

BURLINGTON'S ZEPHYRS

Classic Trains
SPECIAL EDITION NO. 29

The fast silver streamliners
that changed railroading

**Profiles of the
*Zephyrs*** p. 50

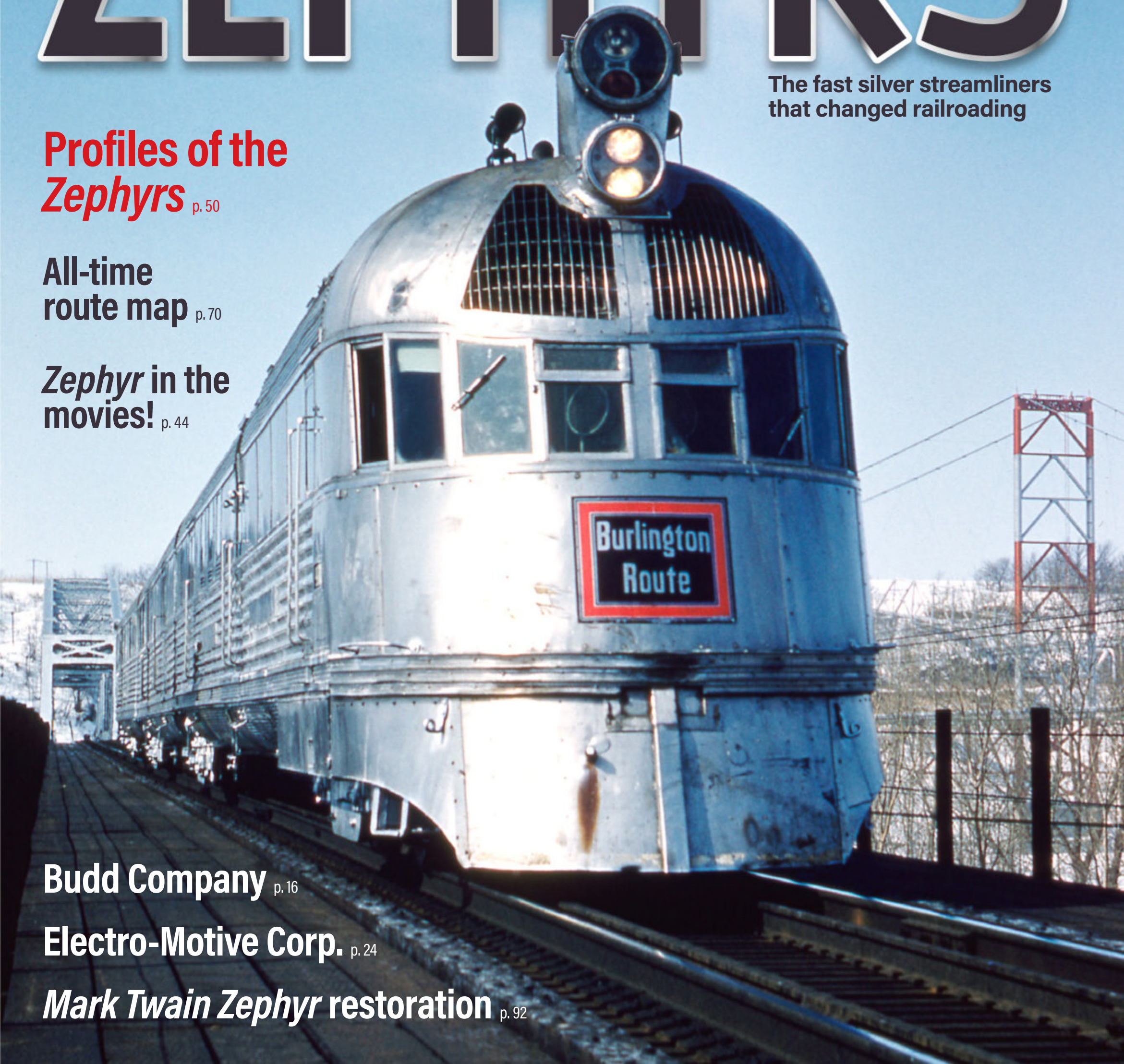
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Learn even more about the *Zephyrs* and the railroad that created and operated them from the Burlington Route Historical Society!

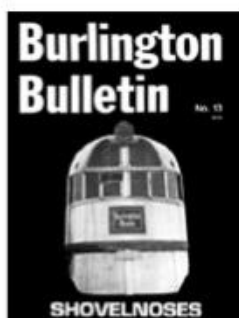


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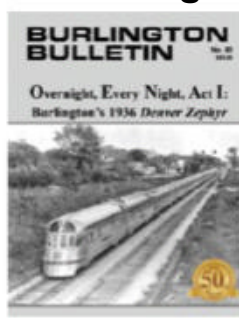
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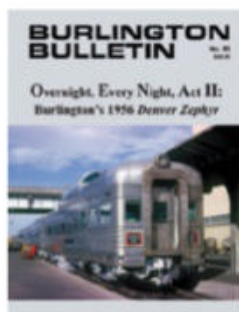
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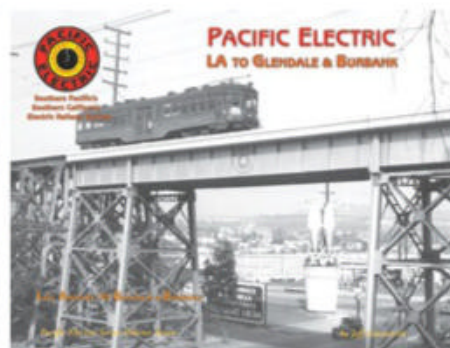


Bulletin No. 55 Picks up where *Bulletin* No. 50 left off, recounting the history of the last true American streamliners, 1956's *Vista-Dome Denver Zephyr*, from their pre-service exhibitions in October 1956, through the March 1970 Burlington Northern merger, and up to their demise at the dawn of the National Railroad Passenger Corporation (Amtrak) on May 1, 1971. **\$50.00**

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BURLINGTON'S ZEPHYRS



ON THE COVER

CB&Q No. 9900, the landmark *Pioneer Zephyr*, crosses the Missouri River during its last public run, Lincoln, Nebr.-Galesburg, Ill., on March 20, 1960.

Robert A. Caflisch, Helen Caflisch collection

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Salute to a silver family

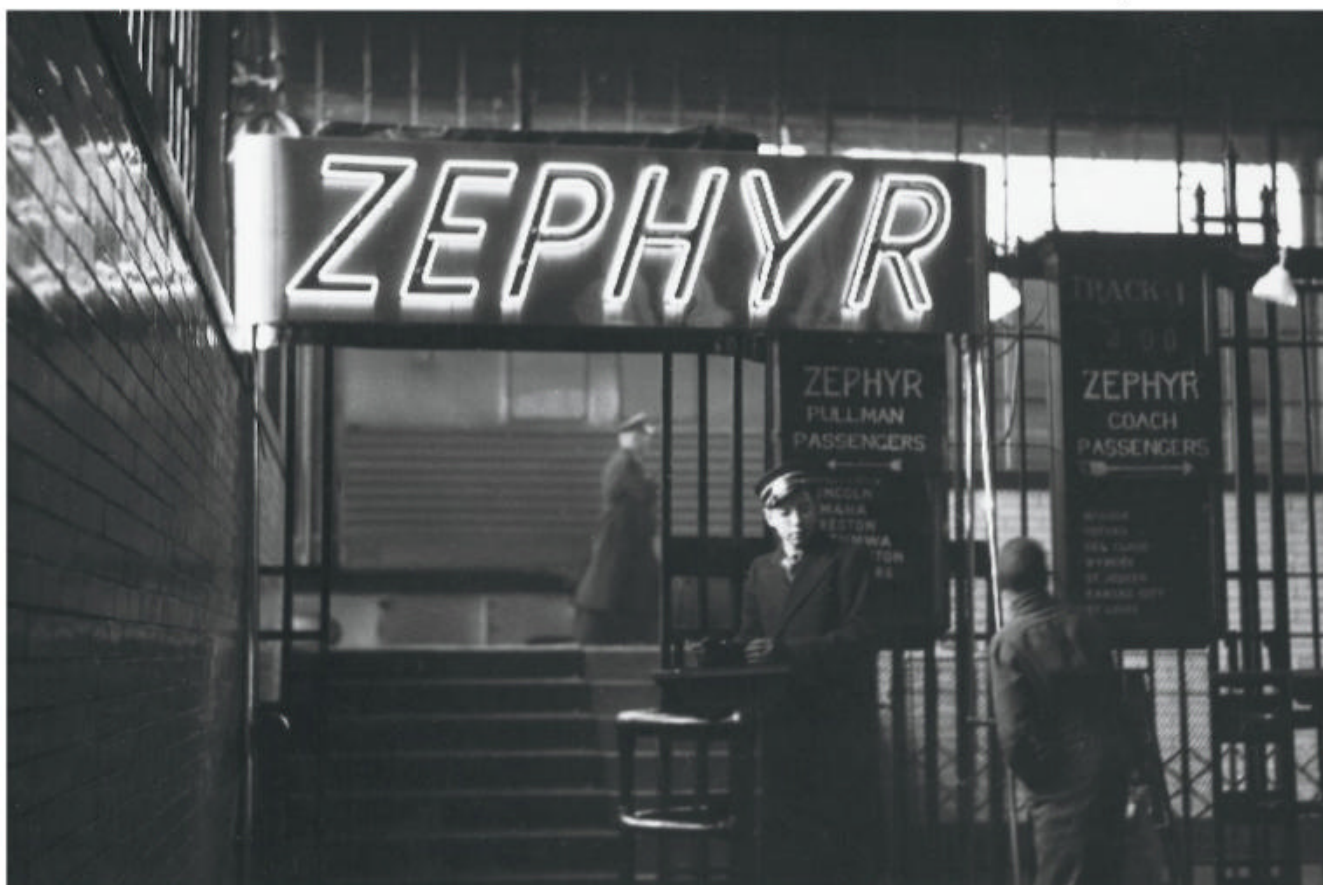
ZEPHYR! The very word evokes speed and excitement, power and adventure. That it does can be credited to a railroad president's decision nearly 90 years ago to name the first of a fleet of innovative trains after the Greek god of the west wind, Zephyrus. It was a fitting choice for the Chicago, Burlington & Quincy, whose slogan was "Everywhere West." Yet in a way it missed the mark, for the ancient Greeks considered the west wind to be the gentlest of the four winds, and outside of railroading a zephyr is a soft, mild breeze.

The Burlington Route's *Zephyrs* were anything but soft and mild. Propelled by powerful diesel engines, constructed of lightweight but strong stainless steel, and designed with aerodynamic features that helped them achieve unprecedented velocities, they represented the best of industrial America at its zenith.

With a mix of all-new articles, plus stories from past issues of *TRAINS* and *CLASSIC TRAINS*, this special edition celebrates CB&Q's family of streamliners, particularly the early *Zephyrs* of the 1930s. Most of those trains succumbed to the scrapper's torch long ago, but one, the *Mark Twain Zephyr*, is being painstakingly rebuilt by the short line Wisconsin Great Northern. That remarkable project is the subject of a companion DVD program, available at KalmbachHobbyStore.com/Zephyr.

We hope you enjoy BURLINGTON'S ZEPHYRS!

Robert S. McGonigal



A bold neon sign marks the train gate for the *Denver Zephyr* at the Mile High City's union station in the 1940s. For a time, "Zephyr" was virtually synonymous with "streamliner." CLASSIC TRAINS collection



BURLINGTON'S ZEPHYRS

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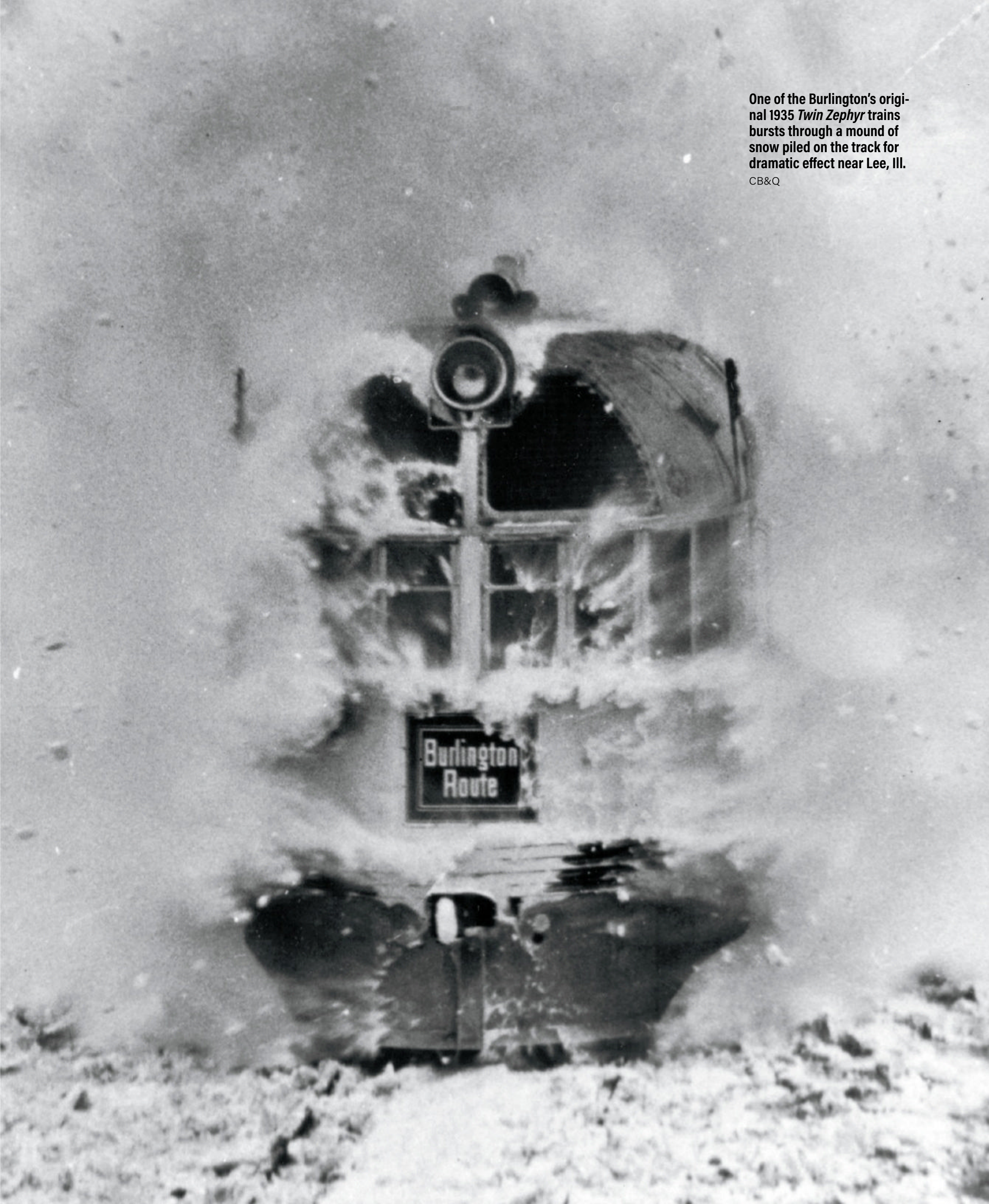
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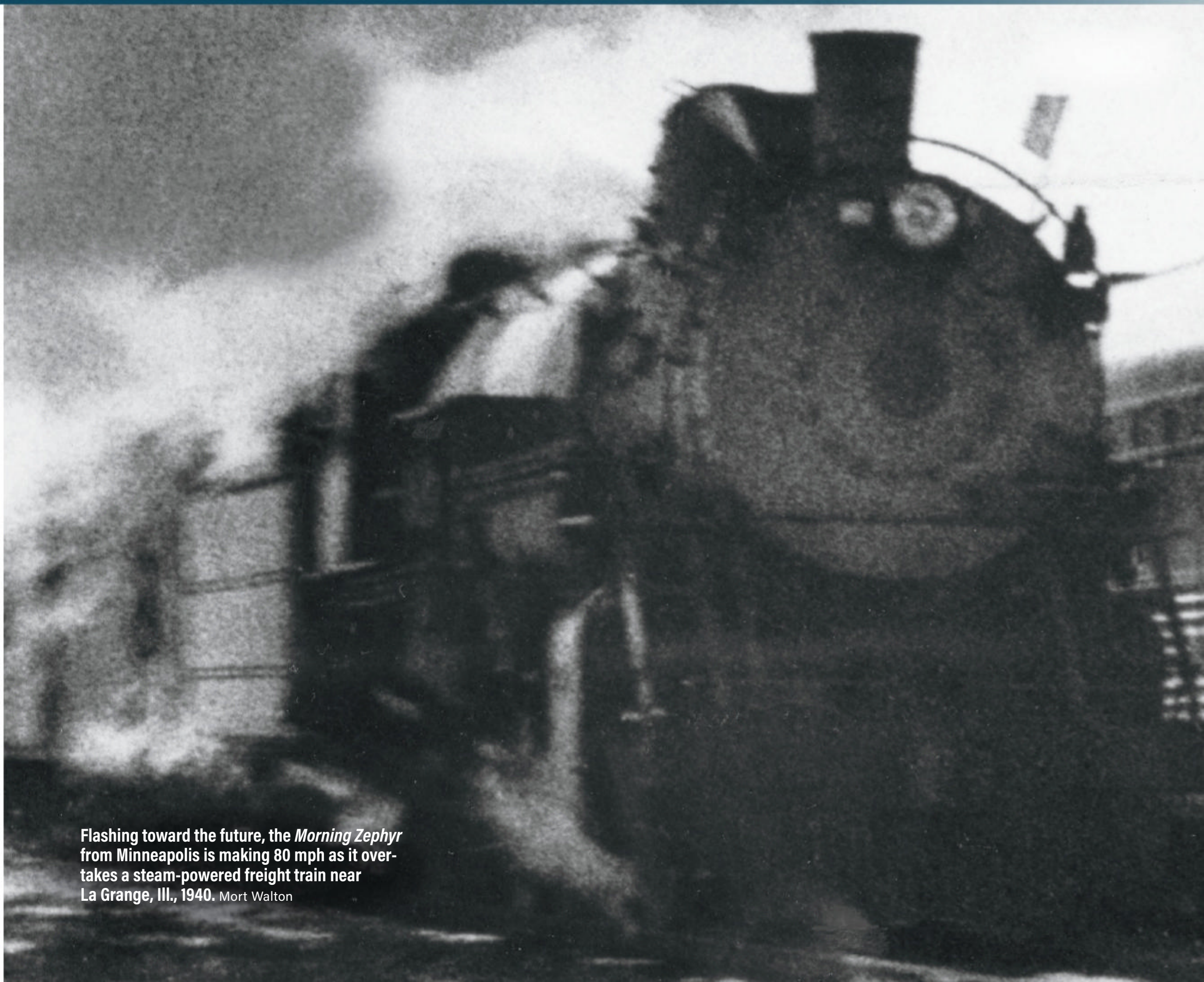


One of the Burlington's original 1935 *Twin Zephyr* trains bursts through a mound of snow piled on the track for dramatic effect near Lee, Ill.
CB&Q



BURLIN

ROAD OF PASSENGER PROGRESS



Flashing toward the future, the *Morning Zephyr* from Minneapolis is making 80 mph as it overtakes a steam-powered freight train near La Grange, Ill., 1940. Mort Walton

GTON

"Make rail travel attractive enough and you'll get the business."
That's the prevailing philosophy on "The Way of the Zephyrs"

By Willard V. Anderson



"Tomorrow at dawn we'll be on our way!"

With those words, spoken over a nation-wide radio broadcast on the night of May 25, 1934, the president of the Chicago, Burlington & Quincy Railroad not only announced a coming event but foretold the future. For with the heralded dawn-to-dusk nonstop run of the first *Zephyr* from Denver to Chicago, the Burlington Route was indeed "on its way" to a new high in passenger service.

It was not without misgivings that boss Ralph Budd spoke those words into the microphone. For even as he said them, the *Zephyr* lay, a cripple, in the railroad's shops in Denver. A last-minute checkup had revealed a cracked bearing in a motor armature — and the little train was a foreigner in a land ruled by steam. Away from the *Zephyr*'s home base, railroaders could not find replacement parts as easily as would become true for its descendants only a few years later. The nearest replacement bearing was at Omaha, more than 500 miles away.

Ralph Budd knew this, but he burned his bridges behind him. He had faith in the men who were scorching the wires in their search for a replacement part, in the men who were investigating substituting truck axle bearings.

And he had faith in the *Zephyr* — as yet of bringing back to the rails at least part of the traffic that had been lost to the highways.

The *Zephyr* missed its appointment with the dawn of Saturday, May 26, but not with the dawn of the future. It left Denver more than an hour late and had to be held to 50 mph for an hour or so while the new bearing was being worked in, but before the day was over, the gleaming stainless-steel articulated train glided to a smooth stop on the stage of the "Wings of a Century" pageant at the Century of Progress fair in Chicago. The *Zephyr* had just made the longest and swiftest nonstop run in railroad history, and despite minor troubles along the 1,015 well-guarded miles of CB&Q's main line, it had averaged 77.6 mph. (Normal Denver–Chicago passenger mileage is 1,034, but the *Zephyr* bypassed Omaha by keeping to a shorter freight route.)

The *Zephyr* earned a good deal of publicity for itself and for the man who had been president of the Q for only two years when he set out to recapture the lost passenger business. And with the publicity came the business — not in dribbles, but in droves. The original *Zephyr* plied between Lincoln, Nebr., and

Kansas City, Mo., and it soon became apparent that the upswing in passenger traffic was not to be a flash in the pan but would continue, as far as this train was concerned.

And so, Ralph Budd embarked on a program of passenger progress, which has resulted in bigger and better *Zephyrs* — still stainless steel, but not articulated, for it was soon found that articulation limited the trains to a definite number of passengers and placed an entire train in the shop when just one unit required repairs. Passenger travel continued to increase, and instead of being a stranger in a land of steam, the original *Zephyr* is the honored chieftain in a new land of diesel power in which replacement parts are as available as automobile accessories.

A fleet of *Zephyrs*

Today the *Zephyr* fleet is spread out over much of Burlington's 11,000-mile system, and, come March 20, 1949, will extend to the Pacific Coast. On that day the Burlington, in conjunction with Denver & Rio Grande Western and Western Pacific, will inaugurate the Chicago–Oakland *California Zephyr*, the last word in Vista-Dome travel.

Mr. Budd's policy in promoting passenger traffic has been to give the traveling public something a little better than the accommodations offered by competing forms of transportation. The *Pioneer Zephyr*, for instance, was conceived as a glorified railbus, which would be economical to operate and more comfortable and more attractive than a bus. Railroads can't compete with airplanes on speed, but they can be reasonably fast, and a whole lot more comfortable and safer than airplanes. That's where such trains as the *Denver Zephyr* and the *Twin Zephyrs* come in.

At the same time, Mr. Budd recognizes the fact that some passenger travel just can't be recovered. That was the basis for his remark in 1947 that he would cut off 10,000 miles of branchline passenger service if he could get permission. These little trains have outgrown their usefulness. "They will have to come off," says Budd, "not because the railroads are deserting the people, but because the people have deserted us in those places." Buses and automobiles can serve the branchline communities better, and act as feeders to mainline trains. They not only *can* act as feeders, but *do*, Mr. Budd says, pointing to the parked autos at Aurora, Oregon, and Savanna, Ill., and other stations along the Chicago–Minneapolis route where the *Twin Zephyrs* stop. Branch lines are not "fast track," and modern streamlined trains need fast track to compete with the highways. New equipment on slow track would be a waste of money and effort.

But wherever there is traffic potential, Budd's Burlington will exploit it. The *Twin Zephyrs* are a good example of what can be



A big crowd waits to visit the *Pioneer Zephyr* during the new train's tour. The location is Albany Union Station on the New York Central; the date is April 28, 1934, just 10 days after No. 9900 was christened at the Pennsylvania's Broad Street Station in Philadelphia. Jack Mower



CB&Q introduced the *Twin Zephyrs* with a bang, running both trainsets down the triple-track main line from Aurora, Ill., to Chicago on April 14, 1935. Each carried one half of 44 sets of identical twins, ages 3 to 73. Here Nos. 9901 and 9902 zip past onlookers at Downers Grove. Willard V. Anderson

accomplished by giving the public more than it expects. When it was decided, back in the dark days of the '30s, to put on high-speed daytime service between Chicago and the Twin Cities, the decision was made despite the fact that the Q was carrying an average of only 14 northbound and 12 southbound daytime passengers on this route. Obviously, with millions of people living at one end of the line and with more than a million at the other end, there was traffic potential.

Twins to the Twin Cities

Twin Zephyr service was inaugurated April 21, 1935, with two sets of equipment, each designed to carry 88 passengers. The demand for the service was so great that before long, people were paying to sit in portable seats in the baggage car! The service had started with one trip daily, but by June 2, each train was making a round trip every day, and the *Twins* soon became known as the *Morning Zephyr* and the *Afternoon Zephyr*. The original con-



Business quickly swamped the original three-car *Twin Zephyrs*, so in 1936 CB&Q replaced them with longer trains, one of which skirts the Mississippi en route to Chicago. CLASSIC TRAINS collection



Dome-studded conventional consists replaced the 1936 *Twin Zephyr* trainsets after World War II. In this July 1957 view, CB&Q 24, the *Afternoon Zephyr*, has just departed Great Northern's Minneapolis station and is about to cross the James J. Hill Stone Arch Bridge over the Mississippi. Fred Matthews

ventional train was kept running to take care of passengers where the *Twins* didn't stop, and also head-end mail-and-express business.

Even with their daily double trips, the original *Twins* were crowded. On December 18, 1936, new six-car trains replaced the three-car *Twins*, and less than a year later a dinette coach was added to each train.

The next enlargement of the Q's Chicago-Minneapolis service came in December 1947, when the road inaugurated the country's first Vista-Dome trains in regular service. Each of the new *Twin Zephyr* consists is, like its predecessor, seven cars, but can accommodate 149 more passengers owing to the domes and

greater car lengths. At present, dome seats are not being sold and are open to any passengers.

Another outstanding example of how the Burlington has improved its passenger service in the past 15 years is on the Chicago-Denver route. In the early 1930s, CB&Q's *Aristocrat* took 26 hours 15 minutes to do what the *Denver Zephyr* today is doing in 15 hours 35 minutes. Today's Denver traveler bound for Chicago gets a faster ride than even the Chicagoan bound for New York on New York Central's *20th Century Limited*, for while the *Century's* trip takes five minutes longer, the *DZ* travels 73 miles farther, 1,034 miles compared with 961. Moreover, the *Century* makes only two

scheduled passenger stops en route, while the *Zephyr* makes 10.

The new *California Zephyr* will be a moderate-speed train, its schedule arranged to pass through the most scenic portions of the route in daylight. Leaving Chicago at 3:30 p.m., the *CZ* will whisk riders through the flatlands to Denver overnight, then treat them to a daylight run over most of the Rio Grande's line "through the Rockies, not around them" to Salt Lake City, where Western Pacific takes over after dark to cross the vastness of Nevada. On the second morning, the train is to traverse California's scenic Feather River Canyon in daylight. Running



Newsman crowd a new Vista-Dome during a preview trip for one of the *Zephyrs* in the late 1940s. Like all *Zephyr* cars, the domes were built of stainless steel by the Budd Company. Wallace W. Abbey

time from Chicago to Oakland will be 51 hours 20 minutes, with the eastbound schedule covering 50 hours 30 minutes, leaving San Francisco Bay in the morning, arriving Denver the second evening, and Chicago the next afternoon.

The *California Zephyr* will carry five dome cars: three coaches, one buffet-lounge, and one observation-lounge-sleeper. Besides these, the consist will include a baggage car, two all-room sleepers, one 16-section sleeper, a diner, and a room sleeper that will run through to and from New York via the Pennsylvania Railroad one day and the New York Central the next.

1949: A big year

This year, 1949, is a momentous one for the Burlington. Not only is it the 15th anniversary of the first *Zephyr's* nonstop Denver-Chicago run, it is also the 100th anniversary of the railroad's founding in 1849, when the tiny Aurora Branch Railroad was projected to connect Aurora, Ill., with the Galena & Chicago Union Railroad at Turner Junction, now West Chicago. The G&CU became part of the Chicago & North Western.

From that 12-mile beginning, the CB&Q has become an 11,000-mile network serving 14 states. Although the Aurora Branch is still part of the system, it is a relatively little-used,

freight-only line. Until 1864, though, it was the Q's only entrance to Chicago, its trains using the (now) North Western from West Chicago. The completion of what is now CB&Q's three-track speedway between Chicago and Aurora shortened the distance from 42 miles to 38 and enabled the Q to establish, in the 1880s, a suburban service as far as Downers Grove. This has been extended to Aurora and is one of the finest steam suburban services in the country, and, although it is a losing proposition, the railroad is modernizing its suburban coaches. Dieselization is not anticipated soon, however, for the Pacifics that handle the suburban runs do a consistent



CB&Q complemented its fleet of modern trains with modern depots, such as this one at Burlington, Iowa, which opened in 1944. CB&Q

Just over three years old, the *Mark Twain Zephyr* approaches St. Louis Union Station near the end of its run from Burlington, Iowa, on July 12, 1938. Mike Raia collection



job of delivering patrons to work on time, and the capital investment is a minimum for the short daily mileage.

The modernization program includes the rebuilding of 60 steel suburban coaches and 25 mainline coaches for suburban service, and the addition of 25 to 30 completely new cars. The open platforms that have characterized Q commuter coaches will be enclosed on the rebuilds, and the cars will be painted to simulate stainless steel. A modified form of air conditioning is to be used.

Just what is behind this modernizing of such a service that most railroads would be glad to be rid of? President Budd believes he might be able to reduce some of the suburban losses if he can induce more people to use the trains. At the same time, he's taking a chance of losing more money, because if he induces too many more people to ride the trains,

more coaches will be needed. This will increase terminal charges, which are based on the number of cars using Chicago Union Station. What he's aiming at is a fuller use of the trains, which are not filled to capacity. If he can strike that happy medium, he'll be able to cut the losses.

Jim Hill's foresight

CB&Q has always had an eye to improving passenger service. Even back in 1881 it featured "gorgeous CB&Q smoking cars, run only by this line, for the exclusive use of first-class passengers." Sleeping cars were running on the Q by 1866, and in 1872 two "palatial" dining cars were inaugurated in Chicago-Omaha service. Fully vestibuled trains were running by 1888.

Equipment alone is not enough to make good passenger service, of course. A good roadbed is needed too, and the Burlington was paving the way for its *Zephyr* schedules in the early years of the century, long before anyone envisioned lightweight, streamlined trains. James J. Hill, the "Empire Builder," was chairman of the board of the Great Northern at the time, and GN and Northern Pacific controlled the Burlington then as they still do today.

The year was 1909, and Elmer Howson, division engineer of Burlington's La Crosse Division, was asked to prepare an estimate of the cost of double-tracking the line from Savanna, Ill., to St. Paul, and to prepare another estimate of the additional cost of reducing the grades to 0.2 percent and the curves to 1 degree. Howson was surprised to be asked for this second estimate, for the grades were already minor and the curves were anything but sharp.

But he went to work, figuring the costs as he rode up and down the division and noting where it would be necessary to build embankments and dump riprap to pull the railroad toward the river, as well as where it would be necessary to make cuts to push it in closer to the bluffs.

Finally the figures were ready. Howson handed them to Hill on the Empire Builder's business car as it rolled down the river line. Hill mulled the figures over in his mind for a full five minutes, then said, "You will please proceed with the full improvement program. Someday competition will be much stiffer, and we will be ready for it."

Because of Hill's far-sightedness, it was no trick for the Burlington to

match the time of the Milwaukee Road and the North Western when the *Zephyr* went into competition with the *Hiawatha* and *Twin Cities 400*. Yet the Q's line to the Twin Cities is 16 miles longer than the Milwaukee's and 18 miles longer than C&NW's. A few curves had to be spiraled out and CTC had to be installed at the few single-track segments over draw-bridges, but basically Burlington's Twin Cities line was already prepared to handle the exhilarating speed of the *Zephyrs*.

Vista-Dome view

Exhilarating — that's just the word to describe the feeling you get when you ride a *Twin Zephyr*. High up in a Vista-Dome, where you can see everything that's going on along the railroad, you get a tingling in your blood as you whisk through Downers Grove just 21 miles and 20 minutes after leaving Chicago Union Station. You recall the times you've spent an hour going this far on a suburban local, and you get a sort of nostalgia as you flash by the coach yards and remember the old roundhouse that used to serve the little Ten-Wheelers that pulled the suburban trains. Now the trains are handled by Pacifics and the Downers Grove roundhouse is gone. The old turntable with its long wooden push-handles is gone too, replaced by a larger, powered table to turn the 4-6-2s, which when not in use, repose on tracks at the east end of the yard.

You have little time for reminiscence, however. The *Twin Zephyr* is already slowing for Aurora, 38 miles out. The hands of your watch point to 4:34; it was 4 on the head when you left Union Station. You find it hard to realize you've averaged 67 mph, for there's little sensation of speed as you look ahead from a dome. It's only when you look to the side and watch the familiar landmarks blur by that you realize how fast you're moving.

This is an exciting new way to travel, but you soon find yourself wanting to explore the lower level of the coach. You descend

the carpeted stairway to the rear section, which you find looks much like an ordinary coach, only much shorter. You round the corner of the staircase and step down the ramp under the dome. Here are doors leading to the men's and women's lounges. Up ahead, again at normal floor level, are more coach seats.

