

# GreatTrains

Holiday 2017

## FREIGHT

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Union Pacific's line across Nebraska has been a vital freight artery since its completion as part of the first transcontinental railroad. In this view from a car heading east on U.S. Route 30 in about 1950, a 4-12-2 rushes stock cars toward Omaha.

Linn H. Westcott

# GreatTrains FREIGHT

Moving goods in the  
golden age of railroading

EDITED BY **ROBERT S. McGONIGAL**



**ON THE COVER:**

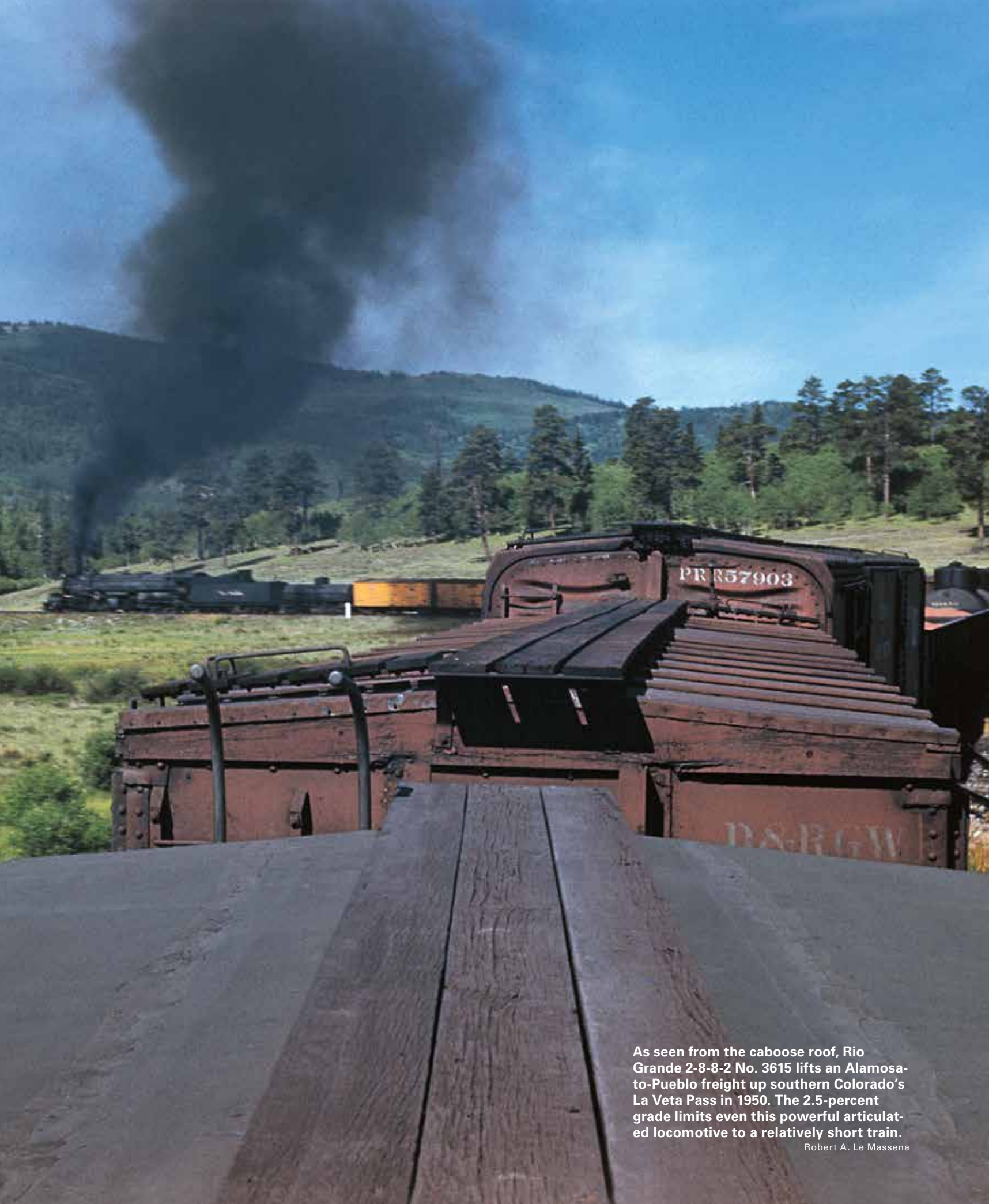
Nickel Plate locomotive 719, from the road's first order of fast-freight Berkshires, crosses Conneaut Creek in Ohio with a train for Buffalo in the mid-1950s.

CLASSIC TRAINS collection

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As seen from the caboose roof, Rio Grande 2-8-8-2 No. 3615 lifts an Alamosa-to-Pueblo freight up southern Colorado's La Veta Pass in 1950. The 2.5-percent grade limits even this powerful articulated locomotive to a relatively short train.

Robert A. Le Massena

## The world of freight

**W**hen we launched the GREAT TRAINS series of special publications nearly two years ago, we focused on passenger trains, the side of railroading we remember best.

As the principal point of contact between the carriers and the public, trains like the *Super Chief*, *20th Century Limited*, and *Panama Limited* were the very symbols of the railroads that operated them.

But on all but a handful of roads, the revenues derived from freight service dwarfed passenger receipts. Other metrics — such as employees, rolling stock, and physical plant — also reflected freight's overwhelming dominance. And by the mid-20th century "classic era," the profit picture was even more lopsided. Freight was where the action was, the (to borrow one railroad's slogan) road to the future.

Hence, GREAT TRAINS FREIGHT. Like its three passenger-oriented, regionally themed predecessors, it is composed mostly of articles previously published in TRAINS and CLASSIC TRAINS, dating back to 1941 and completely revamped with new page designs and photos. Topics include ballast-scorching merchandise trains [pages 16 and 112], a friendly local with business in every town [8], time-sensitive perishable shipments [38 and 86], steam locomotives performing at their peak [46 and 106], ponderous coal and ore drags [28], a brand-new computer-controlled hump yard [50], and the three-day, 461-mile odyssey of an automobile from assembly to dealership [68]. In eight of the stories, we ride along with the crew in the engine cab or caboose.

We hope you enjoy GREAT TRAINS FREIGHT!

Robert S. McGonigal

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**A Southern Pacific freight en route from San Francisco to Los Angeles rounds a curve at Pismo, Calif. The big road was the nation's leading practioner of piggy-backing in the second half of the 1950s.**

Richard Steinheimer





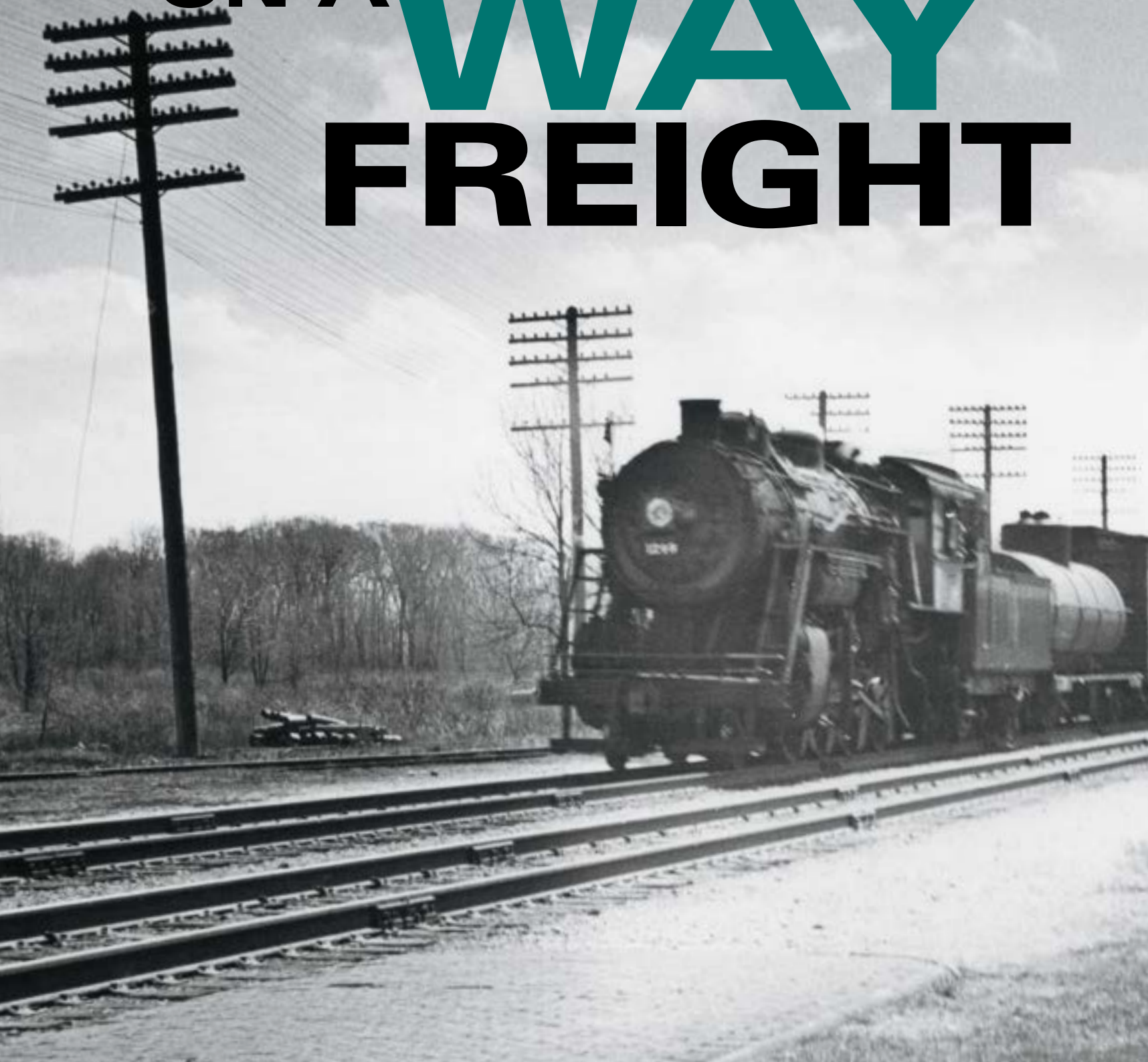
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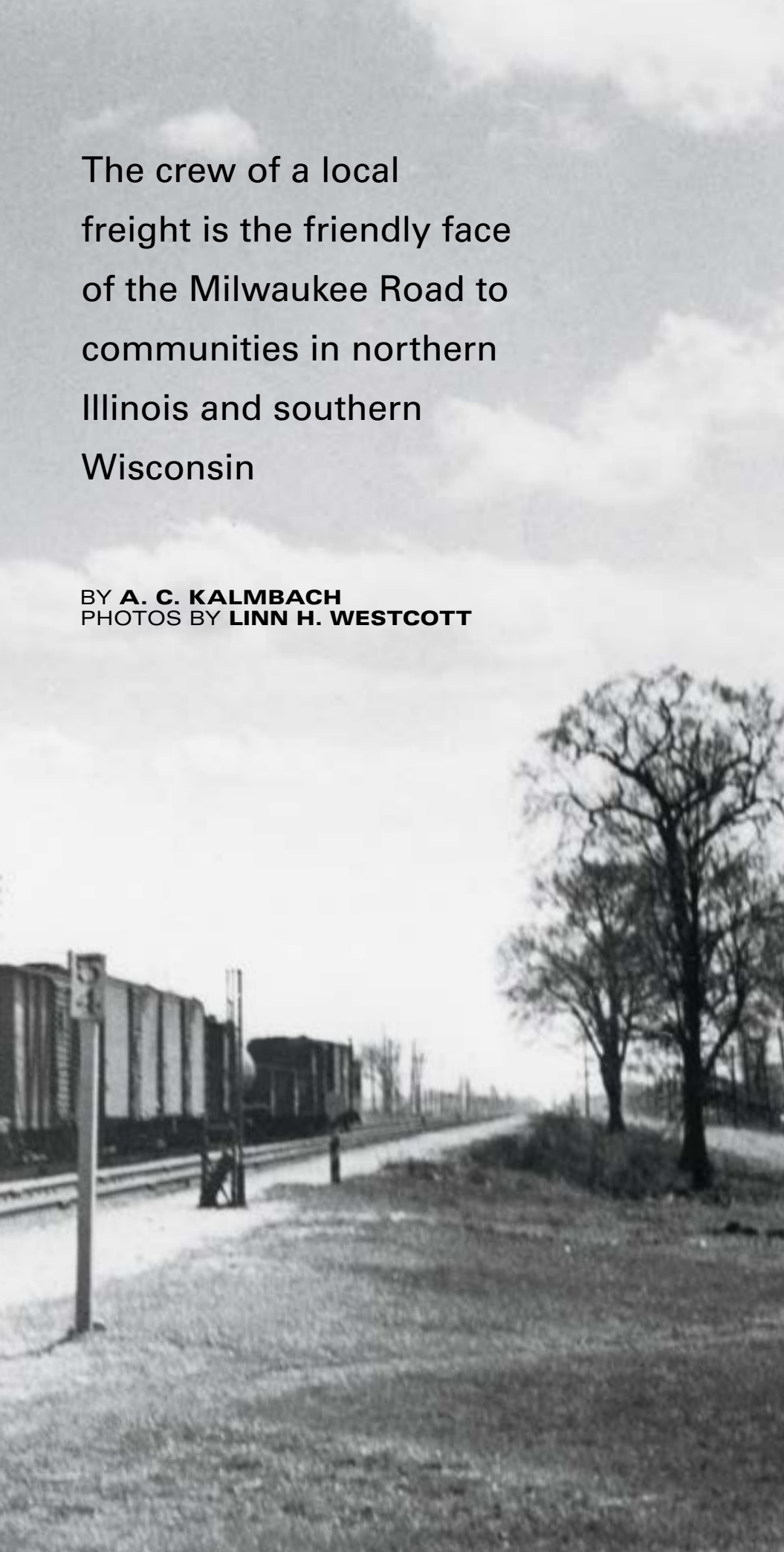
DAY

