of the cut. The station is on the two-track portion, which helps to make this six-tenths of a mile of line a real bottleneck. Steps taken to alleviate this include closer-than-normal signal spacing, stopping only a minimum number of trains at the station, and two-way signaling that allows trains to run through the cut against traffic without train orders.

Out of the south tower windows we can see the drawbridge on the West Side line. This is the only low-level draw on the Harlem River and must be opened for the smallest pleasure craft besides the normal complement of tugs, barges, and sightseeing vessels. It cannot be opened unless the electrical unlock is secured from DV's machine, and then only after all signals on approaching tracks are at stop and all derails are set.

Because of the extensive layout, every route through the plant is governed by at least two home signals, which must be cleared (by pulling levers), in addition to whatever switches must be operated to establish the desired route. For westbound passenger trains, the work consists mainly of dividing them from the single westward track to either Track 1 or Track 3. Track 1 is used mainly by through passenger and freight trains, while local trains must use Track 3. Trains from the West Side may continue straight up Track 5 to the city line at MV Tower (Mount St. Vincent), where the six-track section ends and where they must be crossed to Track 1 or 3, or they may be sent over DV's ladder to 1 or 3.

Eastbound, the passenger trains on Track 4 must be dovetailed between those on Track 2 until they reach the four-track section beyond the cut. West Side trains run either Track 6 all the way or must be crossed over from 2 or 4 to 6. Freights on 6 for the SD&PM line are routed through the West Wye. Most of the night work concerns freight traffic.

With one exception, all regular eastbound freights go to the West Side yards. However, most of them have some cars for Bronx in-

A man crosses the footbridge as inbound train 274 nears the Spuyten Duyvil station at 8:08 a.m. In 1946 only about 130 commuters rode into Grand Central from here each weekday, thanks to the station's location at the base of a steep hill and the proximity of an IRT subway station.

T-motor 277 passes through the cut just east of the station with a train from Grand Central. Because of this cut, the NYC main narrowed from four tracks to two. CLASSIC TRAINS coll.

Viewed from a signal mast protecting the Harlem River bridge, a city-bound M.U. train curves away from the Hudson as it approaches the station. DV Tower is at right center.

dustries and other lines connecting in the Bronx, and these cars are left at DV. From here they are handled by local switchers, which make several visits during the night. Since Johnson's Siding (named after a former industry), immediately east of the station, has a capacity of only 14 cars, all larger drops of cars are put on Track 5.

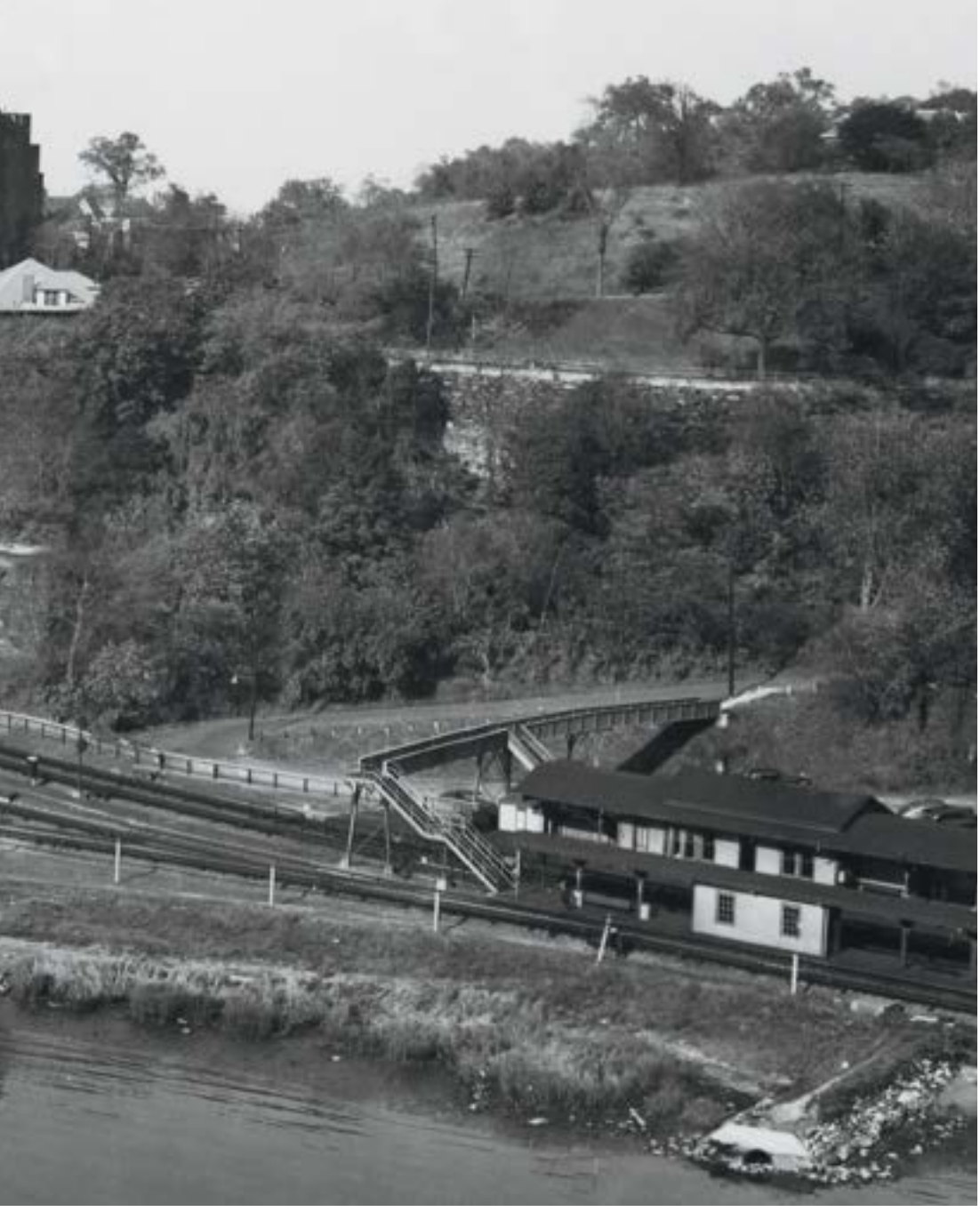
Switchers and freights between the West Side line and Bronx points are routed via the South Wye and the crossovers east of the station. The engineer of a 40-car train about to enter the cut can look back and see his caboose on the bridge.

Now it's a few minutes before midnight; the second-trick man has left, and you'll have to excuse me for ignoring you occasionally while I do my work. Our attention the first 40 minutes is taken up with a parade of late-evening westbound passenger trains. Shortly before we arrived, LS-1, a western freight hotshot, came out of the West Side and went up Track 1. Hence the dispatcher ordered No. 61, the *Montreal Limited*, up Track 3, and it passed DV at 11:42 p.m. Now the ringing of the approach bell from the West Side indicates that train 7159 is rolling under the approach to the George Washington Bridge over the Hudson at 178th Street.

Not all West Side trains are freights, since the bulk of NYC's mail and express is handled at West Side terminals. No. 7159 (the 7 indicating West Side connection) is bringing up mail cars, 14 in all, for No. 159 and several other trains, plus an ordinary caboose for the train crew. These cars will be added to their respective regular trains from Grand Central Terminal while power is being

The Henry Hudson Parkway bridge gives a fine view of the junction as an outbound M.U. train curves past Spuyten Duyvil Hill, whose apartment dwellers look down on the neatly landscaped area inside the wye. Author Rinke lived just north, in Yonkers.

An eastbound M.U. train has left the station behind and is about to enter the rock cut. Johnson's siding is between the two main tracks and the Harlem River, while in the background the West Side bridge is open for river traffic. Herbert H. Harwood Jr.



changed from electric to steam or diesel at Harmon, 33 miles up the Hudson.

I step on the telephone foot pedal that connects DV's mouthpiece with the dispatcher's line and, calling with Spike, the tower's nickname, I inquire, "Spike, the mail?"

"Three!" is the unhesitating command of Dispatcher Charlie Konz.

Immediately I yank out levers 81, 83, 85, and 87; eight pairs of switch points move instantly, permitting me to pull two more levers to clear the signals just as 7159's headlight peeks around the curve below the drawbridge. While it's passing the tower, I wink the floodlight at the engineer, count the cars, and wink again at the rear-end crew. A moment later a series of red lights on the tower's model board shows that 7159 is snaking its way across four crossovers from Track 5 to Track 3, with Harmon its next stop. I sit down and report to the dispatcher, "Spike west — No. 7159, motor 322 and heater 7, 14 and one, on three, at 11:46 — Spike."

No. 59, the *Iroquois*, with cars for Chicago and the West Coast, follows 7159 on 3 at 11:54½. Next comes 259, a Peekskill local, at 12:03 a.m., after making the station stop. Thereafter Track 3 is sewed up for a while and three mainline trains following in rapid succession are sent up Track 1, freight LS-1 by now having reached a safe distance up the line. Close on the heels of the third one comes a traveling switcher from the Port Morris branch with work to do at Yonkers and Harmon. Ordered up Track 3, he groans by with 40 cars at 12:25. Then the last sleeping-car train of the night sparks up Track 1 at 12:30½. Hardly has he gone when the West Side approach bell "hits" again.

What might be the most interesting train of the night, No. 139, is "on the bell." This is a solid express train of 18 cars for West Coast and intermediate points via various roads west of Chicago. Its consist might include cars from any or all of them — Santa Fe, Union Pacific, Southern Pacific, MoPac, Katy, Northern Pacific, Milwaukee, Burlington, etc. He rolls across the ladder to Track 3 at 12:35 with motor 340, the engineer shouting his usual greeting through the cab window.

There's been no eastbound traffic for a while, but now No. 56, a coach job from Buffalo, rings in on Track 2 as it passes MV, and 3 minutes later, at 12:58½, its markers are passing the station. Subsequent operation is similar for several hours.

Later on in the morning, while we discuss the close of the 1946 baseball season with the night maintainer, three drawn-out wails on the river announce that a tugboat demands that the bridge open. Five levers need be moved to set as many derails, and two more to unlock the bridge. Then two red lights on the chart show that the bridgetenders are at work and the opening is underway. Eight minutes later the bridge is closed again.

Meanwhile, HN-2, a New York-bound freight with New England connections from Troy, N.Y., has arrived on Track 6 at 6:12 a.m. with five cars to leave on Johnson's Siding. After waiting for the bridge circuits to be restored by the tenders, HN-2's cut is sent onto the bridge, then backed around the south wye to the siding, the flanges screaming their protest at the sharp curvature.