This is a different arrangement than you'll find on the origi-





CB&Q's silver fleet went long-distance in 1936 with the launch of the overnight *Denver Zephyr*, seen here eastbound at Galesburg, Ill., in the late 1940s or early '50s. Its 16-hour schedule on a run of more than 1,000 miles made it one of America's fastest trains. Henry J. McCord

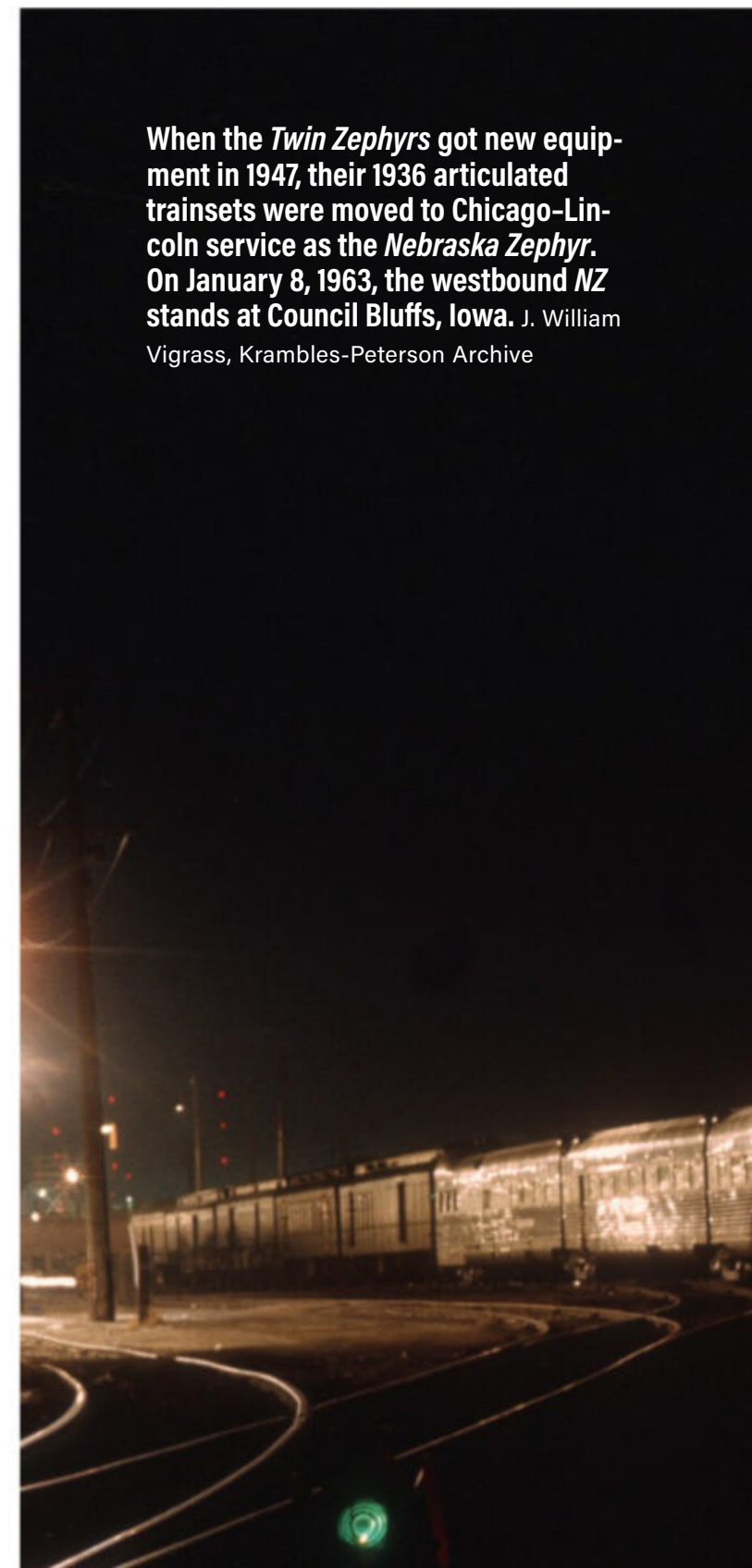
nal dome car, the one Burlington created from a standard lightweight coach in 1945. This was the first dome car on any U.S. railroad, and its construction is just another example of the road's policy of giving the public a little more than it expects. Because it was built from an existing car, the floor beneath the dome is not depressed, and seats — some arranged longitudinally to face the windows — occupy the space taken up by the lounges in the newer cars.

All the time you've been exploring, the *Zephyr* has been streaking across Illinois toward Savanna and the Mississippi River. Now you climb back upstairs where you can watch the sun set across the river as the *Zephyr* follows its winding course on those sweeping curves James J. Hill ordered back in 1909. The Mississippi bluffs tower on your right and the broad river is to your left. This is the section "where Nature smiles 300 miles," as Q publicity states, and you're a little sorry you took the *Afternoon Zephyr* instead of the *Morning Zephyr*, for dusk is falling and you think you won't be able to see much after dark.



Scheduled for scenery, not speed, the *California Zephyr* backs toward Chicago Union Station before its daily transcontinental voyage to Oakland, Calif., on August 21, 1950. Wallace W. Abbey

When the *Twin Zephyrs* got new equipment in 1947, their 1936 articulated trainsets were moved to Chicago-Lincoln service as the *Nebraska Zephyr*. On January 8, 1963, the westbound *NZ* stands at Council Bluffs, Iowa. J. William Vigrass, Krambles-Peterson Archive



But here in the Vista-Dome, darkness has its recompenses. Up ahead you can see the beam of the locomotive's headlight as it plays against a bluff just before swinging into a curve. You can watch as the block signals turn from green to red, and you can catch their reflections along the fluted roofs of the cars ahead. With satisfaction, you note how the automobiles lag behind on the highway that parallels the tracks.

You can see all this because the dome lights are dimmed at night; only a blue floor light is kept on so you won't miss your footing if you go downstairs. You can see the moon and the stars, and all the station activities when the train stops at La Crosse and Winona Junction, Wis. And you can see the lights of lineside communities. It's a sightseeing trip you'll remember for a long time.

Still a few miles out of St. Paul, you can see the huge illuminated "1" atop the First National Bank Building near Union Depot, and it helps keep you oriented as the *Zephyr* backs into the station, unloads, then pulls out for Minneapolis. You leave the dome and

hurry to your seat to get your hat and coat. Your watch is in your hand as the *Zephyr* eases to a stop in the Great Northern station, and you're pleasantly surprised to find that you're five minutes early!

During your trip you've been impressed with the friendliness and courtesy of the Q trainmen. Perhaps without your realizing it, this has had a lot to do with your enjoyment of the *Zephyr*. It's a part of Burlington passenger policy to encourage trainmen, and others dealing with the public, to make your trip a pleasant one.

"It is more the train personnel than anything else," says Mr. Budd, "that spells the difference between a train that is satisfactory and one that is not. I believe an old train, clean and well maintained, and in [the] charge of courteous people throughout, will make a better impression on patrons than will a fine new train with lack of friendliness and courtesy and tact."

Other people, too, have a big part in making your trip a success, and it may be that someone entirely unassociated with the rail-

road can spoil it for you, if you'll allow him to. One woman wrote to Mr. Budd and complained that she did not have a good taxi driver on the way to the station!

Burlington's enviable position in the passenger-carrying field is based on all the factors that enter into good service — not only fine trains, not only good roadbed, not only courteous personnel, but a combination of all three. And back of it all is Ralph Budd's conviction that "by making rail travel attractive enough, we have an opportunity to enlarge our passenger business almost indefinitely. A completed trip, if it can be looked back upon with pleasure, should and will encourage another trip."

And a trip on the *Zephyr* — any *Zephyr* — does just that. ■

WILLARD V. "ANDY" ANDERSON joined Kalmbach Publishing Co. in 1936 as a linotype operator and served the firm for 43 years, retiring in 1978 as executive editor of MODEL RAILROADER. Andy was editor of TRAINS during 1948-52, and he died in 1989.



THE BUDD COMPANY

TRANSPORTATION
INNOVATOR FOR
75 YEARS

The Reading's Philadelphia-Jersey City *Crusader*, the first full-sized streamliner in the East, dashes down the Jersey Central main line in the mid-1950s. Budd built the train in 1937. John Dziobko

The builder of the *Zephyrs* made vehicles for road, rail, and air

By Kevin J. Holland



Edward G. Budd founded his Philadelphia manufacturing company in 1912. CLASSIC TRAINS collection

If ever a manufacturer of railroad rolling stock became synonymous with both quality and durability, it was the Budd Company — or, as it was officially known until 1946, the Edward G. Budd Manufacturing Co., of Philadelphia.

Incredibly, passenger cars built by Budd as long ago as 1946 remain in front-line service with VIA Rail Canada, while Amtrak's oldest Amfleet cars soldier on into a sixth decade (seventh, if you include their 1960s Metroliner parentage). Even the youngest Amfleet II cars, completed by Budd in 1983, are now almost 40 years old. The secret to the enduring success of these shining examples of passenger-car engineering lies in their stainless-steel construction, embodying innovative production techniques developed by Budd engineers in the early 1930s.

19th century origins

Born in Delaware in 1870, Edward Gowen Budd trained as a machinist and found employment with Philadelphia-area metal fabricators (including the American Pulley Co., established by Budd and two partners in 1897, and railroad passenger-car seat maker Hale & Kilburn).

Edward Budd's formative successes developing split-steel pulleys and pressed-steel seat frames led to ever-larger undertakings in the railroad industry and beyond. From his earliest metalworking endeavors, Budd's goal in manufacturing had been the reduction of weight while simultaneously improving strength, durability, and production simplicity for a given product. While still with Hale & Kilburn, in 1908 Budd consulted with Pullman on the design and construction of that company's first all-steel sleeping cars, and also devised the pressed-steel body for William



During World War I, Budd adapted its facilities to produce a variety of items for the war effort, including helmets for combat troops, as seen here. National Archives

McKeen's futuristic internal-combustion rail cars. Budd had identified the nascent automobile industry as a potential customer for pressed-steel components and production methods, and in 1909 secured a contract for Hale & Kilburn to experiment with metal body construction for the Hupp Motor Co., in a notable departure from the auto industry's reliance on wood-framed bodies.

After falling out with H&K management over the company's unwillingness to pursue automotive business, Budd established the Edward G. Budd Manufacturing Co. in 1912. Among his first contracts was one from the Oakland Motor Car Co. (a General Motors division) for 2,000 bodies. When Budd received a 1914 order for 5,000 steel bodies from the Dodge brothers, it marked the start of a long and mutually beneficial relationship between the two companies. On the strength of a 50,000-body Dodge order the following year, Budd invested in a large new factory and office building in Philadelphia.

By the time the United States entered World War I in 1917, Budd's business had grown sufficiently to be awarded large government metal-fabrication contracts for the production of steel helmets for American soldiers, as well as mobile military field kitchens and utility-truck bodies.

Focusing on the auto-industry market after the war's end, the Budd Wheel Corp. — created just before the war and based, like its parent, in Philadelphia — collaborated with French tire-maker Michelin to expand its

wartime production of two-piece, stamped-steel wheels for trucks and cars to peacetime applications, rendering then-standard wood-spoked wheels obsolete.

In 1923 Budd produced the first all-steel, all-welded automobile bodies for the Dodge brothers, hailed as a major advance in safety and durability over the industry's previous reliance on wood-framed and steel-reinforced bodies. The Edward G. Budd Manufacturing Co. produced millions of automobile bodies for Chrysler, Studebaker, Ford, and others, and established both an automotive division and a dedicated factory in Detroit to handle this aspect of its business.

In 1928, Edward Budd became interested in the commercial applications of stainless steel, an alloy possessing a bright finish and resistance to corrosion that was gaining prominence in Europe and the U.S. during the first two decades of the 20th century. The particular grade of stainless steel that drew Budd's attention is known as "18-8" — an alloy incorporating 18 percent chromium and 8 percent nickel. It is also known as Type 304 "austenitic" stainless steel, a metallurgical term referring to the alloy's crystalline structure. This type of stainless steel is non-magnetic, and is a relatively poor conductor of electricity.

Budd recognized that the metal's combination of high tensile strength (up to three times greater than standard low-carbon steel), ductility, and corrosion resistance offered great potential in creating lightweight but durable and appealing structures. Stainless steel was



Ideals

OF the essentials that determine the quality of a product, one of the most important is the ideal that actuates the manufacturer.

To make the best and only the best—that is the Budd ideal. Ask any user of Budd-made Wheels or Budd-made bodies and you will find that we have paid unswerving allegiance to this standard.

We are proud of the Michelin Wheel because we know it represents the best in wheel design. And we are equally proud because we know that here in the big Budd factories the Michelin Wheel is built as well as science and experience can build it.

Our engineers will gladly confer with interested car manufacturers.

BUDD WHEEL CORPORATION

Sole Manufacturers in the United States of Michelin Disc Wheels

A Budd subsidiary produced disc wheels for automobiles in partnership with the French firm Michelin. Kevin J. Holland collection

more expensive, and challenging to fabricate, but from Budd's perspective, because of its higher tensile strength, less steel would be required to achieve necessary levels of structural support and collision protection, with overall savings in car weight.

The magic of Shotwelding

As attractive as 18-8 stainless steel is for durability and esthetics, it requires specialized techniques for fabrication since conventional arc welding compromises the metal's anti-corrosion properties. The solution, as developed by the Budd engineering staff led by Col. E.J.W. Ragsdale and patented in 1934, was "Shotwelding," an electrical resistance welding technique that the company subsequently licensed worldwide.

Using a localized high-ampere electric current passed for just a fraction of a second through an electrode clamp fixture, pieces of stainless steel are fused together at a series of small contact points, rather than with the long melted seams that result from conventional arc welding. The electrical resistance employed in Shotwelding provides almost instantaneous heating of the weld point to 2,600 degrees F (100 degrees above the metal's melting point), creating an exceedingly strong attachment, but sufficiently fast and localized to prevent the heat spreading and damaging the adjacent steel.

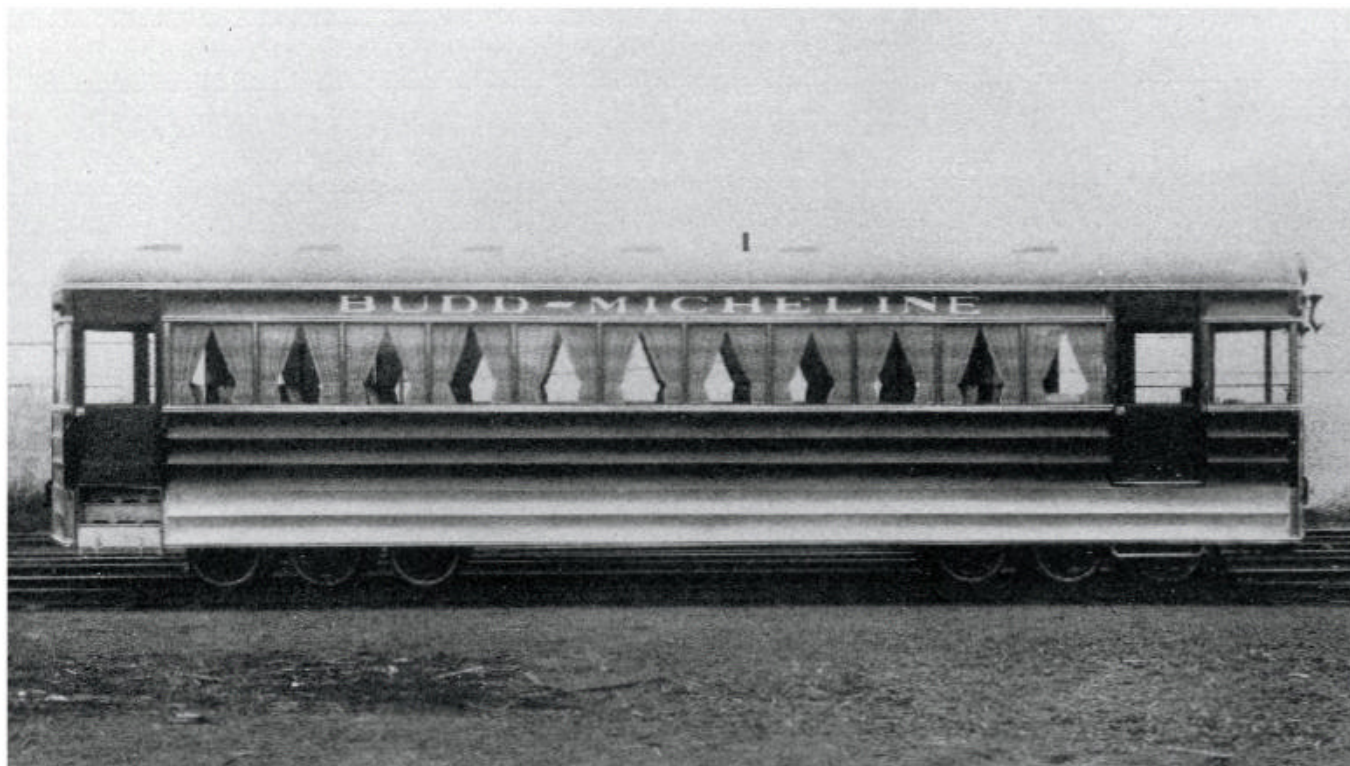
With Shotwelding at the core of Budd's "superior strength and safety" marketing to the rail industry, the company also sought to educate the traveling public about the technique and its benefits, in part to overcome groundless negative press fuelled by carbuild-

ing rival Pullman-Standard. Following the Burlington *Zephyr*'s 1934 debut, Budd produced stainless-steel souvenirs including business-card-sized sheets with sample Shotwelds. Five years later, Budd's exhibit at the 1939-40 New York World's Fair included a display of the Shotwelding process, and visitors could take home a circular stainless-steel key fob featuring a sample Shotweld.

Budd in the air

Budd's aspirations had extended skyward with development beginning in 1930 of a first-of-its-kind stainless-steel aircraft, the BB-1 Pioneer, and, more than a decade later, with design and production of the twin-engined RB-1 Conestoga cargo aircraft.

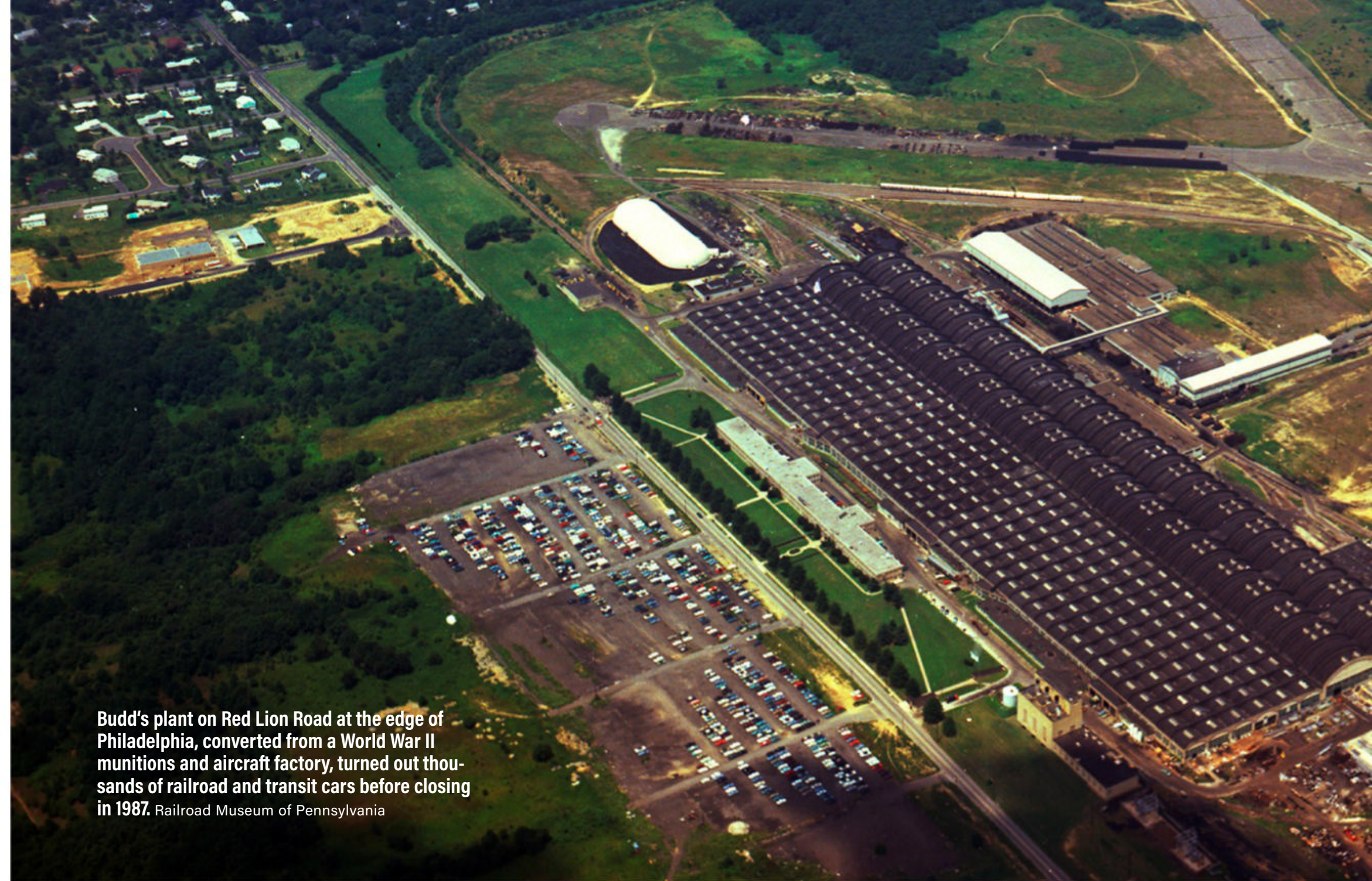
The BB-1 Pioneer was a single-engine bi-plane flying boat combining a Shotwelded stainless-steel frame and hull with fabric-covered wings. Derived from the Savoia-Marchetti S.56, it was built by Budd under license



Riding on hybrid flanged-wheel/Michelin tire running gear, the stainless-steel "Green Goose" of January 1932 was Budd's first foray into railcar construction. Albert M. Rich collection



Just two years after the first "Budd-Micheline" unit, Budd's carbuilding efforts took a quantum leap forward. Burlington 9900 — the original *Zephyr* — poses at Budd's Hunting Park Avenue plant in Philadelphia shortly after the train's completion in April 1934. Budd



Budd's plant on Red Lion Road at the edge of Philadelphia, converted from a World War II munitions and aircraft factory, turned out thousands of railroad and transit cars before closing in 1987. Railroad Museum of Pennsylvania



Workers fabricate smokestacks of weight-saving stainless steel for Navy destroyers at Budd's Hunting Park Avenue plant in October 1941. Kevin J. Holland collection

from that Italian firm. The single example built first flew in 1931, and in 1934 was donated by Budd to Philadelphia's Franklin Institute, where it remains on outdoor display.

Two hundred RB-1 transport aircraft were ordered by the U.S. Navy in 1943, but shortages of stainless steel meant that only 17 were built before the military strengthened its existing commitment to aluminum aircraft from Douglas and Curtiss. The same fate overtook the Budd C-93, the U.S. Army Air Force version of the Conestoga, with none of a 600-strong USAAF order ever built. Although its potential was never realized, and it never flew in a combat theater, the RB-1 pioneered the drop-down tail loading ramp later adopted by designers of the Lockheed C-130 Hercules and other large transport aircraft. After the war, some of the surviving RB-1s were acquired for civilian cargo service by National Skyway Freight, which later became the Flying Tiger Line. A single RB-1 airframe survives, earmarked for restoration at the Pima Air & Space Museum in Tucson, Ariz.

On flanged (and rubber) wheels

Seeking new markets for its Shotwelded stainless-steel fabrication, Budd built on its decade-long transatlantic relationship with



The Rail Diesel Car, introduced in 1949, was a big postwar success for Budd. Prototype 2960, demonstrating on Canadian Pacific, pauses at St. Jovite, Quebec. CLASSIC TRAINS collection



Intended as a platform for a variety of car types, Budd's Pioneer III coach of 1956 remained a loner, although it was the basis for PRR and Reading electric multiple-unit cars. Budd

Michelin to introduce, under license, a series of rubber-tired, self-propelled internal-combustion "Budd-Micheline" rail cars beginning in 1932. The compact, lightweight vehicles were the first to be clad in what would become Budd's signature treatment of lengthwise stainless-steel fluting. Led by the Budd-Micheline "Green Goose" demonstrator that tested on the Pennsylvania Railroad beginning in February 1932, they were the world's first stainless-steel rail cars, with additional, larger examples acquired by PRR, Reading, and Texas & Pacific.

Disappointingly for Budd's immediate rail-industry aspirations, however, these cars weren't a success, not least for their unusual and puncture-prone rubber-tired running gear. But their stainless-steel construction set the stage for developments that would change the face, and fabric, of the U.S. rail industry.

Zephyrs and kin

Notably, one of the many rail executives who viewed the Budd-Micheline demonstrations in 1932 was Burlington Route's Ralph Budd (a distant relation). Proverbial wheels started turning, and in June 1933 the CB&Q ordered a diesel-powered, stainless-steel, three-car trainset. In April 1934 the *Zephyr*, a



Budd and CP personnel inspect a partially completed Skyline dome car for the *Canadian* in mid-1954. The car is on Red Lion's compression test plant. Railroad Museum of Pennsylvania



Partially completed Metroliner M.U. cars occupy the shop floor at the Red Lion plant. Here Budd built 61 Metroliners in the late 1960s and 642 nonpowered Amfleet versions in the 1970s and '80s. Budd



collaboration between Budd and GM's Winton Engine division, barnstormed its way into the spotlight and changed how American railroads, and travelers, perceived the passenger train.

Although T&P's two-car shovel-nosed trainset, dubbed the "Silver Slipper," debuted in 1933 — the year before the *Zephyr* and Union Pacific's Pullman-built M-10000 — its arguable primacy as America's first streamlined, lightweight, multi-car passenger train quickly faded while the two better-known entrants were still making headlines. A mechanical disappointment, the T&P train was scrapped in 1934.

Across the Atlantic, Budd's French connections grew in 1936 when carbuilder Carel et Fouché became a Shotweld licensee, turning out the first of a long line of stainless-steel passenger cars the following year. As had been the case in the auto industry, Budd's railcar patents were licensed to manufacturers in a number of other countries in Europe and beyond.

Budd built its first conventional stainless-steel passenger car in 1936, a coach for Santa Fe. Closer to home, in 1937 Budd delivered the *Crusader* to the Reading Company, a five-car streamliner rendered bidirectional (for quick terminal turnarounds) by virtue of having a round-end observation car at each end.

Railroads from all parts of the U.S. were jumping on the Budd bandwagon. Overcoming the false start of the Budd-Micheline experiment, by 1935 the company had found its niche with a growing fleet of *Zephyrs*. By the end of 1941, Budd had delivered 487 stainless-steel passenger cars to 14 U.S. railroads. Underscoring his paternal pride in the company's products — and mindful of publicity — Edward G. Budd made a point of traveling aboard every one of the new streamliners that this car fleet created.

Wartime and beyond

As had been the case during World War I, Budd lent its expertise to the American war effort in the early 1940s, with a new government-funded factory on Red Lion Road on the outskirts of Philadelphia producing millions of munitions shells as well as the aforementioned RB-1 Conestoga transport aircraft. Budd's Marine Division made lightweight stainless-steel funnels (smokestacks) for U.S. Navy destroyers, with the 18-ton savings per ship accommodating more armor plating. After the war, the Red Lion plant became home to Budd's railcar manufacturing operation.

Batches of sleeping cars built by Budd in 1936 for Burlington and 1937 for Santa Fe had sparked the Pullman Company's ire and triggered an industry upheaval. When Pullman balked at staffing those cars — a particularly shortsighted example of corporate hubris — the resulting impasse triggered a federal antitrust action that resulted in the 1944 forced separation of Pullman's operating and carbuilding divisions. Thereafter, railroads were free to acquire sleeping cars from their builder(s) of choice, and the newly reconstituted Pullman Company was obliged to staff the cars, regardless of who built them.

For its part, whisper campaign notwithstanding, Pullman-Standard recognized the public appeal of stainless-steel streamliners, but, understandably, was loathe to license Budd's proprietary construction methods. Indeed, the vast majority of stainless-steel cars produced by P-S proved to be sheep in wolves' clothing, with the builder's usual Cor-Ten steel bodies simply clad in clip-on cosmetic stainless-steel trim. The combination proved as corrosive as the antitrust action had been, with poor drainage and galvanic action between the two types of steel causing severe Cor-Ten rusting that was hidden behind the

stainless cladding. Even as P-S and its customers wrestled with the costs and consequences of this fundamental design flaw, in the wake of World War II the newly renamed Budd Company (combining the Edward G. Budd Manufacturing Co. and the Budd Wheel Corp.) was obliged to play keep-up to some of P-S's more practical and appealing car-design innovations.

Sadly, barely six months after the company's name change, its founder died on December 28, 1946, at age 76. He was succeeded by his son, Edward G. Budd Jr. Another major figure in the company's development, Col. Ragsdale had passed away on February 24, 1946, at age 61.

Thanks to the Burlington Route's 1945 in-house conversion of a pre-war Budd stainless-steel coach into the first dome car, the Philadelphia builder was associated with that landmark postwar innovation right from the start. P-S helped the domeliner cause with its four-car *Train of Tomorrow* that barnstormed North America during 1947–49, but Budd would become the leading builder of domes, beginning with cars delivered for Burlington's *Twin Zephyrs* in 1947. The notion of keep-up arose in 1950, when P-S unveiled its Super Dome with an entire upper level under glass.

CP's *Canadian* cars are still on the job for VIA, a testament to the durability of stainless steel and the quality of Budd design and construction. This is western Saskatchewan, 2015. Robert S. McGonigal



Not to be outdone, Budd followed suit before long with its own version, with Santa Fe as the first customer, and offering arguably better sightlines than the P-S design.

Budd had pioneered a bi-level design of its own in 1950, with the debut of “gallery”-style commuter coaches for Burlington Route that paved the way for similar equipment — from Budd, P-S, and other builders — in the U.S. and Canada. Budd’s double-deck expertise found an intercity market in 1956 with Santa Fe’s “Hi-Level” fleet.

Budd’s self-propelled Rail Diesel Car appeared with much fanfare in 1949, enabling railroads to maintain service on marginal intercity and suburban routes where conventional locomotive-hauled trains were uneconomic.

For the most part, Budd sidestepped the mid-1950s ultra-lightweight-train minefield, even as the company’s market for conventional passenger cars and RDCs was shrinking. Misses among Budd’s 1950s hits were the low-slung Tubular Train, which entered service in 1956 as PRR’s one-of-a-kind *Keystone*, and New Haven’s *Roger Williams*, an oddly styled RDC variant. Another 1950s market entry from Budd, the Pioneer III, was intended as a multi-purpose, next-generation passenger-car design, and found its niche as an

electric multiple-unit car in Northeastern commuter service. Although sleeping, dining, and other specialized versions of the Pioneer III were mooted by Budd, and a few figurative tires were kicked, no North American railroad was willing to invest in a re-equipped intercity fleet as the 1960s dawned.

Transit vehicles became an important part of Budd’s carbuilding operation after 1949, with its first stainless-steel subway cars produced that year for service in New York City. Sizeable transit contracts followed, in particular for multiple generations of Silverliner (Pioneer III) and Cosmopolitan M.U. cars for commuter authorities along the Northeast Corridor in the 1960s and ’70s.

Escalating labor costs and stiff overseas competition meant that the Metroliner and Amfleet cars were Budd’s intercity swan song. The final intercity innovation brought to fruition by Budd was the SPV-2000 — essentially an updated RDC in an Amfleet body — but it failed to attract meaningful orders after its 1978 debut.

Transit contracts kept the Red Lion plant active, but barely, and by the early 1980s the stage was being set for Budd’s exit from railroad carbuilding. Development of the Amtrak Viewliner was disrupted by Budd’s corporate

upheaval, with three prototype cars assembled in 1987-88 by Amtrak at Beech Grove, Ind.

Thyssen, Transit America, Bombardier

Budd had considered selling its railcar division as early as 1970, with General Electric as one potential buyer, but the federal government nixed the idea for competitive reasons.

In 1978 Budd was acquired by the German company Thyssen AG, and was rebranded in North America as Budd Thyssen.

In 1984, Budd’s Red Lion-based operation was renamed Transit America, with sole emphasis on transit vehicles, but by the end of 1987 the sprawling facility had closed and Budd’s railcar patents and other assets had been sold to Bombardier. A 75-year era of innovation and excellence in passenger-train design and construction had ended.

The 1999 merger of Thyssen and Krupp, another German conglomerate, marked the beginning of the end for the former Budd Company, with the remaining automotive, plastics, and other legacy operations sold between 2006 and 2012. ■

KEVIN J. HOLLAND is a writer, editor, and publications designer living in Ontario. This is his 15th CLASSIC TRAINS article.

ELECTRO-MOTIVE: YOUNG



GIANT

The pioneering “infant” of 1922 has 26 years later grown into the world’s largest builder of locomotives

By David P. Morgan



EMD deployed two sets of F3 demonstrator locomotives, one for freight service (shown here), and one for passenger. Both wore dual GM/Electro-Motive identification. Milo M. Schalla



Electro-Motive was founded in 1922 to design and sell gas-electric rail cars. Toronto, Hamilton & Buffalo 301, built under license by Canadian Car & Foundry in 1927, is a classic example. The 24-year-old looks pristine in this 1951 view, but it was scrapped five years later. R. V. Mehlenbeck, Krambles-Peterson Archive



Rock Island's 15 EMC-powered units of 1927-29 (some converted from baggage cars, others built new) could haul train-sized loads; RI 9006 still worked branches out of Fairbury, Nebr., in 1962. Frank Tatnall

Twenty-six years ago the Electro-Motive Co. consisted of a man with a plan, a small staff, and a modest office in Cleveland, Ohio. That man was H. L. Hamilton, a one-time Southern Pacific fireman; his plan was a blueprint for a gas-electric railcar designed to slash costs of steam-powered passenger trains in areas of limited traffic. Hamilton gambled his life savings on the idea, farmed out construction contracts for two such units, and sold them in 1924 to the Chicago Great Western and Northern Pacific.

A year ago, NP's veteran railcar was brought back "home" — not to Cleveland, but to the vast La Grange (Ill.) plant of the Electro-Motive Division of General Motors Corp.