ON A

WAY

FREIGHT





# The crew of a local freight is the friendly face of the Milwaukee Road to communities in northern Illinois and southern Wisconsin

BY **A. C. KALMBACH**  
PHOTOS BY **LINN H. WESTCOTT**

**T**he heavy rails beyond the platform edge begin to vibrate with that strange anticipatory hum that precedes a fast train down the track. Now a long-drawn grade-crossing whistle floats through the cloudless sky. This isn't what I'm waiting for. It's coming too fast! The crossing warning begins to tinkle. She whizzes past! No. 20 from Madison, Wis., is through Morton Grove; a gray mail bag plummets onto the station lawn as a dark steel finger snatches a similar bag from the mail crane and whisks it along in that cavalcade of motion. The clatter of rails and the roar of exhaust dwindle in the distance, the acrid aroma of coal smoke dissolves, and silence descends once more on the small town, 14 miles northwest of Chicago on the Milwaukee Road main line between the Windy City and Wisconsin's biggest metropolis.

This is a good show, but only a sideshow. The feature attraction is now but a blackish haze hanging limply over the right of way to the south. Station agent Mark Corcoran unhurriedly loads packages on an express truck and pushes it down the southbound platform. The postmaster ambles across the driveway with his pouch of love and kisses, checks and bills. An auto or two crawls along the street across the tracks from the station, and a crossing watchman basks in the sun outside his shanty on the right of way. The quiet is broken only by the pastoral sounds of birds and trees rustling in the breeze. Even the sounds made by two men unloading a boxcar of fertilizer at Vegetable Growers' Supply Co. are muffled by the car and its load of soft, odoriferous material.

## LITTLE TRAINS MATTER

Fifty or 60 businesses are clustered about this station; 2,200 persons live in Morton Grove. But this warm morning I have the impression of a lazy country hilltop with clouds drifting by. Only the railroad tracks seem to presage action. They are four strips of 132-pound steel, taut and straight to both horizons, cleanly ballasted, semaphores pointing invitingly upward, businesslike heavy switches trailing off to side tracks serving the unkempt back ends of warehouse buildings. Four or six times a day, *Hiawathas* sail through at 100 mph, brief bright flashes in the slow day. Thirty other through passenger trains make the rails hum each weekday, including suburban trains, but the stopping

**The Milwaukee's "Sturtevant Patrol" way freight rolls into Morton Grove, Ill. The "54" signpost shows engineers where to stop with commuter trains of 4 or 5 cars.**





**Consolidation 1248, sister to the engine that powered the train the day author Kalmbach rode, switches cars just off the main line.**

suburban trains are the ones that matter to Morton Grove. Heavy power pounds the rails with drags and time freights, but with no more than a whistle toot of respect for the commercial life of the town. Here the big trains don't count; it is the little trains that are used and lived with.

A haze on the southern horizon becomes a white plume and moves nearer like a water-spout swirling over the ocean. The station agent is watching it too. The plume focuses into a black speck, grows into a locomotive,

into a train of freight cars. Extra 1251 West squeals to a stop with the caboose right smack in front of the depot. The squat Consolidation sits beyond the next street, white flags limp in the heat, boiler simmering in the sun. Agent Corcoran is out with greetings and salutations. "Well, boys, what have you for me this morning?" Genial conductor Ed Bailey clammers down from the caboose with a fistful of waybills, smiles a broad hello at Corcoran, and then turns to me with mischief in his eyes.

"Some nerve you have, coming back to see us after writing our flyer up as the 'slowest train.' [We called it that in a British magazine some years ago.] You remember Red Johnson, our rear brakeman." Red is unsealing the way car, that most intriguing 40 feet of cargo space, right ahead of the caboose, reserved for less-than-carload (l.c.l.) merchandise.

The door slides open and inside is a great big case labeled WURLITZER AUTOMATIC PHONOGRAPH. It's a new juke box for a Mor-





**A crewman throws a switch so two freight cars, set in motion by No. 1248, which then cut off and sped ahead, can roll into a spur.**

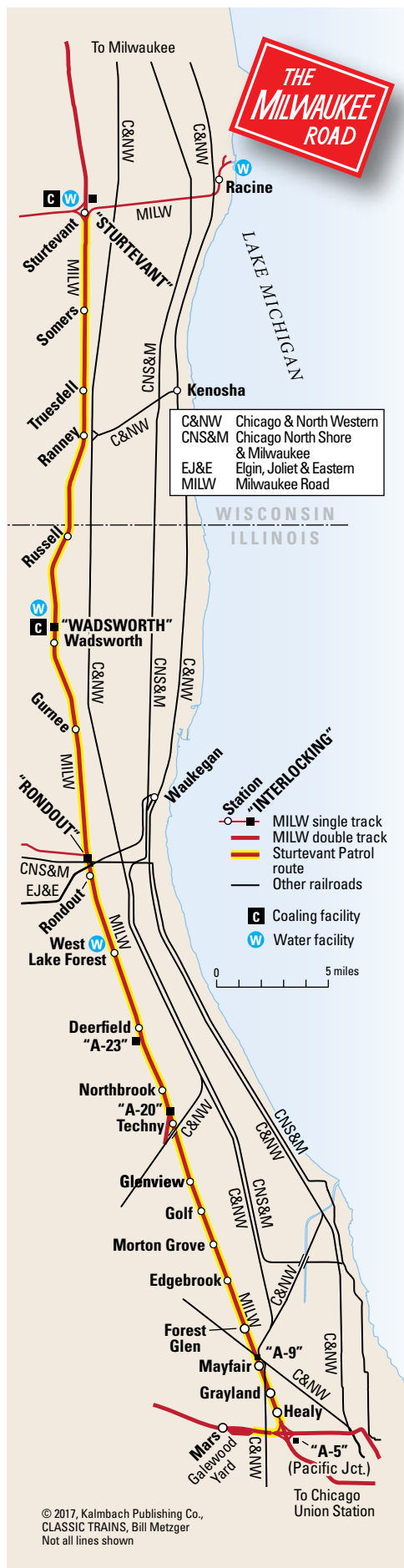
ton Grove soda parlor, and it takes the combined brawn of the rear-end crew and front brakeman Archie Davenport to slide it carefully out onto a platform truck. A new lawn roller comes along, as well as several boxes of calcimine powder. There's an informal exchange of waybills between conductor and station agent, and then Corcoran says, "One of those cars of fertilizer up at Vegetable Growers' is empty. Pick it up if you want to." The train has an inbound car of fertilizer bound for the same place, as well as a car of

building tile for Robinson Clay Products and a car of coal for Morton Grove Material Co. Sometimes F. L. Huscher gets cement and other materials in by the carload, but, says Bailey, "Huscher hasn't been getting so much lately, a couple of cars a month or so." Standard Oil and Vaughan's Seed Store are other good rail customers here.

The empty car at Vegetable Growers' Supply is picked up on the front end of the locomotive and kicked back onto the train by means of a quickly executed flying switch.

The loaded car of fertilizer is moved from behind the engine to in front of it by the same type of maneuver and spotted for unloading. Bailey says, "We know pretty well where to place the cars. After all, we've been on this run for quite a time and we know what the customers want."

As he says this he's standing next to the crossing gates while the engine shuttles back and forth, and I can't help noticing how many people he greets by name. When the locomotive chances to park across the main



**Conductor Ed Bailey waves from the caboose platform as another crewman boards. The way freight is departing Northbrook on its trek up the main line to Sturtevant.**

street the motorists wave hello to engineer John Wilkins instead of honking angrily, and Wilkins smiles back benignly from No. 1251's cab.

### SLOW-SPEED WORKHORSE

Truly the way freight is an integral part of Morton Grove's life, and of the railroad's life too. Slow train, yes. Workhorse of the railroad, yes. But the way freight is the distilled, flavorful essence of all that is railroading. It runs out on the high iron where named and numbered trains roll thick and fast, but it is not above visiting every lowly siding, the originating and delivery points of the traffic that foots the bills. It works hard all day: cuts off two cars of coal, picks up some empties,

dodges into a siding to clear for the *Morning Hiawatha*, crosses over to the other main to move some cars for unloading in a material yard, makes a run for the next town before No. 23 is due. The conductor is up in the cab at one stop to lay things out with the engineer, swings up into the caboose as it rolls out of the next stop to do some figuring on the wheel report, and then he's into the operator's bay at the station to get a lineup from the dispatcher. To those who ride the way freight, all the machinations of mainline operation are laid open like the pages of a picture book.

Let's swing aboard with good-natured conductor Bailey as Extra 1251 leaves Morton Grove. The railroad austere calls this



friendly little train the “Sturtevant Patrol,” and it left Galewood Yard in Chicago about 2 hours ago. Most of the intervening time was spent at Forest Glen, setting off a car of flour for the Northwest Flour & Feed Co. and switching in the Hill-Behan Lumber Yard across the tracks and north of the station.

Between engine and caboose are some 20 cars of miscellaneous freight and a couple of empties. The train with its cars of coal, oil, fertilizer, steel, lumber, building tile, and stone is a pretty good cross section of what railroads are transporting in all parts of the country. The way car with the l.c.l. freight is even more varied. Conductor Bailey flips through some waybills. “One bicycle, from Montgomery Ward to Billy Tocco at Deerfield.” Probably the boy’s first bicycle. Won’t his eyes shine when the train comes in! “One kitchen sink, three rolls wire fencing and steel fence posts, hardware for cow barn.” This is as much fun as a mail order catalog.

### NO SCHEDULE, NO ORDERS

With all its varying local freight the Sturtevant Patrol cannot stick to any schedule, and indeed it doesn’t even have a schedule. On this double-track, block-signaled division, extra trains do not even have running orders. At Pacific Junction in Chicago, Extra 1251 West received a clearance card, that little formality of railroad dispatching which assures that a train gets all the orders intended for it at the starting terminal. The only order was a copy of one issued to the second section of passenger train No. 20 reading, “Second No. 20 will run 2 hours late.”

All day long the way freight merely stays clear of the scheduled freight and passenger trains, and in case another extra is on the line at the same time, the dispatcher makes certain that a meeting point is arranged between the two extras. The job of the way-freight conductor is not only to see that his freight is properly delivered and picked up but to see that his train is always in a siding when it’s time for a scheduled train.

Ed Bailey is the archetype railroad conductor, well built, weather-bronzed, friendly. He knows his territory intimately, not only the railroad but the industries it serves. He knows what the Farmers’ Cooperative means to Truesdell, Wis., and he knows too what the Farmers’ Cooperative means to the railroad with its 25 or 30 cars a month of feed, coal, and materials. When the brakes grind for Glenview, he’s telling, with a certain nostalgia, about the greenhouse that used to stand near the Morton Grove station and how a storm broke a lot of the glass and put the concern out of business. “That greenhouse was a good customer for the Milwaukee,” and he gathers up the Glenview waybills.

While the rear-end crew banters with Henry Honeman, the station agent, the head-end crew sets off a car of lumber for Edward Hines Lumber and a car of building materi-



**Safely in the clear on a siding north of Glenview, crewmen watch from the way freight’s caboose as class A 4-4-2 No. 3 sails past with a Minneapolis-bound *Hiawatha*.**

als for Rugen Stores. Here, too, we pick up some outgoing l.c.l. The usual thing in small towns is inbound less-than-carload freight, but Baxter Laboratories of Glenview ships medical supplies to all parts of the world, and some nursery stock is going out today from Swain-Nelson’s. A full car of miscellaneous merchandise is set off on the house track, which is what the railroad calls its own freight house siding.

Several small boys on bicycles pull up and park in the shade of the depot while the 1251 switches. Eternal fascination of the steam locomotive! Who said the railroad has lost its hold on the younger generation! Glenview is a busy, growing place. To the west, where there used to be fields, stretch perhaps hun-

dreds of new houses, houses attracted by the fast railroad commutation service which many a householder will use only as a mental salve: “Mighty handy in case the car breaks down or there’s a blizzard.”