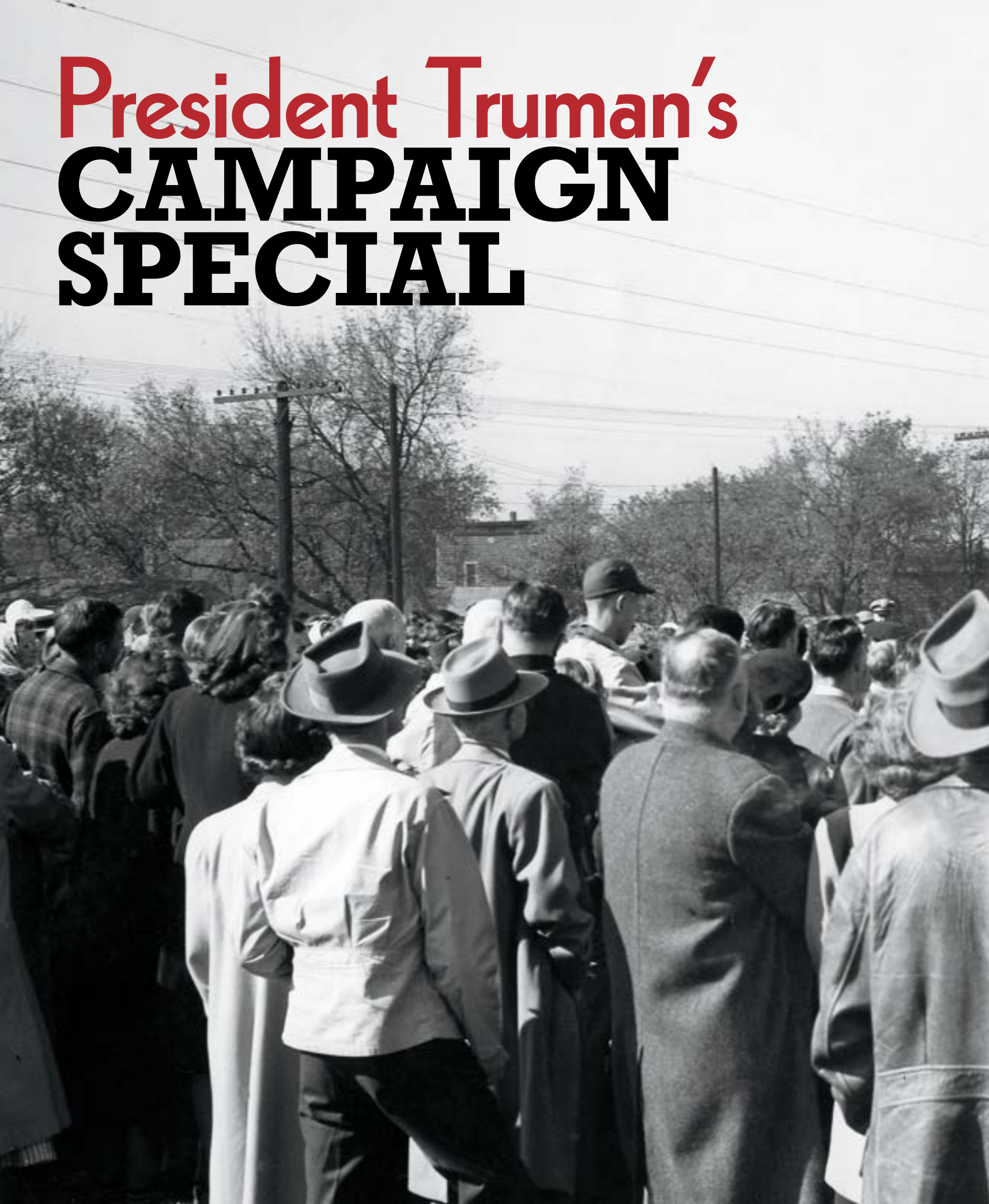
The class R motor retraces the route to its train beyond the north crossovers, while the head-end brakeman brings the waybills upstairs to cover the cars set out. At 6:28 his caboose rolls past the tower, over the draw and into the morning mist just as No. 202, the day's first commuter train, swings east past the station to herald the start of the morning rush.

The last hour brings a parade of inbound passenger trains, ranging from Yonkers locals to Chicago limiteds, some getting in the way of others at the two-track bottleneck. At 7:55 the first-trick man bobs up the stairs.

During the past eight hours we have witnessed and recorded on DV's train sheet 20 freight movements totaling 693 cars, and 47 mail, express, and passenger trains with 389 cars. As we leave, those entries are all that remain of yesterday's third trick at Spuyten Duyvil. ■

HERMAN RINKE was the third trick towerman at DV when he wrote this story, which won fourth prize in the 1946 TRAINS photo story contest. He was National Secretary of the Electric Railroaders Association when, on May 30, 1940, he became the first person to tour the entire New York City subway system on a single fare, a feat that required 25 hours.

President Truman's CAMPAIGN SPECIAL



MARCH 1949

President Truman addresses the crowd at Altoona, Wis., on the Chicago & North Western, during a 1948 campaign whistle stop unusual for an on-the-spot car repair having to be made. Milwaukee Journal

Truman relaxes behind armor plate and bulletproof glass in the lounge of presidential Pullman car *Ferdinand Magellan* during a stop at Fort Worth. Texas & Pacific

30,000 miles of travel by rail played an important part in the re-election of the man who pollsters said was bound for Missouri on a one-way ticket

BY **WALTER FITZMAURICE**

The railroads, whatever they thought of Franklin D. Roosevelt's statesmanship, could never quarrel with his travel tastes. Not that Roosevelt was a railroad fan. There is no record that the Squire of Hyde Park ever set foot inside an engine cab. But when President Roosevelt had a trip to take, he went by train. When, after an overnight run from Washington to his family home in Hyde Park, N.Y., over the Baltimore & Ohio and New York Central, he announced that he had enjoyed a good night's sleep, and the railroads got a front-page endorsement that money couldn't buy.

President Harry S. Truman, on the other hand, became known early in his administration as a cockpit man. Stories of his fondness for playing pilot, fed regularly to newsmen by the crew of the presidential plane *Sacred Cow*, not only stimulated Air Force recruiting, as the crew intended, they yielded benefit to the commercial airlines.

When campaign time came for Truman, he returned from air to earth. With one exception (an air trip to the South), the chuff of competing trains — the President's and New York Gov. Thomas E. Dewey's — was the dominant travel note of the 1948 campaign. It was a choice dictated by necessity. Only the rail networks tapped all the political harvest fields, from tank town to metropolis. Only trains — both campaign specials ran to 17 cars — could accommodate the hordes of threshing hands that came and went as the candidates traveled.

The railroads tackled their job with zest, carried it through with care, and finished with almost perfect safety scores. For them, the prestige more than offset the heavy deficits of a job they had done often enough to make it routine. But for this White House reporter and railroad fan who rode 30,000 miles with Mr. Truman, there was memorable drama on the train — tension as it crawled through immense city crowds; stimulation as it raced across the prairies, making up lost time; and sympathy when that effort failed, as it sometimes did. An engineer who is a Democrat may crack back when the Republican candidate passenger suggests he should be shot, as Governor Dewey said of his engineer at Beaucoup, Ill., on the Louisville & Nashville when his train moved unexpectedly. But what can be said by an engineer, also a Democrat, when, with the locomotive's safety valve about to pop, the Democratic President chides him for not keeping up steam?

Considering the pains in planning such a tour, a candidate can be forgiven a burst of temper when something goes wrong. With a President who is running to succeed himself, the problem is comparable to that of an ordnance officer who, after servicing a small peacetime garrison for several tranquil years, suddenly finds himself called on, in haste, to supply a vast battlefront. The President's speeches, which are his heavy ordnance, are now in great demand. True, his supply is plentiful; what baffles him is how to deliver a personal salvo within two months at each point his lieutenants consider critical. Ideally, the fire should be concentrated on decisive states, and in a concentrated area. But when the decisive ones are as separated as New York, Illinois, and California, and intervening states are doubtful, time schedules become weighty and routings vital. Mileage means crowds, and crowds in 1948 spelled the difference between victory and defeat.

Democratic national headquarters considers where the President shall go, and about when, but he has the final word. With an itinerary settled, technicians take over, led by a mild, modest, and efficient member of the civil service, the White House transportation officer, Dewey Long. On him falls the job of drafting and telegraphing the "POTUS" messages which advise the chosen railroads that the President Of The United States will soon be along. On the Baltimore & Ohio and the Pennsylvania, both old hands at moving presidential specials, a POTUS message initiates a well-oiled routine. On the remote divisions of some western roads new to presidential business, last summer's messages, calling for extraordinary safety measures and promising extraordinary publicity, had the mingled effect of an earthquake and a jubilee.

Not least among the safety factors Long must calculate is the train's length. A reservation list posted in the White House pressroom for newsmen and telegraphed lists of the political part-trippers soon apprises him how many cars he needs. Last year's train consisted of two dining cars, three lounge cars, a press car, four all-room sleepers, one standard sleeper, a dynamo car for power, a communications car, and the President's own iron-clad Pullman car *Ferdinand Magellan*.

The POTUS special's engineer knows where he'll stand, also. A Secret Service crew

scouts the route, visiting each station and staking for the engineer the stopping point, which, when measured against the train's length, assures the widest space around the *Magellan*. The security men also check bridge capacities against the *Magellan*'s tremendous weight and instruct local police in crowd control. All this is done weeks before departure day.

SETTLING IN ON A POTUS

All is orderly bustle in Washington Union Station when zero hour of the big day arrives. The usual crowd has clustered under the great arched roof above the concourse to see the capital's big boss off. Just inside the gate leading to Track 15, Dewey Long sits at a desk, quietly checking arrivals against his passenger list. On the lapel of each he pins a big white nametag imprinted with the presidential seal. This will serve in lieu of a ticket and as "open sesame" through police lines out on the road. If you're a through passenger, you get no ticket; a bill comes a week or two after journey's end.

Now, the nametag gets you past the gleaming *Magellan* unchallenged by watchful Secret Service men, through the local newsmen, and forward to the GG1 electric that will take the train up the PRR to Baltimore. Up in the cab you can see a half dozen men huddled over the train orders. As on every division we ride, the foremen of engines, air brakes, car repairs, and lighting are aboard.

Then, from back in the station, comes a cheer. The President's limousine has wheeled him through a lane in the crowd, right to the gate. You hustle back there in time to see him board the *Magellan* and hear his goodbye to his vice-presidential running mate, Kentucky Sen. Alben Barkley, which sets the campaign theme.

"Hit 'em hard, Mr. President," says Barkley. "Don't worry," the President chuckles. "I'll give 'em hell."

The POTUS special's rear-end whistle wails its weird substitute for a conductor's all-aboard and you climb on. As the train starts, you know the men in the GG1's cab can't be chuckling. The jerk that sets the train shuddering as the couplings come taut against the *Magellan* warns them that their counterparts further along in the trip also will get some hell handling the 285,000-pound, armor-plated car on the Allegheny grades.

You go to the press car, knock off your report, then go back to your room where the reading lamp throws an inviting glow over your made-up berth. The train is running smoothly. The hour is still early, and the lounge cars are open, so you wander back to the one just ahead of the *Magellan*. No politicians there, no news. The young man sitting just inside the rear door declines a highball, pointing with a smile to his Secret Service lapel button, and you know Capt. Ernest Chapman of the B&O police, sitting across

At 8:30 a.m. on September 20, 1948, specially cleaned and inspected gray Union Pacific 4-8-4 No. 835 eases the Truman campaign train into Denver Union Station. Elmer Treolar

Pullman office car *Ferdinand Magellan* was modified in 1942 for exclusive use by the President. For security reasons, it displayed no name or number. Michael Hall collection

Aboard the *Magellan*, his home for much of the '48 campaign, President Truman speaks with members of the press on the road in October. Truman Library; Bob Withers collection

Truman's opponent, New York Gov. Thomas E. Dewey, also traveled extensively by train during the 1948 campaign. At top, his 17-car special moves east out of Othello, Wash., behind Milwaukee 4-8-4 No. 250 on September 28. Above, Dewey waves to supporters at Providence, R.I., in October. Top, Wade Stevenson; above, Truman Library, Bob Withers collection

the aisle, doesn't drink. So you talk about the car and long-ago presidential trips.

Capt. Chapman recalls the incident on the Warren G. Harding train in 1923 that earned him his post as a kind of master brakeman on all presidential trips since, whatever the railroad. The Harding train was rolling along the B&O beside the Ohio River in West Virginia when an equalizer spring gave way under the President's car. Harding, whom fate allowed to go through to the West Coast and up to Alaska, but who took fatally ill at San Francisco on the return journey, might have met his end right then, except that Chapman got to the emergency-brake cord. After repairs, the trip resumed, but when Chapman and others went to the President's room to receive his thanks, Harding said he felt he was then "a dying man."

Returning on the funeral train, Chapman had his hands full. People swarmed like locusts on the right of way, laying flowers, coins, and trinkets on the rails before the oncoming engine, then snatching the flattened souvenirs from between the trucks of the moving coaches.

"How we got through without hurting anyone, I'll never know," he says. "We tried tying down the whistle cord, but it didn't help. Never had such an experience, before or since."

Chapman was to face similar trials on these trips and to be rewarded pleasantly at the end. Now, as we slow for Baltimore, the *Magellan* merely gives us a sharp spank.

Aside from the jolts, which in the President's case are minimized by setting the bed in his room crosswise, the *Magellan* makes a comfortable, even cozy, home. It is very compact, as the Secret Service man explains. First comes the galley and pantry from which the Filipino cook serves the simple meals (meat, potatoes, vegetable, and pie) that Mrs. Truman has the Secret Service put aboard at stops en route; next, a dining room paneled in pearwood, which can seat six and usually does since the Trumans like guests at meals; then, going down the side aisle, the President's office, his bedroom, and those of Mrs. Truman and daughter Margaret, whose beds run lengthwise; and finally, the lounge, a room done up in soft green, which seats nine comfortably and, of course, opens onto the rear platform where the main business of the trip is done.