She was there to play her part in celebrating her builder's silver anniversary. Several years before, her CGW sister had been destroyed by fire, and thus NP's No. B-3 stood proudly in line as the oldest existing product of Electro-Motive, surrounded by such august company as the GM *Train of Tomorrow*, a Santa Fe four-unit freight locomotive, Burlington's 3½-million-mile *Denver Zephyr* power car 9907A, and a brand-new 1,500 h.p. road-switcher demonstration model.

But if the tiny "doodlebug" found difficulty in recognizing certain of its varied offspring, there was at least one familiar human in attendance — H. L. Hamilton, ex-SP tallow-pot, now vice-president of General Motors. Both the lean, smiling executive and the

Pullman-green railcar had come a long way in 25 years down the road of dieselization for the American railroads. At the opposite end of the Northern Pacific timetable from the branches where the railcars operate, powerful Electro-Motive F3 diesels roll today's streamlined *North Coast Limited* — and from an assembly line not far from Hamilton's own desk, EMD turns out four road units and one switcher every working day of the year.

There were other evidences of progress: EMD locomotives roll virtually every top-flight train in the nation with but a few notable exceptions; the list includes New York Central's *20th Century Limited*, Pennsy's *Broadway*, Santa Fe's *Super Chief*, Rock Island's *Golden State*, and Great Northern's *Empire Builder*. In addition, Electro-Motive machines handle redball freight traffic for such leaders as Union Pacific, Atlantic Coast Line, Southern Pacific, and even relatively tiny Bangor & Aroostook.

Hamilton's first two railcars proved quite successful, and they paved the way for more than 700 similar units in the following years. These cars were built with power plants of 600, 700, and 800 h.p. And in 1929 Electro-Motive furnished the power for Chicago Great Western's three-car *Blue Bird* train used between Minneapolis and Rochester, Minn., and said by certain students of passenger train architecture to bear faint traces of the forthcoming era of streamlining. That year also witnessed delivery of an 800 h.p. gas-electric box-cab freight unit to the Rock Island; this locomotive was exactly a decade ahead of its time, for steam power was to

reign supreme until the advent of the 5,400 h.p. FT locomotive in 1939.

In 1930 General Motors eased into the railroad scene through its purchase of Electro-Motive and Winton, the maker of the gasoline and distillate engines used in Electro-Motive railcars. The Depression was being felt back then, and the automobile firm did not immediately press expansion. But the new addition continued to push along; Santa Fe purchased a 900 h.p. articulated railcar in 1932 for Topeka-Kansas City operation. This power unit had the tractive effort to pull five standard-weight coaches or head-end cars. The train demonstrated the ability of an Electro-Motive product to operate in mainline service in conjunction with full-sized rolling stock. More important to the railroads, EMC presented the opportunity to economize.

Salvation by streamliner

This pleasant state of affairs might have continued indefinitely had not the streamliner pushed its way into the scene — but it did (to the salvation of both Electro-Motive and passenger traffic), and Hal Hamilton soon got in touch with Burlington's Ralph Budd when he found out about the stainless-steel articulated train on order with the Budd Company. At that time (1933) the question of motive power for the *Zephyr* had not been finally settled and Hamilton promised a 600 h.p. diesel engine with an electric transmission. The Burlington agreed to wait until such a prime mover was available.

What made Hamilton's bid possible was the result of research initiated back in 1928 by Charles F. Kettering in cooperation with the Winton Engine Co. Out of that research had come the standard GM two-cycle diesel, an engine that cut the weight of previous diesel designs by a fifth, and size by a fourth. Then, finally, the Burlington Route, Budd, Winton, Mr. Kettering, and Electro-Motive pooled

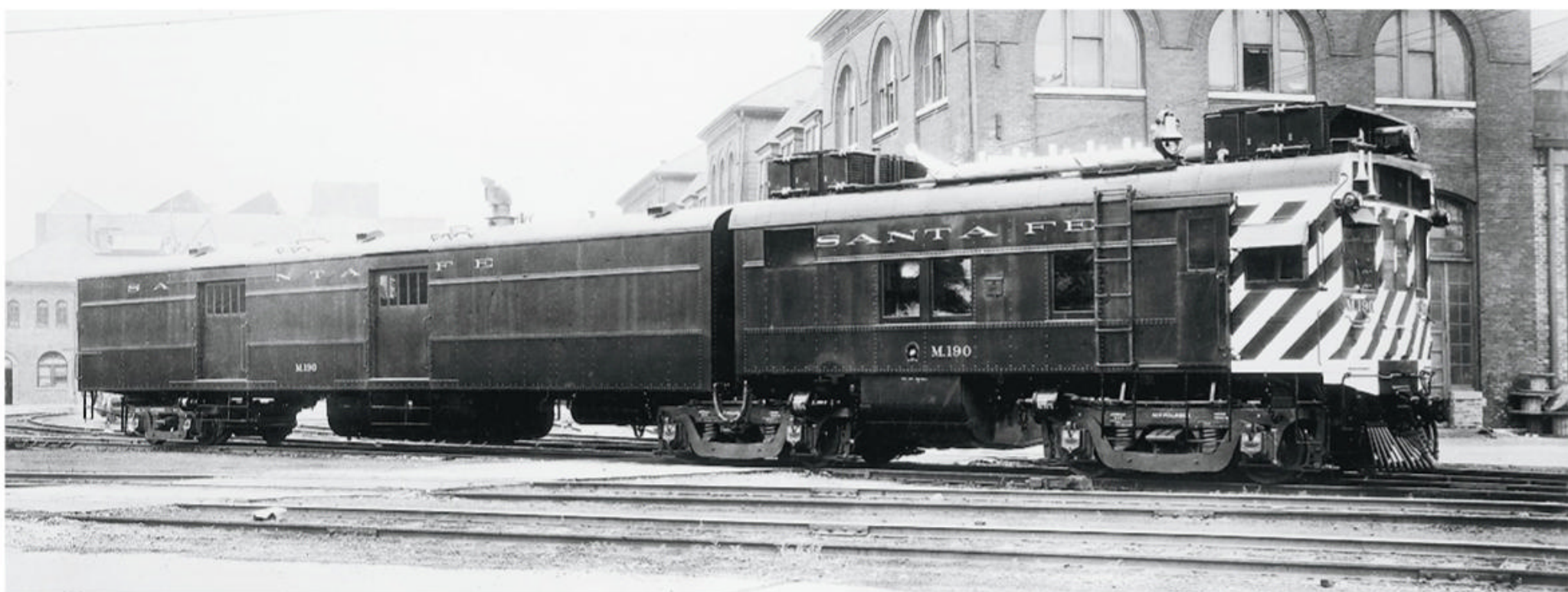
their collective resources and hatched what is known today as the *Pioneer Zephyr*.

It is impossible to exaggerate what this tiny streamliner did for Electro-Motive, for overnight the railroad world was made conscious of diesel power for high-speed, mainline usage. Two carriers kicked aside tradition and immediately told Hamilton that they wanted a diesel — but a nonarticulated power unit for operation with a standard train. Some officials went that inevitable step further: could Electro-Motive build a freight diesel? All this must have been a mild shock to Hamilton, railroad fireman and builder of gas-electric cars, but he never wavered in the face of the challenge. Yes, he could and would build non-articulated mainline passenger locomotives. No, the freight model must wait for experience to match enthusiasm.

Several roads engaged EMC to convert their gas-mechanical McKeen cars to gas-electric propulsion. Chicago Great Western's three-car *Blue Bird* train of 1929 presaged the streamliner era. CLASSIC TRAINS collection



In 1935 Electro-Motive marched, almost ran, forward to keep pace with the publicity being produced by the *Zephyr*. Hamilton's firm was now known as the Electro-Motive Corp., with divisional status in the GM organization, and had moved into its brand-new plant outside Chicago. Moreover, it introduced two standard switchers with 600 and 1,000 horsepower and built a pair of 1,800 h.p. mainline passenger diesels for demonstration trials. These locomotives, numbered 511 and 512, bore small similarity to our generation of streamlined units. They were of box-cab construction, and were hurried to completion with only one object in mind: to demonstrate the practical worth of a high-speed diesel that could be coupled with standard railroad passenger equipment. After much experimentation, these pioneer units



Electro-Motive's ultimate doodlebug was Santa Fe M.190 of 1932, a 900 h.p. locomotive articulated with a baggage car. CLASSIC TRAINS collection



Electro-Motive made the leap from gas and distillate engines to diesel with CB&Q's *Zephyr*, seen on display at Galesburg, Ill., in 1934. CLASSIC TRAINS collection

were withdrawn from the field and scrapped. Perhaps some have mourned the fact that the nation's first nonarticulated diesel passenger units were not preserved for posterity.

In August 1935, Baltimore & Ohio received an 1,800 h.p. box-cab unit from Electro-Motive, numbered it 50, and let it carry the road's pride and longtime joy, the *Royal Blue*. After No. 50 had apparently convinced the B&O of its value, it was shifted west to the Alton (bankrupt cousin of the eastern carrier) for service between Chicago and St. Louis on that line's *Abraham Lincoln*. Its appearance was vastly improved with the aid of a new semistreamlined nose in this service; enthusiasts will recall the interesting contrast in new motive power that the Alton provided in those times, with diesel No. 50 handling the *Lincoln* and with No. 2 — B&O's own high-pressure, high-drivered Hudson steam locomotive — holding down the companion *Ann Rutledge* schedule.

By 1944 the contrast was gone; the Hudson had returned to the B&O proper, and No. 50 had been relegated to the status of a booster unit behind a regular 2,000 h.p. EA unit. Then, after the war, No. 50 went into the shops of the Alton Route (now the Gulf, Mobile & Ohio) and both her famous number and the smooth nose were removed. Today, as GM&O 1200, she handles local freight between Joliet and Bloomington, Ill. It has

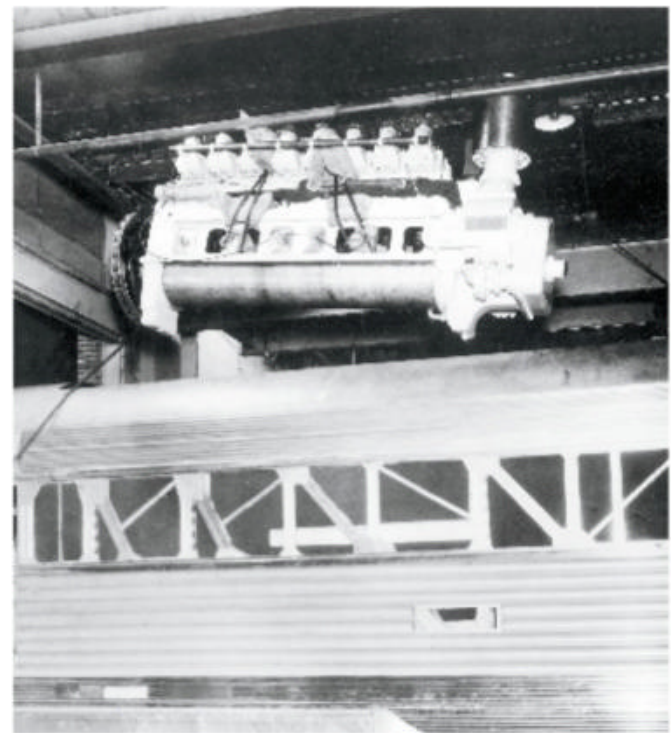
been a long and famous trail from leading the *Royal Blue* to setting out merchandise cars deep in the Midwest, and both Electro-Motive and the GM&O take pride in the record.

In September 1935, Santa Fe took receipt of its 3,600 h.p. diesel, a two-unit creation numbered 1 and 1A and powered by Electro-Motive and built by St. Louis Car Co., perhaps more famous as a builder of streetcars. The new locomotive was sent directly into *Super Chief* service following a demonstration speed test in which it hurtled from Chicago to Los Angeles in 39 hours 34 minutes — a run made with standard Pullmans, and a run which finally broke Death Valley Scotty's *Coyote Special* record set in 1905. The results achieved with this locomotive embarked AT&SF on a program that has made it today the largest owner of diesel railroad motive power in the world.

Triple pillars of success

In 1936 Electro-Motive evolved its triple pillars of industrial success in the business of producing railroad motive power: *Product*, *Production*, and *Promotion*. That was the unbeatable combination that justly or unjustly beat down the supremacy of heavy steam power and forced American, Baldwin, and Lima into the field on a large scale. Such a combination is worthy of close examination.

Many years before Electro-Motive turned



A photo dated December 21, 1934, shows a Winton 201A diesel engine being installed in an early *Zephyr* power car. Electro-Motive

out its first diesel road locomotive, both Alco and Baldwin had produced several interesting applications of diesel power to yard services. Indeed, Alco proudly calls itself the builder of America's first diesel, which means Jersey Central's famous No. 1000, built in 1924. But neither company followed up these first units with anything approaching a standardized

line of diesels built on a mass-assembly basis. The late 1930s found Alco handing praise to its Milwaukee Road and North Western streamlined Hudsons, while Baldwin pointed with pride to its Santa Fe 4-8-4s.

It's a different picture in this postwar period: Alco's president has cited the diesel as "the proven locomotive for the next generation or two," while Baldwin has lately been bowling over its great traditions of steam in an attempt to climb aboard the more lucrative diesel bandwagon. Lima-Hamilton (new name for the home of the 2-8-4 and the Texas type) fights the trend with vigor, but it has now launched a line of diesel switchers. Steam is a valiant cause, a fighting banner, but almost a charitable organization in our day. Even Fairbanks-Morse and Ingalls Shipbuilding have entered the fray, both out for diesel honor and diesel profit. So far, FM seems to be leading Baldwin.

Now, check the reasons for this surge:

Electro-Motive's *product* was a standard line of diesels, so uniform that 1948 marks the second year in which the identical EMD 2,000 h.p. model has been featured on both the New York Central and the Pennsylvania wall calendars. EMD has reason to be proud of this reconciliation between two otherwise arch enemies; it is a realistic measure of proof-of-worth for the locomotive which can cross the Alleghenies or skim the Water Level Route with equal ease.

EMD's *production* has been carried out in a modern plant devoted exclusively to the construction of standard models on an assembly-line basis. Briefly, that is one big reason why Electro-Motive is today the world's largest builder of locomotives. La Grange not only assembles EMD's products but it builds or manufactures virtually all parts used, from outer sheet-steel and plywood shells to the V-type engines themselves. Here — and at

In 1935, five box-cabs paved the way for the E unit. Below, EMC demonstrators 511 and 512 head east on C&NW at Marshalltown, Iowa. At right, GM&O 1200 (formerly B&O 50) is near Chicago Union Station in September 1953. Below, Edward H. Myers; right, George Krambles, Krambles-Peterson Archive



Several switchers, the power units for Union Pacific's M-10002 streamliner, and B&O box-cab passenger unit No. 50 occupy the shop floor of EMC's new plant at La Grange, Ill., in 1936. Electro-Motive





EMC followed up the homely box-cabs with the mechanically similar E series, styled by GM's Leland Knickerbocker. At left, the first example, B&O EA No. 51, takes shape at La Grange. At right, sister 55 leads a train through Philadelphia in the mid-1940s. Left, Electro-Motive; right, Frank and Todd Novak collection

Plant No. 2 on the far south side of Chicago — EMD employs 12,000 men and women who carry out their war against steam power under 57 acres of covered floor space. General Motors, contrary to what you may think, has yet to earn a thin dime on this enormous investment. All profits have been plowed right back into plant expansion.

EMD's *promotion* has been beyond the status of comparison, for it has convinced the man on the street that all steam locomotives are old-fashioned and that the diesel represents progress. John Q. Public knows virtually nothing about centralized traffic control, grade and curve reductions, continuous welded rail, radio communication, or any of a dozen similar advances in the science of rail transportation. But John knows about the diesel — Electro-Motive told him.

It is impossible to find an equal in railroad

After successes in yards and on top passenger trains, Electro-Motive scored its greatest victory with the FT freight locomotive. Four-unit demonstrator 103 toured during 1939-40. Electro-Motive

history for the advertising war waged by Electro-Motive since 1934 — a campaign that includes color-packed front covers on *Railway Age* and a complete rolling exhibit of railroad-ing à la GM, the *Train of Tomorrow*. Electro-Motive started by hitting hard against steam power, and there were plenty of below-the-belt blows; next came the theme of complete dieselization once the new motive power had established a secure foothold; now EMD is training its publicity guns on other builders in a completely successful effort to capture the bulk of the heavy road-unit market.

Electro-Motive began to round out its production schedule in 1939 with the introduction of No. 103, a four-unit, 5,400 h.p. main-line freighter with a snub nose and enough guts to sell itself across the nation from the Blue Ridges to the 2-percent gradients of the Denver & Salt Lake. Designated model FT, No. 103 ran off 83,000 miles in 11 months over 20 Class I roads. Santa Fe was the first to order the FT, but did not buy the 103. No. 100 on the western transcontinental was the first production-model FT; demonstrator 103 was later sold to the Southern.

La Grange's own "supersonic barrier" was broken in late 1946 when the famous F3 ("28 locomotives in 1") with 1,500 h.p. per unit replaced the F2 with only 1,350 horses. The "28 in 1" slogan was merely 7 (number of possible gearing options) multiplied by 4 (number of possible units in combination). The net result was that the F3 could be used either as a drag freight locomotive or as a high-speed passenger machine or anything in between those two extremes.

The F3 could even be set up as a dual-service diesel — but that was evolution, not revolution. Before World War II, Alco-GE had delivered a fleet of 15 two-unit 4,000 h.p. products to the New Haven. These locomotives worked one way with express passenger trains and went back at the head of freights. And after the war, EMD itself had converted a four-unit set of Santa Fe FTs into a passenger engine for duty on the *Chief*.

But if the new F3 was not the first dual-service unit of its kind, it was the most flexible. By the process of changing gear ratios and subtracting or adding booster units, this F3 could be used for virtually every road assign-



ment required, from heavy-duty helper to lightweight, fast-running streamliner service.

Two test models have been carrying F3 benefits around on demonstration tours. No. 291 has a freight gearing, while No. 754 works in passenger service; both are four-unit, 6,000 h.p. machines. Cost: a little better than \$600,000 each — 5 percent extra with dynamic brakes.

Steam fans: Stay away

But if you worship at the shrine of the reciprocating steam locomotive, if you receive splendid satisfaction from the incomparable sounds of rapid exhaust and “steamboat whistling,” then stay away from La Grange, Ill., the Chicagoland suburb that EMD calls the “Home of the Diesel Locomotive.” Not that Electro-Motive’s plant isn’t an utterly fascinating place. But also it is governed by a group of smart young men whose life mission, if successful, must inevitably result in the abolition of all that is beautiful in our Age of Steam.

The visitor to La Grange finds EMD’s smart young men a most agreeable lot, eager to display their modern plant, anxious to answer questions. And several to-be-expected characteristics of young EMD turn out to be acutely true when one tours the plant and talks with the officers. Consider the matter of tradition, for instance. A Pullman drawing room would hold every item of EMD background almost with space to spare; the collection would include a few photos of such veterans as GM&O 1200, Electro-Motive 511 and 512, and CGW railcar M-300. Add a few press clippings of the *Zephyr*’s first run, some performance records for Santa Fe F3s over Raton, and possibly an account of the Silver Anniversary celebration — and that’s about it.

All this is because 25 years is not a long history for a locomotive builder, and because

Electro-Motive divides its time almost equally between today and the future. An industry that goes from the smallest to the largest in its field within a quarter-century has no time for memories.

When the cigars have been passed around after the simple but well-prepared noon meal in the small official dining room off the administration building’s cafeteria, then H. L. Hamilton may drop back through the years to when Electro-Motive’s chief troubles were wrapped up in a somewhat noisy Erie railcar. Residents complained that the gas-electric kicked up too much clatter coming through town, the founder recalls, and his company finally equipped the car with a muffler that virtually cut out all sound of the offensive engine. Shortly after this work had been completed,

the car ran down someone who hadn’t heard its approach, and of course the public berated the carrier for operating such a noiseless machine. So off came the muffler, and peace and content reigned supreme among the residents along the Erie as the car roared into view.

But that’s about the limit. The EMD dining room is no place for mention of the Ashtabula Wreck or the run of New York Central 999. No indeed.

The plant itself is modern to the hilt, as clean as any dining car. There you can observe the complete cycle, from the field-winding of the heavy traction motors to the final trim work in the paint shop. In other areas of the factory, finished generators, truck frames, engine blocks, and crankshafts lie neatly stored in readiness for inclusion in the final

“Ugly as sin, efficient as a bank,” NYC NW2 switcher 8750 shuffles freight cars at West Detroit in early 1961.

J. David Ingles, Brian Schmidt collection





Put on hold for the duration, passenger-train dieselization came roaring back after World War II; EMD's E7 of 1945 led the way, becoming the top-selling passenger diesel of all time. Three Southern Pacific E7s whisk the *Golden State* east at Nicklin, Calif., in January 1948. Frank Peterson, Alan Miller collection



Dark green paint and gold leaf striping and lettering mark these E7s as Pennsylvania Railroad property — but they are essentially identical to the E7s on the 29 other roads that bought the model. Al DiCenso



Ads in popular magazines stressed EMD's affiliation with General Motors. Greg Palumbo collection

assembly work. Thus the production schedule has been so decentralized that final assembly takes an amazingly short time.

In the long erection shop you might see a row of Chicago & North Western 2,000 h.p. passenger cab units in various stages of completion, from the skeletons of frames to the final locomotive minus only its green and yellow colors. And over in the small, modern paint shop you might find a three-unit Pennsy passenger job ready for mountain work or the Crestline-Chicago speedway. Superficially, cab sections 5847A and 5846A, spliced by booster 5846B, seem unmistakably Keystone in exterior treatment, with their characteristic tiny numbers and flowing gold

stripes in GG1 fashion. But beneath the coats of dark green Duco lies the same EMD model that leads the *Golden State* out of Los Angeles.

It is dangerous to overlook the value of this paint shop, for color has been a true friend to Electro-Motive. In the world of glamour it is, perhaps, the one redeeming feature of the diesel. And while you're here, don't pass up that brand-new Southern Railway switcher — ugly as sin, efficient as a bank — now ready to step forth and send a brace of slide-valve shifters to the scrap track.

If the steam power enthusiast leaves La Grange feeling half sad and half bitter that an automotive corporation has arrived to smash the traditions of steam and capture a large

share of the locomotive market, then at least he may be assured that all of Electro-Motive's exploits were not of its own making. The cause of the diesel has been advanced immeasurably by such unrelated circumstances as the increased cost of coal, the lack of steam-power standardization, the limited acceptance of such steam-locomotive improvements as roller bearings and the Franklin system of steam distribution, and the inadequate number of shops designed to repair modern steam locomotives speedily. Smoke abatement ordinances in many cities have virtually forced the adoption of the diesel switcher upon many roads which otherwise would have stuck with steam shifters. And in many an instance, a

heavy-duty diesel has been purchased because it could negotiate divisions restricted to older and lighter steam power because of light rail or timber trestles.

Furthermore, diesel operation has not always fully measured up to what the public and the railroads had been told to expect. Failure of the oil-fired train-heat boilers to fully warm up long limiteds in periods of severe winter cold has been noticeable; sometimes in the summer months the same thing takes place, and the effect upon passengers dependent on steam-jet air-conditioning systems has not been pleasing. More specific shortcomings would include the excessive length of the diesels — one has only to observe the arrival of a four-unit Santa Fe diesel in Dearborn Station, Chicago, to appreciate this.

And the question of “how many units?” has still to be settled. Certain 21-car passenger schedules have been kept to time with but a 4,000 h.p. diesel, while other roads appear reluctant to trust far lighter loads behind machines of equal or greater capacity. Of course, the amount of horsepower needed depends on several factors which include train weight, schedule, gradients encountered, etc. Fear of burning out traction motors through continuous operation at low speeds has contributed in some cases to the other extreme of excessive horsepower. Moreover, the unequaled success of the diesel in certain services has probably sprung from the fact that the road in question never saw fit to design a steam locomotive that would, if ever built, be able to match internal-combustion performance.



More on EMD

Watch for *TRAINS* magazine's special publication *EMD at 100*, coming in January.

Looking ahead

Electro-Motive views the future with the confidence that a company must receive when it climbs from the smallest to the largest producer in its field within the span of only 25 years. Just last year it dedicated a new Locomotive Development Center in which every phase of diesel advancement is studied and tested.

In addition, a large turbine-development program is now being pushed at General Motors' Allison Division in Indianapolis; that may unearth something of use to the railroad industry. What

is more, this turbine experimentation reflects an important item in the manufacturing philosophy of Electro-Motive — and that is that EMD expects to stay in the locomotive industry even if the diesel should be entirely supplanted by some newer form of motive power. That is but insurance for the millions that GM has poured into La Grange.

It is now too early to judge the true worth of Electro-Motive's entrance into the motive power field. Oil prices and the uncertain status of this nation's oil reserves might potentially harbor a real threat to large programs of complete dieselization. The fact that labor actions all too often have placed the railroads' coal supplies on a hand-to-mouth basis does not set aside the comforting underground reserves of this fuel which will be ample for many generations ahead. And in another light, the diesel locomotive is still too new to fully evaluate the effect of age upon maintenance costs and service capacity.

But this much is definite: Electro-Motive has climbed to the top against great odds and



EMC founder H. L. Hamilton (right) and GM engine designer Charles F. Kettering beam in front of CB&Q 9907 during Electro-Motive's 25th anniversary celebration in 1947. Electro-Motive

with vast rewards. It doesn't intend to be pushed aside without a fight. Perhaps that battle is nearer than we expect. The older firms lost the first round through underestimation of their youthful rival. They will not make that mistake again. ■

DAVID P. MORGAN joined the TRAINS staff in 1948, became the magazine's editor in 1953, and retired from that position (as well as publisher) in 1987. He died in 1990. Electro-Motive remained the top builder until the 1980s, when it was overtaken by General Electric.



The F3 was a postwar hit, selling 1,800 units to 49 roads during 1945-49, including the Monon, which signed up for 24 A units and 6 Bs. Brian Schmidt collection

THE

Burlington Route's silvery 9900, the *Zephyr*, looked like the future when it hit the rails in 1934 — and it was.

Robert Yarnall Ritchie

TRAIN THAT SPARKED AN ERA

In 1934, the *Pioneer Zephyr* was a bright novelty; 18 years later its success is demonstrated by the great fleet of diesel streamliners that course the nation

By Wallace W. Abbey

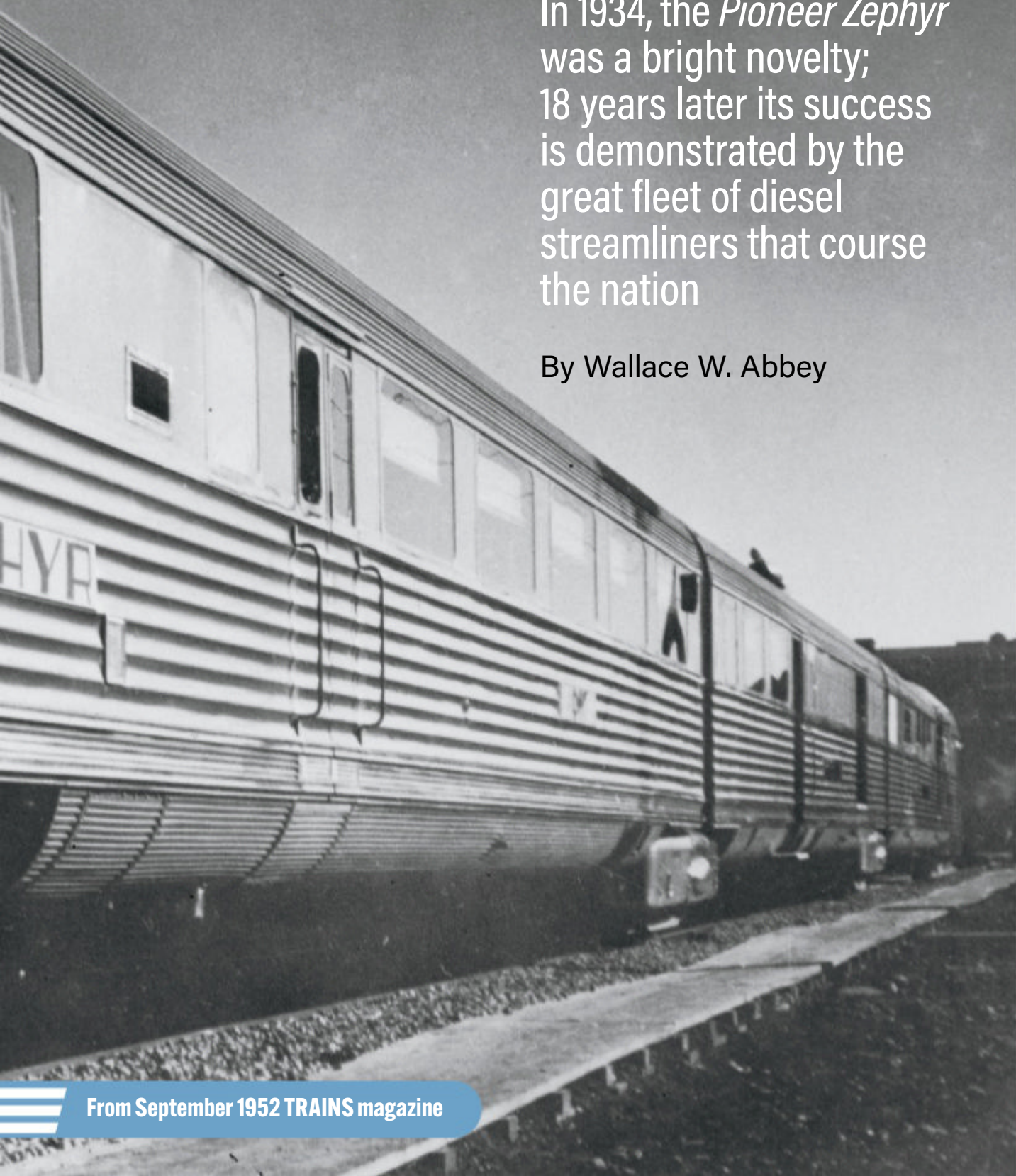


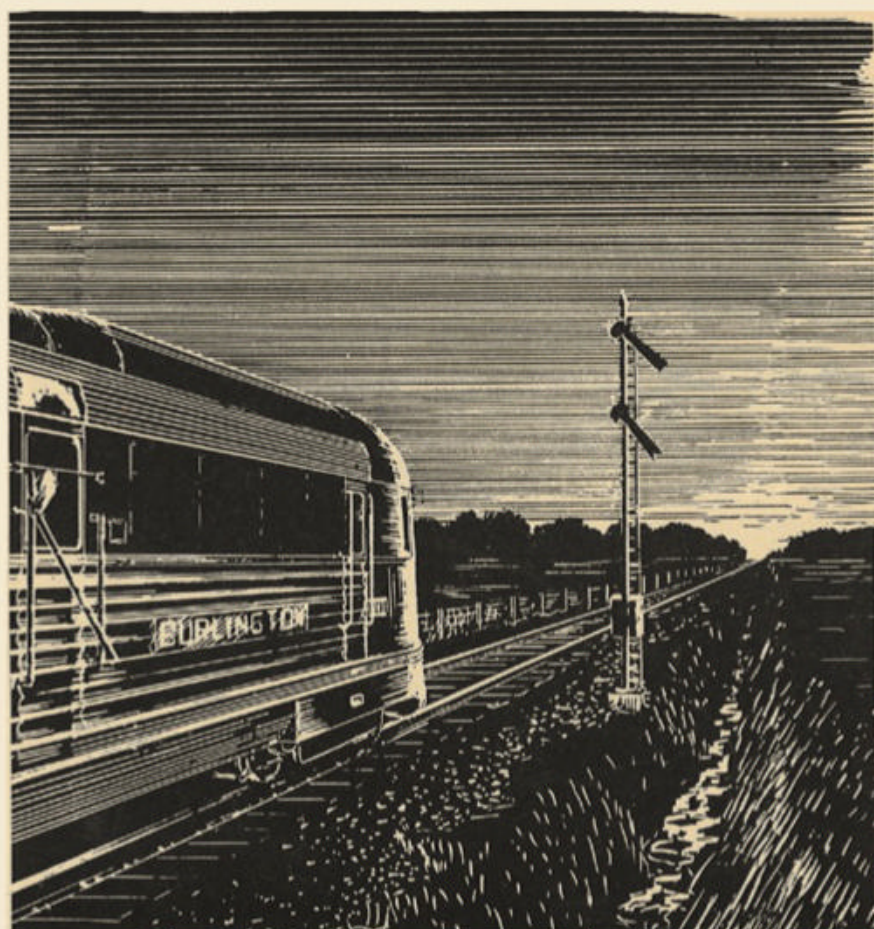
Plying a rural path between two mid-state Illinois cities is a stainless-steel grasshopper that gallops along, pausing at stations beside grain elevators and country stores to load and discharge everything from prosperous business folk to hogs. It's an awkward-looking train, short and blunt and with a vestibule step so high that the brakeman employs a double-deck step box to bridge the gap between it and the platform.

The entire train seats just 52 persons, about the capacity of a modern coach. It starts like a jackrabbit and stops like a streetcar. The austere lounge in its tail disgraces its counterpart on many a modern streamliner for rearward visibility.

As of May 1952, this railbug had skittered 2,541,216 miles. And since that day, it has been adding 1,400 miles a week to its record. This train, the one that brought the magic name *Zephyr* to a tradition-bound and skeptical railroad industry in 1934, has really been around. It first saw the light of day in Philadelphia, and it was taken on a tour of the nation to be ogled by more than 2 million persons, and to travel more than 32,000 miles, even before it turned a revenue wheel. Its subsequent wanderings as a paying proposition for proud papa Burlington Route have taken it to Nebraska, Colorado, Missouri, Texas, and now into a kind of inglorious semiretirement in Illinois. The *Pioneer Zephyr* is an old-timer among streamliners, the pioneer of a breed that substantially changed rail passenger service and probably helped save it from a creeping, crippling paralysis. And it did it in a single generation. The age of streamliners, though gaudy and eventful, isn't so long: In only 19 years out of the 122 that this country has had common-carrier railroads, the streamliner has been conceived, born, reared to some measure of maturity, and has ceased to be a novelty.