Cars are strung out in uncoupled groups on main line and siding as the crew plays its game of giant checkers. Eventually the assortment on the main track is pushed together, the glad hands of the air hoses coupled up, and Extra 1251 is again ready to go.

Dapper Archie Davenport, front brakeman, comes back from the locomotive and there’s a short confab about lunch. “Looks like we better go up to the brick yard and then 101 will just about be by before we finish eating.” With the whole train tucked back



Engineer John Wilkins looks down from the cab of locomotive 1248 as the way freight makes another move. The 2-8-0 was built in 1913 by the road's West Milwaukee Shops.

securely in the brick yard siding a few miles up from Glenview and the switch locked for the main line, there is an hour or so for lunch. There's time for Ed Bailey to tell about some of the pictures taken by his camera-fan brother-in-law. John Wilkins recounts (after proper persuasion) some of the lush details of his record 59-minute, 85-mile run between Milwaukee and Chicago on the *Hiawatha*, before some engineer with more seniority bumped him. Fireman Frank Callahan kids the brakemen about the three 900-pound reels of cable that must be unloaded from the way car at Northbrook and to gloat over the fact that while he handles tons of coal he handles it by the shovelful and doesn't have to be a piano mover in the bargain.

### RAILROAD PRIDE

*Swish, bang, swish*, there went No. 101, the *Afternoon Hi*. "That's a train that can pick 'em up and lay 'em down. I bet there isn't any better in the country," says Red Johnson. Railroad men make believe now and then that they don't like their jobs and that they don't like the particular railroads they work for, but put an outsider within earshot and there isn't any better railroad in the country, or any better kind of work to do anywhere.

Lunch finished, the front end crew walks up to the 1251, uncouples some empties that the brick yard has ordered, and backs down the parallel siding track with them. The sun is hot by this time, and the top half of the tender tank stands out dirty and dry against the perspiration of the water-cooled lower portion. Two full carloads of new brick are picked up, and we amble up to Techny, where we pick up an empty tank car from Cooskey Oil. A Chicago & North Western 4-8-4, a distant silhouette against the sky, ambles southwest toward Proviso Yard on the line bridging the Milwaukee tracks south of the station. We watch the long, animated frieze of cars and caboose on the horizon as Extra 1251 West rolls toward Northbrook.

Bailey tells, meanwhile, about the preparation of zeolite, a chemical used in water softeners. It seems that the Culligan Zeolite Co. is located in Northbrook. It gets its raw materials in over the railroad and even today has five cars of finished water softeners ready to ship to a government project in California. It's a good customer of the railroad, and the crew has a genuine and deep interest in each of the customers along the line. Also at Northbrook, a full car of I.C.I. merchandise is picked up, and the miscellaneous items, including the 900-pound reels of cable, are unloaded into the truck of Henry Bucher, who does the railroad pickup and delivery service on a contract basis.

The floor of the car begins to tremble, the doors vibrate, and a crescendo of noise builds up, roaring in my ears, and is as suddenly gone. "That was No. 6 on the other side of the train." Another *Hiawatha*.





**A 4-8-4 restarts its Chicago-bound train after taking water at Sturtevant in 1947. The Patrol's crew overnighted here in their caboose.**

Bob Gaulke

Local freight all checked off, the clank of couplings works down from the front end and the train is together again. Conductor Bailey had ordered the train split in half at the street crossing so as not to block traffic. "No, it isn't the law which makes me do that. The law gives us 10 minutes to block a crossing, but, after all, this railroad company gets business from Northbrook. We need the good will of the people here and we don't get good will by keeping the crossing blocked."

## RUNNING FOR RANNEY

The afternoon clicks on. Deerfield, with its storage tracks for suburban coaches. West Lake Forest, and a car of wheat picked up. Rondout, junction with the Elgin, Joliet & Eastern, the North Shore Line interurban, and the Milwaukee's line to Janesville. No. 100, still another *Hiawatha*. North Shore interurban cars gliding across the overhead bridge. Wilson station; nothing today. Gurnee, and a car of cattle added to our string. Wadsworth, squat brick interlocking tower and high-speed crossovers. At Russell, Wilkins calls down from the cab: "Think we can make Ranney before No. 9?"

"Sure," and off we go. It's 4.6 miles and 15 minutes before No. 9 is due. Ranney siding is interlocked with power-operated switches and is a desirable place to go into the clear for a first-class train. The gray of twilight is creeping up in the eastern sky as we come around the curve with the Ranney home signal showing red over yellow. The 1251

lurches over the switch into the siding. Seven minutes later a soft yellow glow grows brighter and brighter and emerges from the dusk as a light Pacific with its string of coaches and Pullmans, the *Copper Country Limited* to Green Bay and Upper Michigan.

Day's work for Extra 1251 West is nearly done, one more stop before we tie up. Ahead of us for 9 miles of tangent track to Sturtevant, the signals are lined up like street lights, most of them green, but beyond are a yellow and a red, way up where No. 9 has long since been swallowed by the night. In the middle of this stretch is Somers, destination for one kitchen sink and its fittings, a bag of garden seed, one stove, and 25 cylinders of tank gas from Wisconsin Rapids. Somers is dark, the station closed until morning. A switch key opens the freight house door and the sink, fittings, garden seed, and stove are set inside.

The last few miles are always longest but sweetest. Sturtevant, junction with the Racine & Southwestern Division leading southwest toward Omaha and Kansas City, is alive with neon lights, station lights, and signal lights. The heavy engine of a time freight is busybodying around on a yard track. We get the call-on signal, drop what little train we have in the westbound yard, and Wilkins uses a Dutch switch (by which a favorable grade moves the car into place after the engine moves out of the way) to kick the caboose into a stub of track. While Wilkins is getting coal and putting the engine to bed, Red rolls up his sleeves and starts dinner on

the caboose stove. "Want to stay for steak dinner with us?" He explains that Monday is steak night, Wednesday is boiled dinner, and Friday is fish or eggs. On alternate days the train ties up in Chicago, and the crew members can eat at their homes.

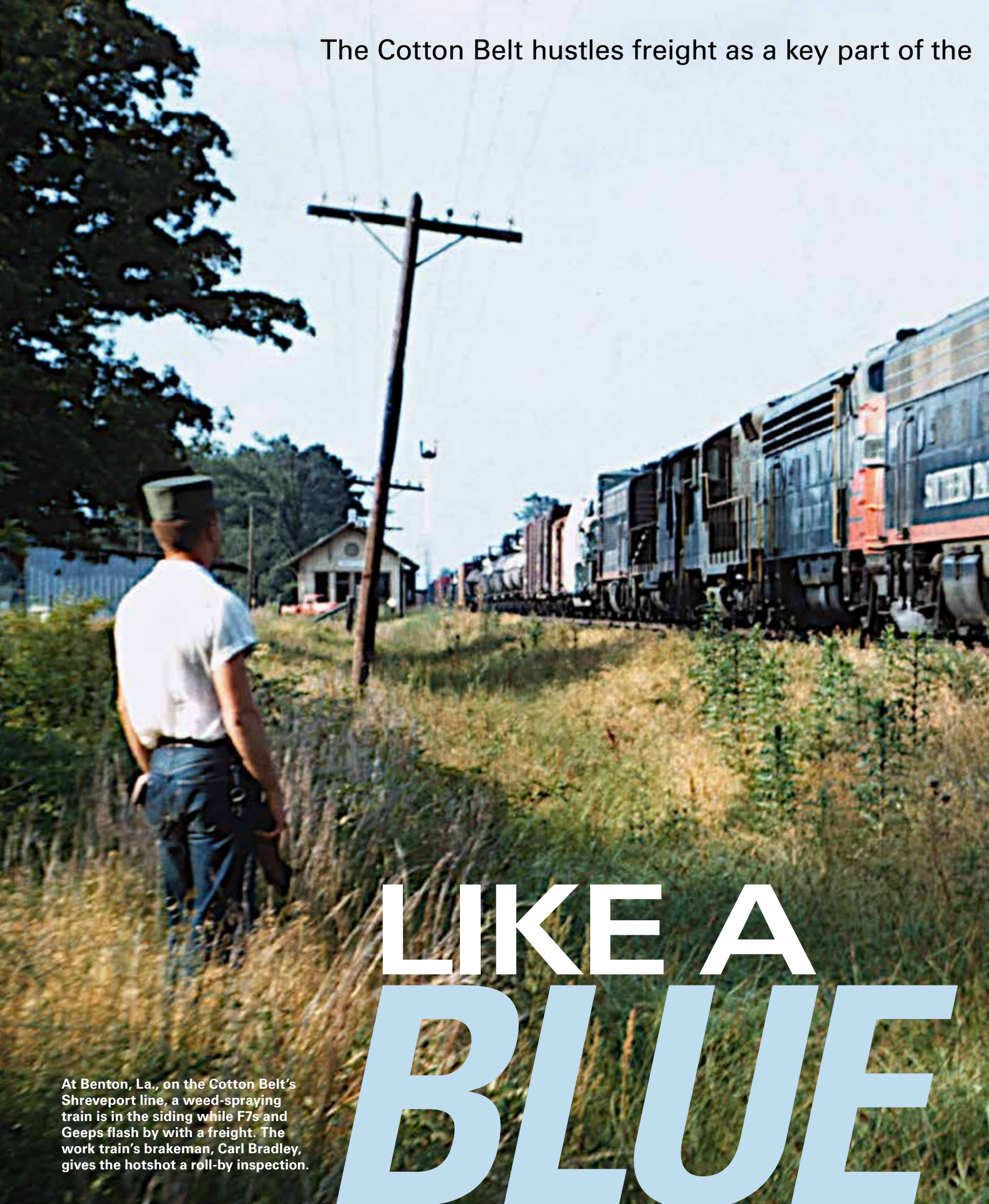
Eating can be good in a caboose parked out under the stars amid the harvest smells of autumn. And railroad men are good cooks, too. The fireman acts as dishwasher. Bunks are pulled down from the ceiling and made up for the night. "We're up early tomorrow, for we not only work back along the main line but into Racine as well." The five men, who to station agents and carload customers along the line personify the Railroad, relax in the soft glow of the lamplight. The chirping of crickets fills the air. A locomotive's loose connecting rod clanks slowly and irregularly down beyond the station. A yellow aurora grows in the direction from which we have come. It must be No. 361, local train to Milwaukee, our ride home. The long whistle of its Pacific sounds close and insistent.

"Good night," calls the way freight's crew. "Come again." ■

*A. C. KALMBACH, a Milwaukee printer with a passion for railroads, launched his magazine business with MODEL RAILROADER in 1934, followed by TRAINS in 1940. He was chairman of the board of Kalmbach Publishing Co. when he died in 1981. Today KPC publishes 11 print magazines and a variety of digital and other types of content.*



The Cotton Belt hustles freight as a key part of the



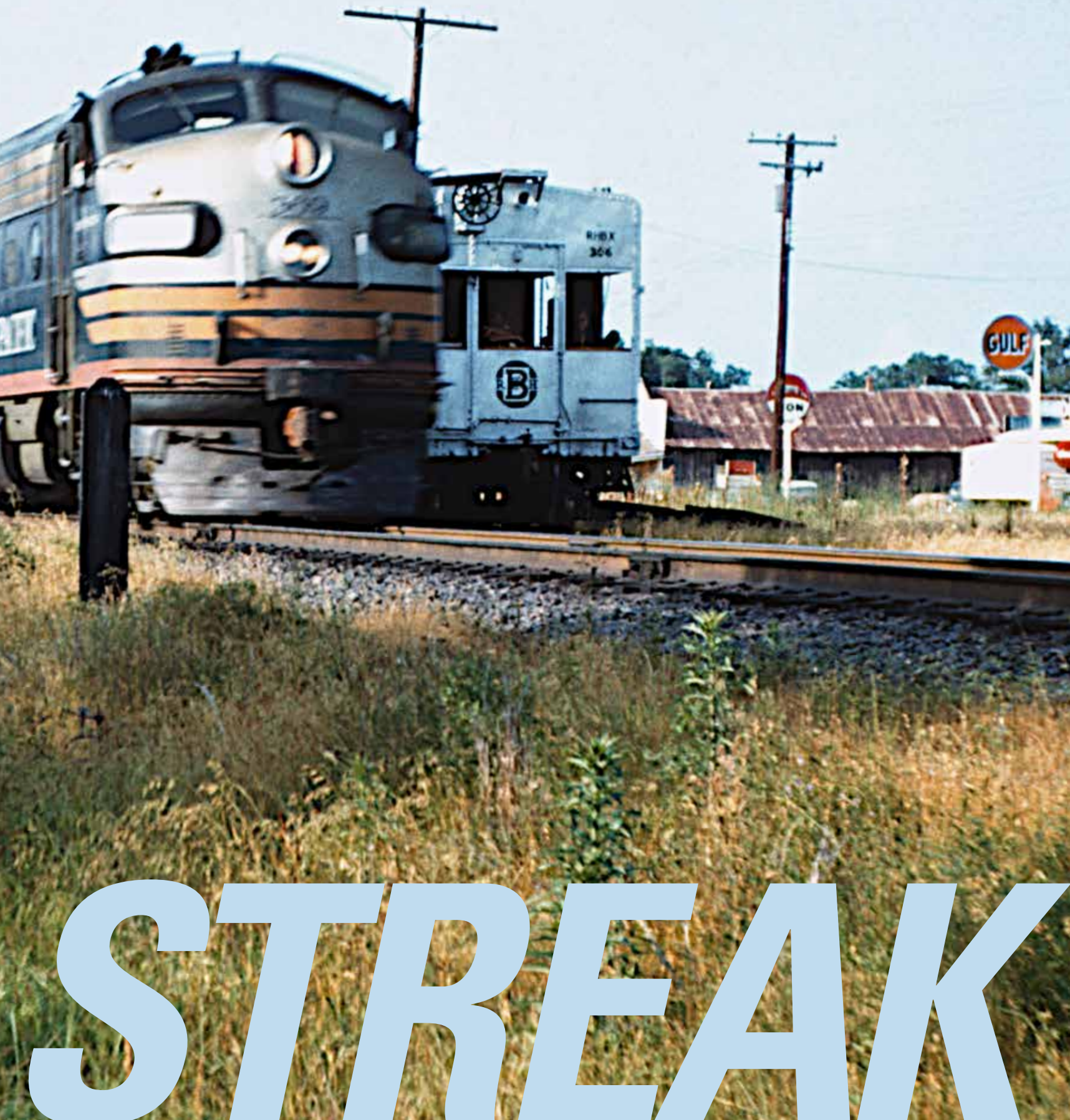
At Benton, La., on the Cotton Belt's Shreveport line, a weed-spraying train is in the siding while F7s and Geeps flash by with a freight. The work train's brakeman, Carl Bradley, gives the hotshot a roll-by inspection.