"The family's just as comfortable as the car," says the Secret Service man. "I mean to work for. We never get orders from back there, only requests."

Midnight and the mountains approach, and you turn in. But jolts and jars continue through the night and you awake, vaguely irritated. At breakfast, Harry Karr, Pennsy's Washington passenger agent, a veteran with almost as many years as Chapman on POTUS trains, assures you that once you become accustomed to the *Magellan*'s clanks, you'll be as comfortable as at home — and as safe. The assurance naturally prompts an inquiry about that best-known railroad safety appliance, the pilot train, which always precedes a POTUS special, ready to absorb any disaster that chance or malice might have aimed at the President. Karr, a small, wiry man, takes out an after-breakfast cigar and calmly announces that just now in the Pennsylvania-Ohio industrial complex, where crossings and switches are many, there is no pilot train.

"Nope," he says, lighting up, "a pilot train would be a nuisance here where we can pick up a regular passenger train every hour or so. Right now, 20 minutes ahead, one of our fastest trains [he lowers his voice and names it] is piloting for us; chances are, the passengers probably don't know it, of course."

"Look there." Karr points between the passing girders of a bridge to a man on watch down the slope. "And there." The cigar nods toward another man knee-deep in the weeds beside a culvert. "Every bridge, crossing, and culvert has been under guard for hours," he says. "Every switch has been spiked, every freight train stopped, every opposing passen-

ger train switched one track away. Expensive? Sure it is. But money doesn't count when you're running a POTUS operation."

Many times during last fall's four trips, passengers on equally famous trains of other roads also unknowingly served the President's security. But, as Karr watches the right of way and points out evidences of the other safety measures taken, the chances of martyrdoms among passengers shrinks to zero.

While the measures Karr mentioned are standard, each railroad adds special rules geared to its own signal system, traffic density, and track multiples. Add to this the varying judgments and experience of individual rail officials, and the pattern on a coast-to-coast journey becomes a kaleidoscope. Thus the PRR, which vacates the track next to the POTUS special where the right of way has three or four tracks, allows the special and a passenger train to pass next to each other where the tracks narrow to two.

The pilot train, which most roads rate superfluous on much-traveled trunk lines, becomes imperative when the POTUS special veers onto a single-track branch. The composition of pilot trains varies, too. On a single trip, the pilot may be an engine alone; an engine and caboose; an engine with baggage car and passenger coach; or, as on one highly conscientious western road, an engine and one official car with the road's general manager himself aboard.

Just five days before the election, Truman smiles, work gloves in hand, beside a New Haven PA diesel with Road Foreman of Engines R. L. Acker. Truman Library, Bob Withers coll.

CONTRASTS ON THE C&NW

Nowhere was the contrast between main line and branch line drawn more clearly than on the Chicago & North Western versus its subsidiary, the Chicago, St. Paul, Minneapolis & Omaha, or "Omaha Road." Last June, C&NW hosted the first of the POTUS special's two transcontinental trips, handling it from Chicago to Omaha on its double-track main equipped with General Railway Signal's famed Automatic Train Control. Subsidiary CMStP&O took over in October, on a swing through northern Wisconsin after the second transcontinental trip. Although its meandering, single-track route from Wyeville to Superior has only conventional signal blocks, the Omaha Road held its own, maintaining schedule despite a minor breakdown.

At Chicago's North Western Station, the diesel cab was already crowded when our overnight run from Chicago to Omaha began. Engineer Larry Martin shook his head when another visitor popped in the door. Press credentials proved persuasive, though, and I stood behind Martin's seat with the supervisors: Elton Legg (automatic train control), A. C. Buran (diesels), and Albert Hitchcock (road foreman of engines).

The trip began smoothly as we threaded through the Chicago terminal area. From signal bridges ahead, lights glowed yellow, then green. The diesels picked up speed, empty suburban streets flashed by, and then the rails stretched into open country. Under road tests, C&NW's two-unit, 4,000 h.p. Electro-Motive E units sail at as much as 117 mph, but with the whole night open and no speaking stops en route, our speed limit was set at the usual 73 mph.

At DeKalb, Ill., an inspection stop, I left the cab and walked back along the train, the line of closed, darkened Pullmans offering a cheerful sight. A shaft of light slanting reassuringly from a single open door was proof that the porter had not forgotten this passenger, who otherwise would have been pounding for entrance when the train pulled out.

More interesting, in retrospect, were two cars new to the consist, twin blue-gray diners from the *Overland Limited*. One later would make trouble on the October swing in northern Wisconsin, a segment also noteworthy for a worrisome encounter by the President with a switch engine.

It was a crisp fall morning after a night of frost, and the western Wisconsin forests blazed with color. The President's off-the-cuff talks in the little woodland towns had made no news, and the press car expected none until he got to formal discussion of the issues that afternoon at Superior, Wis., and Duluth, Minn. The newsmen, musing over the scenery or their poker hands, shrugged off the *Magellan*'s jolts when the brakes went on for a whistle stop just east of Eau Claire, and few even bothered to look up the town's name.

In the lounge car just ahead of the *Magellan*, all was tranquil, too. Sitting quietly by their train telephones, the Omaha Road's top officials wore the air of men who, having planned well against accident and delay, now needed only to watch the operation. The diesel doctor from EMD had little to do, as the E units developed no ailments. The steam locomotives standing by at every roundhouse were superfluous. The car repairmen lined up by the train when this stop was made might raise the idea you were in Altoona, Pa., site on the Pennsy of the world's largest car shops, except the schedule plainly read Altoona, Wis., an Omaha division point. Within its means, little Altoona stood ready to see that the POTUS special stayed on time, provided the President didn't hold things up by talking overtime. He didn't.

The schedule allowed him five minutes, and he took just that, ending with an appeal to vote the straight Democratic ticket "so I won't have to worry about the housing shortage." As always, the gag got a laugh and a cheer; as always, a secretary passed the cue to start up. The Omaha's general superintendent, H. P. Congdon, picked up his phone and said, "Go ahead," but the train didn't budge. Three minutes … five minutes … eight minutes passed. Newsmen, jogging back for a look, found the President still on the platform, beaming around, his smile now rather forced, and the crowd lingering on.

Congdon, the "General Super," had the answer by now, and he also had a problem. A

Three Baltimore & Ohio E7s head up the presidential train as it nears a campaign whistle stop at Gary, Ind., on October 25, 1948. Immediately behind the diesels is communications car 1401, a modified B&O combine on long-term lease to the Army. Baltimore & Ohio

sharp-eyed inspector had spotted a broken spring leaf under the rear truck of the second diner. Detaching the car meant depriving half the 200 passengers of lunch, for its twin could serve no more than 100 before the afternoon arrival at Superior for the off-the-train show. Unfed newsmen would not yield good press relations.

Something more serious than good press relations might be jeopardized by proceeding without repairs, though. Although experience had shown that a broken spring leaf almost never shook off, the chance that it might do so conjured up the fearsome word "derailment." The officials turned to the repair crew, whose men at once squared away for tinkering. Tools were brought up and a thick plank procured. The car was jacked up and the plank jammed between the frame and springs, wedging the broken leaf in tightly. The crew foreman highballed Congdon, who picked up his phone. A little unkempt but completely secure, the POTUS special started up. Soon, the jiggling of the coffee cups during lunch told of time being gained, and the clock at the Superior station showed the special on time . . . and in time for the encounter with the switch engine.

The President spoke at Superior, motored over to Duluth, spoke again, and started back to the train. His car, bedecked with pennants, came first in the parade, with Mrs. Truman and Margaret in a Cadillac behind, and a long line of vehicles trailing after. The motorcade, which barely crept in Duluth's crowded streets, picked up speed when, entering the Superior docks area, it was on a deserted street paralleled by a railroad track. If the Secret Service advance crew had scented danger at the point where the track made an S turn over the road ahead, its rusty rails had reassured them. The crossing stood unguarded as the presidential car led the parade over it at 50 mph.

Nor did Mr. Truman show any uneasiness when he met up with an approaching Soo Line switch engine a minute later. Across a dividing ditch, the crew and he exchanged a greetings — a whistle toot and a wave — and sped on their opposite ways, he toward the Superior depot, they toward the road crossing. In the press car, fifth behind the President's, faces turned and watched the engine and its cars. The newsmen then discovered, as Mr. Truman obviously had not, that the parade was no longer following. A tire leak in the First Family's Cadillac had compelled it to stop just before the crossing, and the others had pulled up behind it.

This threatened nothing worse than a widened gap in the parade. A few fast miles and another turn farther, a traffic light brought the presidential car to a halt, amid the usual crowd, from which a voice called, "Hey, Mr. President, where's Margaret?" Mr. Truman looked back at the dismembered parade, his brows rising in surprise, and he repeated the question to the Secret Service men. The answer soon came as the lost cars appeared around a turn and closed up fast. Margaret waved reassuringly, and the parade, again back together, moved ahead.

The follow-up inquiry absolved the Soo Line engineer, who, while recognizing the occupant of the car with the pennants, had no idea that Margaret and her mother were in the first of the stalled vehicles. But while the Secret Service men had no doubt that the engineer cut the parade unintentionally, it could not absolve its own men for allowing a separation of the Truman family. Their failure to post a guard drew a reprimand.

KEEPING SAFE AT TRACKSIDE

Grade crossings were a minor problem compared with crowd control, and the worry was not so much over anarchist bomb-throwers (not a single crank menaced the President during POTUS train operations) as it was that some good citizen be crushed to death in the rush to get near Mr. Truman. In big cities, the President often spoke from an elevated railroad right of way to his audience standing below in the street. But in small towns, two pools of people, divided by the track before the oncoming train, became rivers upon its arrival. They flowed along its moving sides, swirled at the rear, and eddied around *Magellan*'s platform when it halted. A warning was drafted against such surging and a sepulchral-voiced Secret Service agent was appointed to read it from loudspeakers as the train rolled through the human lanes. "For your own safety, keep back, 6 feet at the sides, 30 feet at the rear. For your own safety, 30 feet."

But with only constables for enforcement, the 30 feet often shrank to 20 or 10, leaving

The day after the election, Truman beams from the *Magellan*'s platform as he holds the famously erroneous early edition of the *Chicago Tribune*. The photo is at St. Louis Union Station during HST's trip back to D.C. from his hometown of Independence, Mo. Corbis

so little clear space that when a speech began, newsmen squatted on the rails, typewriters on their laps, within 6 feet of the *Magellan*'s wheels, while B&O's Chapman leaned against the platform, a calm, alert, but presumably inadequate Atlas. A stop in one small western town showed Chapman to be anything but inadequate.

In that instance, the crowd had wedged so close to him that the Truman lapel buttons were within plucking distance when close listeners suddenly heard a rumble accompanying the President's words — faint but fearful evidence that the train was starting to back up! The President went on talking, quite oblivious, but Chapman absorbed the warning. Unhurriedly, without even turning his head, he reached up and grasped a valve. A sigh of air stilled the rumble, applying the brakes, and the President went on.

"Chappie sure earned himself a medal that day," a Secret Service man said later, recalling how smoothly the incident went. (By then Dewey had blown his top at Beaucoup, Ill.)

The tension aroused by the behavior of the crowds persisted, of course, whenever another stop lay ahead — a tension that sometimes carried on past midnight, long after the speaking engagements had been fulfilled. On one occasion in the West, however, it ended happily at twilight. An eastern magazine, in a report on the second transcontinental trip, said the staff was worried about the passage through the Rockies. But on the run over the Continental Divide, everyone rested easily, so thorough were the precautions taken by host Rio Grande. These precautions included an inspection of the line from an airplane several days ahead, a roadmaster's inspection of the right of way the day before POTUS arrived, and posting guards at all intersections, bridges, and rockfalls an hour before the train was due. His train thus secured, the President could contemplate the grandeur of the Royal Gorge in peace and quiet, which is what he did.