The *Pioneer Zephyr* spent three months in mid-1934 at the Century of Progress Exposition in Chicago, where 706,964 persons trod its carpets, inspected its diesel-electric power plant, and patted its gleaming flanks. Today,





Early on the record run, a clear signal against a morning sky beckons the *Zephyr* on the plains east of Denver.

DENVER AT DAWN, CHICAGO AT DUSK

By Wallace W. Abbey
Illustrated by George A. Gloff

Edward Flynn, operating vice-president of the Burlington, went to the phone. It was the editor of Denver's *Rocky Mountain News*. "Mr. Flynn? I have a Rocky Mountain canary that goes aboard the *Zephyr* to be taken to Chicago. When shall I bring it over?"

"What's a Rocky Mountain canary?" Flynn asked.

"A burro."

"A *what*?"

"A donkey — a small one." Flynn's response wreathed him in lightning and brought thunderclouds to the murky interior of the shop. "It's a gift from the *News* to the Century of Progress. You're supposed to carry it to Chicago on the *Zephyr*." The critter's name: Zeph.

Flynn turned desperately to Ralph Budd, president of the Burlington. Budd looked at the little *Zephyr*, her nose up on jacks, disabled on the eve of what was to be her most spectacular bid for fame — a nonstop, dawn-to-dusk run from Denver to Chicago.

"Why not?" Budd said. "One more jackass on this trip won't make any difference!"

It had been touch-and-go from the beginning. The Edward G. Budd Manufacturing Co. plant in Philadelphia hadn't had enough headroom to clear the *Zephyr's* cars on their trucks, so the cars had to be placed on their wheels outdoors. It had taken four days to start the diesel engine that powered the train. And now, while Ralph Budd



as this same train bounds along between Quincy and Galesburg, the people who see it pass accord it merely a glance, and those who are inside appear to be not in the least impressed by their famous conveyance.

Not the first streamliner

The design for the *Zephyr* was not the first attempt at streamlining a train. In fact, the issue of *Railway Age* in April 1934 that carried the story of the completion of the *Zephyr* also contained a full-page advertisement for a large builder of steam locomotives, an ad that told of a patent issued in 1893 for a "railway car and train" that was to have "everything streamlined but the bell rope."

From an aesthetic point of view, Mr. Frederic U. Adams' "streamliner" of 1893 left something to be desired. But there were other new departures among railroad trains already on the scene when the shiny *Zephyr* nosed through the throng around the Edward G. Budd plant in Philadelphia.

Back in 1929, the Chicago Great Western first put its *Blue Bird* through its paces



The *Zephyr* drew crowds wherever it went. During its eastern exhibition tour, Bostonians wait to inspect the train at South Station. H. W. Pontin

between Minneapolis and Rochester, Minn. The *Blue Bird* was a lightweight, three-car train built of stream-styled McKen railcars, its original propulsion equipment replaced by Electro-Motive gear. It contained coach space, dining facilities, and berths for patients of the Mayo Clinic at Rochester. For 1929, the *Blue Bird* was luxury on wheels.

The Pullman Car & Manufacturing Co. had unveiled its sausage-like Railplane, a 50-passenger car capable, so it said, of 90 mph, in 1933. And the Budd Company itself had been playing around with stainless-steel gas-electrics, and had sold them to the Reading, Pennsylvania, and Texas & Pacific.

But the train that shared the spotlight with the Burlington's *Zephyr* was Union Pacific's M-10000, later to become known as the *City of Salina*. It was UP's answer to the problem that had also brought on the *Zephyr* — decreasing rail travel as people going someplace turned more and more to automobiles and airplanes.

The M-10000 was also a three-car train, but it was built of aluminum alloys and was

powered by a spark-ignition distillate engine instead of a diesel. Its articulated coaches seated 126 persons, and a buffet in its tear-drop tail supplied them with meals en route. Although the *Zephyr* had been ordered earlier, the M-10000 was exhibited about two months before its Burlington cousin.

The *Zephyr* could not, then, claim the title of first streamliner, but it could — and did — claim the honor of being the first streamlined train to be powered with the diesel-electric drive that is well on the way to replacing the steam locomotive today. Beneath the silvery exterior of the *Zephyr*'s power car was a 600 h.p. Winton diesel whose contented mutterings prophesied good times for its builders.

The internal construction of this new train was radical, too. It was built like a bridge, with the familiar diagonal braces of the Pratt truss. Its structural members as well as its sheathing were of stainless steel. Its fluted exterior was not designed solely for beauty's sake, for the corrugations strengthened the comparatively thin metal. Wind-tunnel tests at the Massachusetts Institute of Technology with a scale

model had established that its resistance to motion at 95 mph would be less than half that of a train of conventional coaches.

The first of the *Zephyr*'s three articulated cars carried its diesel and electrical equipment, a Railway Post Office, and a section for storage mail. On it was affixed the train's number, 9900. About two-thirds of the second car was given to baggage and express space; in the remainder was a tiny buffet-grill and seats for 20 passengers. The rear car contained coach seats for 40 and an observation lounge with chairs for 12.

This was the train, then, that made its first run on the Reading, 25 miles from Philadelphia to Perkiomen Junction and back, on April 9, 1934. And it was the train that nine days later at PRR's Broad Street Station was christened the *Burlington Zephyr* by Marguerite Cotsworth, daughter of CB&Q Passenger Traffic Manager Albert Cotsworth Jr.

Columnist June Provines, writing in the *Chicago Tribune*, told how the name *Zephyr* came to be. Geoffrey Chaucer, the early English poet, started it, so the story goes, with a



With speed down to 15 mph, Electro-Motive's Roy Baer restarts the *Zephyr*'s engine the risky way — by joining two portions of the severed starter wire.

broadcast to the nation that "Tomorrow at dawn we'll be on our way," the *Zephyr* was crippled by a broken traction-motor armature bearing.

A frantic canvass of the country had found a similar bearing in a Union Pacific motor at Omaha. The Burlington had a man coming from there with it by plane. If he got to Denver by 12:30 a.m., the bearing could be installed by 3:30. The *Zephyr* was scheduled to leave the depot at 4. Close, but it had to work.

Fred Gurley, the Burlington's assistant vice-president, met the plane at the Denver airport at exactly 12:30. He hurried the bearing through the city's quiet streets to the shop, where it was quickly installed on the armature. A crane picked up the assembly, and shopmen walked it down the aisle toward the *Zephyr*'s front truck. In the aisle, blocking their progress, was the west end of the burro.

"Get outta the way!" yelled a machinist. The burro ignored him. The man booted the animal in the midsection. The burro merely lifted his tail and dropped it and continued to eat the hay that had been brought there for him. A mechanic lifted the creature by the tail, swung him around as you would open a gate, and the men with the armature passed on. A round of laughter eased the tension of the moment.

Drama out of Denver

Sixty-five minutes late, the *Zephyr* left Denver on an unprecedented speed test to prove to the world that this stubby stainless-steel train was worth all the hoopla. Its schedule put it in Chicago, 1,015.4 miles away over a route shortened from the regular passenger path by 19 miles through the use of freight cutoffs, in 14 hours. The fastest scheduled conventional train took about 26 hours.

Until the new bearing worked itself in, the engineer held the speed to 50 mph. Ernie Kuehn, a comparative oldster in the young Winton Engine Corp., which had built the power plant, lay on the floor of the cab with his head out in the rush of air, listening and sniffing for a sign that the bearing was running hot. But the bearing behaved well, and Kuehn signaled for more speed. The engineer moved his controller, and everyone, much relieved, watched the speedometer needle climb.

line in the prologue to his *Canterbury Tales* ("Whan Zephirus eek with his swete breeth . . .") in which he mentioned the Greek personification of the west wind. The Burlington liked the name *Zephyr* because it befitted a fast train on a road in the breezy Midwest. Miss Provines was pleasantly surprised to find that rugged Ralph Budd, president of the Burlington, could quote the beginning of Chaucer's prologue for her. The prefix *Pioneer*, incidentally, didn't come along for two years.

Touring to Denver, dashing back

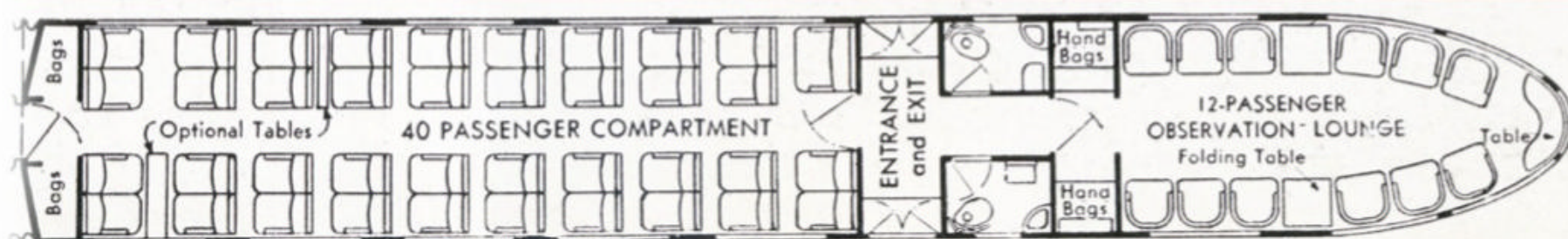
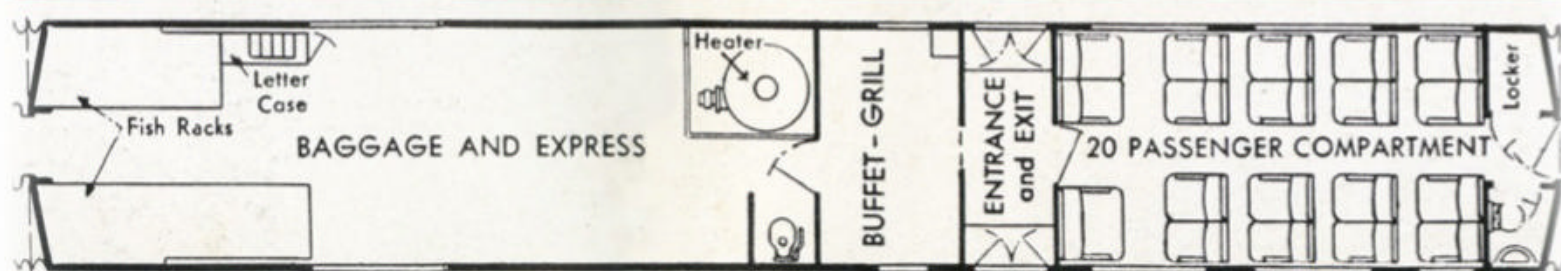
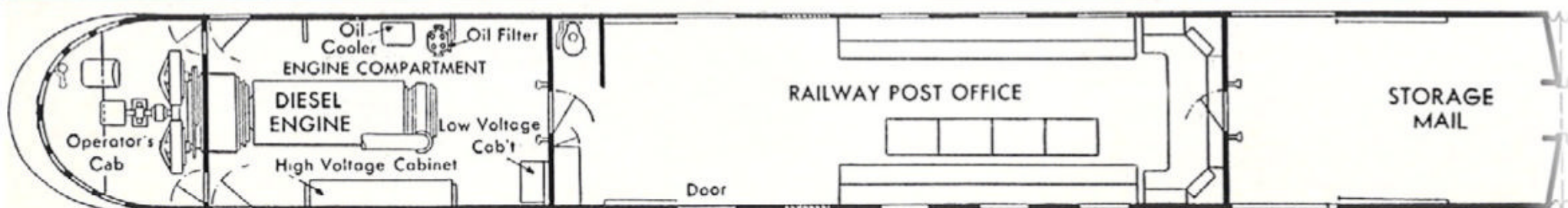
After the christening, the *Zephyr* left on a five-week barnstorming tour of eastern cities and spots along the CB&Q between Chicago and Denver. More than 800,000 persons came to see it. And on May 26, it ticked off the 1,015 miles between Denver and Chicago at an average speed of 77.6 mph, creating a legend that is a story in itself.

The *Zephyr* rested a day at the Century of Progress Exposition on Chicago's lakefront — if you can call being host to 15,757 persons resting — and then was off on a month's junket through Burlington territory and up and down the Pacific Coast. It was inspected by 543,000 curious citizens. On its way west, the *Zephyr* on June 16 led a procession of three Denver & Rio Grande Western trains across the 38-mile Dotsero Cutoff, formally opening a new route between Denver and the Pacific that was 175 miles shorter than the old one through Pueblo and the Royal Gorge.

That summer found the Burlington, Chicago & North Western, and Milwaukee Road all planning faster service between Chicago and Minneapolis/St. Paul. In July the *Zephyr*, on a test run, set the pace for the two similar streamliners that were to be the Burlington's bid for this traffic with a time of just over 6 hours each way, including six stops. Then, through the rest of the summer and into the fall, the *Zephyr* joined its Union Pacific counterpart, the M-10000, on the grounds of the Century of Progress fair. Parked in the shadow of the Travel & Transport Building, the two trains previewed for Chicagoans and others what was to come in rail travel. Some 709,000 of them queued before the *Zephyr*'s entrance and walked wonderingly down its corridor.

Toward the end of the fair in September, the *Zephyr* became an actor. It was the foundation on which RKO built its melodramatic thriller *The Silver Streak*, a story of the young designer of a streamlined train and the troubles he had convincing his girlfriend's railroad-president father that it would be a success. The train proved its worth in a wild dash from Chicago to Boulder Dam in Nevada, carrying an iron lung, desperately needed to save the life of the president's son.

There was one more tour for the little streamliner, an 11-day trip through Texas with stops at 19 cities. And then, on November 11, 1934, the train that had gone on display in 222 cities, had been visited by



As built, the *Zephyr* was modern, but not luxurious. Fully half its 197-foot length was devoted to space for the cab, propulsion equipment, mail, baggage, and express. It had seats for 72 passengers plus a compact buffet-grill. A fourth car, added in 1935, boosted seating capacity. CLASSIC TRAINS collection

2,016,606 persons, and had traveled 30,437 miles in a little over six months, went to work at the job for which it had been built. The *Zephyr* started a turnaround service daily between Lincoln, Nebr.; Omaha; St. Joseph, Mo.; and Kansas City. It replaced two much slower steam trains, and immediately fulfilled the fond hopes of Burlington traffic men that they had a rolling gold mine.

Despite the fact that the *Zephyr* had run 42 short excursions to satisfy the curiosity of the people and thereby cut down the number who would ride the first regular run, there were more than 100 claimants for the 72 seats on the first trip out of Lincoln. The reservation book was closed days before the date of the run. The *Zephyr's* patronage remained high — so high, in fact, that the next summer a fourth car, a 40-seat coach, was added. At that time No. 9900 had increased the level of traffic 136 percent over what it had been with the steam trains, and had reduced operating and maintenance costs for that run from 65 to 35 cents a mile.

By the time the *Zephyr* entered service, the Union Pacific's second streamliner, the original *City of Portland*, was on the road. But because both UP trains were still on exhibition tours, the *Zephyr* copped the honor of being the first streamliner to enter revenue service.

Further exploits, more *Zephyrs*

The subsequent history of the *Zephyr* is equally colorful. In spring 1936, while the 12-car *Denver Zephyrs* were being built, No. 9900 and No. 9903, the *Mark Twain Zephyr*, were pressed into service as the *Advance Denver Zephyrs* between Chicago and Denver, to capitalize on the summer upswing in travel and to protect the Burlington's Chicago-Denver mail contract. I can remember with pleasure driving across Iowa that summer and stopping at some hamlet to watch the *Zephyr*, speeding like the west wind and braying like Zeph, the burro that rode on the record trip from Denver to Chicago. It descended on us and disappeared in a swirl of dust.

On November 11, 1936, two years to the day after it had entered regular service, the train was renamed the *Pioneer Zephyr* in honor of its firsts, and a new nameplate was fastened to the rear of its observation lounge.

The 40-seat coach was replaced in mid-1938 with a new coach, which also contained a dinette section, and that fall No. 9900 began running as the *Ozark State Zephyr* between St. Louis and Kansas City. It went back to its original K.C.-Lincoln route in May 1939, and that October it had its first bad accident. Running through an open switch at Napier, Mo., the train collided with a locomotive standing

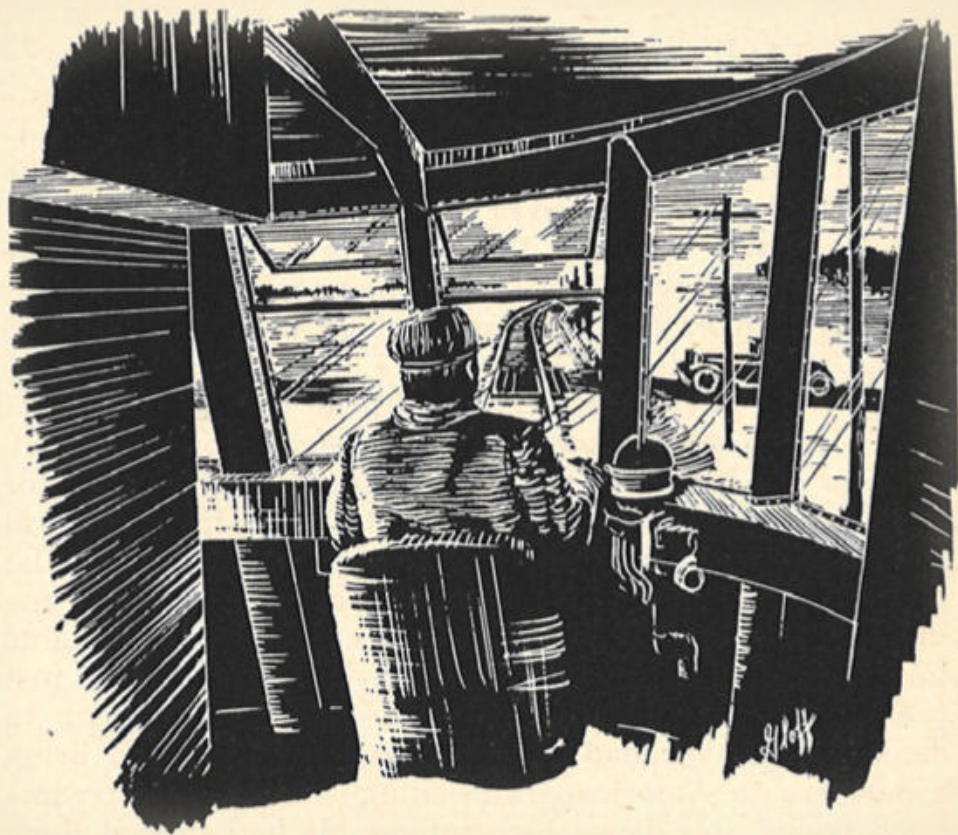
in a siding. The power car was practically demolished to a point behind the mail door, but, thanks to its sturdy construction, the remainder of the train was not severely damaged. The Burlington's shops at Aurora, Ill., had the train back in service in two months.

Four days after Christmas 1939, at 9:18 a.m. near Council Bluffs, Iowa, the *Pioneer Zephyr* became a million-miler.

By 1940, the original *Zephyr* had sired several new Burlington streamliners, and more were to come. It served temporary duty again between St. Louis and Kansas City, down in Texas on the Burlington-Rock Island Railroad, and between St. Louis and Burlington, Iowa. In March 1942, with World War II raging, the little train toured Nebraska, selling U.S. Defense Bonds. And after that, it went to work between McCook, Nebr., and Lincoln.

The *Pioneer Zephyr* turned 10 years old in April 1944. Its birthday party was at the Lincoln depot. The shiny streamliner inched forward and dropped an 8-foot stainless-steel knife, cutting a 6-foot-high, 300-pound birthday cake. Seven months later, in November, the 10th anniversary of the date the train actually entered service was celebrated at Kansas City and St. Joseph.

In summer 1948, the *Zephyr* returned to Chicago's lakefront and another exposition.



The nonstop run could have fallen victim to innumerable factors, including the nearly 1,700 road crossings along the train's route.

Between Denver and Chicago, the *Zephyr* had to pass over 1,689 road crossings. In anticipation of the record run, the Burlington had arranged with officials of cities and towns along the route to have the crossings — every one of them — guarded. The *Zephyr* sped along between almost continuous rows of cheering people, even early on that memorable May morning. The men aboard envisioned a trouble-free trip the rest of the way.

But then, back in the engineroom, somebody slammed the door of an electrical cabinet, catching and short-circuiting the starter cable. The engineer, smelling the burned insulation, quickly closed the throttle and stopped the engine. His action, though well-intentioned, disabled the power plant, for there was no starting circuit to get it going again. As the *Zephyr* coasted slower and slower, the crew frantically searched the car for some wire to splice the cable.

Budd and Flynn came forward when they heard the engine die. They found Kuehn and Roy Baer, Electro-Motive's assistant chief engineer, hard at work, and H. L. Hamilton, founder of Electro-Motive and board chairman of Winton Engine, guarding the door. Hamilton told the Burlington chiefs about the accident.

"We'd better stop at the next station," Flynn decided. "We don't want to be stalled on the main line." At the time, the *Zephyr's* speed had fallen to 15 mph.

Roy Baer decided differently. He grasped the bare wires, planted his feet and gritted his teeth, and shoved the wires together. Somebody punched the starter. With a blinding arc that severely burned Baer's hands, the starter caught and the engine turned over. The *Zephyr* was moving under power again. The nonstop run was intact.

Across the undulating prairies the *Zephyr* flew, a glittering prophecy of things to come. Between Yuma and Wray, Colo., it reached its top speed, 112.5 mph. It battled off more than 19 miles at better than 100. Lincoln, the capital of Nebraska, fell behind the observation lounge. Omaha and Council Bluffs didn't even see the *Zephyr*, for a cutoff took it across the Missouri River at Plattsmouth, Nebr., some miles to the south.

The jubilant warnings broadcast by the *Zephyr's* horn at one point drained too much air out of the braking system, and the brakes began to grab the wheels. It seemed there was nothing to do but stop and pump up the pressure, and the engineer started to shove

Burlington 9900 rolls north on Mason Street in Fort Collins, Colo., during its brief (fall 1949–spring 1950) assignment to the Denver–Cheyenne run. Larry Kirk



This time it was the Chicago Railroad Fair, where, reenacting in a way its dramatic entrance at the end of its dash from Denver in 1934, it participated in another Edward Hungerford pageant, *Wheels A-Rolling*.

Texas saw the *Zephyr* next, late in 1948, when it went into service as a local between Houston and Fort Worth. On April 29, 1949, it had another bad break when it tangled with a cement mixer at Houston. Again it went to Aurora to be repaired. And that summer it returned to the Chicago Railroad Fair.

After the fair, the *Pioneer Zephyr* took over a new assignment, a daily round trip between Denver and Cheyenne, Wyo. On April 29, 1950, exactly a year after the cement-mixer episode, No. 9900 struck a truck at Longmont, Colo. Aurora again repaired it.

The *Zephyr's* next job was its present one, the 200-mile-a-day round trip from Quincy,



Ill., to Galesburg. The 9900 has been on this run since October 18, 1950. It's not exactly a job wreathed in glamour, but the *Pioneer Zephyr* is immeasurably better off than the UP's M-10000, which was sacrificed to the gods of war atop an Omaha scrap pile in 1942.

Riding the *Pioneer Zephyr*

To look at the *Pioneer Zephyr* today, as it stands at the Quincy depot, chuckling to itself and possibly reminiscing about its past, you'd hardly think that it was nearing its 19th birthday. The stainless steel of its skin is unblemished and gleaming, surprisingly free from the dents and scratches that accumulate on other trains in a much shorter time. Inside, the paint and upholstery are clean and unworn.

The service required of this shiny flivver does not include that of feeding its patrons or providing seats for as many as it could. Con-

sequently, the dinette-coach is currently stored at Aurora, while the *Zephyr* bounds along with its original three-car make-up. But even that is changed, too: The second car has been made a full baggage-express car at the expense of the old buffet and 20 seats.

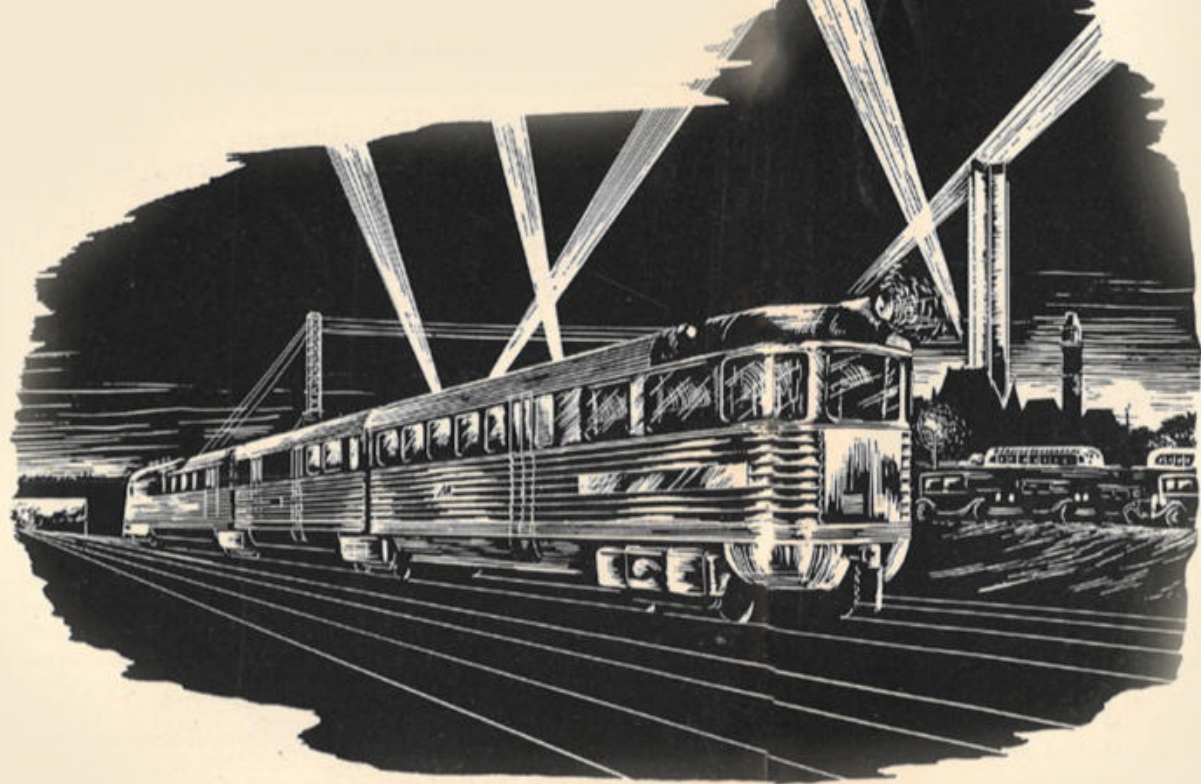
So the passengers are accommodated in the last car, in seats that are narrower, spaced closer together, and lean back farther than those in later, larger cars. Few patrons ride in the observation lounge unless there's no room up front (though it is coach space, and the seats are free) because it rides a little roughly.

If you come, as I did, from St. Louis on the *Mark Twain Zephyr*, you have plenty of time to inspect the two trains as they stand side by side, and then eat lunch in the station restaurant before the *Pioneer Zephyr* leaves. I watched the crew load a crated, grunting hog into the baggage car, and then joined the

handful of passengers who climbed the two-level stepbox to the folding vestibule step and chose their seats in the cozy coach.

The route the *Zephyr* now serves is almost branchline in character, although it is part of the through Chicago-Kansas City line and is being improved in anticipation of faster trains to come. After it pulls away from the station in the Mississippi River town of Quincy, passes the wye at Carthage Junction, and starts the long, steady pull up away from the river, the *Zephyr* has seen the last of large communities, save one, until it reaches Galesburg. Macomb, seat of Macdonough County and home to more than 10,000 Prairie Staters, is about two-thirds of the way up the line. Here the *Zephyr* pauses several minutes to do a more-than-satisfactory business.

But most of the way, it's a passenger here, a passenger there, and a little head-end work



The Zephyr's triumphant evening arrival at Chicago's Century of Progress Exposition was a fitting finale to the landmark day.

the throttle closed. But Kuehn immediately reached over and yanked it open all the way. The diesel roared and the locomotive strained against its tether; the air compressor filled the tank rapidly, and the brakes released.

Anticipation in Chicago

As the *Zephyr* raced over the miles, Chicagoans were pouring into the fairground on the shore of Lake Michigan to attend the first day of the second year of the Century of Progress Exposition. Loudspeakers throughout the grounds reported on the *Zephyr's* progress. And as dusk came and lake breezes cooled the hot, dusty grounds, a throng gathered in the grandstand to witness Edward Hungerford's pageant, *Wings of a Century*. For here, with Lake Michigan as a backdrop, was the terminus of the *Zephyr's* run from Denver.

The *Zephyr* was reported by Aurora and on the home stretch at 6:41 p.m. At 7:10 — 13 hours 4 minutes 58 seconds after it left Denver — the train snapped the Western Union timing tape stretched across the track at Halsted Street. The *Zephyr* had gone the 1,015.4 miles at the unheard-of average speed of 77.6 mph — bettering by nearly an hour the fantastic schedule that the Burlington had set up for it. In a nonstop run, the *Zephyr* had left Denver at dawn and arrived in Chicago before dark the same day.

The train left CB&Q tracks at Halsted Street and continued toward the lakefront over the St. Charles Air Line and the Illinois Central. It stopped for the first time when it prepared to back from Central Station down through the IC's yard to 31st Street. Then, to the tumultuous welcome of skeptics enlightened, the silver train slipped beneath the floodlights in a dramatic finale to its run. The pageant was just reaching its climax. From Denver to Chicago, dawn to dusk, the *Zephyr* had come across the prairies to bring a new era to American railroading — an era of streamlined trains and diesel locomotives. It had indeed done a remarkable thing.

When the *Zephyr* had stopped and the shouting had subsided somewhat, Ralph Budd led Zeph, the Rocky Mountain canary from the *Rocky Mountain News*, out of the baggage car and presented him to the officials of the Century of Progress.

With the combined power of 600 horses and one little burro, the *Zephyr* had come from out of the West to open the way to a revolution in railroading unlike anything seen in more than a century of advancement. It was a great day in Chicago.

almost everywhere. The people who ride are farm folk and the like. Often the depot platform is devoid of all people except the agent, and the train must linger a minute or two before starting again, lest it get ahead of schedule. There is an unhurried feeling about the journey.

But the *Pioneer Zephyr's* acceleration and deceleration are still something to marvel at. They are qualities which for my money have yet to be duplicated in modern-day streamliners. But of course, the three-car train weighs only about 195,000 pounds and is therefore much easier to get moving than a long train of streamlined coaches, which may weigh some 115,000 pounds apiece.

Over around Quincy, the country is hilly and the railroad full of curves. But a couple of the bigger ones have been eased, the roadbed is good, and the rail is heavy. On toward Galesburg, the land flattens into the gently rolling, richly endowed farmland that Illinois is known for. This is a line that still operates, for the most part, under the arms of manual block semaphores, and it's single track except for the 25 miles or so between Bushnell and Waterman Tower at the west end of the classification yards outside of Galesburg.

Somehow, as you ride the *Pioneer Zephyr* along this bucolic byway, or watch it glinting in the afternoon sun from one of its rural stations, it all looks so natural that you can visualize it as always having been this way. But there are two plaques, one on the outside of the rear car and the other inside it, that remind you that this is the historic little train that started the *Zephyr* fleet a-growing until today it reaches from Chicago to San Francisco, from Denver to Texas, and back and forth across the vast Midwest. This is the little train that made you, in days past, think "*Zephyr*" when you thought of *any* streamliner, the first train with the magic name that became so fully a household word.

About supertime, the *California Zephyr*, hardly into its trek to the Pacific, rolls into Galesburg. The *Pioneer Zephyr* is there in the depot, waiting for the time that it is to start back toward Quincy. Next to those big cars with the Vista-Domes, next to the big diesel units with many times the horsepower of its little engine, the *Pioneer Zephyr* looks dwarfed, ungainly, out of place.

Well, there's been a lot of railroading done since that day in 1934 when the first *Zephyr*, now the father of a large, prospering family, was ushered into the world of travel. And it is altogether proper that the youngest son, respectful and aware of his upbringing, should be taller and more worldly. For that is progress. ■

WALLACE W. ABBEY, a prolific railroad journalist, author, and photographer, was on the *TRAINS* staff from 1950 to '54. He retired from a career in railroad public relations in 1991. Abbey died in 2014.



Passengers use a special two-level step-box to board the *Pioneer Zephyr* in Quincy, Ill., at the start of its run to Galesburg. Later *Zephyrs* had two fold-down vestibule steps, which enabled use of standard stepboxes. Wallace W. Abbey

HOLLYWOOD'S ZEPHYR RIDE



Mechanical engineer Tom Caldwell (played by Charles Starrett) climbs into the cab of his brainchild, the *Silver Streak*, for a trial run of the radical new train. Academy of Motion Picture Arts & Sciences

Burlington's breakthrough train played the title role in RKO's thriller, *The Silver Streak*

By Les Hammer

“I can’t stand it!” cries a distraught woman, rising from her chair. “I can’t, I tell you. We’re going too fast. We’ll all be killed. My ears are ringing. My head hurts!” Other passengers attempt to calm the terrified woman, who collapses in hysterics. “I can’t stand it!” she screams again. “I can’t stand it any longer!”

The train was the *Burlington Zephyr*. The time was late 1934. The medium was the train’s cinematic debut, *The Silver Streak*, produced by RKO Radio Pictures. Critics panned the melodramatic, outrageously plotted movie whose own producer conceded was “very bad railroading.” Ignoring the negative reviews, cinema devotees and railfans flocked to theaters in droves, eager for their first glimpse of the diesel-electric train that was billed as “the fastest ingenue” in motion-picture history.

Flash back to early 1934, when Union Pacific introduced the nation’s first stream-

liner, the M-10000. The futuristic train scored a hit with the public and spawned UP's diesel-powered M-10001, which set a North American record of 120 mph in late 1934.