# LIKE A BLUE



Southern Pacific system

BY **STEVE PATTERSON** • PHOTOS BY THE AUTHOR



# STREAK



## ***"Hot rail!" someone shouts, and the crew of a work extra in a siding divides to take up inspecting positions on each side of the high iron as a Cotton Belt freight streaks by.***

One way to be a money-making railroad today is to be a bridge line, and in the Southwest the 1,554-mile St. Louis Southwestern (a.k.a. "Cotton Belt") — from East St. Louis to Fort Worth, Dallas, and other Texas interchange points — is just such a road. Bridge lines are fortunate in not having to maintain large yards to break up and classify all trains; they can just haul them straight through as-is. They aren't plagued with the costs and delays of terminal switching. Bridge lines mean speed and tonnage; together the two mean efficiency. Both require good track, and good bridge lines usually have it.

Of the 105 Class I U.S. railroads in 1960, the energetic Cotton Belt ranked 17th in percentage of train-hours spent for switching, 16th in gross tons handled per freight train-hour, 13th in train-miles accumulated per day per mile of road, 7th in train-miles cov-

ered per train-hour, 6th in rate of return earned on average net investment, 6th in freight revenue received per ton carried (indicating the high-paying commodities hauled), and 3rd in car-miles amassed per day from serviceable cars on line.

The five railroads ahead of Cotton Belt in revenue per ton (Union Pacific, Santa Fe, Western Pacific, Southern Pacific, and Northern Pacific) are also the only ones with longer average hauls than SSW's 391 miles.

The two roads deriving more mileage from cars on line were little Kansas, Oklahoma & Gulf and Lehigh & Hudson River. KO&G rivals Missouri-Kansas-Texas and Frisco for traffic between Kansas City and Dallas-Fort Worth, and had an average car mileage of 210 for only a 327-mile railroad. The L&HR, only a 96-mile line, had per day average car mileage of 114.7 by utilizing

trackage rights over Jersey Central from Allentown, Pa., to Phillipsburg, N.J., and over the Pennsylvania from Phillipsburg to reach its own track at Belvidere, N.J. At the other end — Maybrook, N.Y. — it interchanges to the New York Central and New Haven.

The Clinchfield, a principal link between the southeast Atlantic seaboard and the Great Lakes area and renowned for its superb track, was just a few steps ahead of Cotton Belt in gross tons handled per freight train-hour and return on investment.

In 1961 Cotton Belt stood 32nd in total operating revenues and 14th in the lowest operating ratios (SSW had a pleasant 62.7, well below the nation's average of 79.2).

### ***NARROW-GAUGE ROOTS***

The Cotton Belt had its beginning in 1871 when the citizens of Tyler, Texas, wanted a railroad to ship out their cotton and to tap the outside world of commerce. Thus was born the Tyler Tap Railroad. Meager capital limited the gauge to 3 feet. By 1877, trains were operating between Tyler and a Texas & Pa-



**The first run of the Cotton Belt's famous *Blue Streak Merchandise* poses for a photo west of Mt. Pleasant, Texas, on October 1, 1931.**

Harold K. Vollrath collection

**Cotton Belt 819, destined to become the only survivor of the road's 20 4-8-4s, brings the first section of fast freight 119 through Texarkana in 1951.**

R. S. Plummer





cific connection at Big Sandy. Later the company was reorganized into the Texas & St. Louis Railway. President J. P. Douglas went to St. Louis in an attempt to interest financiers in his railroad; the businessmen were indeed interested in getting Texas cotton to St. Louis.

They planned to have the T&StL connect at Texarkana with the St. Louis, Iron Mountain & Southern (a Missouri Pacific predecessor) and to extend lines southwest to Waco.

In 1881 Jay Gould purchased the Iron Mountain and canceled the proposed agreement to handle T&StL cotton to St. Louis. This was an effort to get the narrow-gaugers to sell him their Texas properties. Not only did the T&StL refuse his proposal to sell out or to wither on the vine, but it launched plans to build its own tracks toward St. Louis.

On August 12, 1883, President J. W. Paramore drove a silver spike on a bridge over the Arkansas River near the small town of Rob Roy, Ark. This officially opened the T&StL's narrow-gauge line from Birds Point, Mo., on the Mississippi River to Gatesville, Texas.

One of the features of the Cotton Belt

through Arkansas was the number and length of bridges required. The area between the White and Arkansas rivers was very swampy and sometimes trestles were built 40 feet above the water. In some sections pilings had to be sunk 70 feet below water level to reach a good foundation. More than 2,000 feet of spans and some 6.5 miles of trestle approaches were built to cross five rivers.

The T&StL built as far from the Iron Mountain as possible so as to develop a new trade territory. Advertisements boasted that the "Cotton Belt Route" had no branches, thus preventing cars from "getting astray." Connection with other railroads were facilitated by changing the cars from narrow-gauge trucks to standard-gauge ones. For 17 years T&StL traffic was ferried across the Mississippi and interchanged with the Illinois Central, Big Four, and Mobile & Ohio. But flooding or low water made the owners start looking for a better place to cross.

Not quite five months after the driving of the silver spike, lack of adequate equipment to handle increasing traffic and the damage

resulting from floods forced the Texas & St. Louis into receivership. In 1886 the properties were sold and reorganized as the St. Louis, Arkansas & Texas.

Samuel Fordyce, now StLA&T president, decided the road should be converted to standard gauge and that feeder branches be built. On October 18, 1886, all traffic was stopped and the line from Birds Point to Texarkana — 419 miles — was converted from narrow to standard gauge in 24 hours.

Soon afterwards a program of laying 56-pound rail was started. More than \$3 million worth was purchased and soon Fordyce realized that earnings would not pay for the debt. He was forced to sell treasury stock and income bonds, and Gould soon held controlling interest in his competitor. But the new capital failed to avert a second receivership.

Fordyce again became receiver, although by this time he wanted to return to private business. But new owner Gould asked Fordyce to stay on, and he did. In 1891, the properties were reorganized into the St. Louis Southwestern Railway.



**Local railroaders and crewmen from a weed-spraying train salute a west-bound freight at Grapevine, 10 miles west of Carrollton, Texas. The first two units are FTs, soon to be retired.**



Three new Alco RSD15s and an F7B glide down the ladder track at North Tyler Yard with a 75-car *Motor Special* in June 1962.

With the new prosperity a line was built from Delta, Mo., to Grays Point on the Mississippi. Ferry service started there in 1900 to connect with IC and Chicago & Eastern Illinois. Soon Chicago-to-Texas passenger trains were using this route and the Birds Point operations ceased in 1908.

Since 1892 Cotton Belt freight and passenger cars had been hauled by Missouri Pacific into Memphis from Fair Oaks, Ark. In 1921, an agreement was reached with the Rock Island whereby Cotton Belt could operate its own trains with its own crews from Brinkley to one of the world's largest cotton markets — Memphis — over RI's tracks.

In 1898 Edwin Gould (second son of Jay) succeeded Fordyce as president. A few years later MP began handling SSW trains from Delta through Bismarck to St. Louis, and MP started using Cotton Belt's tracks from Dexter, Mo., to Grays Point and ferry facilities to reach its Illinois Division at Thebes. Six years later Cotton Belt was granted trackage rights on MP's line to East St. Louis and the movements through Bismarck were discontinued. On April 18, 1905, a new double-track bridge across the Mississippi was opened at Thebes. Considered an engineering marvel, the massive cantilever span is operated by the Southern Illinois & Missouri Bridge Co., owned 60 percent by MP and 40 percent by SSW.

Also during Gould's 14-year presidency,



Train 243, the East St. Louis–Houston *Shreveport Streak*, is about to crest the hill at McNeil, Ark., in June 1961. The consist includes 19 loads of '62 Chevys.

the Cotton Belt's gross earnings more than doubled, mainline grades were reduced, and 75-pound rails were laid from Grays Point to Fort Worth. In 1925 Edwin Gould sold his control of the Cotton Belt to the Rock Island, ending 68 years of Gould-family control of at least one railroad. Later in the same year Kansas City Southern acquired the SSW control held by Rock Island, then sold it to New York investors just before the onset of the Great Depression.

#### **SOUTHERN PACIFIC GAINS CONTROL**

Ever since 1919 Southern Pacific had realized the importance of its connection with SSW. During the Depression SP made application to acquire control of the Cotton Belt, and the Interstate Commerce Commission approved this in February 1932.

By 1935 the Depression was carving its ugly mark on many railroads, including the Cotton Belt. For 10 years SSW was in court hearings trying to present a plan of reorgani-





Two GP20s and an RSD15 head up a freight at Mt. Pleasant, Texas, a major junction.

zation. Then World War II increased profits so much that the company and its new owner decided to drop bankruptcy proceedings. The trusteeship was abolished in 1947.

SP couldn't have made a wiser move. It holds 95.7 percent of Cotton Belt's stock now, and in essence the SSW is the east end of the SP for transcontinental shipments through the St. Louis and Memphis gateways. Solid trains are exchanged with the proud parent at Corsicana. The *CBX* (*Colton Block Expedited*), the *Colton Block*, the *RGV* (*Rio Grande Valley*), the *SSE*, and the *Merchandise* are examples of the northward hotshots. Speeding south are the *BSM* (*Blue Streak Merchandise*), the *ABSM* (*Advance Blue Streak Merchandise*, formerly the *Advance Motor Special*), the *SSW*, and the *MS* (*Motor Special*). They whisk by 60-mph speed boards, frequently exceeding that.

Recently dispatchers began to suffix an X to the initials, which authorizes trains so designated to run at 70 mph where conditions allow between Illmo and Corsicana.

Cotton Belt inaugurated the *Blue Streak Merchandise* between St. Louis and Pine Bluff in 1931. Today the *BSM* (often tagged *BSMX*) covers the 763 miles from East St. Louis to Corsicana in 14½ hours. It's the fastest on the system. Thirty-six hours later SP will have it in Los Angeles. The *ABSM* and *CBX* make the run in 15½ hours, while reefer blocks

from Colton, Calif., and the Imperial and Rio Grande valleys are given about 18 hours.

These racers are powered with EMD GP20s or a combination of them and six-motor Alco RSD15s. They replace sets of FTs, and work in multiple with SP RSD15s while racing over the relatively flat Southwest. Cotton Belt has just completed a program of trading in the old FTs for the new engines. SP low-nose road-switchers and 300- and 400-series cab units run through to East St. Louis if they aren't turned at Pine Bluff, and SSW's 800- and 900-series diesels are usually turned at either San Antonio or El Paso.

Protecting the rear of these hotshots are the best in conductor offices. Beginning in February 1959, Cotton Belt received the first batch of 25 new steel cabooses with extended-vision cupolas with window wipers, extended cushion underframe, electric lights powered by a belt-driven generator and supplemented with batteries, refrigerator, oil-fired stove, radio, roof-mounted electric marker lights, roomy lockers and washroom, and low-level slip-proof steps. All this glides on roller-bearing trucks.