SUCCESSFUL CONCLUSION

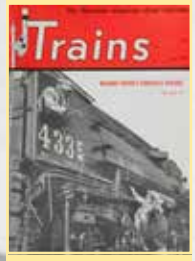
At Canon City, Colo., the last stop before the Gorge, Truman's talk had run long. Dusk was falling, and it turned to deep night a few minutes later when the train moved into the tremendous chasm. From the Pullman windows, even with the lights out, the rock walls appeared as vague shapes, close but indistinct. Guided by a trainmen, two newsmen were able to view the river and Gorge up close from an open door in the diner's pantry. Below, so close you wanted to peel off your shoes and dangle your feet in it, rushed the Arkansas River, indigo blue except where the water foamed white against big boulders.

Across its narrow width, straight up from the far bank, rose the wall of rock on which, for millions of years, the river had been exercising its incredible abrasive power. Deep blue and coal black at the base, the wall lightened in color as it rose until, at the top, a thousand feet up, its serried crests glowed strangely. A turn in the gorge revealed the moon that, having crowned the crests with silver when all was dark below, now flooded the whole canyon. The diesel sounded a low arresting note, a reminder that while nature had worked wonders here, men had also performed a kind of miracle with the engineering that enabled a heavy train to get into the Gorge. The track curved, and the Pullmans ahead, their golden windows glowing against the overhanging walls, shrank to model-train size. You felt very small.

On the return from the West Coast, the Chesapeake & Ohio handled the home stretch, leading all to expect a novelty. Impresario Robert R. Young, C&O's chairman, provided a movie preview in the forward diner. Word spread that the Trumans might attend, but regretfully, none of the three did. Was the President somehow irked? The train had covered 30,000 miles with few delays and no accidents despite huge, sometimes unruly crowds, so despite the President's absence, railroaders concluded he intended no snub but was merely tired or busy.

The campaign over, Mr. Truman again became a cockpit man. Although the *Independence* flew him to Key West for a post-election vacation and the *Magellan* went back to its shed, railroaders were not forgotten while he rested at the naval station there, for Capt. Ernest Chapman of the B&O police was invited south as the campaign's transportation hero. His mission accomplished, he accepted with a great deal of pleasure. ■

WALTER FITZMAURICE, a newsman from Appleton, Wis., studied journalism at Marquette University in Trains' *hometown and worked for the* Milwaukee Journal, Chicago Tribune, *and International News Service before joining the staff of* Newsweek *magazine in 1941. During the 1948 presidential campaign, he was* Newsweek's *White House correspondent. He died in 1988 at age 85.*



JUNE
1949

To Seattle on the OLYMPIAN

HI

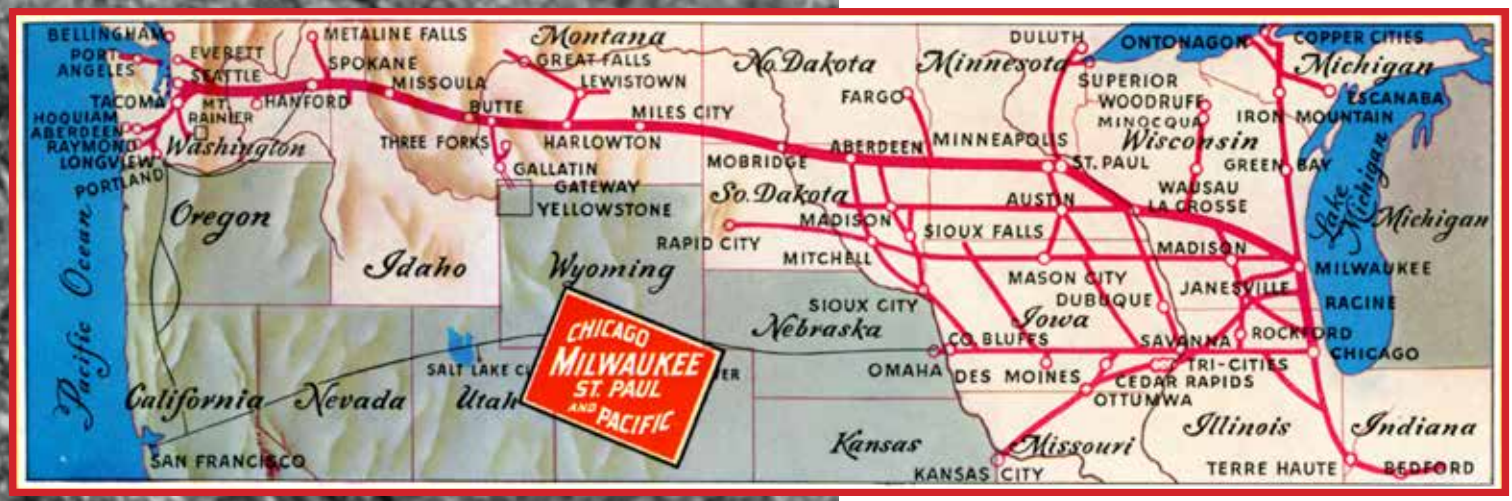
You'll enjoy viewing the glorious Pacific Northwest scenery from the Skytop lounge as Milwaukee Road's crack transcontinental train runs 2,189 miles to Seattle

BY **A. C. KALMBACH**

It is a quiet hour of early afternoon beneath the gaunt steelwork of the Chicago Union Station concourse. The midday crowds have been drawn away on the *Midwest* and *Afternoon Hiawathas* or have melted into the upstairs offices, the corridor to the Elevated, or out via the taxi ramp. The loading for the train on Track 11, north side of the concourse, is more leisurely. These people are going a distance, and there isn't the informal crush that accompanies the departure of the short-run coach streamliners. A handful of passengers who missed the *Afternoon Hi* may be going to the Twin Cities, but most of us are bound for Puget Sound, two-thirds of a continent away. This is the *Olympian Hiawatha*, and we're going to ride it from the industries and dairylands of the Midwest across the historic Mississippi Valley, through the rolling wheat of Minnesota and the Dakotas, over four mountain ranges, and down the pine-covered slopes of the Cascades to Seattle.

The check-in table at the gate reminds us that all space is reserved — coach, tourist sleeper, or Pullman. In spite of the Milwaukee Road's enterprise in providing brand new "Touralux" sleepers at much lower rates, we've invested in first-class transportation. The reason is apparent, just across the platform beyond the train gates. It's the "Skytop lounge" observation car — not a Vista Dome,

One of the six 8-double-bedroom/16-lounge-seat Skytop observation cars brings up the rear of the *Olympian Hiawatha* near Francis, Mont., 100 miles east of Butte, in an early 1950s publicity photo. Milwaukee Road



Much of the *Olympian Hi*, including the famous Skytop cars, was the work of Milwaukee-based industrial designer Brooks Stevens (center, with associates Anthony Reed at left and James Floria). The streamliner's six trainsets cost $1.5 million each. Harry Coleman & Co.

Aft of the bedrooms in the *Olympian Hi*'s sleeper-obs cars, which had *Creek*-series names, was a stunning, sun-filled lounge. Milwaukee had four similar Skytop parlor cars, with *Rapids* names, on the Twin Cities–Chicago *Morning* and *Afternoon Hiawathas*. MILW

not an open car, but a lounge with curved end, curved sides, and a ceiling of glass. Where the scenery is on a horizontal plane such a car might mean little, but this evening along the bluffs of the Mississippi River and tomorrow afternoon in Montana Canyon we'll appreciate the upward view.

As the Pullman conductor checks off our room on the diagram, we reflect that this is one of the country's newer streamliners, inaugurated June 29, 1947. In fact, parts delays kept the Milwaukee Road shops from finishing the coaches, tourist cars, diners, and tap-grill cars until the last minute, and mechanics rode some of the cars making finishing adjustments even as they were deadheaded to their starting points. The Pullman-built room cars for the rear end were finished only a year or so ago, and so the trains ran for nearly their first year with standard cars for room accommodations, including open-platform observation cars. This was probably the fastest open-platform run in the country.

Now the train is complete as planned. As we walk to our car we notice that, new as this train is, it has already undergone a change in its red-and-orange color scheme. Originally each car had the central window group blocked out in red, with the red tapering off at the ends to make each car stand out as a unit. Now, although you occasionally see one of these cars in the consist, most of the train is painted in the traditional streamline pattern, with the red band running the full length of the train.

It's a special treat to see everything along the right of way while running out of Chicago, so we don't take time now to look over the train. We'll have plenty of time for that later. With coat, hat, and luggage safely in our room, we head for the Skytop lounge and manage to get a good seat from which we can see the track behind. As the train starts to move, we can see the unusual Union Station platform arrangement — one on each side of every track so that baggage and mail can be unloaded from one side while passengers get out the other side on a platform without baggage trucks in the way.

Now we are across the double slip switches of the station throat, with the Chicago Daily News Building straddling the tracks, and past the Lake Street interlocking tower that controls the north end of the station tracks. Above and to the left is the throat of North Western's Chicago terminal, and to the right we get a glimpse of the Chicago River, with the Merchandise Mart, world's largest building, reflecting in the water. Then we are around a sharp curve, under the C&NW, and squarely away on our trip.

For a few minutes the North Western's Galena Division, the main line to Omaha, parallels the Milwaukee to the north (we're running due west now), and likely as not we'll see the streamliner *City of Denver* being

readied in the coach yard.

Just after we swing northward toward Milwaukee and cross the North Western at Western Avenue, we have a grandstand seat to see the Milwaukee's Chicago coach yard on the right. Many of the cars are in the midst of the regular scrubbing that's needed to preserve their bright appearance. Others are being switched into suburban trains for the afternoon rush.

100 MPH OUT OF CHICAGO

By now we've really begun to roll, and we don't even slow for such things as the Pacific Junction interlocking, where the Milwaukee's Omaha line branches off, or for Mayfair, where we cross the North Western's route to Janesville and Madison. By the time we've passed through the light industrial area and hit the city's residential Edgebrook neighborhood, the *Olympian Hiawatha* is batting off an even 100 mph behind its two 2,000 h.p. Fairbanks-Morse opposed-piston diesel units that will stay right up there pitching until we pull into Seattle day after tomorrow, 2,189 miles from Chicago. That's one of the longest locomotive runs in the country.

The line from Chicago to Milwaukee is fast track, and it's not hard to imagine the unexpected thrill given the passengers on No. 29, a Milwaukee express, when the business car *Wisconsin* was coupled on the rear one summer day in 1934 and the engineer was given orders allowing him to run to Milwaukee as fast as he could. The 67½-minute run set a record for standard steam locomotives and opened the new era of speed that led to the streamliner schedules of today. With diesel power on the front end, we won't equal the top marks set by the Milwaukee's high-drivered 4-4-2s and 4-6-4s, but we don't need to, for the diesel's quicker acceleration keeps it at a consistent 100 for more of the run.

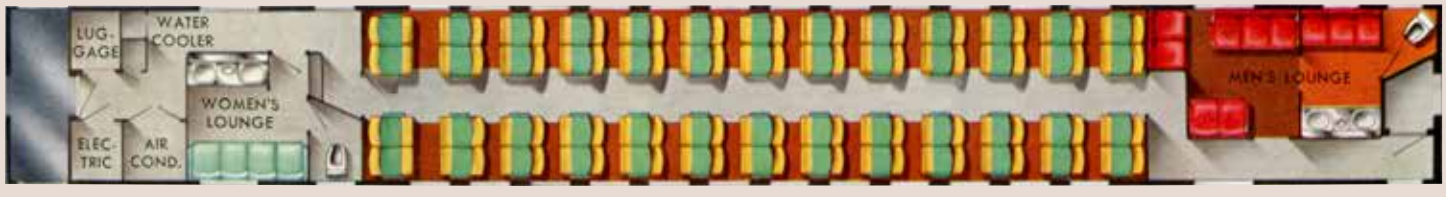
This is excellent track, but it looks much the same as tens of thousands of miles of other high-speed main line, and so now's a good time to see the train. Smiling Ernie Haddock, the train's conductor, has worked his way to the rear, and he offers to show us some of the high spots. Milwaukee Road trainmen always seem to take great pride in their road and its equipment. Perhaps that's because of the road's long tradition of building most of its own rolling stock. Or perhaps it's because the Milwaukee is such a family road, with many second- and third-generation men. At any rate, no other place except on New York Central's *20th Century Limited* have I found such a spirit.

Except for the Skytop lounge, the Pullmans are like many others — but they do have one special feature that is mighty convenient on a transcontinental run: a radio in every room. The diner has oddly shaped tables, the foursomes narrower toward the aisles so it's easier to get into and out of the window seats. Extra space is created in the center of the dining room by a pair of triangular tables for two.