Despite those trains, it was the *Zephyr* — the brainchild of Ralph Budd, the Chicago, Burlington & Quincy's visionary president — that captured the popular imagination from the moment it left the Edward G. Budd Manufacturing Co. plant in Philadelphia on April 7, 1934. Built of gleaming stainless steel and powered by a 600 h.p. diesel engine, the train attained 104 mph during its first test run.

It followed that with its most famous trip, the publicity dash of May 26, 1934, when it streaked nonstop from Denver to Chicago in a record 13 hours 5 minutes. For spectators accustomed to the sight of a hulking steam locomotive pulling a dark-green consist of heavyweight cars, the *Zephyr* was nothing short of spectacular.

The high-speed marvels were barely out of the shops when Hollywood pounced on the idea of an action drama climaxed by the record run of a streamlined train. But screenwriters struggled to come up with a plausible story, because aviation had advanced to the point where an airplane could transport anyone or nearly anything from coast to coast in 14 hours.

Enter Roger Whately, editor of *Diesel Digest*, who showed up one day at the Gower Street entrance of RKO Pictures in Hollywood. A guard directed him to the office of producer Glendon Allvine. In a scene straight out of *The Last Tycoon*, the brash young editor pitched his idea to the hard-boiled producer, who had read and rejected similar scenarios with easily deflatable plots. Allvine listened intently, intrigued by Whatley's novel premise of a streamlined train carrying something too unwieldy to be transported by air — an iron lung, the early curative device for polio patients. To Allvine, a former publicity director for film mogul William Fox, Whatley's story line spelled "box office."

While Whately banged out the first draft of his story, tentatively titled *Hi-Ball Unlimited*, Allvine phoned Union Pacific's office in Los Angeles to inquire about the availability of the M-10000 for filming. He was referred to UP's corporate office in Omaha, but to his dismay, the railroad balked at the idea of loaning its premier train to a movie studio. While waiting for a definitive answer from the UP, Allvine read that the *Zephyr* was in the midst of a Western tour, highlighted by its appearance at ceremonies in Colorado to mark the opening of the Denver & Rio Grande Western's Dotsero Cut-off linking its Royal Gorge Route with the Denver & Salt Lake's Moffat Route. Losing no time, Allvine wired CB&Q's Ralph Budd in Denver.

On June 20, the *Zephyr* reached Los Angeles, where it went on display at Exposition Park. As wide-eyed Angelenos crowded around the train, Burlington and RKO execu-



In a scene from *The Silver Streak* filmed on a studio mock-up of the cab, locomotive magnate Ed Tyler (Theodor von Eltz) steadies train designer Tom Caldwell. Academy of Motion Picture Arts & Sciences

tives held a conference in its observation lounge. The meeting ended with an agreement that the railroad would loan the *Zephyr* to the studio with one proviso: "Do not wreck it."

Fine-tuning the screenplay

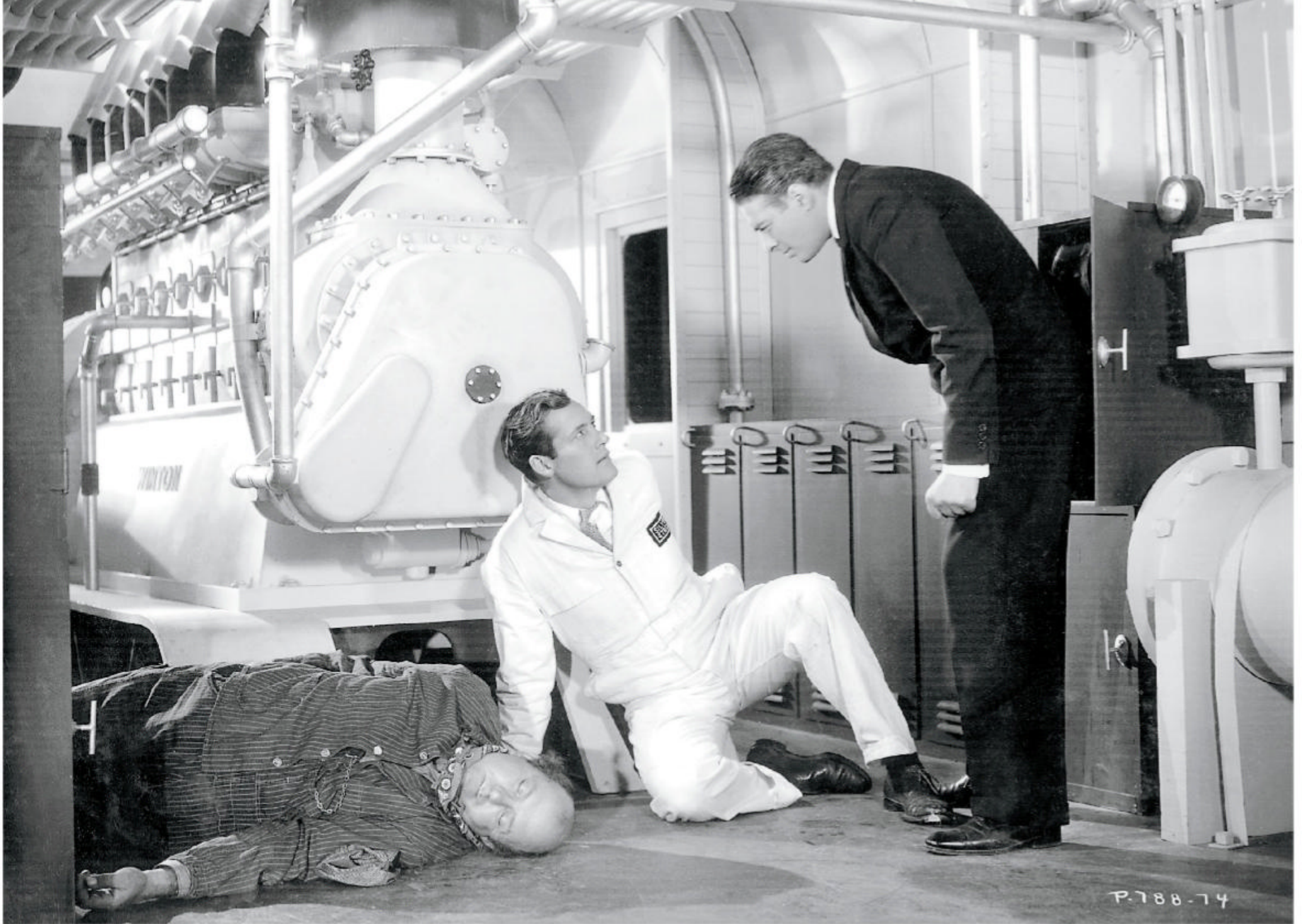
With his streamlined star under contract, Allvine turned his attention to the screenplay. As outlined by Whately, the story began in Philadelphia, where the all-aluminum, diesel-electric "Zoomer" makes an abortive test run, and ended in Los Angeles, where the streamlined train delivers its precious cargo of iron lungs to a stricken city. To his credit, the veteran producer suggested a number of script changes for pictorial and topical interest. Whately agreed, changing the locale of the opening scene to Chicago, site of the 1933-34 Century of Progress exposition, and moving the setting of the closing sequence to the new Boulder (now Hoover) Dam, nearing completion on the Colorado River southeast of Las Vegas, Nev.

Mindful of the fact that Whately had no experience as a screenwriter, Allvine teamed him with a seasoned writer, Jack O'Donnell.

While the pair fleshed out the first draft of

the screenplay, Allvine looked for a director capable of juggling the logistical demands of filming on location and shooting on a limited budget. For better or worse, he entrusted the directorial reins to Thomas "Tommy" Atkins, who had been working as an assistant director at RKO since 1927. As a first-time director, Atkins received a paltry salary of \$125 a week — a fraction of what most of the cast was paid.

After scouting the location at Boulder Dam, Allvine and his colleagues returned to Hollywood, where they labored over three drafts of the unfinished script. Their work paid off with the revised story of an ambitious mechanical engineer named Tom Caldwell, who pitches his revolutionary design for an aerodynamic train to the financially ailing "CB&D Railroad." To his dismay, the road's conservative board of directors, headed by its reactionary president, Barney Dexter, rejects Caldwell's design as impractical. Disappointed by her father's resistance to new technology, Ruth Dexter — Caldwell's girlfriend — convinces Ed Tyler, owner of the Tyler Locomotive Works, that the basic design is sound. Fortified in his belief, Tyler orders the con-



German spy Erdmann Bronte (played by Irving Pichel) confronts Tom Caldwell and pilot engineer Dan O'Brien (Edgar Kennedy) in a scene filmed on a studio mock-up of the *Zephyr's* engineroom that included a representation of a Winton 201A diesel. Academy of Motion Picture Arts & Sciences



struction of a prototype train, dubbed the *Silver Streak*.

Because of an unforeseen mechanical problem, the streamliner fails its trial run. Unwilling to back its development, Dexter turns the *Silver Streak* into a sideshow attraction at the Chicago world's fair. Humiliated, Caldwell quarrels with Ruth, who leaves on the next train for California. Meantime, her brother Allan takes an engineering job at Boulder Dam, where he is stricken with polio. After learning that an iron lung cannot be transported by air, Dexter arranges for a shipment of respirators by train. With Caldwell at the throttle, the *Silver Streak* embarks on a 2,000-mile run from Chicago to Boulder City. En route, a German spy, who is wanted for murder, attempts to sabotage the speeding train, only to be overpowered by the young engineer. In the final reel, the *Silver Streak* reaches its destination, where Tom Caldwell is reunited with his newfound love.

No budget for big stars

With a production budget of \$122,000 — one-fourth of that for the 1930 railroad drama *Danger Lights* ["Thrills and Chills on the Milwaukee Road," Fall 2001 CLASSIC

TRAINS] — Allvine could not afford one bankable star. "If I had been spending my own money," he admitted, "I think I would have spent ten thousand dollars more to buy one well-known actor's name for the exhibitor to put in lights on his marquee."

For the part of Tom Caldwell, the producer originally wanted popular leading man Joel McCrea, but settled for the handsome, rugged actor Charles Starrett, who was soon to make a name for himself as the black-clad, gun-toting Durango Kid. For the role of Ruth Dexter, Allvine cast the beautiful actress Sally Blane, who co-starred in the 1932 railroad thriller *Phantom Express* but whose film career was overshadowed by that of her famous sister, Loretta Young.

Though lacking in star power, the cast included some of Hollywood's best-known character actors. Silent-film star William Farnum played CB&D President Barney Dexter. Actor-director Irving Pichel, best known as the sinister manservant in *Dracula's Daughter* and the sonorous narrator of *How Green Was My Valley*, portrayed the murderous spy Erdmann Bronte. Arthur Lake, fondly remembered as the high-pitched Dagwood Bumstead in the popular series *Blondie*, teamed

with Guinn “Big Boy” Williams to play the garrulous mechanic Crawford and his long-suffering sidekick Higgins. Rounding out the cast were actor-writer Hardie Albright as the ill-fated mechanical engineer Allan Dexter; former Keystone Kop Edgar Kennedy as the bumbling pilot engineer Dan O’Brien; and, notably, Theodor von Eltz, who starred in the silent railroad epic *The Great Mail Robbery*, as locomotive magnate Ed Tyler.

One Burlington Route executive, Warren Fuller, assistant to the vice president of operations, landed a bit part as a railroad director. But the most technically demanding role went to CB&Q engineer Jack Ford, who was required to be at the throttle whenever the *Zephyr* was in motion. Unfortunately, Ford (who handled the train on its Denver–Chicago dash and reportedly had no trouble making it “hit its marks” for the cameras) does not appear on screen — all of his scenes, either as actor or double, wound up on the cutting-room floor.

Prior to filming, the CB&Q removed the rectangular BURLINGTON ROUTE emblem from the train’s nose and replaced it with a SILVER STREAK herald. In Hollywood parlance, the *Zephyr* was ready for its close-up.

Lights, camera, action!

On the morning of September 5, 1934, the RKO Pictures film crew, led by cinematographer J. Roy Hunt, arrived in Chicago to begin what would be two weather-plagued days of shooting RKO 788 — *The Silver Streak* — at the Century of Progress fair. By accident or design, the real Burlington Route received free publicity when one shot, taken at the fair, wound up in the final print.

“[The producers] did their best to eliminate references to the Burlington,” says Hol Wagner, longtime editor of the *Burlington Bulletin* magazine of the railroad’s historical society, “but there is a shot of the Burlington Route herald on a sign above the train.”

On September 7, the film company (sans actors) boarded the *Zephyr*, still “in costume,” for the 160-mile journey to Galesburg, Ill., a major Burlington terminal. En route, Tommy Atkins and his cameraman filmed parts of the trial run sequence, where a freight train, pulled by CB&Q Mikado 4999, overtakes the *Silver Streak*. In Galesburg, the movie crew shot portions of the record run portion, where the train dashes under a coaling tower in the engine terminal.

“I am afraid we ruined a lot of good railroad men in Galesburg during the two days we ran the *Zephyr* back and forth through the yards,” conceded Glendon Allvine, “as our cameras recorded action violating all the safety regulations they had learned in a lifetime.”

On September 10, the company packed up its equipment and moved 45 miles west to Burlington, Iowa. On a scenic stretch of track, the crew filmed one of the most hair-raising — and improbable — scenes in the record-

run sequence, where the *Silver Streak* races toward an open drawbridge over the Mississippi River. For dramatic impact, special-effects director Vernon Walker took the developed footage and ran it through an optical printer. By the reprinting of every other frame to speed up the action, the swing span appears to close just as the train reaches the bridge. For impressionable movie fans, the cinematic sleight-of-hand worked.

“What they don’t show,” notes Wagner, “is that the sharpest curve on the Burlington main line is just west of the bridge. Normally, nothing goes faster than 20 mph there. Low center of gravity or not, you cannot take that curve at 100 mph.”

Following a stop to inspect and service the

train at CB&Q’s West Burlington Shops on September 12, the RKO company boarded the *Zephyr* for a journey over the Burlington main line to Colorado. On the Denver & Salt Lake, bad weather and mainline trains caused delays. When the skies cleared, the crew resumed the trip to the majestic Royal Gorge, shooting background footage all the way. To his consternation, Roy Hunt discovered that there were few places to mount a camera on a streamlined train, on which the doors were flush and the windows were sealed. By his account, he risked his life to take traveling shots from the front of the speeding train.

“One of the most dangerous yet most thrilling of all the sequences filmed,” Hunt wrote, “was when this writer was precariously



The record run in the movie was inspired by the *Zephyr*’s sensational Denver–Chicago nonstop dash, during which it’s seen passing through Aurora, Ill. CB&Q

Actress Sally Blane chats with Burlington Route executive Warren Fuller, who played a railroad director in *The Silver Streak*. Academy of Motion Picture Arts & Sciences





Allan Dexter (portrayed by Hardie Albright) and his sister, Ruth (Sally Blane), greet Tom Caldwell leaning from the cab of his creation, the *Silver Streak*. Eddie Brandt's Saturday Matinee

perched on a mount fastened firmly to the bulbous prow of the train. The nose of the train cut the wind to either side and swayed the operator with it, as though undecided in which direction the body should be precipitated. Those were breathtaking moments in the proper sense of the word."

On to Boulder Dam and L.A.

September 17 saw the film crew and train at Boulder Dam. (Ironically, from Salt Lake City to the dam and on to Los Angeles, the *Zephyr* had to use the rails of the Union Pacific, which had refused RKO permission to use its own train.) With consent from the U.S. Bureau of Reclamation and the Six Companies construction firm, Tommy Atkins filmed scenes at Lookout Point with Hardie Albright and Sally Blane, the first principal actors to be called since the start of production.

The movie company returned to Hollywood on September 20. There the cast and crew spent a week shuttling between the RKO

studios and area location sites. On the morning of the 25th, the director shot the climax of the record-run sequence at the Southern Pacific depot in Canoga Park (standing in for Boulder City). When the cast and crew broke for lunch, engineer Jack Ford climbed back into the cab of the *Zephyr* for a short ride to the RKO ranch in Encino. On arrival, the train rolled to a stop at the end of a spur line, where studio carpenters had recreated the *Zephyr* exhibit at the world's fair, using strategically placed props and signs.

Two days later, Tommy Atkins filmed the beginning of the trial-run sequence at the SP depot in Chatsworth (standing in for a Midwestern station). Satisfied that filming was going well, Allvine dashed off a letter to H. F. McLaury, public-relations director for the Burlington Route.

"Photography is progressing nicely, and I think we are going to have a fine picture," he wrote. "We hope to finish next Wednesday, October 3rd, and about a week later I will

know better just how the scenes fit together."

From the outset of production, Burlington and RKO officials agreed that interior scenes could not be filmed on the *Zephyr*, owing to the confined spaces. For the challenging task of recreating the train's interior, supervising art director Van Nest Polglase turned to his talented protege, Perry Ferguson (who would create the groundbreaking production design for *Citizen Kane* in 1941). Working from blueprints, photos, and sketches, Ferguson and his team of set designers built a mock-up of the cab, engineroom, and observation lounge on a process stage, complete with rear projection screen to simulate the passing landscape. To a casual observer, the meticulously designed set (including a replica of the Winton 201A diesel engine) appeared to have been lifted from the *Zephyr* itself.

Says CB&Q historian Hol Wagner, "[On the set] there is no wall between the cab and the engine room; otherwise, it looks reasonably accurate."

On September 29, the cast and crew reported to Stage 10 to begin filming the on-train scenes. For seven days, the actors worked under the blazing lights of the sweltering sound stage, where the director shot the fight between Bronte and Caldwell. The film was nine days behind schedule when the production wrapped on October 9 with pickup shots of Sally Blane in a mock-up of a Pullman car.

Monumental editing task

Even before the cameras stopped rolling, film editor Fred Knudtson faced a monumental task of editing more than 200,000 feet of film. In the process of assembling a rough cut, he discovered that one scene filmed in Colorado had been mutilated in the cutting room. Special-effects wizard Vernon Walker rode to the rescue, reshooting the sequence using a miniature set complete with track and an 8-foot-long model of the *Zephyr*, courtesy of the CB&Q.

Confident that *The Silver Streak* was going to be a hit, Allvine fired off a letter to Ralph Budd. "The sound and music work being done on the picture will probably be completed so that we can show it with an audience about November 7th," he wrote. "Mr. Atkins and I have screened it in its rough cut version so many times that I am afraid we have lost all perspective on it and we will need an audience to give us a sense of values."

Applause and cheers greeted the *Zephyr* when it made its screen bow at a sneak preview on November 7, 1934, at the RKO Hillstreet Theatre in Los Angeles. By one account, the train upstaged Fred Astaire and Ginger Rogers, the stars of the first feature.

"[The audience] forgot about *The Gay Divorcee*," gushed Hollywood press agent Clarence Upson Young.

"For seventy-two minutes they rode on the rails. One gasp followed another as they liter-

ally held onto their seats. The house rocked with excitement” — while jaded reporters shifted in their seats and yawned.

“The first half of the picture drags like a slow freight on the Erie,” complained the critic for *The Hollywood Reporter*. “Irving Pichel was the sacrificial victim with the worst-written heavy role since the days of *The Curse of Drink*. The direction looks as if Tommy Atkins was cutting his directorial teeth.”

Fortunately, *The Silver Streak* survived the critically panned preview and the oddly unpublicized “world premiere” on December 10, 1934, in Galesburg. “[The film] was shown at the West Theatre, which was a very low-class theater,” says Patty Mosher, archivist for the Galesburg Public Library. “I think that if the stars were coming [to the premiere] they would have shown it at the Orpheum. There was just nothing about it, except the theater advertisements. I truly doubt that there was much fanfare about it.”

Box-office success

The Silver Streak opened on January 15, 1935, at the RKO Mayfair Theatre in New York. Prior to the screening, Jack Ford paid a heartfelt and moving tribute to the real star of the film — the *Zephyr*.

“She has been from coast to coast and has asked no quarters from the seaboard to the steepest grades in the Rockies,” said the veteran engineer, standing before a microphone. “She has gone everywhere, calm and sure of herself, proudly pushing ahead like our old pioneers. Of course, I didn’t know that they were taking her into Hollywood to be slicked up for the movies. But she stood the night life and the make-up better than I did.”

Unmoved, film critics scoffed at the lack-luster cast, clumsy direction, and ridiculous plot. “Turning a switch with just a split-second to spare is thrilling the first time,” noted the reviewer for *Variety*. “But the *Silver Streak* misses derailing at not less than half a dozen switches. Just what *bona fide* railroad men may think of the incredible feats of sustained speed and hairpin curves taken at 120 miles an hour can only be guessed at.”

Producer Glendon Allvine got the last word when *The Silver Streak* earned \$107,000 in profits, making it one of the most successful pictures released by the deficit-ridden studio in 1934–35. With P. T. Barnum-like flair, he orchestrated a mass merchandising and promotional tie-in campaign that predated *Star Wars* by four decades. Advertisements for Camel cigarettes (featuring Jack Ford) suggested the romance and thrills on the *Silver Streak*. Retail stores sold *Silver Streak* carpet sweepers, razor blades, and roller skates. One wholesaler, Grennan Bakeries of Chicago, supplied 60,000 customers with *Silver Streak* cookies. On the literary side, Whitman Publishing Co. printed a “Big Little Book” movie edition for children, while Haskell-Travers published an illustrated edition of the



The *Zephyr* was a big attraction at CB&Q’s Century of Progress exhibit in Chicago (above). RKO shot scenes for *The Silver Streak* there, and at a facsimile it created in California (left), where actor Charles Starrett, in his role of Tom Caldwell, is seen crouching in the cab doorway. Above, CB&Q; left, RKO Radio Pictures

screenplay, supplemented with essays by RKO cast and crew members.

For his part, H. F. McLaury purchased 200 sets of the *Zephyr* model train, produced by American Flyer, for use as lobby displays (though it is not known how many of them actually wound up in movie theaters).

Two decades in the vaults

After its initial release, *The Silver Streak* languished in film vaults until 1955, when the RKO film library was sold to television. At regular intervals, the railroad drama surfaced on late-night TV. In recent years, it has turned up on video and DVD. Unlike the archival print of *Danger Lights* (restored by Turner Entertainment in 2001), the acetate print of *The Silver Streak*, made from the original camera negative, remained in good condition.

Today, visitors to the Museum of Science & Industry in Chicago marvel at the restored original *Zephyr*. It’s an impressive setting for the legendary streamliner, named for the God

of the West Wind. In the mind’s eye, the scene dissolves to a neon-lighted movie palace, where Jack Ford invites the audience to come along for the ride.

“Like those real movie stars who were with me,” Ford says, “you are going to get the ride of your life when you see her true to her name, graceful and beautiful, a shimmering streak cleaving the winds of Zephyrus.” ■

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THE ORIGINAL

In the 1930s, nine Burlington Route trains (plus a New England cousin) were the shining pioneers of a new era in rail passenger service



CB&Q 9900, *Pioneer Zephyr*

During the first third of 1934, two remarkable trains burst onto the scene. In February came Union Pacific M-10000. Built of aluminum and powered by a spark-ignition, distillate-fueled engine, the three-car articulated train weighed just 85 tons. Although it grabbed headlines and spawned a fleet of UP streamliners, it was in some ways a technological dead end.

On April 7, Chicago, Burlington & Quincy 9900, the *Zephyr*, rolled out of the Edward G. Budd Manufacturing Co. plant in Philadelphia. Like the M-10000, CB&Q's shovel-nosed train combined Electro-Motive/Winton propulsion and mail, baggage-express, and passenger space in a lightweight three-car articulated train. However, the *Zephyr* was made largely of stainless steel and powered by a diesel engine.

The *Zephyr* owed its existence to two men named Budd. Visionary Burlington Route

President Ralph Budd believed a modern diesel train could recapture traffic and cut losses on certain runs. His deep involvement in the project extended to his naming the train after the Greek god of the west wind, Zephyrus.

Edward G. Budd's company manufactured automobile components, but looked to develop rail-industry products. His firm had devised a process — Shotwelding — for joining pieces of stainless steel. The material's durability and low maintenance requirements made it well-suited for railcar construction; its natural finish, a dazzling silver, required no paint. Budd engineer Albert Dean was the train's lead designer, aided by his brother Walter.

Following tests around Philadelphia, the *Zephyr* was christened at the Pennsylvania Railroad's Broad Street Station on April 18. Its biggest day was May 26, when it dashed non-

Constructed of silvery stainless steel, the first *Zephyr* made a striking nighttime sight in the era of drab heavyweight cars. CB&Q

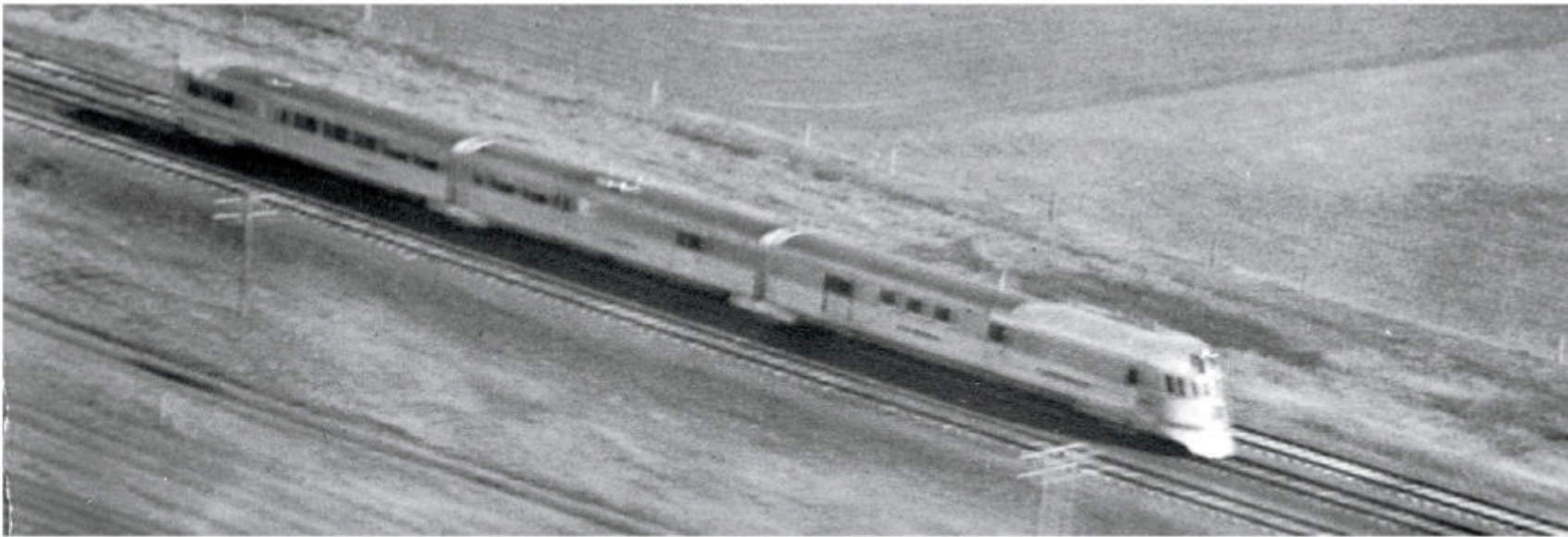
stop from Denver to Chicago run [page 36].

After a nationwide tour (and a role in a movie [page 44]), the *Zephyr* entered revenue service on November 11, 1934, replacing steam trains on a daily round trip between Lincoln, Nebr., and Kansas City. The little train slashed operating costs and boosted revenues. Its 72 seats were not enough, so a fourth car — a 40-seat coach — was added in 1935, replaced in '38 by a dinette-coach. The train was renamed *Pioneer Zephyr* in 1936.

CB&Q 9900 worked a number of routes — and suffered some fairly serious accidents — before its final run in 1960, after which it was retired to Chicago's Museum of Science & Industry. Following decades of semi-neglect outdoors, the *Pioneer Zephyr* was restored to mint condition and since 1998 has stood just inside the museum's main entrance.

ZEPHYRS

By Robert S. McGonigal



A view from an airplane pacing the *Zephyr* in western Nebraska captures the drama of the train's high-speed, nonstop run from Denver to Chicago on May 26, 1934. M. A. Ellingson



No. 9900's engineer waves for a newsman (left) at CB&Q's Omaha station during the train's well-publicized last run, Lincoln-Galesburg, on March 20, 1960. About 20 miles later (above), the *Zephyr* crosses the Missouri River at Plattsmouth, Nebr. Two photos, Robert A. Caflisch, Helen Caflisch collection



Since its 1998 restoration, the *Pioneer Zephyr* has dazzled visitors at Chicago's Museum of Science & Industry. A recent refurbishment has refreshed the exhibit inside and out. Two photos, David Lassen



CB&Q 9901 and 9902, *Twin Zephyrs* (1935)

One of the nation's hottest rail-travel corridors was Chicago–Minneapolis. In 1935, the three leaders in the market launched trains that would become stars of the streamliner era.

The first was Chicago & North Western, whose 400 debuted January 2, 1935. Although the train represented a significant step up in speed (covering 408½ miles in 410 minutes) and amenities, it was formed of conventional (albeit souped-up) 4-6-2s and heavyweight cars; yellow E3 diesels and lightweights arrived in 1939. The Milwaukee Road answered in May '35 with the *Hiawatha*, also steam-powered but brand-new and streamlined, from 4-4-2 to “Beaver Tail” observation car.

In between — on April 21, 1935 — CB&Q launched its service using two near-duplicates of the original *Zephyr*. The *Twin Zephyrs*, Nos. 9901–9902, were not *quite* duplicates of the prototype. Smaller grilles below their headlights resulted in a uniform height for all wind-shield panels, a detail continued on all subsequent shovel-noses. While the first *Zephyr* had baggage-express space in its first two cars, the *Twins*, which lacked RPOs, had all their baggage space in the power unit. The second car contained a full kitchen, 18-seat dining area, and 40 coach seats. The rear car had coach seating for 24 and a like number of parlor chairs, plus an observation lounge.

The *Twins*' revenue seating capacity of 88 was swamped by demand, even after service was doubled on June 2, 1935, enabling *Morning* and *Afternoon Zephyr* departures from each terminal. In fall 1936 a new pair of longer *Twins* (Nos. 9904–9905 [page 56]) took over, freeing up the originals for reassignment. The 9901 train inaugurated *San Houston Zephyr* service, only to become lone *Zephyr* to meet an early end when it was damaged beyond economic repair by fire in 1944. No. 9902, after a stint as the *Ozark State Zephyr*, began running Chicago–Ottumwa, Iowa, in 1945, switching in '47 to Chicago–Burlington–Hannibal, where it ran until retirement in 1954.

Displaced from *Twin Zephyr* service by longer trainsets, No. 9901 became the *Sam Houston Zephyr* in October 1936. It carried the train name on its nose and BURLINGTON-ROCK ISLAND on its sides. Here it stands at Houston before setting out for Fort Worth. George C. Werner



The other 1935 *Twin*, No. 9902, became the St. Louis–Kansas City *Ozark State Zephyr* in late 1936. Since more than half the run was on Alton Route trackage, the train got ALTON-BURLINGTON lettering on its prow and flanks.

Louis A. Marre collection





Each carrying half a set of 44 twins, Nos. 9901 and 9902 wait to depart Aurora, Ill., on a side-by-side stunt run to Chicago Union Station on April 14, 1935. *Twin Zephyr* service began one week later. CB&Q



No. 9902, expanded to four cars, idles at Chicago after arriving from Hannibal, Mo., in the early 1950s. For a time the daily round trip, trains 2 and 5, was named *Zephyr 9902*. Wallace W. Abbey



CB&Q 9903, *Mark Twain Zephyr*

In February 1935, while the 9901 and 9902 trains were under construction, the Burlington ordered a fourth *Zephyr*. Its planned route — Burlington, Iowa, to St. Louis — passed through Hannibal, Mo., the hometown of Mark Twain, whose birth centennial was being celebrated that year. CB&Q 9903 would be named for the famous author.

At four cars, the *Mark Twain Zephyr* was the longest *Zephyr* yet, and the first with individually named cars. Fittingly, they honored characters from two Twain novels, *The Adventures of Tom Sawyer* and *The Adventures of Huckleberry Finn*. In a play on the word “engine,” *Injun Joe* was the power car, housing a 660 h.p. Winton 201A diesel, a Railway Post Office section, and a baggage area. *Becky Thatcher* was a baggage-express car (perishables such as eggs and milk were anticipated to be a major source of revenue). *Huckleberry Finn* contained a kitchen, 16-seat dinette, and 36 coach seats. Bringing up the rear was *Tom Sawyer* with 40 coach seats and a 16-seat solarium parlor area. Decorating the end of the last car was a bas relief by Philadelphia sculptor Giuseppe Donato of Twain’s profile, above

an embossed rendition of his signature.

Following completion at Budd in early October 1935, No. 9903 made a brief tour of Pennsylvania, New York, and New Jersey, then headed west for a Chicago–Twin Cities test trip. On October 23, the train, with the baggage-express car removed from its consist, made a run at what was considered the world rail-speed record of 120 mph (PRR’s claim of 127 in 1905 being widely doubted). Running east out of McCook, Nebr., engineer Jack Ford maintained a speed of 121 mph for 7 miles, touching 122 near Oxford. The *MTZ* then ran to Hannibal, where it was dedicated on October 25. After a weekend of excursions, the *Mark Twain Zephyr* entered regular service on Monday the 28th.

The 9903 train spent more than 60 percent of its service life on its original Burlington–St. Louis route, the longest stint being March 1942 to January ’53. Other assignments saw it work at least five other routes for periods ranging from six weeks to four years. It was retired in April 1958 after 22½ years of service. More than six decades later, the *MTZ* would be reborn in Wisconsin [page 92].



The *MTZ*’s obs car displays the bas-relief portrait of Mark Twain above the author’s signature at West Quincy, Mo., in 1952. Philip A. Weibler



No. 9903 worked a variety of runs during its life, not always under the *Mark Twain Zephyr* name. In this June 1956 view, it's at St. Joseph, Mo., when it was on a nameless Galesburg-Quincy-St. Joseph schedule. Dick Rumbolz, Krambles-Peterson Archive



CB&Q 9903 curves out of St. Louis Union Station at the start of a *Mark Twain Zephyr* run to Burlington, Iowa, on July 4, 1949. It held this assignment for more than half its career. Harold E. Williams



On October 19, 1962, near the start of its 17-year spell on the Old Threshers' grounds at Mt. Pleasant, Iowa, the *MTZ* languishes beside the Midwest Central Railroad's narrow-gauge track.