Cotton Belt and Missouri Pacific still share many miles of trackage rights. After leaving Valley Junction (SSW) and Dupo (MP) near East St. Louis, trains of both companies use the same tracks to as far as Dexter Junction, Mo., 50 miles west of the Missis-

sippi. The Thebes Bridge marks the division of track ownership; everything north of it is MP and everything south of Illmo is SSW. The 3.4 miles from the Illinois end of the bridge to Illmo belong to the SI&MB Co.

Also using the bridge are C&EI and Missouri-Illinois. C&EI's nightly local interchanges with MP at Thebes, then crosses the bridge to tap SSW at Illmo and the Frisco at nearby Chaffee, making about 10 miles of C&EI trackage rights. Since discontinuance of its ferry facilities at Ste. Genevieve, Missouri-Illinois operates its trains down parent MP to the bridge, then back up the Frisco on the west riverbank to rejoin its other half.

### SSW VS. MP

As in Paramore and Fordyce's day, the Missouri Pacific is an established competitor. Southwestward from the St. Louis gateway Cotton Belt brings around 600 carloads per day and MoPac averages about 800 a day. In 1960, 28 percent of this MP traffic split from the SSW-MP thoroughfare at Dexter Junction to join at Poplar Bluff MP's main passenger line from St. Louis to Texas. The tracks meet again at Texarkana. The other 72 percent of MoPac traffic continued on SSW trackage to JN Junction, 16 miles south of Paragould, Ark. There it left the heavy-traffic line on MP's own tracks to Monroe and Alexandria, La., and Houston.

On March 20, 1961, MoPac opened its new electronic hump yard at North Little Rock. Then on May 4, 1962, the road ceased routing its freights beyond Dexter Junction and began directing all of them through Poplar Bluff and the new yard. Now only triweekly local service is maintained by MP through Paragould, a northeast Arkansas town named after two early Cotton Belt presidents.

MoPac operates four northbound and four southbound Red Ball freights daily between Dupou and Texas through Thebes, Dexter Junction, Poplar Bluff, Little Rock, and Texarkana. Southward are Nos. 61, 63, 65, and 67; northward are Nos. 60, 62, 64, and 66. MoPac has the shorter route between East St. Louis and Texarkana, and it gets No. 60 over the 532 miles in 15 hours. Cotton Belt's *CBX* (often combined with the *Merchandise* north of Pine Bluff) can make the 561-mile dash in about 13 hours. Southward, MP's Red Ball No. 67 makes it in 15¾ hours; SSW's *BSM* does it in 12.

Southbound, SSW No. 243, the *Shreveport Streak*, travels the 815-mile East St. Louis–Houston route through Shreveport via SSW and SP in 30 hours. Northbound 216 makes the distance in 33½ hours. Red Ball freights daily between Dupou and Houston via the 897-mile Dexter Junction–Little Rock–McGehee–Kinder route are No. 81 down and No. 80 returning. No. 81 makes

the trip in 37 hours; No. 80 requires 37½.

On a sample day in early 1962 between 8 p.m. and 1:30 a.m., five MoPac freights passed through Illmo — two north and three south. Cotton Belt had three southbound. Averaged, MP trains had 42 loads and 40 empties each and Cotton Belt trains had 67 loads and 10 empties per train. Trains on SSW seldom exceed 90 cars.

Cotton Belt shares considerably in the movement of automobile parts for assembly plants in Texas and California. Most trains have flats carrying products of Detroit on three decks (particularly No. 243), plus auto carriers on piggyback flatcars. Fourteen loading-unloading ramps are located on-line and SSW especially participates in piggyback with subsidiary Southwestern Transportation Co., which provides free pickup and delivery service.

Most southwest coastbound traffic from the East through St. Louis, Memphis, and New Orleans arrives in California over the Southern Pacific. St. Louis gateway traffic may be delivered to SP at Shreveport or Corsicana by Cotton Belt, or at El Paso by the MP-T&P alliance. Memphis gateway traffic may also be picked up at those points, or at Tucumcari, N.Mex., from the Rock Island. And of course SP reaches New Orleans itself.

Leaving Chicago's Burr Oak Yard at 11 a.m. daily is Rock Island's *GSX* — the *Gold*

*Streak Express*. It arrives Tucumcari at 2:45 p.m. the second day, and SP screeches it to a halt in Los Angeles at 6 p.m. the third day. Eastward is No. 92-98. SP wheels it out of L.A. at 10 o'clock nightly, and arrival is made in Chicago just after midnight the fourth night. In each direction setouts and pickups are made at Kansas City.

This leaves Santa Fe as SP's principal competitor since Santa Fe hauls its southwest tonnage into California itself and SP gets no cut as it does of everything else west of El Paso. The big headache for SP brass is LA-53, which Santa Fe releases out of Chicago at 10 each morning, one hour before the *GSX*. Sixty-one hours later LA-53 is in Los Angeles.

### BRANCH LINES

As Samuel Fordyce wanted, Cotton Belt has a number of contributing branches. In 1960 they were most responsible for the 35.1 percent of total tons carried as originated on-line. This would seem to indicate that 64.9 percent of SSW's traffic is through tonnage, but the road declines to confirm that figure and quotes "50 percent" as being closer to the actual amount of bridge traffic. For the same year, freight revenue accounted for 98.7 percent of total income. Peak seasons of traffic are fall and early spring when more movements are made northbound than southbound.



F7 631, wearing an experimental orange-and-black SP livery, is at the head of a northbound freight getting ready to depart Camden, Ark., in June 1962. On the next track, one of SSW's new cabooses brings up the rear of the hot *Blue Streak Merchandise*.



Two branches extend from Malden to serve communities, granaries, and fertilizer plants of Missouri's Bootheel country. One is the old SSW main to Birds Point, built through swamps in 1878. The track now ends at Wyatt, 6 miles from the point. At Lilbourn a 5-mile line separates to serve New Madrid, also on the banks of the Mississippi. From Lilbourn to Wyatt is the longest straight stretch on the system, 30.6 miles.

The other branch from Malden drops down to Trumann, Ark., a point on the Frisco's main where U25Bs zip over the diamond. A segment from this branch reaches the Mississippi at Caruthersville, Mo., by wading through many geese-filled cotton fields. In Midwestern cotton fields geese are fenced in since it is said they keep the vegetation, except for the cotton, under control. Also on this segment can be found opposite-joint track like that used in Great Britain. This is to keep the local's cars from rocking vigorously on the little-traveled track.

At Paragould a branch joins the main from the fast-growing Air Force base town of Blytheville, and it bisects the Malden-Trumann line at Hornersville. Cotton Belt and Frisco tracks form a criss-crossing pattern in this productive Mississippi alluvial valley, crossing each other at a dozen different locations. The valley is so rich that the SSW leases land on its branch rights of way to farm-

ers. Soybeans and other crops can be found growing within 3 or 4 feet of the tie ends.

The daily-except-Sunday locals on these branches are coaxed along by 1942-vintage 1,000 h.p. Baldwin switchers, the first diesels to appear on the Cotton Belt. Bringing up the rear are large side-door cabooses complete with spacious cupolas. They are left over from mixed-train service, which ended in 1958, and are used today for handling less-than-carload freight. They still have passenger seats in their forward compartments. Other secondary trains on the SSW system get old but very trim wooden hacks, many of which have been reconditioned in Chinese red and sport the new, bold COTTON BELT lettering, as well as new numbers, electric lights, and radio.

In Arkansas' Grand Prairie, a 34-mile branch turns eastward and follows rice field borders to Gillett to bring rice to the many Stuttgart elevators, "palace of the rice belt." The Little Rock line forms a wye and leaves the main at Altheimer to parallel more rice and cotton fields on both sides of England. The trackage ends at North Little Rock Yard except for industrial spurs.

Only a few miles from Altheimer the main crosses a swing bridge over the Arkansas River. The river begins in Colorado near Denver & Rio Grande Western's Tennessee Pass and provides the road

with the spectacular Royal Gorge.

Having crossed the river, all trains immediately enter Cotton Belt's pride and joy — Pine Bluff Gravity Yard. The \$5.5-million yard, begun in 1957, was put into operation December 18, 1958. It has 28 classification tracks with a 1,300-car capacity and was designed so that 12 more tracks can be built if needed. Rip track facilities can accommodate 70 cars at a time, cleaning tracks can hold 56 cars, and local and storage yards can handle



**Boldly marked boxcars took SSW's Blue Streak legend throughout North America.**

John S. Ingles



## Racecourse for fast freights

### St. Louis Southwestern circa 1961

— SSW Cotton Belt  
— MP Missouri Pacific  
— RI Chicago, Rock Island & Pacific  
— SP Southern Pacific

0 50 100 miles

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CLASSIC TRAINS, David Styffe  
(from original by Larry Luser)  
Not all lines shown.



**Modern headquarters for a modern railroad: Cotton Belt's general office building at Tyler, Texas, opened in March 1955.**

CLASSIC TRAINS collection



357. Electric signs at each end of the yard light up the track number into which each arriving train will pull. Nine receiving and departing tracks, each with a 140-car capacity, have remote-control switches to enable trains to enter or depart without stopping.

The prize facility also boasts an electronic push-button hump, radios, intercom squawk boxes, a pneumatic tube system among towers and other buildings, and floodlighting for around-the-clock operation. Nearby is a roomy diesel shed with associated servicing units, including an electronically controlled locomotive wash rack capable of washing

four units at a time at a rate of 6 minutes each. Also nearby is one of two refrigerator-car icing stages on the Cotton Belt (the other is at Valley Junction).

Other yards at East St. Louis, Texarkana, Shreveport, and Tyler each have a modern yardmaster's tower like the ones at Pine Bluff. The 50-foot towers are complete with air conditioning, paneled walls, tile floor, drinking fountain, rest room, tinted glass windows with Venetian blinds, fluorescent lighting, two-man electric elevator, and roofed observation porch.

At the southwest end of Gravity Yard are

the Pine Bluff Shops where major rolling stock repairs are performed, and where big 4-8-4s were once built. Baldwin supplied 10 in 1930 and Pine Bluff followed with 5 more of its own in 1937 and another 5 in '42. Today only one is left, No. 819, and it stands in Pine Bluff's Oakland Park, a gift of the railroad. Cotton Belters who pool and donate their time are building an appropriate display track and shed to enshrine the majestic high-wheeler that faithfully upheld the "Blue Streak Fast Freight" motto.

Cotton Belt dieselized relatively early. Engine 502, a Consolidation built in 1906,





A local freight, powered by RS3 No. 309, is under the high Texas sun at Commerce.



The station at Gatesville, Texas, most soundly constructed and beautiful on the system, marks the west end of the Cotton Belt.



Laborers top off the bunkers of refrigerator cars at the Pine Bluff icing platform, one of two on the Cotton Belt system.

made the last smoke over the road when it shuttled a work train on October 28, 1953.

### **RACING TO TEXAS**

After the merchandisers cross almost the center of downtown Pine Bluff, the low-nose hood units unleash their power for the 151-mile race to the Texas state line. Thirty miles before Texarkana Yard is Lewisville, an important fork in the road. There the 62-mile main line to Shreveport originates for the second most important delivery point to the SP. On this line is Cotton Belt's longest mainline stretch of tangent track: 25 miles.

Even with Dallas and Fort Worth setouts and pickups, Cotton Belt freights usually spend less time in Texarkana than MP, T&P, and KCS passenger trains do at the nearby Union Station. The hotshots pause only a matter of seconds and frequently the new Tyler Subdivision fireman makes his inspection under the hoods as the train eases out of the yard and across the state line.

Next junction is Mt. Pleasant, 60 miles and an hour from Texarkana. The centralized traffic control-equipped main swings south at this junction while 112-pound rails with a 49-mph speed authorization heads

westward into the Texas setting sun. Milepost 546 stakes the end of the Tyler Subdivision and home of the Cotton Belt. Tyler's \$1.5-million general office building was dedicated in March 1955. The air-conditioned structure boasts three acres of floor space and a 500-seat auditorium.

Still another branch leaves the main line, this one beginning near the general office and stretching 88 miles over hilly, sometimes curvy, and scenic country to the Texas timber region around Lufkin. Wood and wood products are the chief export of Angelina County and the lifeblood of connecting short



**Baldwin switcher 1013 wades through soybeans with local train 389 at Blytheville, Ark. The big caboose, left over from mixed train service, still contains passenger seats.**

lines Angelina & Neches River and Texas South-Eastern. The branch has a jovial, rough-riding characteristic. The agency at Bullard has long been closed, but not wishing to see the quaint old station demolished, a nearby cattleman bought it and had it moved to his ranch.

Only local service is provided beyond Waco once the train has threaded its way through downtown Waco streets. The local usually turns back at the Gulf, Colorado & Santa Fe connection at McGregor unless there is business to be done at the Army base at North Fort Hood or at Gatesville.