Haddock shows us the microphone from which announcements can be made over the train's public address system, then shepherds us into the Touralux sleepers. These tourist sleepers are nothing like the connotation given the name when some western roads took off this intermediate-class accommodation. Nor are they even like the clean, comfortable standard 14-section tourist sleepers of prewar days. They are slickly modern in light wood finish, and the section walls come clear to the aisle, giving a good degree of privacy. The berths are a new type, with the beds made in advance as in roomettes so they can be lowered into place in a minute, ready for occupancy.

COACHES

Olympian Hi coach passengers enjoyed reclining Sleepy Hollow seats and wood-paneled window areas that echoed the cars' initial exterior livery.



Built in the road's West Milwaukee Shops, the coaches had seats for 52 passengers. Milwaukee Road booklet, CLASSIC TRAINS collection

Initially, stylish Fairbanks-Morse "Erie-built" diesels powered the *Olympian Hi* through from Chicago to Seattle (where No. 6 was photographed). In 1949, GE and Westinghouse motors took over on the two electric districts, with steam in between. Dan Pope collection

Main lighting in the Touralux cars is fluorescent. Washrooms and lounges are clean, light, and modern. It's said that the Milwaukee considered the trend of western roads to eliminate the tourist class, but decided there might come a time when travelers would again be economy-minded. So it built these streamlined Touralux sleepers to create a reputation as the economy route to the Pacific Northwest.

In one of the tourist cars we meet Al Marxan of Chicago, train passenger representative this trip. He's arranging details of a connection for a passenger, and he'll keep busy all the rest of the trip doing all he can to make the journey more pleasant for those aboard. Instead of assigning regular men to the new *Olympian Hiawathas*, Milwaukee took various passenger agents, both on-line and off-line, and had each make one round trip acting as train passenger representative. This way the agents got a sample of the ride they're selling. One duty of the train representative is to read prepared announcements about points of scenic interest. They've taken all this in stride, except for a certain reticence about reading poetry — a stanza of Longfellow's "Hiawatha" scheduled for reading as the *Olympian Hi* speeds along the west bank of the Mississippi.

Now the train is slowing for the outskirts of Milwaukee, and we slide into a vacant section and watch out a right-side window as we pass the innards of Milwaukee Harbor. A Chesapeake & Ohio carferry is backed up to a loading apron not far east of our track, and across the river is an older Grand Trunk Western ferry. We run alongside a row of coke ovens, then swing to the west, across the Menominee River, and around a sharp curve into Milwaukee Road's ideally located downtown station.

The stop here is brief, just long enough to change crews and check the train. Most short-run passengers use No. 23, 20 minutes later out of Chicago, so there is a minimum of loading and unloading. As the train pulls out from under the high, dark trainshed, we walk ahead through the combination coach-tourist sleeper for women and children only, and enter the tap-grill car. Here's a good place to find a seat on the left side of the train and to stop for a bit of refreshment.

Look fast, now, for only 4 minutes out of the station we're going past the famed West Milwaukee Shops where this railroad builds freight, passenger, and diesel motor cars and where it has built many of its steam locomotives. This same side of the car is a good place for the view of broad Pewaukee Lake some 20 miles west of Milwaukee.

This is a winding railroad now, through part of Wisconsin's lake country. But it's also fast, with curves beautifully spiraled and elevated, though still nothing like the speedway we rode from Chicago to Milwaukee. We make the 93 miles from Milwaukee to Portage in 80 minutes. Portage takes its name from the old land-bridge point between the Fox and Wisconsin rivers, one of the connection points between the Great Lakes and Mississippi waterways. As we slow for the station, the train crosses a drawbridge over the old Portage Canal, now used only by a few small pleasure craft.

Beyond Portage the line dips into the Wisconsin River valley, and we catch glimpses of the broad river on a high bridge. If one is quick enough in looking to the right, one will see the beautiful dells of the Wisconsin spread out below and far beyond. These sandstone formations, worn by the river through the ages, attract tens of thousands of tourists every year. Except in summer, when the foliage is too heavy, passengers can see the dells for miles beyond the river crossing as the rail line still follows the river valley.

MORE FAST RUNNING

The country flattens out into a high plateau over which we speed on some of the fastest track on the Milwaukee system. We hardly slack speed at New Lisbon, the junction where the *North Woods Hiawatha* leaves the main line. Now the horizon is broken with odd rock formations, like the battlements of medieval castles, where the glaciers never reached. Past Tomah comes the first big surprise of the trip — a whoosh of rushing air as, at Tunnel City, we enter a 1,330-foot bore at more than 1,000 feet elevation, in otherwise flat dairy state Wisconsin. Thus we cross the divide between the Wisconsin and Mississippi valleys and start down the long grade to the river crossing at La Crosse. We are riding along the edge of a broad valley bounded by hills and bluffs, and alongside us is a single-track railroad, the North Western line used by the *Minnesota 400*. Signaling our approach to La Crosse is the biggest cliff of all, Granddad Bluff, towering over the city.

After a rather long division-point stop, the train pulls out onto a single curving track, centralized traffic controlled, that takes us across the Mississippi. The first bridge, over the Black River, is a fooler, for the opposite bank proves to be only an island, a rather big one with a power plant. Then we cross water three more times, over French Slough and then two spans over Mississippi waters proper, the last one a longer structure with a drawspan. Finally we reach the west bank and a wye junction with the line south to Marquette and Davenport, Iowa. In some seasons the river seems unimpressive; at other times a flood stage takes it over its usual banks, covers some of the islands, and makes it quite the Father of Waters indeed.

By this time we've gone back to the rear-end Skytop lounge, for now we are on the scenic River Division. From here to St. Paul, with only a few interruptions, we'll look out across wide panoramas of river and wooded bluffs. The waning twilight adds to the impressiveness of this scene. The view is all to the east across the open valley. Bluffs rise immediately from the track on the west.

Across the river is the Burlington Route. On the river, boys are fishing from small boats, *à la* Huck Finn; "towboats" push their barges; pleasure cruisers and other craft are evidences that the waterway is still useful, although no longer the sole mode of transportation that it once was.

Beyond Winona the river widens out into Lake Pepin, wide, open, and green. Then it narrows again, the train swings away for a bit, and we are through Red Wing and on to Hastings, where we cross the Mississippi for the second time. Daylight is gone now, but a bright moon helps us spot landmarks.

At St. Croix interlocking we come to an unusual paired track arrangement. The Burlington and the Milwaukee both once had single-track main lines from here into St. Paul, but years ago they got together on joint use of the trackage to create a double-track road for both. Because the grades work out best that way, we leave Hastings on the left-hand track, which is the Burlington's. Part way into St. Paul the lines used to cross, so, still on the left track, we find ourselves on the Milwaukee again.

After climbing a steep rock bluff, we've landed atop a flat plateau, across which we approach St. Paul. Almost before we realize

After unloading at Seattle Union Station, the *Olympian Hi* was towed south behind steam, backward and with diesels still attached, to a wye, where the train was turned to head for its ultimate destination, Tacoma. Eastbound, the process was reversed. Stuart B. Hertz

TOURALUX SLEEPERS

MILW bucked the trend toward private sleeping accommodations with the Touralux sleeper, which was more luxurious than traditional section Pullmans.

The Touralux cars had 14 extra-roomy sections; an 8-section/32-seat sleeper/coach version for women and kids was soon dropped.

Four types of electrics would haul the *Olympian Hiawatha* through the years. Bipolar E-2 (GE, 1919) is at Seattle in September 1950. GE box-cab duo E-23 is at Deer Lodge, Mont. E-2, H. M. Stange, Krambles-Peterson Archive; E-23, Wade Stevenson, Milwaukee Road Historical Assn. coll.

it, the big neon numeral "1" on the tall tower of the First National Bank comes into view. It's a landmark that guides us right into St. Paul Union Depot. We run past freight yards, watch the lights of St. Paul Airport across the ribbon of river shimmering in the moonlight, and catch a glimpse of the Great Northern wye approach as we move slowly under the loudspeakers that direct switchmen in the station throat. The station is full of hustle and dim moving shapes as mail cars are loaded and switched for night trains.

As we leave "SPUD," we cut back from the river and climb a hill that taxes the diesels and once required helpers on heavy steam trains. This is the Short Line, so called because it replaced a longer route once used by the Milwaukee between the Twin Cities. There's a brief flash of beauty as we cross the high bridge, our third time to span the Mississippi. Then we're crossing street after street, and soon we stop in Minneapolis.

The station here is a stub-type terminal, and the wye where the line west diverges is several miles back toward the river, so some unusual operations are called for. We get out, catch a feel of the close summer air we've been missing in the air-conditioned cars, then get back on the train. Presently the highball is relayed down the platform. Back-

TIP TOP GRILL

Continuing a tradition begun with the 1935 *Hiawatha*'s Tip Top Tap lounge, the new Seattle train featured a Tip Top Grill for drinks and light meals.

The tap-grill cars had seats for 18 in the dining area, 26 in the lounge. Like most *Olympian Hi* cars, the Milwaukee built them itself.

Black 2-C-1+1-C-2 box-cab E-12 (Baldwin-Westinghouse, 1919) is at Butte, Mont., in September 1950. "Little Joe" 2-D+D-2 E-21 (GE, 1946) is at Fish Creek, Mont., near Gallatin Gateway, in May 1953. E-12, H. M. Stange; E-21, George Krambles; both from Krambles-Peterson Archive

wards we go, past the grade crossings and the brightly lighted neighborhood streets, to a stop next to the shops. With the train properly headed west on the main line and the highball passed, we go to bed, confident that the railroad will carry on till morning.

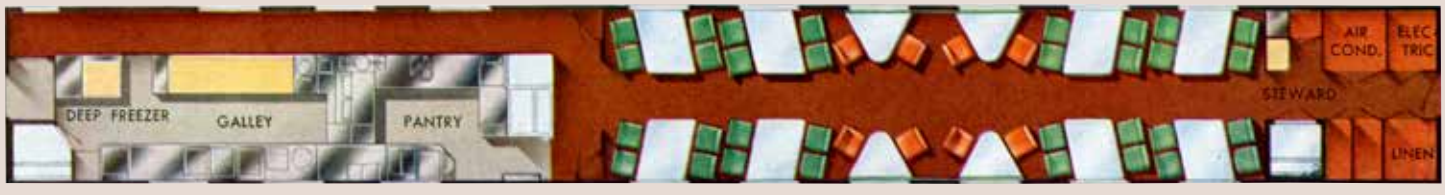
THE WIDE-OPEN WEST

The second day out on a transcontinental train is always a day of getting acquainted. People who would never think of speaking to strangers under any other conditions finally break down and become friendly. The young man across from us at breakfast turns out to be a student at Butte High School, on his way back from a student congress in Washington, D.C. It's the first time he's ever been east of Montana, and he is full of his impressions of the "East," as he calls everything beyond the Missouri River. It's fun listening, but at an appropriate break we head again for the rear end to look at the track.

We're in Montana now. While we slept we crossed Minnesota, most of South Dakota, and a corner of North Dakota. That's why we had an early breakfast, to leave time to see something of the line along the Yellowstone River east of Miles City — and we're due there at 9:45 a.m. So we sit in the Skytop lounge and watch the muddy, swirling river.

DINING CAR

Brooks Stevens' decorative scheme for the interior of the diners divided the car into thirds to reduce the "tunnel effect" of the elongated space.



The diner's unusual tables, shaped to make it easier to access or exit the seats beside the windows, had spaces for 40 people.

The *Olympian Hi* has come 2,178 miles from Seattle as it tears through Edgebrook, Ill., in August 1950. H. M. Stange, Krambles-Peterson Arch.

A searchlight signal flashes by and changes to green, which means something else is on the railroad, since this is CTC territory. Sure enough, it's a work train in siding for us. A bit beyond, a power shovel is widening a cut.

The man across from us has the clear, far-seeing eyes and sunburned neck of the civil engineer, and he's been keeping a practiced eye on the right of way. So we ask, "Burrowing, or improving the cut?"

"Widening the cut to improve drainage," he replies.

"You with the division engineer's office?"

"I'm it," he says with a grin.

"Have trouble with the river?" Right now the Yellowstone looks relatively tame, but the eroded banks and gullies show what it can do. The rip-rap at points where the railroad comes close to the river indicates the concern about Mr. Yellowstone in his wilder moments.