R. T. Riebe, Brian Schmidt collection



CB&Q 9905, named *Zephyrus*, heels to the curve on the east side of Aurora, Ill., with the *Afternoon Zephyr* for Minneapolis in June 1937. This is the original configuration of the 1936 *Twin Zephyrs*: a diesel locomotive ("motor" in CB&Q parlance) and six articulated cars. L. E. Griffith

E5 9911A *Silver Pilot* has baggage car *Olympus* and the "Train of the Goddesses" in tow at Princeton, Ill, in 1948, not long after the 1936 *Twins* became the *Nebraska Zephyr*. Both the diesel and the articulated train set run occasionally at the Illinois Railway Museum. CB&Q



CB&Q 9904 and 9905, *Twin* *Zephyrs* (1936)

When the 1935 *Twin Zephyrs* proved shy on seating capacity, Burlington knew that simply adding a car to each consist, as it did with various early *Zephyrs* over the years, would not suffice. Entire new trains were needed.

The 1936 *Twins* were cut from *Zephyr* cloth, but they incorporated key advances over the first four trains. First, the power cars — dual-engined, 1,800 h.p. locomotives that internally forecast the first E units of 1937 — were not articulated with the train but joined to it by standard couplers. Thus, a problem with the propulsion system need not sideline the whole train — a substitute locomotive could be used. Also, in busy times, capacity could be augmented by coupling standard cars between the locomotive and the train.

The new *Twins* had significantly more capacity and amenities than trains 9900–9903. With six passenger-carrying cars (head-end-power/lounge, two coaches, full diner, parlor, and parlor/observation), each new *Twin* had seats for 120 coach and 46 first-class passengers. Even this wasn't enough, so in 1937 a dinette/coach was added, boosting total revenue capacity to 222. The 1936 trains continued what the *Mark Twain Zephyr* had started by having named cars. One set, led by “motor” No. 9905 *Zephyrus*, had cars named for male Greek and Roman gods; No. 9904 *Pegasus*' train bore the names of female deities. The consists were known as the “Train of the Gods” and “Train of the Goddesses.”

The new *Twin Zephyrs* officially entered service on December 18, 1936. Eleven years later, in fall 1947, the trains were replaced by all-new consists of Budd-built conventional (non-articulated, 85-foot) cars. Several of these sported Vista-Domes, incorporating a feature CB&Q had pioneered when it rebuilt a pre-war car at its Aurora (Ill.) shops in 1945.

As *Twin Zephyr* passengers were enjoying Mississippi River views from their dome seats, the 1936 trains were settling into a new assignment: the Chicago–Lincoln *Nebraska Zephyr*, inaugurated November 16, 1947. Motors 9904 and 9905 powered the *NZ* at first, but soon gave way to E5s as the shovel-noses were put into more general use, converted to booster units, and then retired. Although at times combined with other trains, the seven-car sets remained intact until 1963, when declining patronage prompted the removal of two cars from each train. Finally, having outlasted all other 1930s *Zephyr* equipment, the pair was removed from service and stored in June 1968. The Train of the Gods went to Saudi Arabia, while the Goddesses found a haven at the Illinois Railway Museum [page 84].



Fifteen years after the top photo on the opposite page, motor 9905 has been put into the general passenger pool and converted to a B unit. It's at Omaha with an E7 on September 13, 1952. Charles E. Winters



Train 11/35, the combined *Kansas City Zephyr/Nebraska Zephyr*, swings through Mendota, Ill., in June '66. The three *KCZ* cars are bracketed by a gaggle of mail-express cars and the five-car *NZ*. Craig E. Willett



CB&Q 9906 and 9907, *Denver Zephyr*

Burlington and Union Pacific were fierce rivals for Chicago–Denver traffic. Accordingly, both carriers planned overnight streamliners for the route, descendants of CB&Q 9900 and UP M-10000. When it looked like UP's *City of Denver* would enter service before Burlington's *Denver Zephyr* was ready, Ralph Budd's road worried that it might lose a lucrative mail contract.

So on May 31, 1936, CB&Q put two of its existing streamliners on the route, the *Pioneer Zephyr* and the *Mark Twain Zephyr*, calling the service the *Advance Denver Zephyr*. Passenger accommodations on these trains were hardly suitable for a high-profile overnight service — but in this case the trains' Railway Post Office facilities were their real asset. So was their speed: Nos. 9900 and 9903 made the 1,034-mile run in 16 hours, significantly faster than previous steam schedules. They held the fort until the full trains entered service on November 8, 1936.

Just before that, however, Burlington staged a record run that was perhaps even

more impressive than the *Pioneer Zephyr's* had been. On October 23, a six-car *DZ* consist ran nonstop from Chicago to Denver (climbing about 4,700 feet as it went) in 12 hours 12½ minutes. Speed peaked at 116 mph, and the *average* was 83.3 — nearly 6 mph better than No. 9900's pace on its “downhill” run.

The two *Denver Zephyr* train sets represented the apex of the shovel-nose era. At 10 cars each, they were the longest *Zephyrs* to date. The big consists each required two power units, another first: 1,800 h.p. 9906A *Silver King* and 1,200 h.p. 9906B *Silver Queen* pulled one train; 9907A *Silver Knight* and 9907B *Silver Princess* headed the other. The *DZ* sets were the first *Zephyrs* with sleeping cars (Pullman's objections to the Budd-built cars led to a federal anti-trust order that resulted in the break-up of Pullman as a sleeping-car-building and -operating monopoly). In addition to section and room sleepers, the *DZ* carried a head-end-power/RPO/baggage car, baggage/crew dorm/lounge, coaches, diner, and a parlor/buffet/observation — all with *Sil-*

*ver-*prefix names, launching a CB&Q tradition.

The trains also took a further step away from articulation. The locomotives were separate from their cars, as the 1936 *Twin Zephyr* power had been. In addition, only 7 of the *DZ's* 10 cars were articulated, in groups of 3, 2, and 2. CB&Q, like other railroads operating similar equipment, was realizing that the weight savings and other advantages of articulation were offset by its lack of flexibility.

The *Denver Zephyr* was a resounding success, prompting the addition of two cars to each consist before 1940. In 1956, after two decades of hard use, the old trains were replaced with all-new sets of conventional cars — some with Vista-Domes — from Budd. The cab and booster locomotives were replaced by E units in the late 1940s, working other assignments until they were retired in the mid-1950s. The *DZ* was the last major passenger train to be completely re-equipped at a stroke. Many of the 1936 cars continued running for another decade between Denver and Dallas as the *Texas Zephyr*.

Motors 9906A *Silver King* and 9906B *Silver Queen* pose with a brand-new 10-car *Denver Zephyr* consist in 1936. Additions in 1938 and '39 made the trains 12 cars long. CLASSIC TRAINS collection



Electro-Motive Corp. employees pose proudly with the 9906A and B units at the builder's brand-new La Grange (Ill.) plant on October 16, 1936. Electro-Motive



The 13-year-old *Denver Zephyr* eases past dated-looking heavyweight cars during its arrival at Chicago Union Station on July 3, 1949. Louis A. Marre collection



Just before departure for Chicago, the *Denver Zephyr* idles beside its rival, Union Pacific's *City of Denver*, at the Mile High City in the 1940s. William C. Moore



CB&Q 9908 *Silver Charger* stands for a photo with coaches *Silver Leaf* and *Silver Eagle* and diner/parlor/observation *Silver Star* — the short-lived *General Pershing Zephyr*. Unlike earlier *Zephyrs*, the cars had full-sized cross-sections. CB&Q



North of Hannibal, Mo., *Silver Charger* trundles south toward St. Louis at the head of CB&Q train 44 just before 6 p.m. on June 1, 1962. M. S. Pellon, Brian Schmidt collection

Since 1966, No. 9908 has been at St. Louis' Museum of Transportation. On August 31, 1980, it stands with Southern 6100, the first FT, later restored to its original GM No. 103 identity.

Paul H. Dalman, Brian Schmidt collection



CB&Q 9908, *General Pershing Zephyr*

The last shovel-nose *Zephyr* built was CB&Q 9908, the locomotive for the St. Louis–Kansas City *General Pershing Zephyr*. Launched on April 30, 1939, the GPZ consisted of power/baggage unit 9908, named *Silver Charger*; coaches *Silver Leaf* and *Silver Eagle*; and diner/parlor/observation *Silver Star*. All rode on two trucks and were joined by standard couplers.

Silver Charger embodied some key advances. Behind its standard shovel-nose was an Electro-Motive 567 engine, not a Winton 201A. The unit's lead truck was a variant of the A1A type developed for E units in 1937; the trailing truck was unpowered. All the train's trucks but the lead one had disc brakes, a new feature that became standard for passenger cars.

Less than two months after launch, CB&Q extended the GPZ's route to Lincoln, Nebr., and — taking advantage of its flexible consist — the train began carrying cars for the new *Exposition Flyer*. The loads were too much for No. 9908's 1,000 h.p. engine, though, and the unit was reassigned. It spent most of its life hauling heavyweight cars on local trains, and even working in freight service. It ran until 1966, when CB&Q donated it to the Museum of Transportation outside St. Louis. Obs car *Silver Star* survives too — in Australia!

B&M 6000, *Flying Yankee*

The phenomenal success of the *Zephyrs* helped push the railroads toward diesel power and streamlining — but it did not spawn fleets of similar trains throughout the nation. Indeed, there was only one outside Burlington territory, and it was the second *Zephyr*-type train built: Boston & Maine 6000, the *Flying Yankee*.

B&M announced its order for a new train on June 8, 1934, just two months and one day after Budd completed CB&Q 9900. The New England train would be a near duplicate of the *Zephyr*, consisting of three articulated cars, powered by a 600 h.p. Winton 201A diesel engine, and measuring 199 feet long. Unlike the Q's train, B&M 6000 would have coach seats

in all three cars: 28 in the lead car (plus a baggage section and a buffet), 60 in the second, and 32 in the rear (plus a 12-seat solarium lounge). Also unlike most of the CB&Q trains, B&M's "Silver Slipper" retained its as-built configuration for its entire 22-year career.

B&M 6000 entered service April 4, 1935, on the Boston-Portland-Bangor, Maine, *Flying Yankee*, replacing conventional steam-powered consists. This was a joint operation with B&M affiliate Maine Central, and the power car carried the names of both roads on its sides, with FLYING YANKEE on its nose.

Other assignments out of Boston followed: to Littleton, N.H., as the *Mountaineer* (twice); to

White River Junction, Vt., as the *Cheshire* (twice); to Troy, N.Y., as the *Minuteman* (twice); and to Portland as the *Businessman*.

B&M retired the train in 1957 and transferred it to the narrow-gauge Edaville Railroad tourist line at South Carver, Mass., where it remained on display, in deteriorating condition, for 36 years. As part of an ambitious restoration plan, the train was moved to New Hampshire in 1993, acquired by the state in '96, and moved again in '97. But after project leader Robert Morrell's death in 1998, things unraveled. Since 2005 the historic streamliner has been stored at the Hobo Railroad in Lincoln, N.H., its future uncertain. ■

Backed by old heavyweights and shiny new RDCs, B&M 6000 is working as the *Businessman* from Portland in this mid-1955 view at North Station, Boston. George Krambles, Krambles-Peterson Archive



No. 6000 had several names in its 22-year career. Here, as the Boston-Littleton, N.H., *Mountaineer*, it traverses New Hampshire's Crawford Notch in the early 1940s. A. O. Wilkins



March 1951 finds B&M's "Silver Slipper" running as the *Cheshire* through a snowy cut near Surry, N.H. CLASSIC TRAINS collection

THE ULTIMATE ZEPHYR

The *California Zephyr* was scheduled for scenery, and had the equipment to showcase it

By Karl Zimmermann

“The most talked-about train in the country.”

This was the public-relations-office-created yet accurate tagline applied to the nonpareil *California Zephyr* in its flush years by its trio of operators: Chicago, Burlington & Quincy, which carried the train from Chicago to Denver; Denver & Rio Grande Western, running on to Salt Lake City; and finally Western Pacific to Oakland, with ferry (and later bus) connection to San Francisco. From the moment of its March 1949 inauguration, the train's fame only grew, and the fight that finally resulted in its partial discontinuance probably merited more ink than its inauguration. Indeed, it was still the most talked-about train, in spades.

There are so many things one could say about the CZ. It was famous for being “scheduled for scenery,” a priority inherited from its immediate predecessor, the *Exposition Flyer*. And what scenery! It had the Colorado Rockies and California's Feather River Canyon, plus Utah's Soldier Summit in the Wasatch Mountains. Other railroads certainly touted their scenery, but the CZ's claim that scenery drove its schedule was probably unique. Many trains had route brochures (including Amtrak, until it inexplicably discontinued them a few years ago), but the CZ's “Vista-Dome Views” [page 65] seemed to me the *ne plus ultra* of that genre. For one thing, it listed both westbound and eastbound times for all highlights cited, not just for station stops. That was playing guts ball, at least as seen from the perspective of today's shoddy time-keeping foisted on Amtrak.

The *California Zephyr* was beautiful,

though not colorful, on the outside at least, its Budd Company-built, unpainted fluted stainless steel, *Silver*-named cars falling right in a *Zephyr* tradition that had begun in 1934 and climaxed in 1947 with the final version of the Chicago–Minneapolis/St Paul *Twin Cities Zephyrs*. In essence, the *California Zephyr* was a long-distance, overnight version of those trains, which sported five Vista-Dome cars as the CZ would. In its consist, the CZ was pure *Zephyr*, but the best ever.

With its western endpoint of Los Angeles (and thus Hollywood), Santa Fe's all-Pullman *Super Chief* from Chicago was the preeminent “train of the stars” and movie magnates. Nonetheless, at its christening on March 19, 1949, the CZ set out to capture a bit of that stardust. Movie actress Eleanor Parker, whose fame would be more fleeting than that of the train she christened, whacked a feather-bedecked EMD F3's nose with a ribbon-girt bottle of local Champagne. Ms. Parker nailed it in a single swing, by superstition good luck for the *California Zephyr*, which did have a happy, if too-short, life. The train would be a consistent winner; its operators claimed that the CZ's 89.4 percent occupancy rate over its first decade was a record for any transportation entity. It remained so popular even in its dying days that WP, the disenchanted member of the operating troika, struggled to get Interstate Commerce Commission approval to dump it.

The 11-car consist stretched out that christening day on San Francisco's Embarcadero in front of the Ferry Building was led by a trio of



WP F3 diesels. (Almost without exception, Fs would be the WP power until the end. Purpose-built A-B-A F3 sets were the CZ's early power on the Burlington, but E units soon took over. Alco PAs in evolving paint schemes started out on the Rio Grande, but were replaced before long by F units.) Behind a nameless baggage car were 10 passenger-carrying cars, all carrying *Silver*-prefixed names, a *Zephyr* tradition: three Vista-Dome coaches, a Vista-Dome buffet-lounge, a 48-seat diner splicing four sleepers (three 10-roomette/6-double-bedroom cars and one 16-section), and the train's signature car, the 3-double

bedroom/1-drawing room Vista-Dome buffet/lounge/observation.

On its memorable tailsign, an etching of the Golden Gate Bridge glowed the appropriate color, framed by CALIFORNIA ZEPHYR in tubular neon. Such artistry abounded inside the cars: Western murals by Mary Lawser on the bulkheads of the coaches, cut linoleum fronting the under-dome bars of the buffet-lounges, which also featured wrap-around Russell Patterson murals. A wide variety of restful pastel shades were chosen for walls throughout the train.

Over much of the train's life this was the

inviolable consist, with two significant changes. In 1952 a 6-double-bedroom/5-compartment sleeper was added, and four extra sleepers (including a Vista-Dome observation car) arrived from Budd to be pooled with the *Ak-Sar-Ben Zephyr*. (The CZ's long Chicago lay-over allowed one car to do the work of two in this pool.) Later these became valuable extra cars for the CZ.

New look for the CZ

Eventually, as part of the "New Look for the *California Zephyr*" initiative in 1958, the railroads conceded that in spite of their lower



At Tabernash, Colo., five Rio Grande F units climb east toward the Moffat Tunnel, about 10 miles ahead, with a standard 11-car *California Zephyr* consist. Laurel Zimmermann



Three F3s, CB&Q's original power for its portion of the CZ route, performed tests with the new cars near Plano, Ill., March 16-18, 1949. L. E. Griffith

fares, section sleepers had lost their allure, as tastes had veered away from these curtain-draped, semi-private accommodations in favor of roomettes and bedrooms. The cars were withdrawn that fall, began to reappear a few years later in peak season, and were rebuilt as coaches and came back in that configuration for the 1966 summer peak.

All of these additional cars had the same wiring as the originals, requisite to carry music and announcements to sleeping rooms and coaches throughout the train. An off-line car would not only lack that amenity itself but also block it for all the cars beyond it. Eventually that would happen, as in the train's last years its summer consists swelled with the addition of tour groups from such operators Four Winds.

So the train, beautifully dressed in silver, had state-of-the-art cars and arguably the most abundantly fine rail scenery in the United States. Then there were the Zephyrettes, hostesses extraordinaire, a tradition that originated in the mid-1930s aboard Burlington's *Denver Zephyr* and *Twin Cities Zephyrs*. The segue to these women from the through wiring of the cars is not entirely random, as without that continuity one of their most important duties would have been impossible.

The crews of other elite trains — Northern Pacific's *North Coast Limited* was a sterling example, with its "Sues" — included women as stewardess-nurses, hostesses, or the like, but the Zephyrettes were the longest lasting and probably most noted. Their home base was a private room in the mid-train Vista-Dome buffet-lounge car, next to the space with the communications board, at which they made announcements, including heads-ups on points of interest, and set in motion the recorded music that provided throughout the train a peaceful undertone to the muted clatter of wheels on rail.

The Zephyrettes would be out and about through the train every two hours or so, and on one of these passes would take dinner reservations. They might lend a hand to an overwhelmed mother, help an ailing passenger, or just provide a moment of conversation for a solitary traveler. Always smartly dressed in blue suit and white blouse, from slightly stodgy to fairly mod as the years rolled by, the Zephyrette was very much a personage from the train's inaugural run to its last. Her presence was one of many ways in which the train



Sun glints off the Colorado River and the silvery cars of the eastbound *California Zephyr* in Gore Canyon, one of the highlights of the Rio Grande's scenic Moffat Route. Karl Zimmermann

that died in March 1970 was little changed from the one born 21 years earlier.

Scenic route via Moffat Tunnel

If the 1949 train's hardware was pure *Zephyr*, its route was a direct inheritance from the *Exposition Flyer*, inaugurated on June 10, 1939, roughly 10 years before the *California Zephyr*. The CB&Q-D&RGW-WP *Exposition Flyer* was intended to be a temporary train, triggered by the Golden Gate International Exposition. Set on man-made Treasure Island in San Francisco Bay, this fair, which assembled artifacts from Asia and Polynesia, was projected to draw enough tourists to justify the three railroads' challenging the much faster Chicago & North Western-Union Pacific-Southern Pacific Overland Route's lock on the Chicago-San Francisco market. Making it possible was Rio Grande's comple-

tion in 1934 of the 38-mile Dotsero Cutoff, which connected that road's former main line through the Royal Gorge and over Tennessee Pass with the Denver & Salt Lake's Moffat Tunnel line, saving an all-important 175 miles.

"The Scenic Way across America," blurbbed the *Exposition Flyer's* inaugural brochure, a tag line that lasted through the train's career and was handed on to the CZ, and this did offset the Overland Route's decided speed advantage. The train's schedule was advertised as "arranged to give travelers daylight views from their car windows of some of the finest scenery in Western America," but its east-bound version really did that only in part, traversing Feather River Canyon in the predawn hours. It remained for the *California Zephyr* to perfect this concept.

Though inaugurated early in the streamliner era, the *Exposition Flyer* was a heavy-

The Rio Grande used Alco PAs on the CZ before switching to F units. At Ironton, Utah, an A-B-A trio in their original black and gold heads a March 16, 1949, preview trip that originated in Salt Lake City. Photo, Otto Roach, State Historical Society of Colorado collection; brochure, Karl Zimmermann collection





weight train, with standard Pullmans and chair cars between San Francisco and both Chicago and St. Louis, tourist Pullmans San Francisco–Chicago, and an observation-lounge for Pullman passengers. A diner served “delicious meals” with lower-priced options for coach and Tourist Pullman patrons. Before its replacement by the *California Zephyr*, the *Exposition Flyer* did put a toe in the waters of streamlining. As Budd delivered CZ equipment beginning in early spring 1948, the cars, Vista-Domes especially, began to infiltrate the *Flyer*’s consist, occasionally nearly taking over.

The CZ was the quintessential *Zephyr*, though not the final one. That title belonged to the 1956 *Denver Zephyr*, the last completely new consist (excepting its head-end cars) built — as all the *Zephyrs* were, by the Budd Company — for any train in the country. It was a virtual clone of the CZ, adjusted — three Vista-Domes instead of five, a Vista-Dome buffet-lounge observation with parlor seats rather than sleeping rooms — for a much shorter route with a lower percentage of day-time running. Its observation car, blunt-ended rather than bullet-shaped, probably anticipated mid-train operation though I don’t believe that routinely happened in *DZ* service.

There was definitely cross-fertilization between the two trains, which were route-mates from Chicago to Denver. The *Denver Zephyr*’s mid-train under-dome buffet-lounge was felicitously themed as a Chuck Wagon, with “DZ” brands on the tables, lunch counter, paper napkins, sugar packets, and china created for this service. There were two murals by Mary Lawser and a playful die-cut menu showing a chuck wagon and “DZ.” brands on what appears to be a slab of wood.

In the late ’50s, when the CZ received its “New Look” sprucing up, the success of the *DZ*’s Chuck Wagon led to the creation of the Cable Car Room beneath the dome of the mid-train buffet lounge. Themed after San Francisco’s most famous conveyances, the room had photo-murals of views framed by cable-car windows, a pair of glass-encased models of the cars, and a carpet woven to resemble cobblestones and tracks. It’s this version of the space that I remember.

A personal connection

It’s impossible for me to cover the *California Zephyr* entirely in the third person, so entwined has the train been with my life for most of its septuagenarian length. It was the subject of my first book. Most summers of my childhood and youth included a trip with my mother from New Jersey to Salt Lake City to visit her mother, her siblings, and my cousins. We sometimes rode the *Zephyr*, although the blur of memory as often puts us on the Union Pacific’s *City of Los Angeles*. However, one family CZ memory, of the last Salt Lake City train trip with either parent, is crystal clear.

With my parents I’d flown to Salt Lake to



Clockwise from top: Passengers look ahead from the CZ’s rear dome. A Zephyrette makes an announcement from the communications room. Dad and daughter enjoy the view from a 16-roomette sleeper. CLASSIC TRAINS collection; State Historical Society of Colorado collection; Hedrich-Blessing for CB&Q

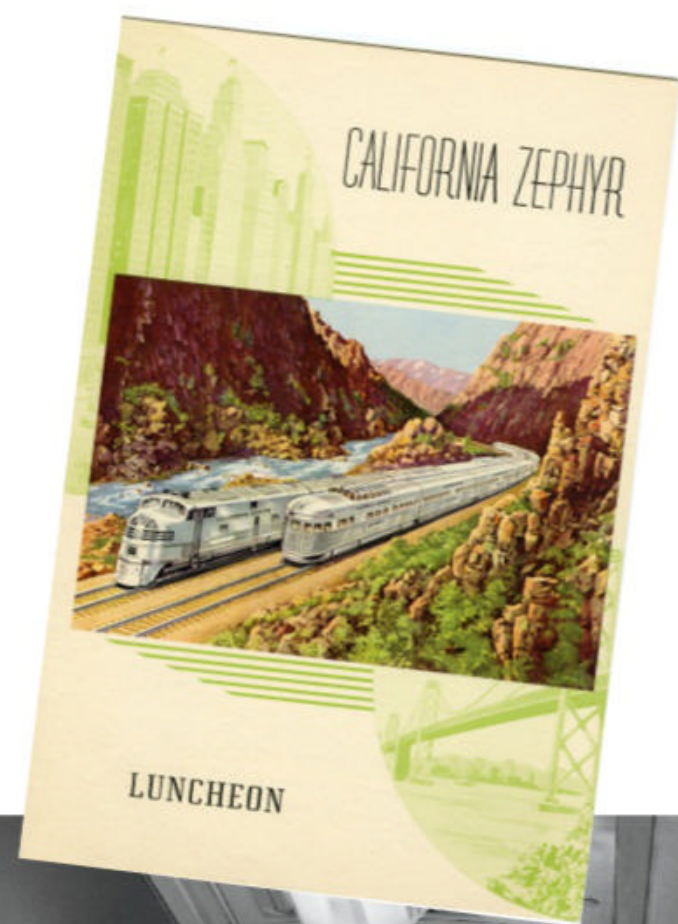
spend Thanksgiving with my aging grandmother and the rest of the family. It was 1965, I was just a few months into my career teaching English in New Jersey, and Dad was still working. The plan had been to fly back home, but when news of a heavy snowstorm reached us, our thoughts turned railward, since passenger trains then retained their reputation as an all-weather travel alternative. In retrospect, I think for my father and me the allure of a train trip together was as operative as blizzard fright, though for a new teacher not showing up for class would have been a bad idea.

While my memory is generally spotty, in that continuum of personal history there are occasional random pools of light. I see Dad and me sitting in the oversize, rear-facing “railfan seats” in the Vista-Dome buffet-

lounge-observation. Dad was wearing a dark suit, I a sport jacket, for that was the custom of the times. I had a paperback — *Anglo-Saxon Attitudes*, a novel by Angus Wilson — in my lap.

“Why are you reading instead of looking at the scenery?” Dad asked — a good question since we were in the midst of a multi-canyon passage along the Colorado River. Sheepishly, I set Mr. Wilson aside for another time.

That evening, with the train stopped in Denver Union Station to trade Rio Grande F units for Burlington Es, we climbed down from our sleeper to get a breath of air before dinner — just as we’d done in August 1960. That time my mother was traveling from Salt Lake with Dad. My friend and neighbor Roger Cook and I had boarded at Grand



The 11-car CZ symphony ended on a high note: a dome-sleeper-buffet-lounge-observation, occupied in this publicity photo by passengers and a Zephyrette. Hedrich-Blessing for CB&Q

An early menu cover (inset) depicted CZ consists meeting on D&RGW in the Rockies — but powered by CB&Q E units. Karl Zimmermann collection





Western Pacific F3 802 and two F3Bs brought a *California Zephyr* consist to San Francisco's Embarcadero for the train's christening ceremony on March 19, 1949. Al Silveria for Cal-Pictures

Junction, Colo., for the trip east. (Earlier in the week Dad and I had flown a Frontier Airlines DC3 from Salt Lake to Grand Junction so he could rent a car for Roger and me to drive to Durango and environs for our introduction to the Rio Grande narrow gauge. Roger had a license but was too young to rent.)

It was a warm evening, but we still relished the fresh air. My parents smoked, though in those days there was no problem doing that aboard. We were watching a car knocker working under our sleeper, blue flag up, when suddenly the train lurched into motion. As he leapt to safety, yelling and slamming the battery hatch closed, Roger and I jumped aboard

as the train gathered speed.

"Don't get on!" the conductor warned my parents. "The train's not leaving!" Bad advice. We paused in the yard for a few minutes, and I'm sure our red markers seemed tantalizingly close to my parents on the station platform. Then we were on our way east.

The next part of the story I know from Dad. The stationmaster first said that they'd have to wait for the next day's train. "We have a young son and his friend aboard," Dad protested, exaggerating our youth. He was a partner in a national accounting firm that claimed the Rio Grande as a client, and that came up in the conversation as well.

In any case, when the train rolled to a stop in what seemed the middle of nowhere on the plains east of Denver, Roger and I had an idea why. Eventually the train moved slowly ahead and stopped again, now blocking a grade crossing. We walked through the train until

Having summited the Sierras near the Nevada state line 45 miles to the east, the *CZ* curves around WP's Williams Loop on its way down to Oakland. Karl Zimmermann



we found an open vestibule with the trap down. Red crossing lights flashed, bells clanged, and there were my parents, getting out of the automobile of some functionary who'd been pressed into rescue service.

Death and rebirth

The *California Zephyr's* attenuated death and complicated rebirth are worthy of another complete article. After years of discontinuance hearings, the ICC finally agreed that operating losses had become too high, for WP especially. On March 20, 1970, 21 years to the day after the CZ's first westbound departure from Chicago Union Station, the last one left. What followed, for years as it turned out, was an unsatisfactory stew of connections at Ogden, Utah, for continuing service to San Francisco. Salvation had seemed at hand in the form of Amtrak, and the expectation was that on inauguration day, May 1,

1971, the *California Zephyr* would be whole again, albeit reaching California via the Southern Pacific, not WP. But only a few days before the deadline, unwilling to give Amtrak *carte blanche* over arguably the most scenic route in the country, D&RGW reneged and chose to run its own train, triweekly between Denver and Salt Lake and Ogden.

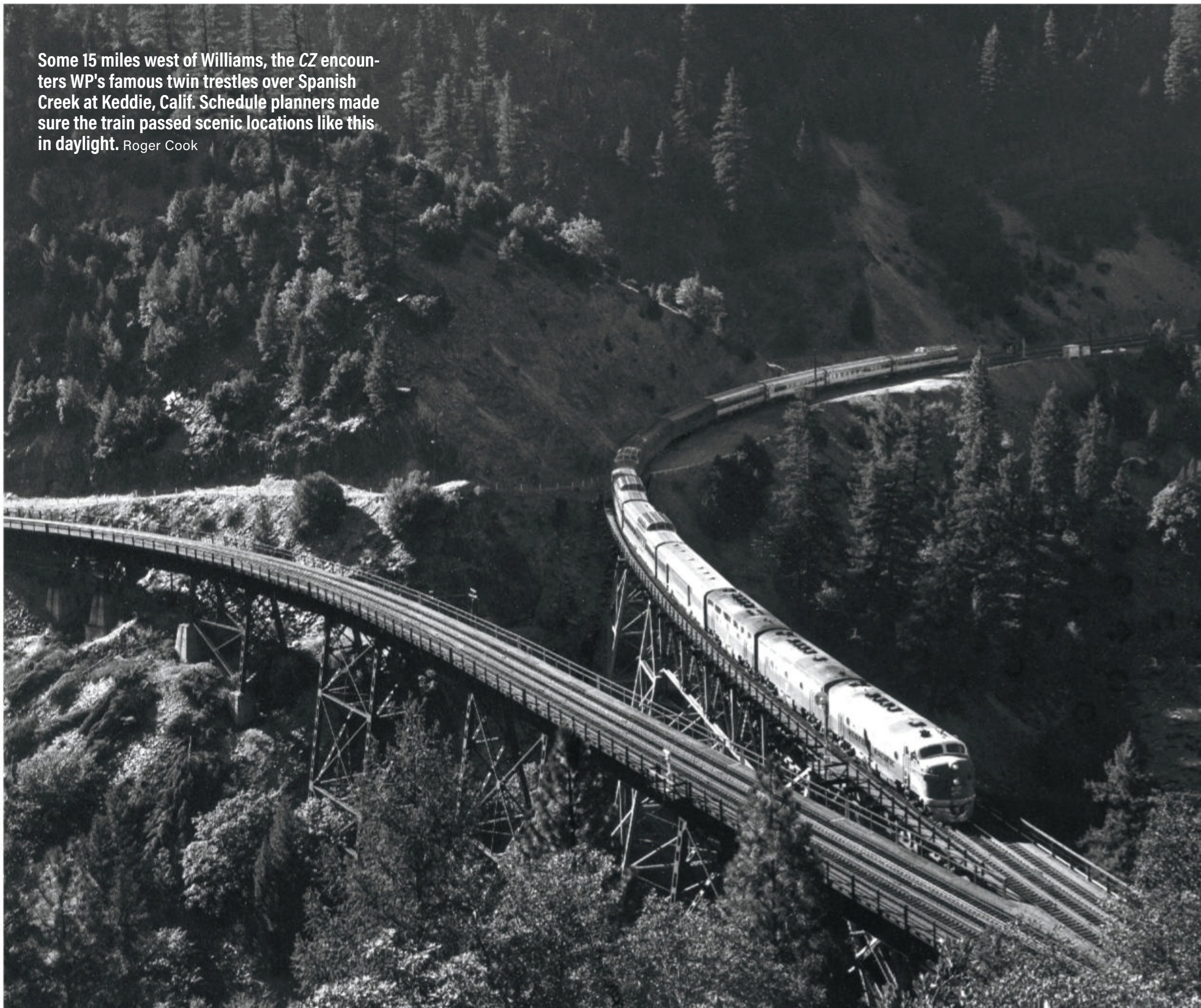
With the real CZ gone, I shifted my loyalty to the *Rio Grande Zephyr*, which utilized D&RGW's share of the CZ equipment pool, whose ownership had been based on mileage. The smallest of the three, Rio Grande's portion nonetheless contained all the essential pieces: Vista-Dome observation *Silver Sky*, diner *Silver Banquet*, coaches both domed and flat-topped, and mid-train Vista-Dome buffet-lounge *Silver Shop*, held as protection for the diner. Not needing a full baggage car, Rio Grande added a non-CZ combine. The train's typical power was a set of two or three

F7s in traditional Grande Gold.