The final miles into Gatesville, referred to by some crewmen as "Rattlesnake Country," mark the terminus of the appropriately named St. Louis Southwestern. There one can sense railroading of decades past, yet the area is so little traveled now that eventual abandonment looms around the rusting, nonballasted track. Ironically, by far the most soundly constructed and beautiful station on the entire system is at Gatesville. The landmark is used only by the operator whenever the local is in town. Some Cotton Belters think an SSW general superintendent, K. M. Post, from Gatesville was responsible for the station's being built to adorn his hometown.

The rapidly expanding areas of Dallas and Fort Worth contribute a good many carloadings, which are handled in through trains to Texarkana. The 1903-built line into Dallas abuts the backyards of many attractive homes, and while the head end watches an overdose of grade crossings, the rear crew has a top-side view of sunbathers around private swimming pools. The trains pass Dallas Union Terminal to get to SSW's yard. Fort Worth's Hodge Yard ends another segment of SSW track, except for downtown leads.

### ROOM FOR INDUSTRY

Serving as vast a territory as it does, Cotton Belt has no problem finding acreage for prospective industries. The most booming center is the Dallas-North industrial area. Between them, SP and Cotton Belt own more

than 675 acres there for industrial use. Besides the scattered railroad-owned lands, some 70,000 acres are available for industrial purposes along the Cotton Belt. Most of this land was ordnance depots and bases built by the Government in World War II, with the largest near Camden, Ark. Thus most of the land is already graded and populated with a few buildings. In terms of natural resources, the territory has an abundance of limestone, glass sand, and natural gas.

Cotton Belt fortunately passes through states with fairly low tax rates (*i.e.*, Arkansas with 20 percent taxation on assessed value and Texas with 25 percent) in comparison with some others, but nevertheless the taxes are discriminatory. Cotton Belt consequently doesn't have the financial ailing of, say, Tennessee Central and Jersey Central, owing in large part to their states' 100 percent taxation on assessed value. Yet in comparison with the 1-mile-shorter Boston & Maine, Cotton Belt paid almost 2½ times as much in 1961 taxes as did B&M.

Cotton Belt is modern in areas other than motive power, cabooses, and Gravity Yard. Installation of CTC was begun in 1941 in the bottlenecks between Illmo and Dexter and between Pine Bluff and Texarkana. By 1956, CTC was complete from East St. Louis to Corsicana. The 121 miles between Valley Junction and Thebes, through MoPac 60- and 50-mph speed limit zones, are dispatcher-controlled by that road. Until 1959 the CTC between Texarkana and Corsicana was controlled from Tyler, but today dispatchers at Pine Bluff regulate the traffic flow on the whole 628-mile main west of the Mississippi. The SSW is an example of how CTC and dieselization can cut running time in half; in 1947 as much as 30 hours was needed for the 4-8-4s to get over the road.

In 1948, 115-pound rail was being laid, and today the 112- and 115-pound main line has a few spots of 119- and 136-pound steel. The only welded rail in service is 5.5 miles of 78-foot sections. The last time Cotton Belt was in a major program of rail laying, equipment for transporting ribbon rail had not

**Two RSD15s — SP 250 and SSW 857 — and an SSW GP20 wheel a fast "Fruit Block" perishables train through Jonesboro, Ark.**



been developed. The next rail to go down will be the typical 1,440-foot lengths. By 1957 rock ballast had been tamped into place from end to end. Many trestles have been replaced with fills.

Radios are used systemwide — engine to caboose, train to wayside, and on maintenance-of-way equipment. IBM-processed payroll checks, reflectoscope inspection of steel in bridges, and direct long-distance telephone dialing (linked with SP's — the nation's largest private telephone network) are other examples of SSW's use of the latest technology.

Although the road has no hotbox detectors, it has plenty of spotters. Employees patriotically exercise Rule 110 of the Uniform Code of Operating Rules, whose seven paragraphs make it mandatory that all employees, as far as practicable, observe passing trains for defects. They're proficient at signaling their findings to the caboose crew.

Cotton Belt claims several important "firsts" in the rail industry:

- First in the Southwest to use oil as a locomotive fuel.
- First to organize an engineering department specifically for improving health conditions. (SSW initiated a malaria-control program in 1917 for employees and farmers. Many community sanitary departments had their start from the educational help of the railroad.)





- First to feature coordinated truck-train service.
- First to give shippers freight schedules on par with those of passenger trains.
- First to offer consignees progress reports of freight en route.

Some of Cotton Belt's vigor can be traced to its relatively young workforce. When H. J. McKenzie assumed the road's top office in 1951, he, at 46, was one of the nation's youngest railroad presidents. Clifford Stewart, a recent Oklahoma State graduate, is now an assistant roadmaster at Tyler and on his way up. And take the Davidson brothers: Ralph began railroading recently as soon as Cotton Belt would let him at age 21 and is a full-fledged brakeman. His older brother Jim is also on the Illmo board, as a fireman. Their father is a conductor on the hotshots.

Even though the road still operates first-class trains, Cotton Belt is like the money-making Clinchfield — it carries no passengers. Trains 7 and 8 stopped plying the 402 miles between St. Louis and Pine Bluff on November 29, 1959, to make the SSW the largest freight-only railroad in America. In 1955 Nos. 7 and 8 operated daily beyond Pine Bluff to Texarkana, and together with the mixeds on the Waco–Gatesville and the Missouri and Arkansas branches, they lost \$1.2 million that year.

Technically, passenger trains still grace SSW rails daily, but only for 2 miles. All of

KCS's passenger trains (except Nos. 15 and 16 to and from Port Arthur) cross the Red River at Shreveport on Cotton Belt's bridge. These are the only signal-protected miles on the Shreveport Subdivision.

#### ***"MODERN AND EFFICIENT," SAYS SP***

What does Southern Pacific think of its gem? SP Vice-President B. F. Biaggini puts it this way: "We are . . . very proud to have the Cotton Belt as a member of the Southern Pacific family. Since 1932, when Southern Pacific purchased a controlling interest in the Cotton Belt, this railroad has made continued and rapid progress, until today it has come to be one of the most modern and efficiently run railroads in the country. Close cooperation between Southern Pacific and the Cotton Belt has made it possible to offer shippers outstanding service between Eastern and Midwestern points and the Pacific Coast."

Freight handling has long been a natural for Cotton Belt. The road thinks no more of shipping carloads of foot-powered paddle fun boats (built at on-line Malakoff, Texas) than it does totem poles bound from Sausalito, Calif., through St. Louis (talk about a job for the rate clerks!).

South of Paragould, SSW is paralleled on both sides by MoPac, so it has to elbow for business. Having traffic men stationed at such far-flung places as Boston, North Carolina, and Oregon shows SP that Cotton Belt

doesn't aim to sit on its laurels and depend on its connections for business, but rather get out in the field and help create it.

Being a vital link in such prominent transcontinental shipping lanes is a virtue in itself. And with such rapid transportation, the advantages of adjoining industrial sites are greatly enhanced, for industries could complete the process of production faster by getting the goods into consumer hands faster. Too, where land and labor are in such supply, companies can build even though they are farther from the markets; Cotton Belt's freight schedules make up the difference. The road will continue to share handsomely in perishable traffic simply because it maintains perishable schedules demanded by such commodities.

A company that had a tough time trying to keep its head above water in the beginning is proving the adage "a bad beginning makes for a good ending." The word "ending" is used loosely here, but speculation is that someday the SSW will follow the Texas & New Orleans and lose its identity into the SP system. It is a dynamic railroad running its freights at or superior to many passenger train speeds. Woe to anything in their way. ■

*STEVE PATTERSON began contributing to TRAINS magazine in 1960. He is retired from a 42-year career, mostly in engine service, with Santa Fe and BNSF.*

# Summer frenzy on LAKE ERIE

Northern Ohio teemed with coal and ore  
trains for a few months each year

BY **HERBERT H. HARWOOD**  
PHOTOS BY THE AUTHOR

**S**pring warmth melts the ice on the Great Lakes, and the annual ritual begins. The elongated lake freighters steam out of winter storage, and from points south of Lake Erie, railroad hopper cars begin moving toward the docks to feed coal into the huge hulls and pick up iron ore for inland steel mills. For the next seven months or so, the exchange of bulk mineral cargoes over the waterside transfer facilities goes on in an erratic frenzy. By late November or early December, all is quiet again.

This basic ritual is much the same in the early 21st century as it was at the end of the 19th, although the volumes and details have dramatically changed — particularly in the past four or five decades. Today there are far fewer facilities, shippers, and receivers; commercial relationships have changed; and many traffic flows are different. What is left often has a different face, thanks to innovations in lake freighter design and bulk-handling methods.

Not that change was any newcomer. Great Lakes ore and coal movements were — and are — nothing more than an enormous two-way industrial conveyor belt, and as with any industrial process, modernization has been constant over time. But in many ways, the late 1950s and early 1960s were the Indian Summer of traditional methods employed by the railroads and steamship lines. It was a time when coal and ore flowing through the lake ports made up some of the heaviest traffic flows in the country, if not the world. Numerous independent railroads, steel companies, mines, and shipping lines competed with one another in a world where the commercial rules and practices still dated to 1900 and earlier.

The most intense activity was along the south rim of Lake Erie, where 10 coal or iron-ore transshipping ports still flourished, some with the docks of two or more railroads, and some of which still saw steam power either on the rails or on the docks themselves. (And the “boats,” as the ungainly



**Three Electro-Motive F7s  
and a Fairbanks-Morse  
Erie-built assemble an ore  
train at Pennsy's Cleve-  
land dock in October 1961.**









Three B&O EM-1 2-8-8-4s haul 127 cars of coal north between DeForest and Painesville, Ohio, on the Lake Branch to Fairport Harbor.

bulk freighters were traditionally called on the lakes, were almost all propelled by reciprocating steam engines.)

## LAKE ERIE'S PORTS

Beginning at the lake's east end, Buffalo's harbor was populated by various coal or ore docks reached by the Lackawanna, Erie, and Pennsylvania railroads. Traveling west, one came fairly quickly to Pennsy's docks at Erie, Pa., followed in Ohio by Conneaut (Bessemer & Lake Erie), Ashtabula (New York Central and PRR separately, plus a slip for the joint PRR-Canadian Pacific carferry *Ashtabula*), Fairport Harbor (Baltimore & Ohio), Cleveland (Pennsy and Erie, separately), Lorain (B&O), Huron (Nickel Plate), Sandusky (PRR), and Toledo (Chesapeake & Ohio and a joint B&O-NYC dock).

Toledo was by far the largest single coal-shipping port on the Great Lakes, fed mostly by Pocahontas region and eastern Kentucky mines. Sandusky was a distant second, also drawing from many of the same sources, while ports to the east handled varying mixtures of coals from western Pennsylvania,

West Virginia, and southeastern Ohio. PRR's Cleveland dock dominated the inbound iron-ore traffic, which until the late '50s consisted almost entirely of the dense high-grade "raw ore" or "red dirt" from Lake Superior. (The opening of the St. Lawrence Seaway in 1959 gradually changed this flow, as ore from Labrador and various foreign sources entered the lakes.)

Once in railroad hopper cars, the ore moved mostly southeast to the seemingly innumerable mills clustered in the Monongahela, Ohio, and Mahoning river valleys. There were some other respectable flows, too. For example, B&O took ore from Toledo to Armco mills at Middletown, Ohio, while C&O did the same for Armco at Ashland, Ky., and PRR's Erie dock fed the furnaces of faraway Bethlehem and Johnstown, Pa.

**The late 1950s and early '60s were the Indian Summer of traditional methods employed by the railroads and steamship lines.**

At the docks themselves, the transfer machinery ran the gamut of age and design, from clattering early 20th century steam-powered machinery to high-capacity electrically operated equipment dating from the late 1940s. Typically, coal hopper cars were put through rotating car dumpers of one design or another, located on the pier itself, and discharged directly into the vessel's hold. Ore was unloaded by large cranes, most commonly the so-called Hulett (named for their designer, George H. Hulett), which were generally installed in groups of three or four. These were essentially enormous walking beams which moved independently both sideways and vertically; each of their buckets could scoop between 15 and 20 tons of ore at a time out of a hold. To imaginative viewers, they looked like a group of oversize Tyrannosaurus feeding on some prostrate Brontosaurus. Usually the ore docks also included large areas for ground storage, serviced by buckets on a traveling ore bridge which also loaded outbound cars.

Baltimore & Ohio's three Lake Erie locations typified the technological and histori-





**Just north of Bellevue, Ohio, in May '56, a Pennsy J1 2-10-4 with northbound coal meets a leased Santa Fe 2-10-4 on empty hoppers.**

cal range. At Fairport Harbor, Ohio, next door to Painesville, loaded coal hoppers were pushed one by one into a steam-operated McMyler car dumper dating to the early 1900s, one of the oldest on the lake. The dumper then laboriously hoisted, rotated, and lowered them back. Operating at full speed, this antique could empty 30 cars an hour. (By the 1950s, Fairport was just a coal port handling mostly traffic for Ontario; an even horier 1880s-era ore unloader was retired in 1946.)