"I should say we do have trouble," says the engineer. "It's a hard river to live with. Never know what it's going to do. I've seen a lot of rivers, and I don't think there's any comparable except maybe the Yellow River in China."

We are impressed by the comparison of this muddy water with another river thousands of miles around the earth, and we watch it with new respect. We also watch a line of rails that was on our side of the river but is now across the valley. This, we realize, must be the Northern Pacific, and as if to prove it we overtake and pass a freight with an NP caboose and steam locomotive. The engine's exhaust hangs low in the still morning air, and for miles we can look back and locate that freight.

The brakes take hold as we pass ends of sidings and signs of habitation. This is Miles City, a major division point and service station for the transcontinental fleet. Look at the crew of men and the piles of apparatus all along the platform! Windows are washed, water added, and trucks and brake rigging are checked. Then we are off across more of eastern Montana's bleak miles.

This, we reflect, is the last of the northern transcontinentals — and of all the major transcontinentals only the Western Pacific is later, and that by only half a year. The Milwaukee had been for 50 years a powerful granger road before it decided to extend west from Mobridge, S.Dak., on the Missouri, to the West Coast. It sent surveying crews through all the territory between the established routes. One party ended up at Eureka, Calif. Another struck across the desert to the south of Great Salt Lake. Others followed the Snake and the Clearwater, coming out on the Columbia. Finally the engineers evolved the alignment we are following today.

The Milwaukee was new in still another way. It was the first American railroad to try long-distance electrification. In the era when electricity was regarded as a means of overcoming special obstacles such as tunnels, terminals, or heavy suburban traffic, Milwaukee strung catenary over 656 miles of main line, farther than from New York to Cleveland.

Now we are approaching Harlowton, the east end of the longer electrified segment. And the train on which we approach, running behind its diesels, may well be spelling the end of the electrification.

It's not long after we've passed under the beginning of the catenary at Harlowton, and made the division-point stop without changing engines, that the labors of the diesels and the slow speed tell us that we are on the 2 percent grade up to Loweth, summit of the Belt Mountains. A little computation from the timetable tells us that somewhere near here we should pass the eastbound *Olympian Hiawatha*, and sure enough we do. The Belt Mountains are particularly unimpressive, but the eastbound streamliner is striking enough to make up for it as it swings past us.

ROCKS AND MORE ROCKS

Now we start down toward the Missouri River valley, and ahead of us lies one of the key scenic wonders of the entire trip: Montana Canyon. Rolling hillsides gradually give way to rocks and more rocks, and finally we are in the depths of a genuine rock gorge. Its sides are not the gentle slopes of a well-worn rock valley, but rather are the steep cliffs of a new formation, more like Royal Gorge than anything else. The rear-end brakeman looks upward at the rock walls just as if he'd never

Miles City, Mont., was an important division point, MILW shop town, and train servicing stop, evidenced by the fuel and water hoses connected to the Erie-built diesels on eastbound train 16. Note the OLYMPIAN HIAWATHA lettering on the lead unit. Don E. Wolter

ROOMETTE-BEDROOM SLEEPERS

Pullman-Standard's *Lake*-series sleepers, the first non-MILW-built cars for any *Hiawatha*, contained 10 roomettes (left) and 6 double bedrooms (above).

P-S's backlog of orders delayed the *Olympian Hi*'s 10&6s until November 1948, a full 16 months after the train was inaugurated.

Rugged Montana Canyon was a natural spot to pose the *Olympian Hi* for a publicity photo. Here the A-B-A set of Erie-builts has been airbrushed into an A-B-B set. MILW

seen them before, then explains that he's looking for some mountain goats that occasionally graze into view.

Seven tunnels carry us through the various configurations of the rock, and an eighth pops us through a ridge and out into the Missouri River valley at Lombard. Just before crossing the river we cross the Northern Pacific main line, which parallels us on the other side of the stream. This is a believe-it-or-not track situation — two railroads running together but in opposite directions. Should we come across an NP train going our way it would be eastbound, while we're obviously going west.

Three Forks, next stop, is the place where the Jefferson, the Gallatin, and the Madison rivers join to form the Missouri. It is also Milwaukee Road's station for Yellowstone National Park. In season the train both drops and picks up many passengers here. Bus connections are used instead of a branchline train. We step off with the brakeman, and he has time to tell us that the Milwaukee Road branch to the Gallitin Gateway leads off southeast in the general direction of the NP's main line east. From here, he tells us, NP has two main lines west. One is the track we followed along the Missouri River. It goes west via Helena. The other goes via Butte, and we shall see much of it later today.

Now the Milwaukee follows the Jefferson through fairly level grazing country to Piedmont, where the climb to the Continental Divide begins. Here our two diesel units really begin to work as they hit the 2 percent. We notice that all grades are steeper westbound than eastbound, a normal procedure for western transcontinentals where the predominant normal tonnage is eastbound.

At the next station we pass an eastbound freight in the siding, and we notice it still has its electric helper in the middle as well as the electric road engine on the front. Since the electrics can hold back by regeneration approximately the same tonnage they can pull upgrade, helpers are left in the trains across the summits instead of being cut off at the top and sent down light.

So far the line has struck boldly straight into the foothills, but now it twists to the right in the beginning of a huge hairpin. Far to our right down in the foothills we see the straight line of railroad over which we've just come, and, moving at snail's pace, the freight with its motors at front and middle. Now we round the end of the hairpin. The left window will offer the best view from here to the Continental Divide tunnel at Pipestone Pass.

This is a spectacular piece of mountain climbing, well worth the entire trip. The gods threw stones as big as houses here and there, and then the railroad builders just as recklessly cut through and between and over them. First we are behind a wall of rock, then we break out into the open looking hundreds of feet almost straight down. Once past the Divide signboard and through the tunnel, we shift to the right-side windows and soon can look across the valley floor at Butte and its tall smelter smokestack.

The Butte station is a stub-end affair. We pull past the wye and back in. The tracks of the station all look alike, even as to overhead trolley, but woe to the Butte, Anaconda & Pacific motor that strays from its own appointed trackage onto those assigned to the Milwaukee! The big road uses 3,000 volts D.C.; the shorter line, 2,400. We shall run beside the BA&P through Silver Bow Canyon west of Butte. Beyond the canyon the BA&P veers westward toward the giant 584½-foot stack of the Anaconda smelter, but the NP, which also shares the canyon, stays with us.

Now we have easy downgrade running on freshly ballasted track, with mountains always in view but not right upon us. The next station is Deer Lodge, a long stop for major servicing. A long stop with this streamliner means 15 minutes, time enough for us to walk up and down the length of the train and look at the mechanical features such as the outrigger bolsters that minimize sidesway. We get on the train at the front end and walk back through the coaches, which are tastefully decorated even to prints on the washroom and lounge walls.

The river we are following now is the Clark Fork of the Columbia. This is Lewis and Clark country, with many reminders of that intrepid pair of explorers. Near Silver Bow we pass the eastbound *Columbian*, the old non-streamlined *Olympian* with the name revived from the Milwaukee's secondary West Coast train of pre-Depression days.

Look to the left of the right of way. About 15 minutes west of Deer Lodge is a huge replica gold spike and signboard marking the place where Milwaukee Road's Pacific extension was completed on May 19, 1909.

From the rear end we see a beautiful panorama of distant mountains, while the foreground is fresh and green. The fertile floor of the valley is broken, however, by a rock formation of striking beauty: Hell Gate Canyon. Then we are in Missoula, home of the University of Montana.

Westward from here we follow the Bitter Root Valley, fruit-growing country and also the path by which we climb toward the last mountain summit for tonight, the crest of the Bitter Roots at St. Paul Pass. About 20 miles out of Missoula we seek a left-side window for a gorgeous moonlit valley view. The scenery never stops, but deep nightfall closes in and sends us to bed.

SECOND NIGHT ON BOARD

During the night, we miss Spokane and the Columbia River. We miss the terrific 2.2 percent grade, electrified, by which the line climbs into the Saddle Mountains, an eastward branch of the Cascades. But we leave word with the porter to wake us early, for it may be a clear sunlit morning.

It is. The view as we tentatively raise the shade makes us fling it quickly all the way up. Those sharp fairy-tale peaks, the evergreen forests thick with mist, the gentle downhill motion of the train, draw us to the rear end just as soon as we can clothe ourselves. No one is in the lounge except the rear-end brakeman and a fellow passenger who turns out to be from Springfield, Ill., and a friend of a friend of ours.

"Should have been here a few minutes ago," says the trainman. "It was even better." We are threading along a slope, over steel trestles directly above the treetops.

The slopes taper off, the forests thin, lumbering camps appear — and now a highway. We are approaching the end of a real Journey, not just a trip on the train. Soon we are across the Tacoma junction at Black River and go the last 9 miles into Seattle. Our train will soon pass here again, being pulled backward by a steam engine to its ultimate destination of Tacoma, but we'll be getting off at Seattle. We roll up to a platform at Seattle Union Station 3 minutes ahead of the advertised 10:45 a.m.

Northwest Passage? This is it!

Crowds gather at Tacoma, Wash., on June 29, 1947, to witness the departure of the *Olympian Hiawatha* on its first run to Seattle, Minneapolis, and Chicago. John F. Endler Jr.

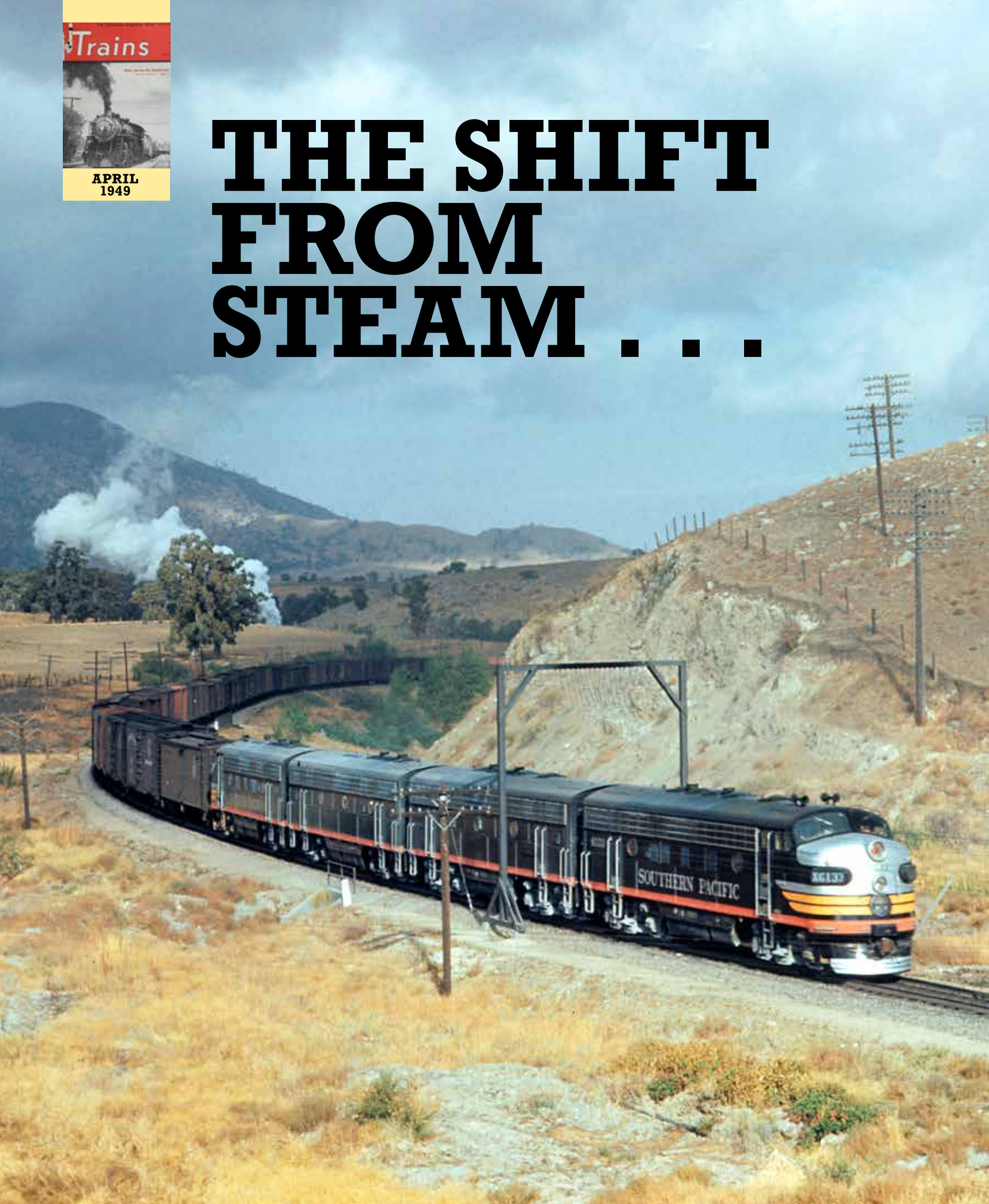
SKYTOP SLEEPER-LOUNGE

Most striking of the *Olympian Hi*'s cars were the *Creek*-series Skytop observation cars, which also housed 8 double bedrooms (left, 2 rooms *en suite*).