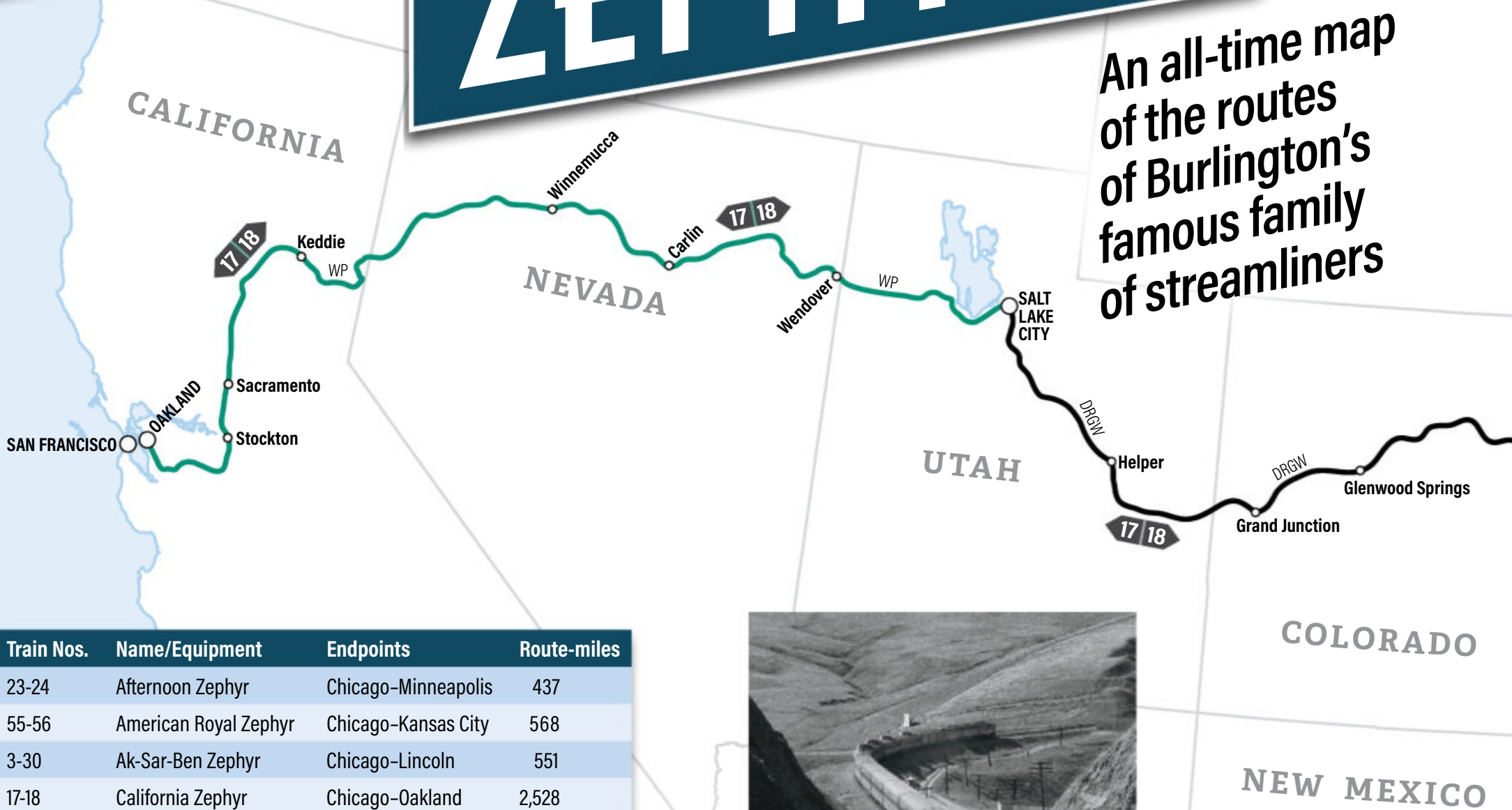
Surprising many critics, and there were plenty at the beginning, the little train carried on until 1983, when D&RGW finally agreed to join Amtrak. A major mud slide at Thistle, Utah, delayed the turnover for more than two months, but on July 6 Amtrak had the *California Zephyr* it had coveted from the beginning. Especially for us traditionalists, the current Superliner consist can't hold a candle to the bounty of the dome-studded, Budd-built equipment that gleamed on the Embarcadero 72 years ago, but we who love riding trains are very glad indeed to have it. ■

KARL ZIMMERMANN, a longtime New Jersey resident, has written numerous articles and books about passenger trains, including CZ: The Story of the California Zephyr (Delford Press, 1972). This is his 22nd article in a CLASSIC TRAINS publication.

Some 15 miles west of Williams, the CZ encounters WP's famous twin trestles over Spanish Creek at Keddie, Calif. Schedule planners made sure the train passed scenic locations like this in daylight. Roger Cook



WAYS OF THE ZEPHYRS



Train Nos.	Name/Equipment	Endpoints	Route-miles
23-24	Afternoon Zephyr	Chicago–Minneapolis	437
55-56	American Royal Zephyr	Chicago–Kansas City	568
3-30	Ak-Sar-Ben Zephyr	Chicago–Lincoln	551
17-18	California Zephyr (with DRGW, WP)	Chicago–Oakland	2,528
1-10	Denver Zephyr	Chicago–Denver	1,034
32-33	General Pershing Zephyr	St. Louis–Kansas City	279
35-36	Kansas City Zephyr	Chicago–Kansas City	568
43-44	Mark Twain Zephyr	Burlington–St. Louis	217
21-22	Morning Zephyr	Chicago–Minneapolis	437
11-12	Nebraska Zephyr	Chicago–Lincoln	551
29-30	Ozark State Zephyr	St. Louis–Kansas City	279
31-32	Pioneer Zephyr	Denver–Cheyenne	120
6-11	Pioneer Zephyr	Galesburg–Quincy	100
3-4	Pioneer Zephyr	Galesburg–St. Joseph	306
41-44	Pioneer Zephyr	St. Joseph–Lincoln	187
3-4	Sam Houston Zephyr (with FWD, RI)	Fort Worth–Houston	283
20-21	Silver Streak Zephyr	K.C.–Omaha–Lincoln	250
1-2	Texas Zephyr (with C&S, FWD)	Denver–Dallas	835
15-8, 561-562	Zephyr-Rocket (with RI)	St. Louis–Minneapolis	583
2-5	Zephyr 9902	Chicago–Hannibal	307



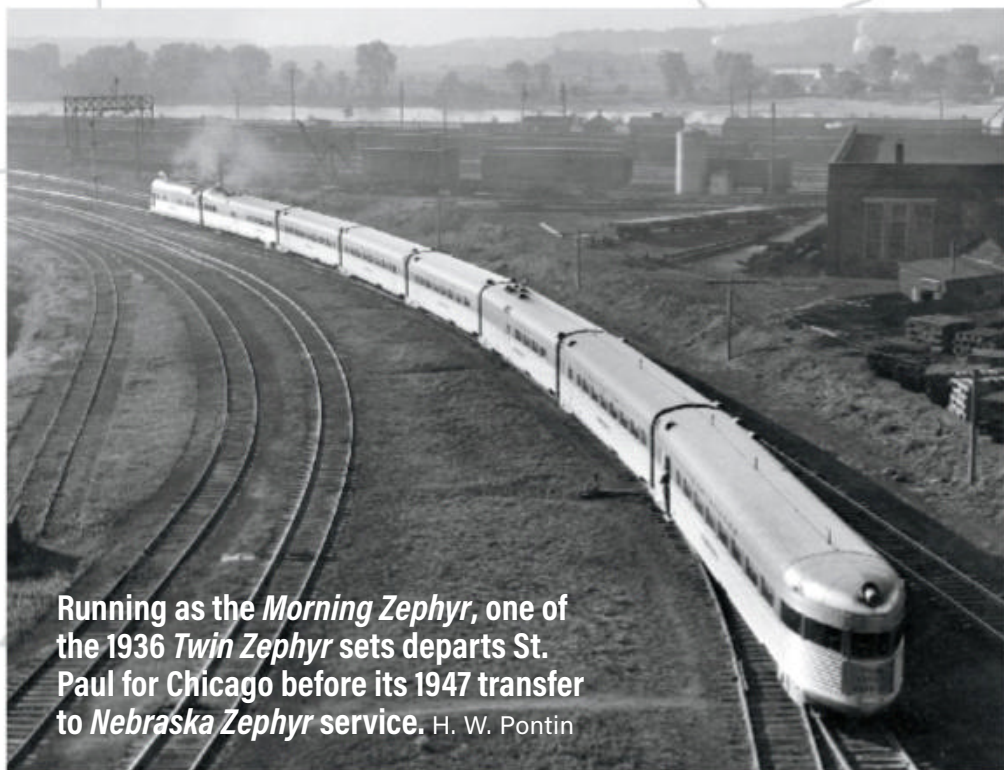
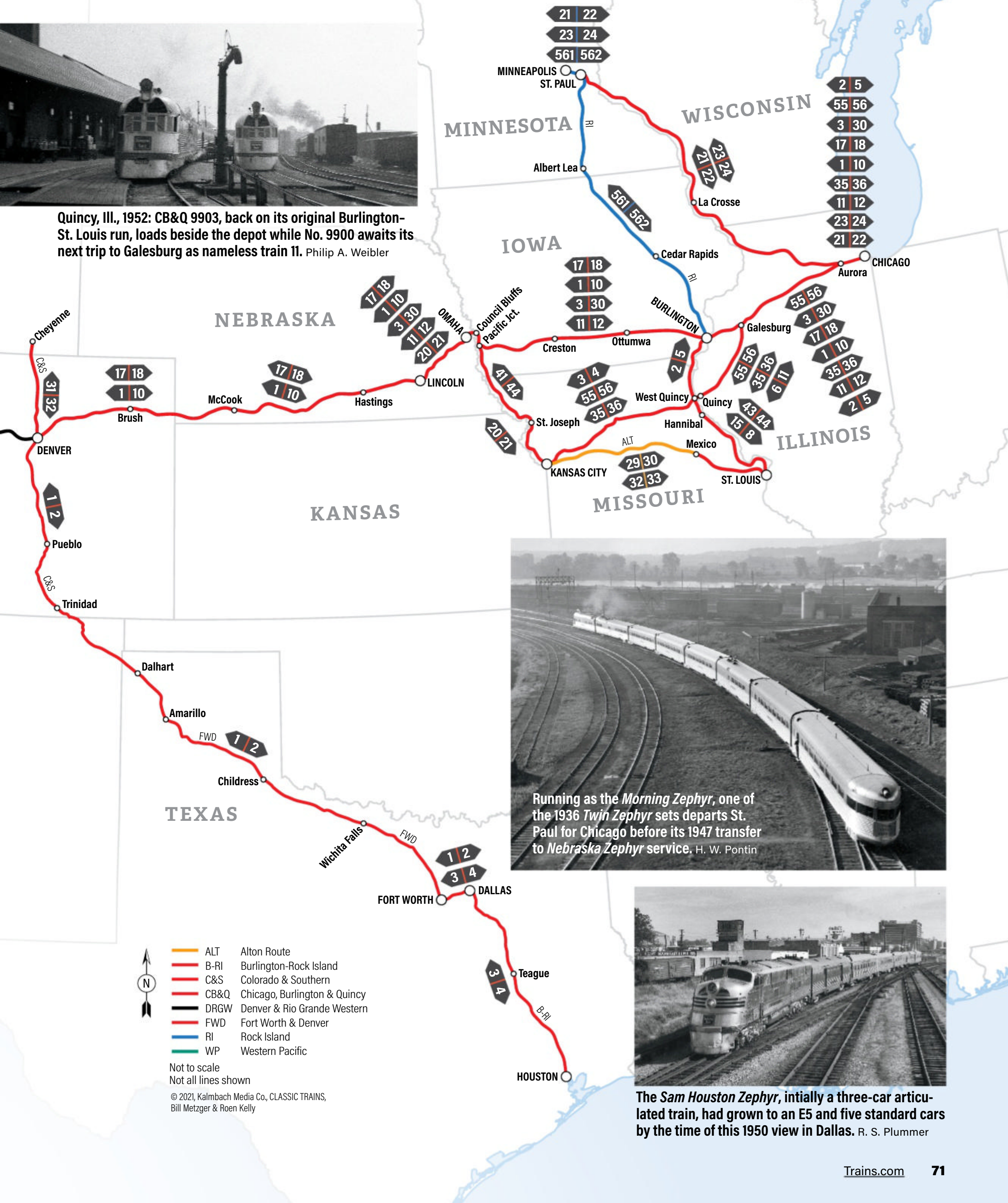
The westbound *California Zephyr* crosses Western Pacific's Altamont Pass between Stockton and Oakland, Calif., in 1953. W. E. Malloy Jr.



Darkroom trickery placed the 1956 *Denver Zephyr*, in reality standing on the Burlington's triple track outside Chicago, in a Western scene. CB&Q



Quincy, Ill., 1952: CB&Q 9903, back on its original Burlington-St. Louis run, loads beside the depot while No. 9900 awaits its next trip to Galesburg as nameless train 11. Philip A. Weibler



Running as the *Morning Zephyr*, one of the 1936 *Twin Zephyr* sets departs St. Paul for Chicago before its 1947 transfer to *Nebraska Zephyr* service. H. W. Pontin



The *Sam Houston Zephyr*, initially a three-car articulated train, had grown to an E5 and five standard cars by the time of this 1950 view in Dallas. R. S. Plummer



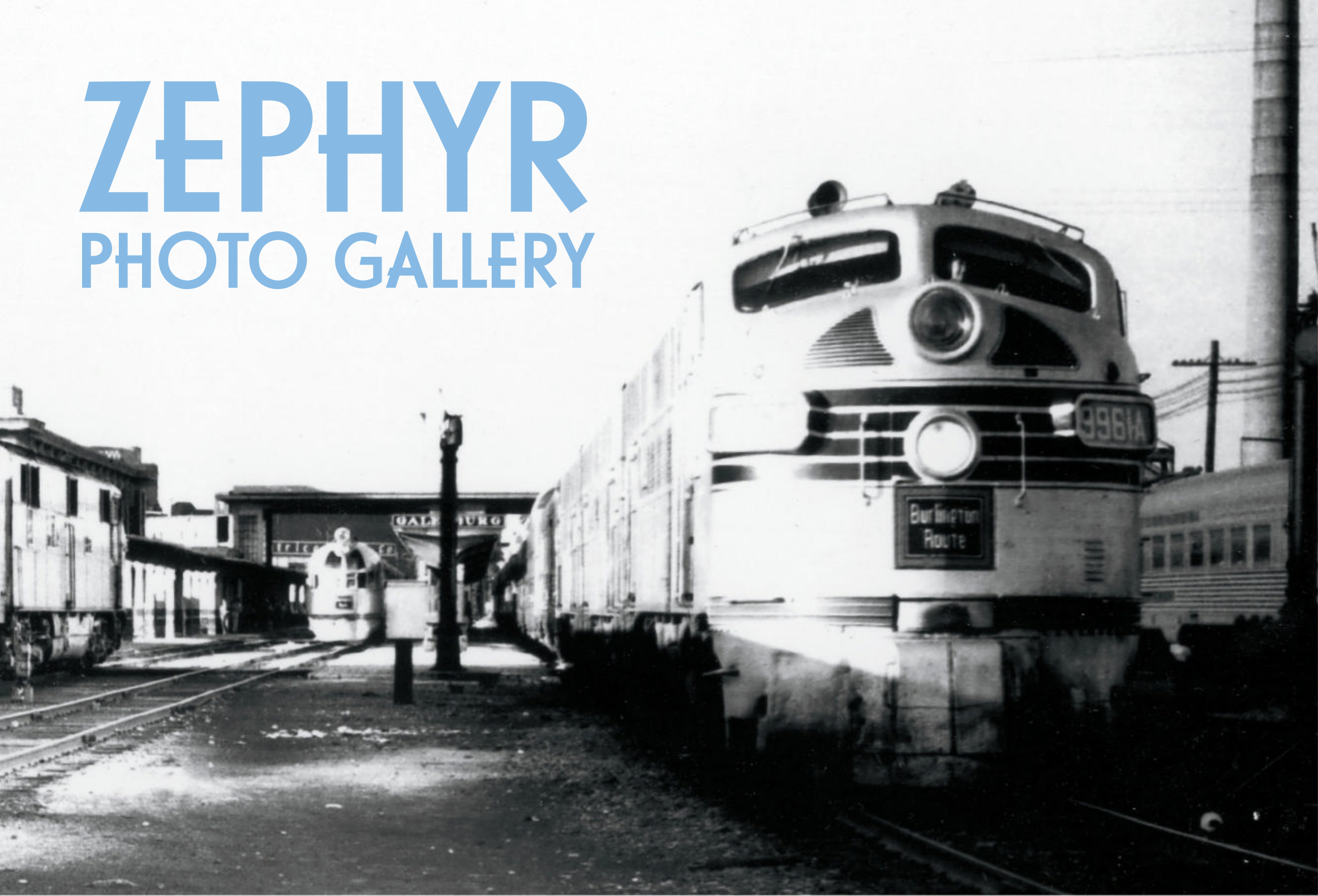
Three Zephyrs gather at Galesburg, Ill., around 6 p.m. in May 1952. From left: An E7 pulls in with the *Nebraska Zephyr* to Chicago; the *Pioneer Zephyr* waits to leave for Quincy; and F3s head up the westbound *California Zephyr*. Robert Milner



Before it was replaced by a new "West Station" on the Missouri side of the Mississippi River, CB&Q's depot at Quincy, Ill., hosts the *Pioneer Zephyr* (left) and *Mark Twain Zephyr* in 1952. The 9900 was holding down a daily round trip from Galesburg, while 9903 was running Burlington, Iowa-St. Louis. Philip A. Weibler

ZEPHYR

PHOTO GALLERY



A dazzling preview of the future, the *Denver Zephyr* slips out of Denver Union Station on November 8, 1936, the first day of service for the deluxe 10-car, partially articulated trainsets. In a little more than 15½ hours, locomotive 9906A *Silver King* will be nosing into Chicago Union Station. R. H. Kindig

ZEPHYR

PHOTO GALLERY



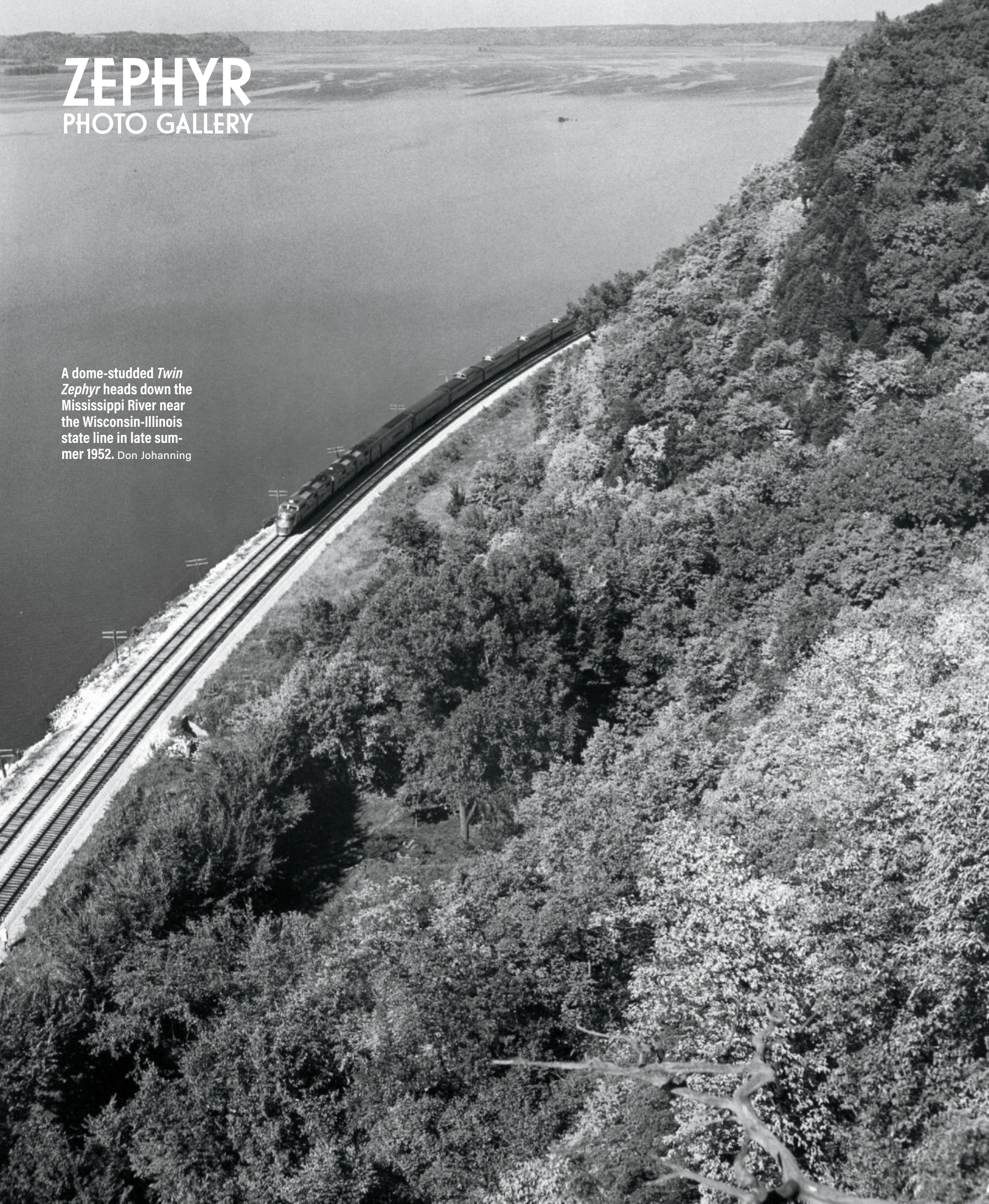
The famous *Pioneer Zephyr*, working as Denver-Cheyenne train 31 on CB&Q subsidiary Colorado & Southern, pauses at Longmont, Colo., on October 15, 1949. The 9900 was on this run for just a few months, fall 1949–spring 1950. Neal Miller

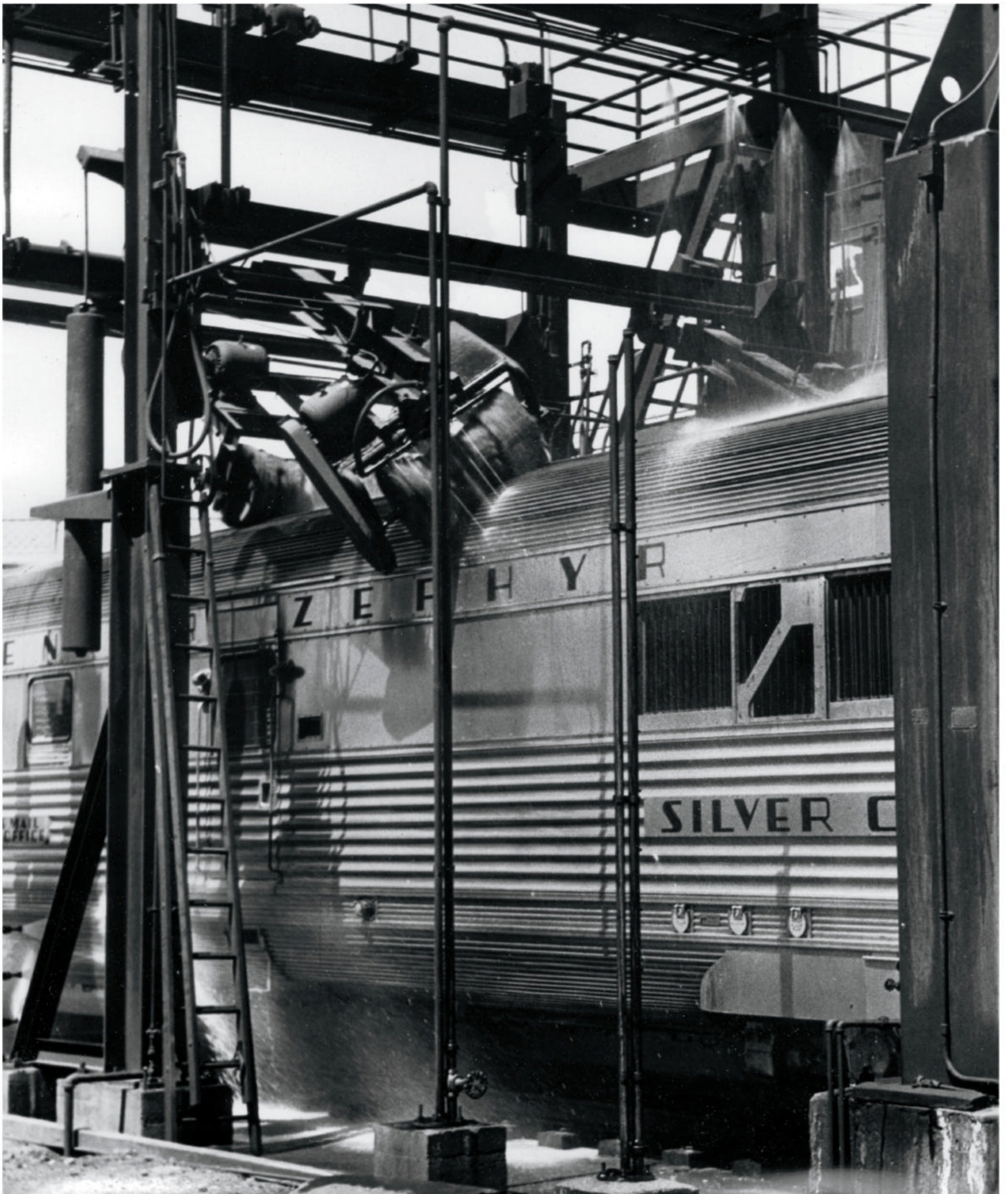


ZEPHYR

PHOTO GALLERY

A dome-studded *Twin Zephyr* heads down the Mississippi River near the Wisconsin-Illinois state line in late summer 1952. Don Johanning





The head-end-power/Railway Post Office car of one of the 1936 *Denver Zephyr* trainsets gets a thorough scrubbing during its layover at Colorado's capital city on June 26, 1949. The *California Zephyr* got the same treatment here, with passengers aboard. Earl Cochran

ZEPHYR

PHOTO GALLERY

At James, Calif., on the Western Pacific about 20 miles east of Oroville, the westbound *California Zephyr* holds the main for a meet with an F7-powered freight. The CZ has only two Fs and three dome coaches this day, just a few weeks before its March 22, 1970, last run. Brian Schmidt collection





After 1939, *Zephyr* power progressed through EMD's E5, E7, E8, and E9 models. On August 5, 1964, an E5 and two E7s (with stainless and painted flanks) lead the Chicago-bound *Morning Zephyr* in St. Paul. Tom Smart, Brian Schmidt coll.



Dome-parlor-observation *Silver Veranda* brings up the rear of an 18-car *Denver Zephyr*, speeding west at Cicero, Ill., on June 11, 1962. This equipment replaced the original, partially articulated 1936 *DZ* consists in 1956. Bob Krone

ZEPHYR

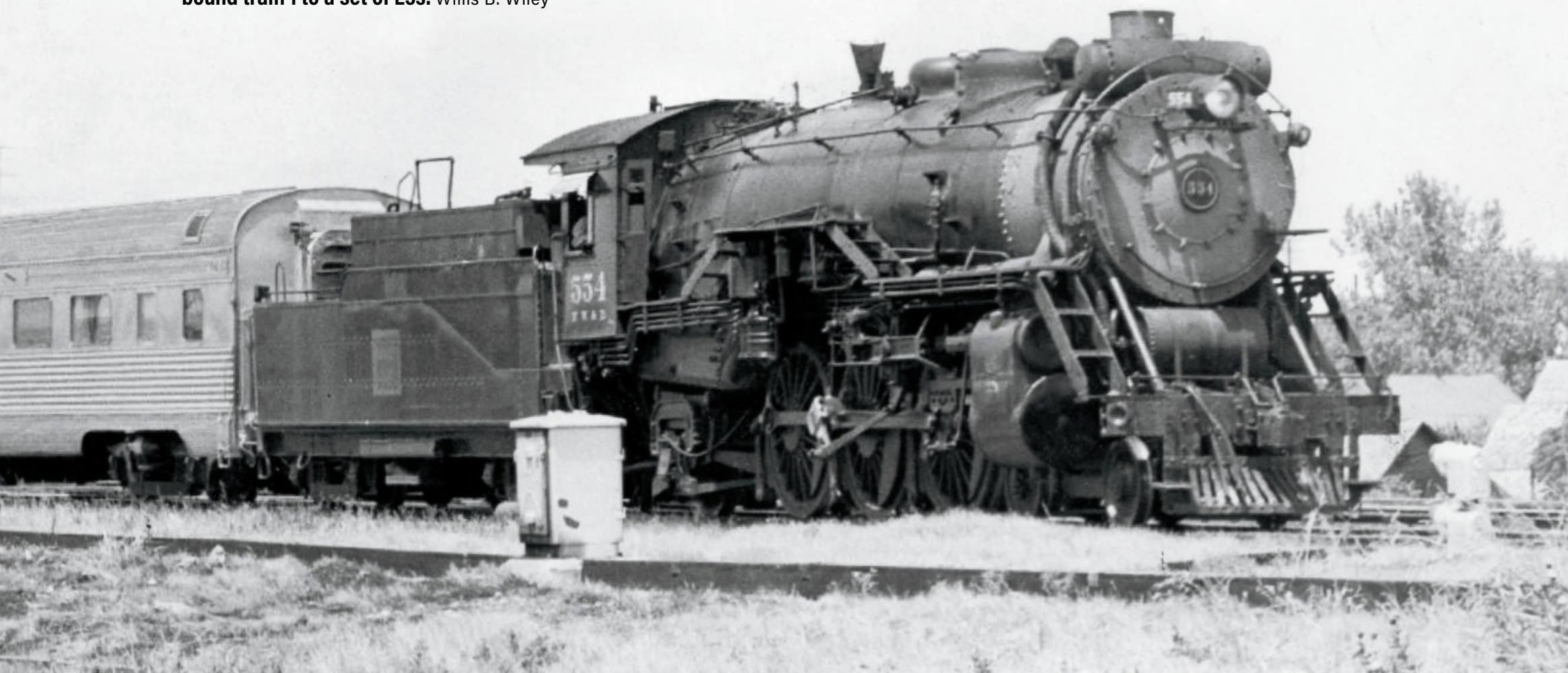
PHOTO GALLERY



CB&Q kept two streamlined 4-6-4s to substitute for the regular diesels as needed on the *Twin* and *Denver Zephyrs*. Hudson 4001 (named, like sister 4000, *Aeolus*), heads a westbound *Twin* at Aurora in September 1938. Four conventional cars are cut in ahead of the usual articulated consist. L. E. Griffith



A lack of diesel servicing facilities in Dallas meant that for a time the *Texas Zephyr* changed power at Fort Worth. In June 1953, Pacific 554, having worked 33 miles from "Big D," is about to hand off Denver-bound train 1 to a set of E5s. Willis B. Wiley



Bumped from its original *Twin Zephyr* duties, locomotive 9905 *Zephyrus* makes an incongruous sight on a train of open-platform coaches departing Chicago on a suburban run in July 1949. Louis A. Marre collection

ZEPHYR

PHOTO GALLERY



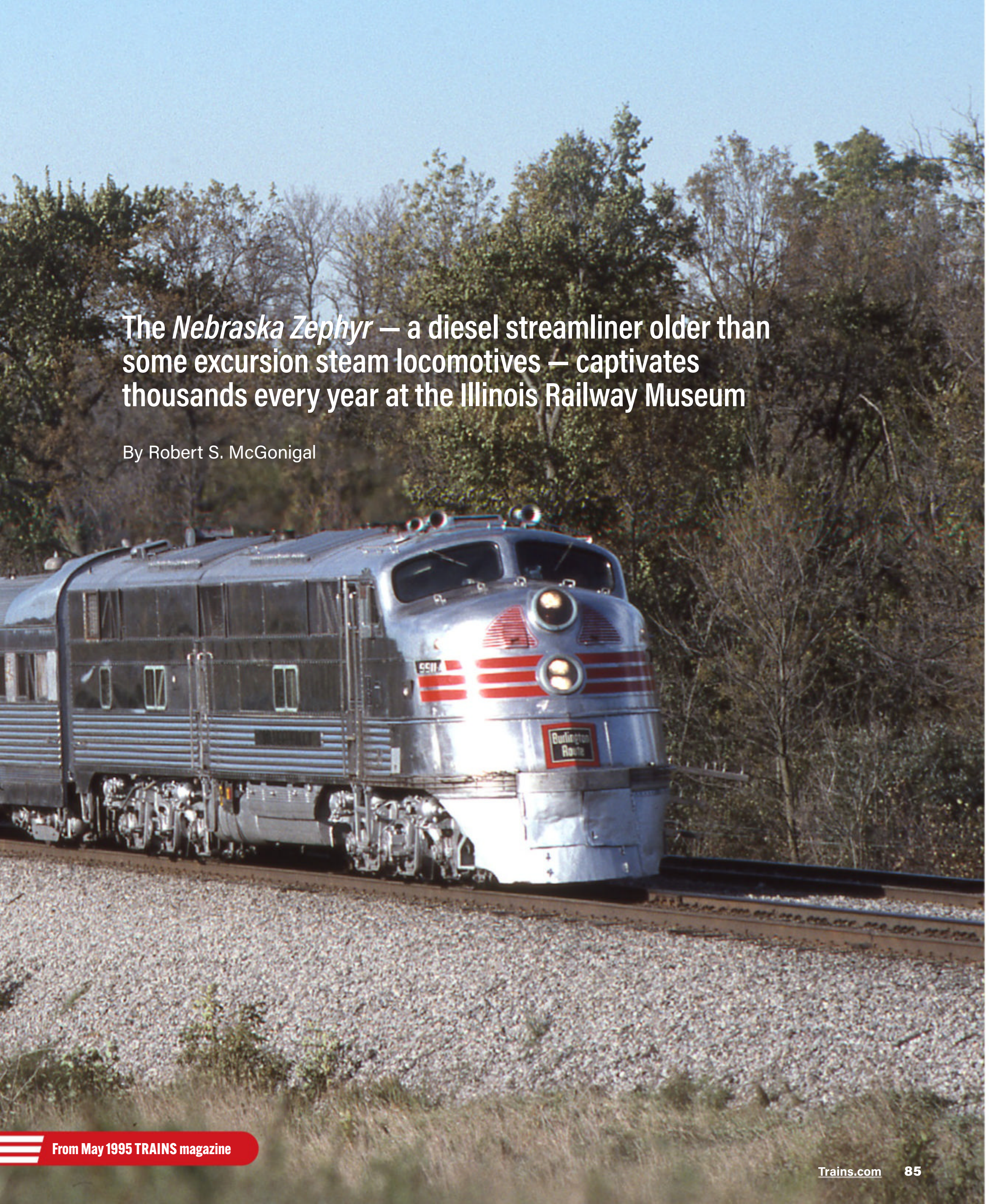
Mail is loaded aboard the baggage-RPO behind *Silver Charger* during a stop at the riverfront station at Keokuk, Iowa, in the 1950s. Retired in 1966, No. 9908 was by several years the last shovel-nose *Zephyr* to operate. Philip A. Weibler



SILVER SURVIVOR



The Illinois Railway Museum's *Nebraska Zephyr* skims down the Wisconsin Central main line at Marsh a siding, 20 miles south of Fond du Lac, Wis., on a September 30, 1993, trip for the Association of Railway Museums. Robert S. McGonigal



The *Nebraska Zephyr* — a diesel streamliner older than some excursion steam locomotives — captivates thousands every year at the Illinois Railway Museum

By Robert S. McGonigal

It's a scene from the shiny noontime of the streamliner. A trim, stainless-steel train zips away from the Chicago area on a high-ballasted, double-track main line. The engineer notches out the throttle, and two 567 prime movers behind him rev up, building toward the 80-mph range. The oscillating headlight of the E unit on the point plays off freight cars as they blur past. The view over the diesel's long sloped nose is commanding: the railroad heads straight through flat farmlands to the horizon. Lineside poles click by; signal bridges sweep overhead. Back in the train, the diner crew prepares lunch in the galley and sets tables. In the observation lounge, riders enjoy the receding view from plush swivel chairs.