Lorain, a steel-mill city 27 miles west of Cleveland, was a substantial step upward in both volume and facilities. Coal from West Virginia and western Pennsylvania moved through a 1948 Heyl & Patterson electric dumper which could handle 60 cars an hour. Its predecessor, another elderly McMyler dumper similar to the one at Fairport, still stood intact as a backup. Adjacent were three Brownhoist electric cranes for unloading iron ore, with a capacity of 1,000 tons an hour.

Finally, in Toledo the brand-new (in 1948) joint B&O-New York Central Lakefront Dock included three electric car dumpers

(two Heyl & Patterson and one Wellman) and four Hulett unloaders.

### ARTIFICIAL PARADISE

But in some ways, all this activity was an artificially created paradise. The multiplicity of rail lines and docks was deemed necessary to maintain each separate railroad's control over its traffic and to accommodate complex commercial relationships with various mines, sales agencies, lake shipping operators, and consumers, some of which owned or were partners in the shipping lines or mining operations themselves!

The traffic itself also had some seemingly irrational stimulants. For arcane commercial reasons, the coal rate structure favored transshipping coal from rail to water rather than all-rail delivery to the industries and utilities that used the fuel. Thus, to use one extreme example, the railroads hauled huge volumes of coal to Toledo, where it was dumped into lake boats to be floated north to Wyandotte and Detroit — less than 60 miles away on the same rail lines. This practice not only concentrated traffic at the docks rather

than the more logical all-rail routes, but it helped create extreme seasonal traffic peaks and valleys. With Great Lakes shipping mostly shut down about four months of the year and all-rail delivery more expensive, customers rushed to ship enough during the warm months so they had adequate stockpiles for the balance of the year. Thus, many of the rail routes to the lake bustled in summer and fall but fell into a semi-coma the rest of the year.

These large seasonal traffic surges inevitably put pressure on railroad motive power, and among other things, the lake coal and ore routes became the last stand for heavy power that was unwanted on the main lines. Each railroad, it seemed, offered something different or offbeat. Not surprisingly, many steam locomotives worked their last miles hauling hoppers to and from the lake. Until displaced by diesels in 1956-57, B&O's noble EM-1 2-8-8-4s were standard power to Lorain and Painesville, while hefty S-1 2-10-2s handled most Toledo trains. The docks were switched by L-1 and L-2 0-8-0s, onetime 2-8-0s rebuilt in typically frugal B&O style.



**Two Erie Lackawanna FM Train Masters depart Cleveland with iron ore for the yard at North Randall, 11 miles southeast, in mid-1966.**

During the same period, PRR's Columbus–Sandusky line was staffed almost exclusively by J1 2-10-4s — except for the famous summer of 1956, when desperation drove the Pennsy to lease a fleet of oil-burning Santa Fe 2-10-4s. Once the coal hoppers reached Sandusky, H10 2-8-0s helped shuffle them to and from the three dumpers. Nickel Plate's more modest coal and ore traffic through Huron was hauled by 800-series ex-Wheeling & Lake Erie 2-8-4s.

Where there was no steam, there were usually diesel castoffs considered questionable for mainline manifest trains. Tractive effort was needed rather than speed, and reliability was less critical. PRR entrusted its heavy Cleveland ore traffic to Baldwin Sharknose cab units, assorted Fairbanks-Morse cabs, and Alco FAs — with occasional Baldwin and Alco former passenger units thrown in. Nearby at Erie's ore dock, mongrel combinations of Alco RS3s and Baldwin road-switchers struggled to move trains out. In the early Erie Lackawanna days, they were supplanted by the former Lackawanna Fairbanks-Morse H24-66 Train Masters. And

then there were the clean and colorful Bangor & Aroostook GP7s and GP9s. These were regular summer conscripts at Pennsy's Cleveland and Erie docks, sent there under a utilization agreement by which each railroad could use them during its traffic peak — for PRR's summer coal and ore business and BAR's winter potato rush.

### **FLAT WEST, HILLY EAST**

While much of the lake coal and ore business was heavy-duty conveyor-belt railroading, there were a goodly number of eccentricities and inefficiencies, hated by railroad managers and workers but beloved by the railfans whose only responsibility was watching the efforts to move trains. One problem was the varying terrain along the lake. The Cuyahoga River, which bisects Cleveland, almost exactly marks the end of the Alleghenies on the east and the beginning of the Great Plains to the west.

So, west of the city it was an operating manager's paradise, with mostly easy grades and lots of flat, open space for yards and other facilities. PRR's Columbus–Sandusky

line (which went to Norfolk & Western in the 1964 N&W-Nickel Plate-Wabash merger) was a textbook example. On a map, this stretch of bucolic single track looked like a backwater of the dense and sprawling Standard Railroad of the World. But in fact, for seven months of the year, it was one of the most productive and profitable lines in the entire Pennsy system. N&W and C&O handed over full trainloads of coal to PRR at Columbus and, once beyond the grade immediately north from the Ohio capital, a single J1 or two F7s rolled them through the flatlands to Sandusky. C&O's former Hocking Valley line from Columbus to the Presque Isle coal and ore docks at Toledo was blessed with similar terrain and traffic flow. Trios of F7s or GP9s easily handled 160 loaded hoppers of C&O's own coal, or trainloads received from the Clinchfield at Elkhorn City, Ky., and Louisville & Nashville at Covington.

But from Cleveland east it was a different story. There the land is hilly and rises rapidly from lake level, invariably producing stiff grades for the heavy ore drags heading south and sometimes similar problems for coal





**Hulett's unload a lakeboat as RS3s prepare to depart and a Baldwin switcher scurries about at the Erie's Cleveland ore dock in 1960.**



**In July 1953, Train Master demonstrator TM-2 works NYC's Ashtabula coal and ore yard in the company of NYC GP7s 5694 and 5700.**

coming north. That, of course, meant lots of high-tractive-effort motive power.

The most extreme example was B&O's 51-mile Lake Branch, the coal-carrying line from Warren, Ohio, to Painesville and the Fairport Harbor dumper. Built as a narrow-gauge line in the 1870s, the branch still looked it. Single-track and without signals, it twisted through backwoods country and was beset by stiff grades in both directions, sparse passing sidings, and just two weekday-only agent-operators along the route. Between the tiny towns of West Farmington and Middlefield, lakebound coal had to be wrestled up a 1.47-percent grade as it negotiated 20 curves hung on a hillside above Swine Creek. Beyond Middlefield, the line dipped and climbed with the rolling countryside, culminating in a 1.1-percent ascent into Chardon. There retainers had to be set for an unrelenting 11-mile descent to Painesville, which averaged 1.6 percent and reached 1.74.

Through some unfathomed mystery of B&O logic, the Lake Branch remained all steam-powered through 1956, with EM-1s hauling the tonnage trains. One of the ar-

ticulateds could handle an 80-car coal train from the eastern division point at New Castle Junction, Pa., to the base of the grade at West Farmington; from there another was needed as far as Chardon. All power was based at the crude and small Painesville engine terminal, a facility which looked like a leftover from the original narrow-gauge days. Engines were serviced in a rectangular three-stall wooden shed, turned on a wye, and fueled by a portable conveyor.

Helpers for the coal trains were thus dispatched from Painesville and backed 35 miles down to West Farmington, where — after a leisurely wait for their train to show up — they either pushed or doubleheaded to Middlefield. At that point everyone stopped

for lunch and, if the helper was on the rear, it was moved to the head of the train. With the two 2-8-8-4s now doubleheading, the train progressed another 12 miles to Chardon where it stopped again; the helper then cut off and dropped downhill to Painesville while the road crew set up retainers.

While two EM-1s and about 80 cars made up the typical Lake Branch train, there were even more spectacular variations. I vividly remember a 1955 tripleheader consisting of an EM-1, a 2-10-2, and a Mikado, and I witnessed several trains in the 120- to 130-car range with three EM-1s on the head end. One, in fact, came to grief on the grueling Swine Creek hill south of Middlefield when all that massed tractive effort proved too much for the drawbar of an old hopper car three cars back. The hopper ended up buried in the hillside, the tripleheader returned to Painesville with its three-car train, and the nearby farmers had their coal for the winter.

**Much of the Lake Erie coal and ore business was heavy-duty conveyor-belt railroading, but there was a goodly number of eccentricities and inefficiencies.**

## **OLD YARDS AND BRIDGES**

Sometimes terrain was only part of the problem. The Erie (and later Erie Lackawanna)



**Summer frenzy! PRR's Cleveland Hulett's unload one lakeboat as another waits its turn in an evening time exposure from 1960.**

received iron ore for various steel mills in the Youngstown-Warren area in a cramped little yard alongside the Cuyahoga River's original channel in Cleveland. To reach it, lake boats had to make a short but awkward trip up what was now a dead-end side channel of the river, and the larger ones could not make it at all. Once the Erie's three Hulett unloaders began scooping the ore out of their holds, cars had to be moved out quickly to avoid paralyzing the yard. Three- and four-unit sets of the Baldwin and Alco road-switchers

would wrestle batches of up to 65 cars 11 uphill miles to a storage and consolidation yard at North Randall, where they would later be assembled into road trains.

The unfortunate Erie also had to go through a double-handling procedure for ore that needed temporary ground storage. With no space at its dock, Erie's next best alternative was North Randall, where a primitive Wellman dumper unloaded the cars while moving back and forth on its own rails. Traveling cranes on an ore bridge stockpiled

the ore and reloaded cars when the ore was needed at the mills. This operation ended abruptly in July 1956 when a windstorm blew down the ore bridge, but in 1959 the yard and dumper were reactivated, using bulldozers and scrapers to handle the ore.

#### **PENNSY'S PROBLEM**

PRR had a variation of Erie's problem at its own Cleveland ore dock, the busiest on Lake Erie. There were no real capacity or operational problems at its so-called C&P





Dock (the name a holdover from predecessor Cleveland & Pittsburgh), which was efficiency itself: four Hulett unloaders could unload more than 4,000 tons an hour either into cars or a large storage area, which could hold 1.2 million tons of ore.

But getting the trains in and out of there was something else. C&P Dock was located on a spot of lakefront land called Whiskey Island, immediately west of the Cuyahoga River and north of New York Central's lakefront main line. Through much of the 1950s,

Pennsy's route to Whiskey Island consisted of a convoluted track layout that required it to enter, leave, or cross the Central's busy tracks three times, as well as use its drawbridge over the river. The old swing structure dated back to Lake Shore & Michigan Southern days and was a headache for everyone on both rail and water. NYC's double-track main — also used by PRR at this point — was squeezed into a gantlet, allowing only one train at a time, and the bridge regularly creaked open and closed to allow the large

lake boats to ease through on their way to or from the upriver steel mills and bulk terminals. Since the PRR was the “junior” line here, its trains not only waited for river traffic but anything on the Central, and long delays were chronic. Furthermore, the odd track layout limited the Pennsy to about 30 cars in a train, so it had to follow the Erie's procedure of dragging short trains uphill away from the lake to a consolidation yard outside town.

NYC's bridge was finally replaced with a



**Cleveland, June 1960: FM C-Liners heave an ore train up from PRR's dock toward the Cuyahoga River bridge on NYC's main line.**

modern double-track lift span in 1957, but the track layout was not completely straightened out for another five years. When it was, the result was an even more noteworthy operation for train-watchers. Now able to run full tonnage trains directly from the C&P Dock, Pennsy still faced the problem of ascending grades as its line climbed away from the lake. Its answer was to add a set of helper diesels and doublehead the train uphill, using two locomotive crews and usually two sets of incompatible cab units. The Baldwin Sharks, FM cabs, Alco FAs, and EMD F7s all mixed to produce a medley of chugs and whines of different pitches — usually accompanied by smoke of varying colors and clouds of sand — as the heavy trains struggled through Cleveland's east side.

The lake season also required some odd routings not otherwise seen. Ideally, coal hoppers bound for the lake could be reloaded with ore on the return — if the facilities were together. Sometimes they were not, which created car shortages at one spot and surpluses somewhere else. With five separate coal and/or ore dock locations spread along

the shore, the Pennsy had a particular problem balancing its car-supply needs. Sandusky was strictly a coal shipping port, which created trainloads of empty hoppers. On the other hand, PRR's docks at Cleveland and Ashtabula were primarily ore receivers, which demanded lots of them.

Unhappily, the Pennsylvania had no direct line connecting the three ports — but arch-competitor New York Central did. So a special four-way arrangement was worked out whereby PRR could haul empty C&O and N&W hoppers eastward over Central's main line from Sandusky to Cleveland or Ashtabula for ore loading. These trains only operated eastbound and always consisted of empties; power would run light west when

**The Pennsy had no direct line connecting its three lake ports in Ohio — but arch-competitor New York Central did, and the two worked out an arrangement.**

needed. In those primeval days before Penn Central and other mergers, train-watchers along the Central's lakeshore route were often shocked to see a pair of Pennsy F7s or Baldwin Sharks chugging along with a string of seemingly misdirected Pocahontas-region hoppers in between the Great Steel Fleet.