Like the 10&6s, the Skytops were built by Pullman-Standard; they arrived in January 1949, when the train was 18 months old.

APRIL
1949

THE SHIFT FROM STEAM . . .



. . . is in full force. The diesel bandwagon keeps rolling along — but some of its gilt paint is peeling off

BY **DAVID P. MORGAN**

The courtship of the diesel locomotive by the railroads has run its erratic course from a shy flirtation on the back porch of the Jersey Central to a formal wedding, for better or for worse, for richer or for poorer. The question is no longer one of proposal but simply, "How long will the honeymoon last?"

The 3.4 million diesel horsepower ordered by the carriers in 1948 indicates, of course, that the romance is still in bloom. The Pennsylvania is setting up pools of diesel units from Enola, Pa., to East St. Louis as its vast backlog of orders begins to pay off in deliveries of a complete range of diesels from baby 44-ton shifters to four-unit, 6,000 h.p. freight haulers; Ike Tigrett's Gulf, Mobile & Ohio (2,900 miles) and John W. Barriger's Monon (540 miles) are in the final lap of a race to join the steamless ranks of the Susquehanna and the New York, Ontario & Western; and Missouri Pacific and Union Pacific are operating entire engine districts exclusively with diesels. On certain main lines of the Burlington, smoke and steam have become the distinction of the way freight as redballs and drags share in the accelerated tempo set by the diesels.

Among the builders, General Motors' ultra-aggressive Electro-Motive Division continues to lead the pack as the industry completes the shift from custom-made to a mass-production pattern that looks more like Detroit with each month of new deliveries. Last year Electro-Motive's orders totaled more than 2 million horsepower, or nearly triple the Alco-GE backlog of 778,300 horsepower. Baldwin (374,170), Fairbanks-Morse (181,00), and diesel-locomotive novice Lima-Hamilton (16,000) bring up the rear.

The builders now offer practically any styling or power output that operating conditions or vice-presidents could demand. In the 2,000 h.p. passenger cab-unit field, for instance, the roads have their choice of four models: EMD's famous E7 with a slightly slanted nose and medium weight and length statistics; the new shark-nosed Baldwin with the greatest length (80 feet) and weight (380,000 pounds) on the market; Alco-GE's flat-nosed and short (65 feet 8 inches) unit [later designated "PA"]; or the Raymond Loewy-designed, opposed-piston Fairbanks-Morse locomotive ["Erie-built"]. EMD and Baldwin use two 1,000 h.p. diesel engines per unit, while Alco-GE and FM get by on one large engine. It is a case of pay your money and take your choice; at least one road — Pennsy — indulges in all four.

Following the 2,000 h.p. example, it is significant that each of the builders except Fairbanks-Morse has turned out a minimum of two modifications — and in 1949 FM is expected to change over to its new "Consolidation" Line. It is rumored that Electro-Motive will also replace the E7 with a more powerful unit.

Certain of these design shifts were effected to cut production costs, but most have been engineered for sales appeal — not bad business when it is noted that the railroads laid down some $279.4 million in 1948 for diesels. As never before in the century, the carriers are motive-power conscious, in the mood and with the means to spend millions. The cause is not difficult to find.

Financially speaking, it has been much easier for the Monon, say, to dieselize its operations than it would have been to underwrite a line relocation project through the knob country of southern Indiana. Investors look kindly upon short-term equipment trusts but with hesitancy on capitalization of the magnitude and permanence required to move mountains and shift rivers. Almost immediately upon arriving on the property, a Monon F3 starts hauling longer trains at sharply reduced fuel and maintenance costs. Then, too, the obsolete Consolidations and 2-8-2s it replaces can be sold at attractive scrap prices.

The latest 6,000 h.p. diesel from La Grange or Schenectady, when compared with an old compound 2-8-8-0, is admittedly a forward step in the art of railroading; its ability to develop a high tractive effort at low speeds gives it an advantage over steam power in mountain work. Management would like to complement these shiny machines with better track, of course, for any locomotive will perform more efficiently and haul more tonnage over level, tangent line. But in the immediate future, there is little choice for most railroads and few are even attempting to buck the tide. Diesels will effect savings on their own hook, so diesels it is.

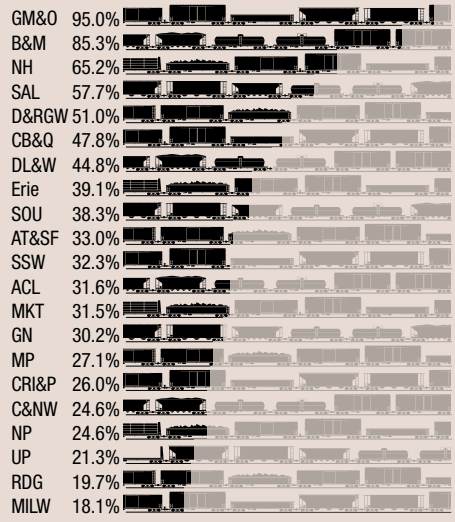
Southern Pacific F3s totalling 6,000 h.p. lead a Los Angeles-bound freight up into the town of Tehachapi, Calif., in 1949. In the background can be seen steam from the train's 4-8-8-2 helper. Linn H. Westcott

MORE EGGS IN THE BASKET

Roundhouse developments will be worth watching as top management places more of its eggs in one basket. Enough diesel horse-

EMD swamped all other builders in postwar diesel sales. Its E7, represented by Alton Railroad No. 100 (top, trailed by an ex-B&O prewar EA on the *Abraham Lincoln* at Joliet, Ill.), was the best-selling passenger diesel of all time. DL&W 662 and its B unit mate were among 1,807 F3s sold, mostly for freight. E7, B. L. Stone, Krambles-Peterson Arch.; F3, John R. Canfield

Railroads with 15 percent or more of total gross ton-miles handled by diesel power in 1948



power has been sold to set up trends; this new method of moving trains is no longer the delicate little six-cylinder power plant bolted to the floor of the *Pioneer Zephyr*'s engine room and watched by a nation as it hurtled from the Rockies east. Today's diesel has been advertised by the builders as a rugged hunk of power ready and able to handle what has been steam's responsibility for more than 100 years. And the carriers have accepted it as such.

Nobody denies that the diesel locomotive is a very capable tool in the railroad world. It has established records for mileage and tonnage-hauling unknown in the age of steam. Precedent after precedent has been broken. It is a locomotive with guts that will run straight through from Chicago to Los Angeles on a high-speed schedule and repeat the miracle day after day through all the variations of climate and up and down all the changes of profile that the *Super Chief* encounters on its 39¾-hour schedule to the Pacific. Nor has anyone found the performance of most freight diesels wanting, for whether the demand has been for speed (NYC's *Pacemaker* and Rock Island's *Rocket Freights*) or for tonnage over the mountains (Southern Pacific and Kansas City Southern), that demand has been met on too many roads to leave unanswered that once-popular question, "Can the diesel take the grind of freight service?" The same may be said for the Elgin, Joliet & Eastern's transfer experience with diesels, for the Susquehanna's Alco commuter-haulers — or for virtually any other assignment from spotting industrial sidings to holding down the swank and the swift.

But as the statistics from impartial sources begin to come into focus, the diesel locomotive is showing up as simply a unit of motive power — possibly the finest motive power the railroads have ever laid their hands on, excepting expensive straight electrification — but still just a locomotive. It is not a panacea for all railroads' ills, a formula for corporate success, or even a Horatio Alger character among machines.

There are streamliners that are losing money today despite the public's enthusiasm for their diesel locomotives; there are also other streamliners (SP's *Daylights*, Milwaukee Road's *Chippewa-Hiawatha*) that are still managing to stay in the black even though they depend upon Pacifics or 4-8-4s to keep them to time. To the astonishment of many, it would appear that comfort and convenience still have a good deal to do with making passengers happy and profitable.

Or examine the Rutland and the New York, Ontario & Western. Before the road diesel was on the market, the former was in receivership and the latter was operating under Section 77 of the Federal Bankruptcy Act, and both were moving their traffic behind the tanks of obsolete steam power. Today O&W is a dieselized property while Rutland still depends upon its veteran Mikes

Alco's mid-1940s freight unit was the 1,500 h.p. diesel later known as FA (cab) and FB (booster), three of which (top) work on the MoPac near the state capitol at Jefferson City, Mo., in 1956. Erie 860, at Ridgewood, N.J., in '56, represents Alco's 2,000 h.p. passenger diesel, later called PA and PB. FA, Mac Sebree, Krambles-Peterson Archive; PA, Bob Krone

and Ten-Wheelers, plus four new light 4-8-2s — and O&W remains in the hands of the trustees while receivers preside over the affairs of the Rutland.

1948 VS. 1940

All of which makes certain recently released statistics from the Interstate Commerce Commission's Bureau of Transport Economics and Statistics quite illuminating. In an effort to evaluate diesel freight-train performance, the research is drawn from "gross ton-miles per train-hour" (a classic index combining speed and tonnage) for the years of 1940 and 1948.

As the statisticians point out, good or bad performance on this barometer is not entirely accreditable to the locomotive; Centralized Traffic Control will speed up a Mikado in almost the same ratio as an F3, and cutting a grade from 2 percent down to 1.3 will boost tonnage ratings all down the line, whether the locomotive's combustion is within cylinder walls or under a brick firebox arch. But as a rule, both steam and diesel suffer or gain in the same proportions, ren-

Baldwin Locomotive Works, founded in 1831, dabbled in diesels in the 1920s and '30s, but didn't field a successful road unit until its 20-axle "Centipedes" of 1945. Its 1,500 h.p. "Babyface" freight diesels, like this Jersey Central foursome, debuted in 1947. Paul Lerman

Lima Locomotive Works shed its commitment to steam by merging with Hamilton Engine in 1947. Lima-Hamilton built 174 units, all switchers, road-switchers, and transfer units, including 1,200 h.p. New Haven 633, during 1949–51. Ed Theisinger

dering the figures of considerable merit.

The two top roads — Gulf, Mobile & Ohio and Delaware & Hudson — make a fascinating contrast. Nine years back, both the GM&O and its future subsidiary, the Alton, were dispatching their trains behind too much power of World War I vintage. There were lanky Mikes in the Alton's Chicago–St. Louis service, while the merger of the old Mobile & Ohio and GM&N had left President Tigrett with a miscellaneous roster of 2-10-0s, light Mikados and Mountains, Pacifics and 4-6-0s that had only their age in common. Translated into entirely different terms, the problem was the same in principle on the prosperous D&H. Coal was the D&H's prime reason for success, and it was moving the anthracite behind heavy, low-speed 0-8-8-0s and Consolidations of great weight and tractive effort.

GM&O turned to diesels as the answer to its troubles, and for months it must have been the happy hunting ground of diesel salesmen. Today the road's roster includes 4,500 h.p. Alco-GE and EMD freight locomotives; EMD, Alco-GE, and Baldwin 2,000 h.p. passenger units; and scores of Alco-GE switchers. More important to the stockholders than the variety, however, is the fact that last year GM&O's gross ton-miles per train-hour was 64.4 percent better than in 1940.