But this is no scheduled run from the 1940s. The date is August 12, 1994, and the train — former Chicago, Burlington & Quincy ES 9911A *Silver Pilot* and the five-car articulated consist known as the *Nebraska Zephyr* — is a museum piece, perhaps the oldest operating streamliner in the world.

Since the late 1960s, the *Zephyr's* home has been the Illinois Railway Museum at Union, on whose short demonstration railroad it has run many hundreds of miles carrying untold thousands of visitors. In the 1990s, though, the *Zephyr* began making occasional forays onto the main line. On this August day, it's speeding over CB&Q successor Burlington Northern to Mendota, Ill., for the town's annual Sweet Corn Festival. The *NZ* has weathered war, derailment, the passenger train's decline, museum ups and downs, and time itself to be not merely a survivor, but a living link to the streamliner era.

Although it predates World War II, the *Nebraska Zephyr* still seems modern. Credit

the inherent soundness of its design. And credit, too, what this train and its sisters meant to railroading when they were introduced.

As a member of CB&Q's *Zephyr* fleet, the train that would come to IRM was a revolutionary. The first *Zephyr*, No. 9900, hit the rails in April 1934, a joint project of Electro-Motive Corp., Winton Engine Co., the Edward G. Budd Manufacturing Co., and the Burlington Route. Its diesel power plant, welded stainless-steel construction, and lightweight design that included articulation between cars contrasted utterly with prevailing practice.

Other Winton-powered, Budd-built trains followed No. 9900, which assumed an Omaha-Kansas City run after tests and demonstrations. A year after the *Zephyr's* debut came Nos. 9901-9903, all sharing the same glassy, radiator-grille-topped "shovel-nose" front end and full articulation of the *Pioneer Zephyr*. In 1935 the 9901-02 pair entered Chicago-Minneapolis service as the *Twin Zephyrs*, while 9903 became the St. Louis-Burlington (Iowa)

Mark Twain Zephyr. In early 1936, with demand outstripping the *Twins'* capacity, the *Zephyr* concept went big-time with Nos. 9904 and 9905, two new seven-car *Twin Zephyrs*, and 9906-9907, 12-unit sets for the *Denver Zephyr*. These were similar to their fully articulated predecessors, except their locomotives were separate units, and not all *DZ* cars were articulated. A final shovel-nose, 9908, was a doodlebug in *Zephyr* garb built in 1939 for the *General Pershing Zephyr*. It was 9904's train that would endure to run today.

A 32-year career

As built, each 1936 *Twin Zephyr* set consisted of a B-B locomotive containing two 900 h.p. engines, and six cars: a head-end-power/baggage/lounge, two coaches, a diner, a parlor car (with a drawing room), and a parlor/observation. In keeping with the *Zephyr* theme, the locomotives and cars bore names from Greek and Roman mythology. Locomotive 9904 was dubbed *Pegasus*, and its cars *Venus*, *Vesta*, *Minerva*, *Ceres*, *Diana*, and *Juno* — all female deities. Engine 9905 *Zephyrus* hauled *Apollo*, *Neptune*, *Mars*, *Vulcan*, *Mercury*, and *Jupiter* — all males. The 9904's train came to be known as the "Train of the Goddesses"; 9905's was the "Train of the Gods."

The new *Twins* entered service December 18, 1936. Each set made one round trip daily as the *Morning* and *Afternoon Zephyrs*. Although the new trains served a hotly contested corridor (against Chicago & North Western's 400 and Milwaukee's *Hiawatha*), it soon became clear they were shy on capacity. In September 1937, a dinette/coach (*Psyche* for the Goddesses train, *Cupid* for the Gods) was added ahead of each diner.

The two trains then served for a decade on the Twin Cities run, which included some 300

Right: CB&Q E5A 9911A *Silver Pilot* and E5B 9911B *Silver Mate*, their truck skirting still in place, are seen sometime in the 1940s. **Below:** Early in its tenure at IRM, the E5A (as C&S 9952A) is flanked by Illinois Terminal traction equipment. Right, Everett L. DeGolyer Jr. collection; below, Carol L. Ingles





One of the 1936 *Twin Zephyr* trains curves alongside the Mississippi River near Savanna, Ill., en route from Minneapolis to Chicago in the 1940s. When new equipment took over the *Twins'* schedules in 1947, the 1936 trains were transferred to a new service, the *Nebraska Zephyr*. CB&Q

Declining patronage prompted the CB&Q to remove two cars from the NZ sets in early 1963. Here, the five-car Train of the Goddesses is eastbound at Council Bluffs on July 4, 1963; just over five years later, it would come to IRM. Jim C. Seacrest





scenic miles along the Mississippi River. Each basic consist was seasonally augmented with one or more stainless-steel coaches between its locomotive and head-end-power car. If needed, the “amplified” consists would get one of the Q’s two streamlined 4-6-4s, until E5 diesels took over. The heavy traffic of World War II further strained capacity, and in August 1942 the cars *Diana* and *Mercury* saw their parlor chairs replaced with coach seats, although they kept their drawing rooms. In a concession to maintenance, the streamlined shrouds over the trucks were removed.

Burlington’s 16 Electro-Motive E5 locomotives (11 A units and 5 Bs) arrived in 1940–

Clockwise from above: Once again wearing its as-built black nose stripes, No. 9911A waits with the NZ at IRM’s depot as Frisco 2-10-0 1630 arrives with a heavyweight train in September 2019. A table in diner *Ceres* is ready for lunch in 1994. Class I Positive Train Control rules and other factors will likely keep the *Zephyr* under IRM wire in the future. Three photos, Robert S. McGonigal

41. These units (the only E5s built) had some vestigial *Zephyr* features: decorative skirting on their trucks, stainless-steel fluting, *Silver*-prefix names, even mock radiator grilles in black paint flanking the upper headlight casing. The 2,000 h.p. E5s were numbered from 9909, right above the shovel-nose units. Today, only the 9911A remains.

After the war, with new Vista-Dome cars on the way to re-equip the *Twin Zephyr* service yet again, the 1936 trains were scheduled to visit Q’s Aurora (Ill.) shops to prepare them for a new assignment, the *Nebraska Zephyr*. But the Train of the Goddesses jumped the gun, in spectacular fashion. On April 3, 1947, the train was nearing Chicago on the *Afternoon Zephyr* schedule when it struck a tractor that had fallen from a freight train at Downers Grove. The 70-mph impact turned over E5 9914A and derailed the entire train. Cars *Venus*

and *Vesta* plowed into the depot, severely damaging both themselves and the building.

The erstwhile *Twins* assumed their Chicago–Lincoln duties on November 16, 1947, with NEBRASKA ZEPHYR on their letterboards and tailsigns. Other work included the raising of the floor level in each car to improve visibility from within. Budd delivered two baggage cars, *Argo* and *Olympus*, for use with the articulated sets. After a spell with their original locomotives, the trains were usually powered by a single E5, E7, or E8. Schedules in the 1950s and '60s often saw the NZ combined with other trains for all or part of its run, with the articulated consists always trailing.

By the 1960s, consists of three E units and 20 cars (mostly mail) were not uncommon. With passenger patronage in free-fall, CB&Q in early 1963 removed coach/drawing room *Diana* and parlor/dinette *Psyche* from the Goddesses train, while converting the lounge portion of *Venus* to coach seating. It is in this five-car configuration — power/baggage/coach, two coaches, diner, parlor/obs — that the train now exists. (The Gods train was similarly modified.) In early 1966, dining service was eliminated; vending machines took the place of four of the eight tables in each diner.

The articulated *Zephyr* era lasted until June 21, 1968, when the two consists were removed from service and stored.

Escape to Union

Before the Train of the Goddesses was retired, the locomotive with which it would be paired in preservation was saved, thanks to the late Herbert N. W. Hansen, president of the Illinois Railway Museum in the mid-1960s. By this time, the original *Twin* and *Denver Zephyr* shovel-nose locomotives were gone, but a few E5s lasted until 1967, when they were traded in on new EMD freight units. The survivors were at Pielet Bros. Scrap Co., which — at EMD's behest — had a policy of not releasing any units, lest they or their components cut into the builder's sales. Hansen prevailed upon EMD to make an exception in the case of one E5, with the understanding it was for nonrevenue use only. Thus CB&Q 9911A (or Colorado & Southern 9952A, as it was lettered at the time; it also had been Fort Worth & Denver 9982A briefly) — purchased with Hansen's own funds — escaped Pielet Bros. for posterity.

In 1968, Hansen purchased the Goddesses train from the Burlington; it came to Union that September. The E5 joined the train shortly thereafter. On arrival at IRM, the equipment was not in good shape: the E's two prime movers barely ran, all three of the Cummins generator sets in the power car were inoperative, the dining car was a mess, and the train showed the effects of years of service, then neglect and disuse.

Hansen became a center of controversy at IRM, and left the organization under a cloud. The *Zephyr* remained, but perhaps did not enjoy the support it deserved. By 1974 the E5's

No. 1 engine no longer ran, the No. 2 was in poor shape, and the train brakes were giving trouble. After much effort, the train operated on the museum's annual September Members' Day. Two members, Glenn Monhart and Gregg Wolfersheim, began a concerted effort to recondition the E5 in 1975. "Slowly things started coming back to life," says Dave Dote, longtime IRM diesel department head. The 1976 season saw several public trips at IRM using a stabilized No. 2 engine while the rebuilding of No. 1 continued.

By the late 1980s, Dote and other diesel department people like Jim Jones and Dan Currens had gotten both engines in the E5 running and had begun to make sense of the unit's inscrutable electrical system. The locomotive shed its C&S sublettering and number

to become CB&Q 9911A again. The TEXAS ZEPHYR lettering on its nose, left over from FW&D/C&S days, was removed. The unit had operated nameless after leaving the Q proper for the subsidiaries, and the spaces for its *Silver Pilot* name were blank. On noticing a certain sharp-edged, unfinished quality to the blank plates on the nameboards, Dote and his crew unscrewed them. They found that the unit had been "de-named" by simply turning the plates so the name faced inward! It was easy to reinstall the plates with SILVER PILOT facing outward.

In the train itself, one of the generators in *Venus* was made operational so the cars could have lights and ventilation. Initially, the only car whose air-conditioning still worked was diner *Ceres*. Now, all cars have air except *Venus*,



Parlor-observation car *Juno* looks inviting on a September 2019 evening during IRM's 2019 Museum Showcase Weekend. Robert S. McGonigal



The E5 and *Zephyr* nearly stole the show at Burlington Northern's January 1994 event at Fort Worth to unveil the first SD70MAC. Robert S. McGonigal



Left: En route to Mendota, Ill., on August 12, 1994, CB&Q 9911A encounters a Southern Pacific trackage-rights train on BN's Galesburg main line just west of Aurora. Right: The fireman's-side rear-view mirror reveals the *Zephyr*'s cars trailing behind the E5 like a stainless-steel mirage. Two photos, Robert S. McGonigal

burdening the single generator, so the crew is working on getting a second unit online. The steam-heat system, beyond economical repair, may be replaced by electric heat, a long-term goal at best as the *Zephyr* rarely operates in cold weather.

Dote likens the train to an old car. "You're

always tinkering with it," he says. In addition to restoration, there's maintenance and occasional repairs. A worn side bearing on the truck between *Venus* and *Vesta* put the train out of service in August 1994. The fix won't be a big job, Dote says, just a matter of finding the time in warm weather.

Diner doings

The *Zephyr*'s rakish E5 and round-end obs may be its most eye-catching features from trackside, but most of the on-board action is in the diner. Around 1988, museum veteran Dana Ishman and others began serving simple, cold fare on the *Ceres*. Tables and chairs



During Train Festival 2011, the *Zephyr* departs Rock Island, Ill., with a July 24 excursion to Bureau. Robert S. McGonigal

were found to substitute for the missing originals. As the galley was restored and the crew's experience grew, the staff offered more-sophisticated, hot meals based on railroad recipes. Printed menus replaced handwritten ones; real *Zephyr* tablecloths supplanted generic red-checked ones. On most runs at IRM, the crew uses disposable dishes and utensils because *Ceres* lacks running water — china is reserved for special occasions and is washed by bucket brigade outside the car.

Because of the changes to the *Zephyr* over the decades, restoration to its original condition is impossible. The best IRM can do is aim for the June 1963–March 1966 period, after the train was shortened and before the diner got vending machines. One anachronism that would be nice to have is an original baggage car (the *NZ* lost them in 1953). *Argo* and *Olympus* are still on Amtrak's roster, and IRM is watching to see if one becomes available.

The *Zephyr* sees action five or six times each year (including Diesel Day, Members' Day, holidays) on IRM's 4.8-mile, 40-mph line. It's a crowd-pleaser. Ishman recalls how the train came out of its barn for work on a day when it wasn't scheduled to run. Visitors began lining up to board, so the crew felt they had to oblige, and ran two trips! Extra runs at day's end are not uncommon, either.

Tens of thousands of IRM visitors have experienced the *Zephyr*, but millions more have seen it on television and movie screens. The train has been used in TV commercials, but its big break came in 1991 with the filming of *A League of Their Own*, set in the 1940s. Purists might chuckle at the OREGON ZEPHYR lettering applied for *League*, and museum people thought the movie crew might have handled it a bit more gently, but such roles prove the worth of the vintage streamliner.

General Manager Nick Kallas says the *Zephyr* is one of IRM's most important assets.

Extracurricular activities

Always a hit at IRM, the *NZ* has recently made some extraordinary trips away from the museum. The first was an appearance July 14–15, 1990, at Railroad Days in West Chicago, just down the C&NW from Union. On September 29, 1993, the train went north for an excursion for the Association of Railway Museums, whose annual convention IRM hosted. The day after deadheading to Burlington, Wis., the *Zephyr* dashed up the Wisconsin Central main line to Neenah. The trip totaled 420 miles, many at 60 mph. This outing was preceded by marathon sessions at IRM to get restroom plumbing operating all through the train. It was a great day, capped by a standing ovation from the passengers.

Thanks to Burlington Northern, the train really shined in 1994. For a January 10 ceremony near its Fort Worth headquarters to introduce the new A.C.-traction SD70MAC diesels, BN wanted an example of a predecessor's venture into high tech. As the only operating *Zephyr*, the *NZ* got the invitation. A freight unit was coupled ahead of the E5 as protection on the 2,000-mile round trip.

The next outing sponsored by BN was to Galesburg, Ill., for the annual Railroad Days June 25–26. This 335-mile round trip over part of the *Nebraska Zephyr* route found the train playing with the 79-mph limit west of Aurora. Because Amtrak trains run here, BN felt no pilot engine was needed, as local motorists are accustomed to fast-moving trains.

Railroaders enjoy the streamliner's ventures into their world. Jim Schwinkendorf, BN assistant director of contracts and joint facilities, terms his railroad's occasional use of

IRM's train "a good experience for both of us." He says the *Zephyr*'s forays onto BN rails have had support from the highest levels of management. Dana Ishman recalls a radio transmission to the Galesburg-bound *Zephyr* after it streaked by a freight: "You're lookin' mighty good, whatever you are!" A C&NW crewman, on being shown into the obs car's plush lounge at the start of the Mendota trip, offered: "Quite a little cathouse you got here." Out on the BN main line, veteran engineer R. J. Campbell yielded the right-hand seat to trainmaster Roland Paulsgrove, saying: "I'm havin' all the fun — you get in here!"

All too soon, Extra 9911A West rounds the big curve into Mendota. The train backs into the house track, adjacent to the carnival rides and food stands of the festival. Townspeople and railfans look on. The BN crew climbs down, all smiles. IRM people haul a folding table out the baggage door for trainside souvenir sales. Within the hour, white-jacketed servers in the dining car present a fine meal, prepared aboard the train. The *Zephyr* legacy still shines. ■

*UPDATE: Twenty-six years after this article first appeared, the Nebraska Zephyr remains one of IRM's premier exhibits. Notable off-campus outings since 1995 have included Chicago-area filming for Flags of Our Fathers (2005), Train Festival at Rock Island, Ill. (2011), and two Chicago–Quincy excursions on BNSF (September 2012); the E5 attended the 2014 Streamliners at Spencer (N.C.) event. A 2005 switching accident damaged two cars, taking the *NZ* out of service for four years. Baggage cars *Argo* and *Olympus* were scrapped without being acquired by IRM. Dana Ishman died in 2017. Nick Kallas is now the museum's executive director, and James Kolanowski heads the diesel department.*

21st Century ZEPHYR

After six decades of uncertainty, the *Mark Twain Zephyr* is being reborn for a new life of luxury in northern Wisconsin

Injun Joe and other cars from the *Mark Twain Zephyr* sit in Wisconsin Great Northern's yard at Trego, Wis., after sunset on July 27, 2021. Following a long night, a new dawn is at hand for the historic train. Lighting: Alexander Vreeland

By Steve Smedley // Photos by the author



The first time I saw the *Mark Twain Zephyr*, it was sitting on its own articulated trucks and wheelsets on a storage track in the former Gulf, Mobile & Ohio yards in Bloomington, Ill., in October 1988.

Spotting the stainless-steel streamliner was a shock to the senses. At the time, I held a property pass to the Chicago, Missouri & Western Railway while working as a photo-journalist for *The Pantagraph* newspaper in Bloomington. A quick visit to CM&W's manager of operations allowed me to tour the train alone. All the glass was missing, and the cars were filled with debris and mechanical fittings. Piles of parts sat in the baggage end of the power car, *Injun Joe*, none labeled as to what they were or which car they belonged to. A family of raccoons were startled as I stumbled over rotted cardboard boxes and into the galley of the diner, *Huckleberry Finn*, its kitchen mostly intact.

Out of curiosity, I pulled on the handle of an old bread box. There, lined up in a row, were four gray loaves of bread. I touched one and it crumbled, reminding me of a scene out of a science fiction movie.

The *Mark Twain Zephyr* sat in Bloomington for several weeks and then was gone, shipped to the Joliet Arsenal outside Chicago for another long period of storage and hopefully a prelude to restoration.

The train eventually found its way to Madison, Ill., near St. Louis, the home of Gateway

Rail Services. The entire train was very close to being sold for scrap. It was taking up valuable space, and no storage payments had been made for several years.

Enter Greg Vreeland, owner of the Wisconsin Great Northern Railroad, a short line and tourist operation on a former Chicago & North Western line out of Trego, Wis., about 60 miles south of Superior. I am not sure how many Mark Twain quotes Vreeland has read, but there's one, from "Pudd'nhead Wilson's New Calendar" in the author's 1897 book *Following the Equator*, that fits his dreams of restoration of this famous train: "Don't part with your illusions. When they are gone you may still exist, but you have ceased to live."

The quote perfectly fits every dream envisioned by Vreeland when it comes to his operations in the Northwoods of Wisconsin.

Start of a 10-year dream

The idea of the Wisconsin Great Northern rebuilding the *Mark Twain Zephyr* began nearly 10 years ago following the railroad's introduction of a dinner and bed-and-breakfast train. The B&B service began with the purchase of a sleeper-lounge car just before Christmas 2010; marketing began in January



2011. That winter, Vreeland traveled with his wife Mardell and their son Alexander (the WGN is a family venture) to Gateway Rail Services to inspect a sleeping car for possible use in the B&B train. The interior configuration was not what they were looking for, so they passed on the car. However, it was during that first trip to Gateway that Vreeland noticed the *Mark Twain Zephyr* stored off its trucks and along a fence. He was surprised that the unique train still existed.

In early 2015 the Vreelands returned to Gateway following their purchase of an ex-Canadian National dining car there. They again looked over the *Zephyr*, as well as several other cars. In summer 2015 they acquired the F units and cars formerly used on Missouri's Columbia Star Dinner Train, which led to several trips through the area and subsequent visits to Gateway. Each visit reinforced the notion of the possible future acquisition and rebuild of the *Mark Twain Zephyr*.

Around this time Vreeland began researching the history of the MTZ and started to collect *Zephyr* memorabilia, including photos, timetables, advertising, tickets, postcards, and framed artwork. In early 2017 the original plans for the train as sent by the Budd Company to the Burlington showed up for sale on eBay. Vreeland added them to his collection and cemented an acquisition plan.

The planning process began in earnest in 2018 as Vreeland started looking for equip-



Wisconsin Great Northern owner Greg Vreeland applies the WGN emblem to the *Zephyr*'s nose during preparations for moving the train from Gateway Rail Services of Madison, Ill., on July 30, 2020.



Jim Lesiak of Over-the-Top Construction hauls the *Effie Dean* north along Interstate 55 at Atlanta, Ill., on August 29, 2020, during the move to Trego. This was the former *Pioneer Zephyr* fourth car that was sold with the MTZ.

ment to power the train. The original Winton 201A diesel engine had been removed and lost to history some 20 years earlier. His plan was to acquire an operating EMD switcher and then transplant the engine, generator, air compressor, and control equipment into the *Zephyr's* power car.

In 2019 the opportunity arose to acquire the perfect unit. Independent Locomotive Service of Bethel, Minn., which had sold three GP35Ms to the WGN for its freight operation, had a former American Can Co. SW600 which fit the bill, so Vreeland bought it.

The rare (only 15 were built) switcher's 6-567C power plant was exactly what he was looking for. Once the propulsion equipment was moved to WGN headquarters in Trego it was time to move ahead with the acquisition of the *Mark Twain Zephyr*, which occurred on February 17, 2020.

With the train under WGN ownership, its movement to northern Wisconsin could be planned. Vreeland hired Jim Lesiak of Over-the-Top Construction of Seville, Ohio, to move the train. The first truckload carried the MTZ's six trucks. An Amtrak inspector was brought in to assist in planning the complete rebuild of the trucks. Off-site in a Wisconsin Great Northern shop in rural Earl, Wis., the trucks for the train are being totally stripped down, bead-blasted, repaired, and finally repainted. Parts are kept on wooden pallets to keep track of each truck set during rebuild.



Alexander Vreeland, 11, stands within one of the MTZ's trucks on April 3, 2021, prior to its rebuilding. The trucks are being completely rebuilt after disassembly, bead-blasting, repairs, and repainting.

Vreeland spent a week researching a custom manufacturer to produce leaf springs, the originals having outlived their service life.

The long road to Trego

After retirement from Burlington Route service, the *Mark Twain Zephyr* bounced around the Midwest under various ownerships over the course of six decades. Its final run —

Burlington, Iowa, to St. Louis, Mo. — took place April 26, 1958. Instead of scrapping it, CB&Q put the train in storage at its West Burlington (Iowa) locomotive shop.

The first private owner was Earnie A. Hayes of Mt. Pleasant, Iowa, who purchased the train in 1962. (The deal included a fifth car, the buffet-dinette-coach which had been added to the *Pioneer Zephyr's* consist in 1938 but



WGN employee Beverly Jaskolski paints details in the ceiling of parlor-observation car *Tom Sawyer* in December 2020. Greg Vreeland is in the background.



Wisconsin Great Northern lead carpenter Bob Heil takes a break from his work in the kitchen area of *Huckleberry Finn*, being converted from a buffet-dinette-coach to a full diner, on a hot July 22, 2021.

which had been removed when the *PZ* went to Chicago's Museum of Science & Industry.) Hayes later sold the *MTZ* to the Midwest Central Railroad, which in turn sold it to the Old Threshers Foundation. Throngs of people saw the train on its display track on the foundation's grounds at Mt. Pleasant during the annual Midwest Old Threshers Reunion, but it never operated there — for one thing, the Midwest Central's line is 3-foot-gauge.

After a 17-year stay in Mt. Pleasant, the train was sold to businessman Alexander J. Barket Sr., who relocated it to an industrial park in Kansas City, Mo., in 1979. Barket's death threw the *MTZ* into legal limbo, from which it emerged when Mark Twain Zephyr, Inc., a firm formed by Chicagoans Dan Krupske, Ronald N. Lorenzini, and John C. Love, bought it in 1987. *MTZ*, Inc., moved the train across K.C. to Mid-America Car for the first in a series of ambitious restoration efforts. The following year the train was moved to Joliet, with a three-week pause in Bloomington, during which I found that moldy bread. In 1997 it moved from Joliet to a Relco Locomotives, Inc. facility in nearby Minooka, again with reactivation in mind.

The *MTZ* found itself under the gun again in 2008 when Relco planned to close its



Two views from April 9, 2021, show the state of progress inside *Huckleberry Finn*. At left is the parlor seating area; at right, the observation lounge. Although not an exact restoration to original condition, the work represents a dynamic new chapter in the train's long history. Two photos, Angela Pusztai-Pasternak

Minooka shop. Once again the train was on the move across Illinois. Although the MTZ's previous trips had been on its own wheels, this time it rode on five flatcars, which took it to Gateway Rail Services, a rail car broker and restoration firm in Madison. There it languished, a deteriorating shell, until Vreeland discovered it in 2011.

In 2020, after having looked for a new owner for a dozen years, the Gateway folks were near the end of searching and about to consider other options.

"I thank God every day that the various private owners stepped in and invested their time and money in pursuit of the dream of returning the *Mark Twain Zephyr* to operation," Vreeland says. "Even though they were not able to bring their dreams to fruition, their dedication to the dream saved the train countless times and allowed the Vreeland family the opportunity to finally succeed in the rehabilitation of the historically significant train."

The *Mark Twain Zephyr* will be a jewel in the WGN fleet, and as such is being rebuilt in a way that will allow it to shine as it provides all-first-class service rather than the no-frills transportation it offered when originally built.

COVID's silver lining

Thirty days after the ink had dried on the *Mark Twain Zephyr*'s purchase agreement, Wisconsin Great Northern passenger operations were shut down on March 17, 2020. The COVID-19 pandemic has been a double-edged sword as far as the MTZ project goes. On the positive side, the shutdown allowed the railroad to have all hands on deck for the rebuild project, which in turn enabled tremendous

progress in a short time. Of course, the shutdown of passenger operations has resulted in diminished cash flow, and pandemic-related shortages of materials, plus supply-chain issues, have held up portions of the project.

A major dedication event to kick off the WGN's 25th operating season is being planned for spring 2022, with the *Zephyr* as the centerpiece. The event will include a history of the project, presentations by stakeholders, and tours. It is expected to be the first chance for the public to ride the refurbished train.

Overcoming skepticism

"From the time we first contemplated our purchase and rebuild of the *Zephyr*," Vreeland says, "we understood there was going to be a lot of 'Monday morning quarterbacking.' The history of the train in the past 63 years has been called 'preservation gone awry.' It was known in the industry as 'the one that got away' and was largely considered beyond hope."

"We knew from the outset," he continues,

"that we would need to clearly articulate our plan for the train and that we would need to make significant progress very quickly to avoid as much of the negative press that the train has received through the years."

The railroad launched a website — marktwainzephyr.com — that set out the restoration plan, including floor plans of the cars showing the changes that were contemplated.

"We held the announcement of our purchase until we were in Madison and loading the *Injun Joe* for the movement to show people action rather than words," Vreeland says. "We moved that whole train within a month and immediately got to work on the rebuild. From the beginning we instituted a very transparent series of weekly update videos, periodic newsletters, and regular website and Facebook updates. . . . We also have held a couple of open-house weekends to show off the progress and allow interested fans the opportunity to come up and visit with us firsthand."

Another part of the strategy to keep the

Cars of the <i>Mark Twain Zephyr</i>		
Name	Original configuration	WGN configuration
<i>Injun Joe</i>	Cab-power-RPO-baggage	Cab-power-HEP-theater
<i>Becky Thatcher</i>	Baggage-express	Displays/museum
<i>Effie Dean</i> *	Buffet-dinette-coach	Tavern-lounge
<i>Huckleberry Finn</i>	Buffet-dinette-coach	Full diner with kitchen
<i>Tom Sawyer</i>	Coach-parlor-observation	Parlor-lounge-observation
RPO = Railway Post Office; HEP = Head-end power		
* Nameless fourth car of <i>Pioneer Zephyr</i> ; named in 1990s for wife of Budd designer Albert Dean		

negativity at bay was the production of a three-volume book set, *Mark Twain Zephyr: History, Restoration and Rebirth*. The purpose of the books, authored by Robert Tabern, WGN's director of passenger development, is to create the definitive history of the train and document the process of bringing it back to life.

"What makes the Wisconsin Great Northern a special place is the unique services we offer," Vreeland says. "The *Mark Twain Zephyr* fits in to our grand plan by being the only shovel-nose streamliner that you can ride. Unlike most heritage railroads, which operate several different services on the same set of cars, the WGN will offer a wide variety of unique services on a wide variety of different dedicated train sets."

The railroad operates a beautiful 1910-era heavyweight trainset, America's only bed-and-breakfast train, which features accommodations in upgraded sleeping cars; the only dinner train which features private dining in wood-paneled compartments; a self-propelled interurban-style diner from 1913; a former Amtrak Pacific Parlour Car (an ex-Santa Fe Hi-Level lounge) that serves as a wine-and-cheese train; and soon the *Mark Twain Zephyr*.

Vreeland said his future operations will

feature three or four of these services operating on dedicated trains each day. This will give visitors the opportunity to ride a wide variety of equipment in a single visit.

Plenty of Zephyr flavor

Carpentry on the *Mark Twain Zephyr* is nearing completion, along with lighting and a paint scheme closely representing the original. Researching exact colors has been difficult, since few interior color photos have been located.

"We are going to give it every bit of *Zephyr* flavor as we can, using *Zephyr* floor plans and interior colors and decoration that befits the *Zephyr* period," Vreeland says.

Tabern has been able to locate and acquire several items including the original Mark Twain medallion from the rear of the *Tom Sawyer* observation car.

The extra car that had been part of the *Pioneer Zephyr* will become a tavern-lounge, making the MTZ a five-car train. Although the car was nameless on the CB&Q, the train's owners in the early 1990s named it *Effie Dean* for the wife of Budd designer Albert Dean.

In mid-August 2021, lead carpenter Bob Heil and WGN crews were working in the

Huckleberry Finn. A coach-buffet in the train's original configuration, the car is being converted to a full diner with plans to offer five-course meals. Heil was applying a thin-set tile cement while placing a new cement board floor in the kitchen area.

"It should be dry by spring," he jokes, while being filmed for a weekly YouTube update produced by the railroad.

While Heil has an infectious sense of humor, he has been all business when it comes to leading his crew during renovation of each car. "I've done this stuff all my life, on ships, on old homes," he says. "It's slick. I cannot wait for the grand opening."

At the end of our conversation, Heil quotes Mark Twain, likely speaking for others who have labored on the project: "Find a job you enjoy doing, and you will never have to work a day in your life." ■

STEVE SMEDLEY, of Atlanta, Ill., is a retired photojournalist who worked 40 years at two newspapers in Peoria and Bloomington, Ill. He shares a 120-year-old home built by the publisher of the Atlanta Argus newspaper with his wife Donna and several pets. This is his first article in a CLASSIC TRAINS publication.



A full rainbow greets *Injun Joe* on its arrival at WGN's Trego yard on August 1, 2020. This was the first car of the MTZ to arrive at its new Wisconsin home.

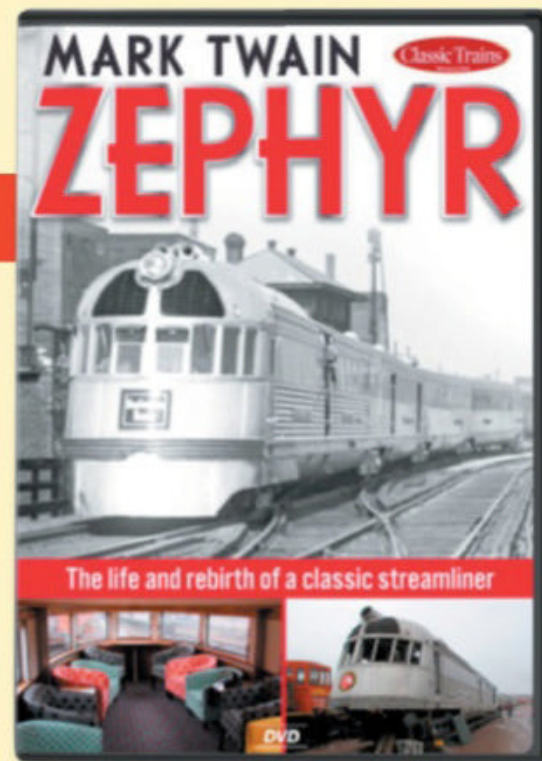
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- Complimentary Wisconsin Cheeses
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- Seating Limited to 28 per trip
- Adults 21+ Only
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