Delaware & Hudson didn't have to look far for a locomotive that would permit existing tonnage ratings to be retained or increased as it underlined the factor of speed in its operations, for the D&H-served Alco plant at Schenectady, N.Y., had already outshopped a handsome new creation in steam for Union Pacific, Northern Pacific, and Western Pacific. So the D&H, the road once famous for high-pressure boilers on low-diameter drivers, ordered 20 freight locomotives with a 4-6-6-4 wheel arrangement and 69-inch drivers. In 1943 Alco supplemented them with 15 K-62 class 4-8-4s. In this manner, the road was able to effect a 60.9 percent increase in its gross ton-miles per train-hour record in 1948 over 1940.

There is nothing strange about the contrast — no juggling of statistics, nothing to indicate major miscalculations. It's signifi-

Fairbanks-Morse entered the market with switchers in 1944 before launching its "Erie-built" road units in late 1945. Santa Fe had one A-B-A set, No. 90, pictured in Los Angles in 1956. Gordon Glattenberg

cant to observe that the Nickel Plate Road (which uses largely 2-8-4s) and Boston & Maine (which has sold its 2-8-4s in favor of Electro-Motive products) both show an almost identical improvement in performance eight years after 1940; NKP was better by 22.5 percent, B&M by 23.4. Thus, along with excellent records by such dieselizers as Burlington and Southern, there are also good showings on the part of Illinois Central and Wabash, both of which depend on steam power. (Although Wabash now is buying freight diesels, IC thus far shows no inclination to set aside its excellent fleet of new and rebuilt 2-8-4s, Mountains, and 2-10-2s.) Even Texas & New Orleans (SP's Texas and Louisiana subsidiary) boosted its performance by 23.3 percent despite the fact that it depends almost exclusively on old Mikes, 2-10-2s, 2-8-0s, and Moguls to move its tonnage.

These statistics do not indicate that dieselization has been bad for the American railroads so much as they rip apart the loose thinking about a modern steam locomotive's ability. They provide factual evidence that on more than one carrier — where steam power has been accorded good maintenance and a chance to make high mileage — the steam locomotive has turned in a good record, even in comparison with the diesel.

Incidentally, it is worth noting that steam's statistics will improve as more old and obsolete power goes to the torch and ceases to burden the record with its low daily mileage, high repair cost, and excessive fuel bill. Ironically enough, the diesel trend must inevitably go down as more diesels are built and enter pools instead of assignments to preferred schedules; nor is servicing and maintenance as good on a fleet of 100 diesels as on an elite corps of 10 or 15.

THE FUEL FACTOR

Perhaps the greatest factor in the advance of diesels, as well as the key to the future, is fuel — an item in the operating budget not taken into account in gross ton-miles per train-hour tables. Thermal efficiency of fuel, any fuel, means little or nothing on a railroad. Management is concerned only with what the stuff costs and what it will produce in a given type of motive power. If $100 will go farther in the tender of a 4-8-4 (with 6 percent efficiency) than in the fuel tanks below a 4,000 h.p. diesel (with 22 percent efficiency), then steam will be retained. Fortunately for the diesel builders, it doesn't often work that way because the price of coal has continued to keep ahead of boosts in oil costs.

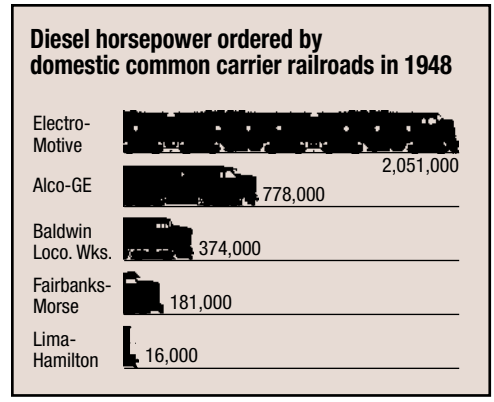
One answer from the mine operators is that the carriers insist upon cheap, mine-run coal; that such fuel is giving steam an avoidably low efficiency on the road; and that steam power has been prematurely kicked off certain railroads. Typical is the comment of Earl Payne, a consulting engineer for Pittsburgh Consolidation Coal: "Better coal on a modern steam locomotive will give a cost and performance that is quite comparable with the best diesel locomotives available . . . If better locomotive fuel is used by the railroads, then the outlook for coal is good. If they continue the purchase of unsuitable coal, the outlook is not at all promising."

Having pioneered the road-switcher type of diesel in 1941 with the 1,000 h.p. RS1, Alco released the 1,500 h.p. RS2 in 1946, the same year Baldwin rolled out its first road-switcher. In 1969, 22-year-old Monon RS2 No. 56 works at Lafayette, Ind. Eric Hirsimaki

Slower to see the road-switcher as the format of the future, EMD responded to the railroads' need for something more versatile than an F unit with the BL2 in 1948—and sold less than 60. B&M 1550 departs Boston in 1955. George Krambles, Krambles-Peterson Archive

ANOTHER DIESEL YEAR

The new locomotive for 1949, however, will be the diesel, as it has been since the war. Reciprocating steam power (of which four railroads, Chesapeake & Ohio, Louisville & Nashville, Nickel Plate, and Norfolk & Western, ordered only 69 units last year) will share the spotlight only to the extent that existing locomotives receive modern shops



Electro-Motive remained the unchallenged leader in the diesel locomotive market in 1948, a position it held until the 1980s.

By the end of the 1940s, only a handful of roads still eschewed diesels for mainline freight work. Nickel Plate class S-3 Berkshire 770, built by Lima-Hamilton in March '49 in the road's last steam order, hustles freight WB-2 east at Blasdell, N.Y., in 1958. Clifford A. Redanz

Illinois Central's Paducah (Ky.) Shops kept the road supplied with modern, if no-frills, steam power. IC 2-10-2 No. 2811 (at Carbondale, Ill., in 1957) was built by Lima in 1921; Paducah gave it and 19 sisters new boilers and other improvements in 1944. R. R. Wallin

or are rebuilt into better machines. The journal *Railway Mechanical Engineer* recently called attention to the fact that such engines still make up nearly 85 percent of the locomotive inventory and cost more than $500 million in repairs each year. One way to cut that high expense even though steam is destined for abolition would be to construct improved coaling towers, water stands, and backshops; another would be to tighten up performance with boosters, poppet valves, roller bearings, and any of a dozen other innovations all too frequently employed on even late-model Hudsons, 4-8-4s, and articulateds.

BUT DIESELS MUST IMPROVE

As good as many diesels are, they must get better. Excessive locomotive length is annoying to operating men; train-heat boilers in the winter of 1948–49 showed few (if any) signs of being much more reliable than they were the previous season of snow and sleet and cold trains; and certain models urgently need modification of minor machinery that often keeps an otherwise working unit in the shops. Fairbanks-Morse's new "C" Line will cut locomotive length down; The Superheater Company has entered the train-heat boiler market; and most manufacturers are realizing that preference servicing of diesels is gone for good.

Last year Alco-GE managed to get its oil-burning gas-turbine on the rails, but Alco engineers have taken pains to point out that their new motive power is still strictly experimental. Down another turbine alley, it doesn't look as if C&O will immediately order any more duplicates of its controversial 500-series steam-electric turbines, although N&W is supposed to be seriously interested in a variation of the same design. For at least the next two years, the turbine will remain what the diesel was 20 years ago, a potentially great but still untried element.

Straight electrification is possibly the most uncertain aspect of the future. It has been just-around-the-corner too many years to arouse intelligent enthusiasm for fresh predictions of motors dragging the tonnage of all the western carriers over the Rockies and the Sierras. The big controlling factor is cost of power, and that rests more in Washington's lap now, what with the huge dam projects of the 1930s and the New Deal.

Of course, it is distinctly dangerous to make predictions about locomotives. Both the Sunday supplements and professional railroaders made it plain that the electric was taking over when the Chicago, Milwaukee & St. Paul and the New York, New Haven & Hartford successfully converted complete divisions to the new silent way of hauling trains. The advantages of regenerative braking, unlimited tractive effort, and fuel savings were explained in awesome detail. Then their embarrassment over finding that electrification was immensely expensive backfired when they laughed out loud at the proposal of moving trains with diesels.

But there were a few grins at the postwar wedding of the railroads and the diesel. And there are those who allow that the romance will not cool for many years, for better or worse. ■

DAVID P. MORGAN joined the Trains staff in 1948, became the magazine's editor in 1953, and retired in 1987. During his 33 years at the helm, Morgan authored hundreds of articles, from brief but evocative essays to 10,000-word studies of contemporary railroad operations to the monthly "News and Editorial Comment" section. Morgan died in 1990 at age 62.

AGE OF THE F3

Florida East Coast F3s arrive Bowden Yard, Jacksonville, in early 1953. FEC bought its 12 F3s in January 1949, just before the end of F3 production. R. R. Malinoski

Motive-power historians of the future may well label our times "The Age of the F3." The pacemaking performance of Electro-Motive's fabulous 1,500 h.p. road diesel unit last year only accented the unparalleled sales success that the F3 has been enjoying ever since its birth in October 1946. Since then, EMD has mass-produced it to a staggering 2.3 million horsepower represented by more than 1,500 cab and booster units, now hauling freight and holding down passenger schedules in the U.S., Canada, and Mexico. In all of locomotive history, there is not even a close runner-up to that batting average; no other basic unit of motive power has gone so far and done so much in so short a time. In the past year or so the F3 introduced road after road to dieselized freight service, including potato-carrying Bangor & Aroostook and orange-hauling Florida East Coast; this year it will carry the banner to such new customers as the Clinchfield, Atlanta & West Point, Texas & Pacific, and Georgia Road.

Elsewhere on the diesel frontier, the Alco-GE team's new 2,000 and 1,500 h.p. models were continuing to gather momentum, invading with their distinctive flat noses such EMD strongholds as the Rock Island and the Great Northern. In the switching field, Alco-GE and just plain General Electric were coming along in fine style. How long it would take for the Westinghouse influence to affect another old steam builder, Baldwin, was still a problematical topic. BLW's horsepower-on-order total for last year was helped substantially by large orders from old-line buyers like the Pennsy.

Fairbanks-Morse sales held their own fairly well in 1948, but they won't begin to reflect the impact of FM's "Consolidation" Line until 1949–50, when the first production units hit the road. NYC is already signed up for 2,000 h.p. units of the new design.

The roads that ordered reciprocating steam power in 1948 stuck by time-tested designs ranging from class A 2-6-6-4s and Y6b Mallets on the N&W to Lima 2-8-4s for L&N and NKP. C&O even dug back to World War I files for its coal branches, ordering 2-6-6-2 Mallets from Baldwin. There were no new designs in steam, no refined duplex-drives or 4-10-4s or another "world's largest" to take the crown from UP's Big Boy.

New developments may arrive in 1950. Pennsy continues to hint that it has a super GG1 electric under wraps, while Allis-Chalmers, Lima-Hamilton, Baldwin, and Alco all speak confidently about the gas-turbine.

Right now, though, it is the day of the diesel — and Electro-Motive is making the most of it. — *David P. Morgan*

EMD'S 1-2-3 PUNCH OF 1949

The 1940s closed with the railroads—most of them, anyway—in a headlong rush to dieselize. GM's Electro-Motive Division was the undisputed market leader, but there was room for improvement: EMD's 1,500 h.p. F3 freight locomotive was no more powerful than Alco's FA; EMD's E7 passenger racehorse lacked dynamic brakes; and EMD had no road-switcher in its catalogue. All that changed in 1949, when EMD introduced three new models: the 1,750 h.p. F7 (top), 2,250 h.p. E8 (left), and 1,750 h.p. GP7. With this potent three-some, GM's locomotive subsidiary was sitting pretty for the 1950s. Three photos: EMD

TIME TRAVEL to the 1940s

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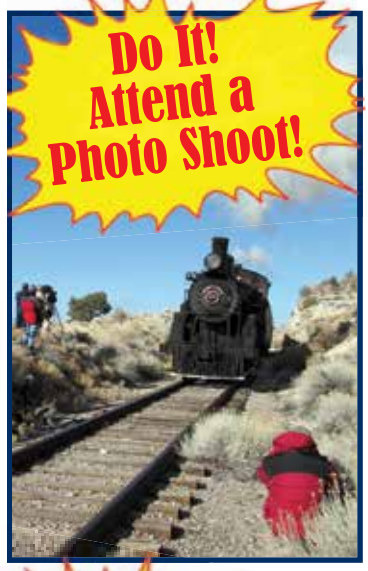

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