While most ore and coal traffic funneled through the railroad docks, there were occasional exceptions. In 1957, for example, Republic Steel and B&O got together to move regular trainloads of ore from Republic's own Cleveland dock to various company mills in the Youngstown, Warren, and Canton areas. The River Terminal Railroad, Republic's rail switching subsidiary, delivered the loaded hoppers to B&O's nearby Clark Avenue yard where the railroad assembled them and moved them south and east over its Cuyahoga valley line.

At the time, Baltimore & Ohio's Cleveland operations were also still largely steam powered, but the 80-foot turntable at the road's Cleveland engine terminal was too short for the EM-1s and even the S-1 2-10-2s. Thus the job of hoisting the heavy trains up





**Bangor & Aroostook GP7s regularly summered on PRR along Lake Erie; BAR 61 and 67 stand at Pennsy's Erie (Pa.) ore dock in 1954.**



**B&O Baldwins: RF16 "Sharknose" 4215 and an AS16 head up a coal train at Lorain, on Lake Erie 27 miles west of Cleveland, in 1958.**

the valley grade fell on Q-4 Mikados. The trains varied in length, but generally at least two Q-4s were needed, usually more. Typically three, two on the head and one pushing, would haul the train at least as far as Akron Junction. There more power had to be added to negotiate a stiff combination of grades and curves to get the trains onto B&O's main line at Cuyahoga Falls — in this case generally some mix of Alco diesel yard switchers and/or a GP9 or two from one of the local freights. On one memorable day, no less than five Q-4s — three at the front and two ahead of the caboose — took an especially heavy ore train out of Cleveland. At Akron Junction a single GP9 was added at the head end and two Alco S2 yard goats at the rear — a grand total of eight engines, each with its own crew!

## CHANGING TIMES

By the early 1960s the old ways were fading. Baltimore & Ohio's primitive Lake Branch was an early casualty. Finally fully dieselized by 1957, it struggled on with little basic change for another eight years. But in

1965 the railroad negotiated a traffic agreement with the Bessemer & Lake Erie to move its coal through Conneaut, allowing B&O at last to retire the ancient McMyler dumper at Fairport. The branch itself continued to survive on interchange and chemical traffic, but this eventually dried up too, and the last train traversed the picturesque line in 1981.

Elsewhere, changes came more quickly. As the number of independent railroads shrank during the mergers of the 1960s and 1970s, so did the multiplicity of separate docks. On the commercial side, the railroads shook off decades of tradition and changed their pricing and marketing methods to encourage all-rail unit-train coal movements direct to the receivers, eliminating much of the "lake cargo" traffic.

Ore-handling methods changed too. As the old high-grade Lake Superior ores gave out, pelletized taconite ores became the norm. These could be more readily unloaded by conveyors carried on the lake boats themselves than by shoreside bucket machinery. So, gradually the more flexible self-unloaders took over and finally eliminated the most

visible and fascinating fixtures of the lake iron-ore trade — the huge Hulett cranes. The last of their breed on Lake Erie, the four 1912 Hulett's working the onetime Pennsylvania C&P Dock in Cleveland, were shut down for good in 1992.

And as they rusted in limbo, another symbol of change rolled past them on the mainline tracks — unit coal trains running directly to consumers like Detroit Edison and bypassing the car dumpers and lake steamers. Now, with all the redundancies and antiquities gone and the eccentricities smoothed out, it's surely a more rational railroad world — but what sticks in the heart are those clatters and chugs, and the breathtaking sight of three EM-1s trying to storm Swine Creek hill. ■

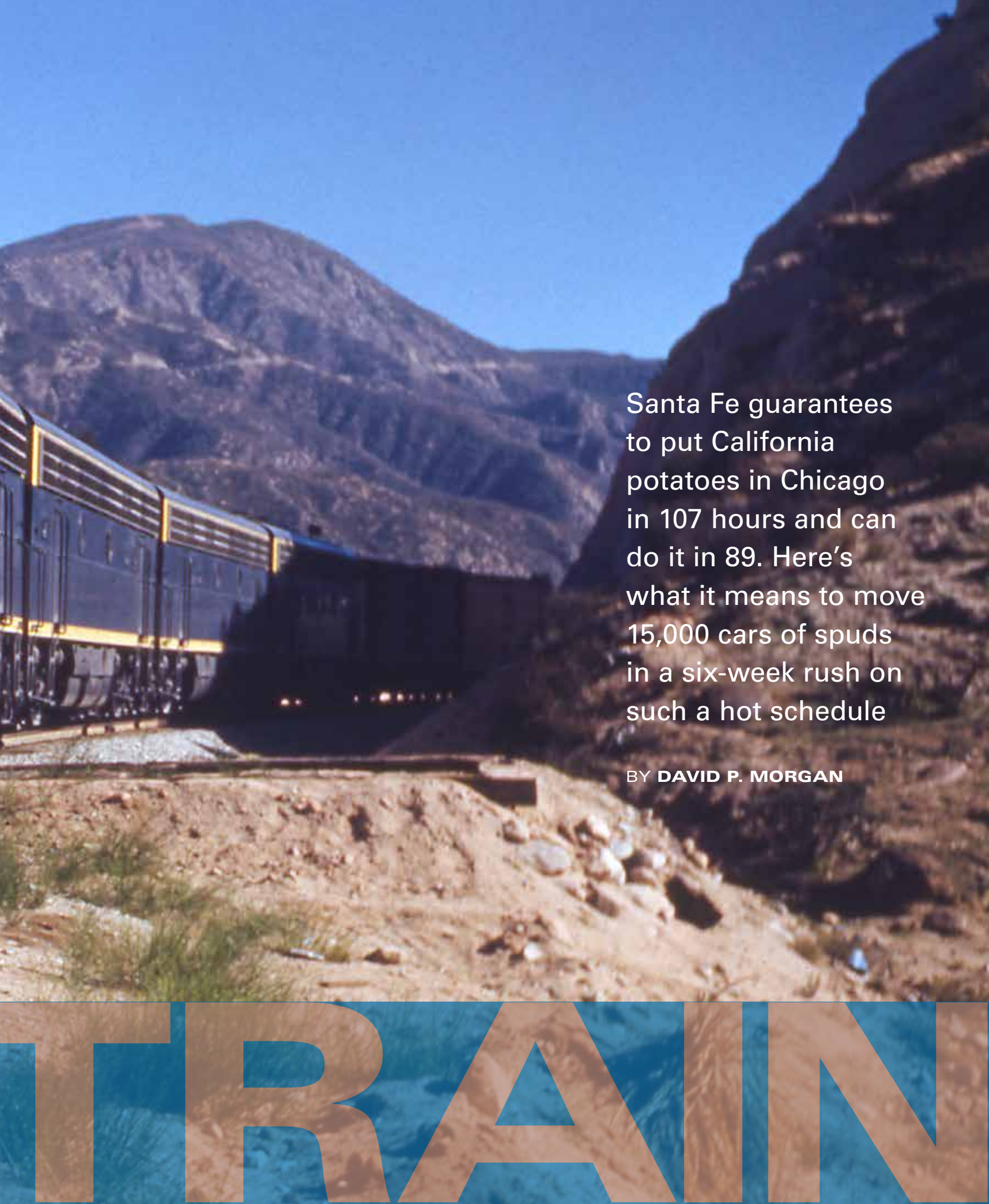
*HERBERT H. HARWOOD JR. retired after 30 years in financial and marketing management for C&O-Chessie-CSX. Along the way, he actively photographed the changing railroad scene and wrote numerous books and articles. He thanks Eric Hirsimaki and Carol Poh Miller for their help with this article.*





# CASE HISTORY OF A SPUD





Santa Fe guarantees to put California potatoes in Chicago in 107 hours and can do it in 89. Here's what it means to move 15,000 cars of spuds in a six-week rush on such a hot schedule

BY **DAVID P. MORGAN**

# TRAIN





**Above: Alco S2 switcher 2358 jockeys refrigerator cars at a loading shed in Kern County, Calif. When filled with potatoes, the cars will be taken to Bakersfield for expedited movement east.**

*Santa Fe*

**Preceding pages: Looking like Extra 261 East but originating in Southern California, not the Central Valley, four-unit F7 No. 241 climbs Cajon Pass with reefers loaded with perishables.**

*Krambles-Peterson Archive*

# What is Extra 261 East?

As of 8:52 a.m., June 4, 1953, it is white flags flapping over the cab windows of a 6,000 h.p. Electro-Motive diesel dressed in blue and yellow and wearing the Santa Fe cross on its nose . . . 3,574 tons on the wheel report: 66 yellow reefers and a dull-red caboose . . . and a two-unit diesel helper idling behind the hack as the tonnage ahead on track 19 lies alongside the icing platforms in the warmth of morning at Bakersfield, Calif. Extra 261 East is men and machines and lading awaiting the highball for a 2,195-mile, 107-hour straight shot to Chicago. It is sacks of washed potatoes stacked up behind thick sealed doors; it is conductor Charlie Harding picking up his waybills; it is 96 cylinders kept alive on a diet of diesel oil — it is tension impatient for release.

For the Santa Fe this is the payoff of the annual movement of potatoes out of Kern County at the foot of the San Joaquin Valley — yet the spadework began months ago when the railroad's agricultural agent, H. E. Adams, nosed his green Buick into the fields to buttonhole big ranchers. Hank was after potato production estimates for the 1953 season, and before he was through he had contacted the growers' association and field men of the U.S. Department of Agriculture. The advance picture he

sent to Chicago headquarters was that Kern County would harvest 50,000 acres of early potatoes (26 percent more than in 1952), equivalent to 15,000 carloads if Santa Fe's solicitors managed to get an even split of the traffic with the Southern Pacific. Back east in Chicago, traffic and operating men went into a huddle over Hank's estimate, then pulled 7,500 refrigerator cars out of the pool for empty movement to Bakersfield.

Gradually, then briskly as the spring deadline loomed, the natural pace of a seasonal perishable rush began to pick up along the 2,200-mile length of the Santa Fe. There were icing stations to brief; diesels to call out; reefers to clean, inspect, and store; tariffs to file. All down the line it was the old yet ever new story of preparation, then waiting . . .

. . . And then the fields were populated. First the machines: the beaters rolled down the long rows of green plants, slicing off the vines — and behind them pocket-sized Caterpillars came along dragging the mechanical diggers, potatoes bobbing to the surface in their wake. Behind each digger, some 40 pickers moved in to pick up the spuds, then set their loaded sacks aside for loading on the stake trucks which raised the dust between field and packing shed from dawn until dusk. At the sheds







the potatoes were dumped into baths, then rolled on conveyor belts under the quick, sure eyes of women — some of them bobby-soxers, some of them grandmothers — who threw out the culls, the bruised and overripe spuds. The belts disgorged their load into 100-pound sacks which were quickly sewed up at the top, then trucked across the platform and into the waiting reefers, 360 sacks to the car. Doors swung shut, seals were snapped on — and Santa Fe took over.

### BAKERSFIELD'S ICEBOX

Black, silver-striped yard engines and Geeps gunned out of Bakersfield on pickup runs. At each of 25 packing sheds and way stations the diesels reached into the sidings to pull out the loaded reefers and replace them with empties.

Bakersfield, assembly yard for the Kern County spud rush, came into the picture as the pickup crews spotted their cars beside the long ice docks. Icing — remember the familiar scenes of sled crews cutting the big blocks out of frozen lakes in the winter, then storing them for summer use? And recall the photos of men atop the ice docks pushing the blocks into the bunkers of waiting refrigerator cars? Well, forget them, because Bakersfield is a push-button operation, a gigantic mechanized icebox that can freeze 720 tons of ice a day, load 3,500 tons a day, and store up to 28,000 tons. The 300-pound blocks — it takes 38 to ice a car — move out of the storage rooms and up onto the docks in an endless chain. Up there the ice is gobbled up and digested by a machine rolling along a 12-foot-gauge track, a Link-Belt creation operated by one man that can dump more than 10,000

pounds of crushed ice into a reefer in 75 seconds flat. Bakersfield ice dock boasts three of these electric loaders and when they're working together the Santa Fe allows but 30 seconds to ice a car.

From the ice docks, the yellow cars were assembled into trains, up to 12 of them a day, and on June 4, Extra 261 East was one of them. Between its diesel units, fore and aft, are something like 4 or 5 million potatoes, and at 8:53 a.m. they're rolling. The road diesel up front pulls the entire train, helper and all, out of the yard and past the passenger station, over several grade crossings, and up to Kern Junction where the Santa Fe takes to SP rails for the climb over Tehachapi to Mojave. Once the caboose clears the tower, the leash is taken off 9,000 diesel horsepower and Extra 261 East heads for the mountains in high gear.

This is the payoff. Chicago is nearly 2,200 miles away on a guaranteed schedule of 107 hours, which means the Santa Fe stands to foot the bill if the spuds spoil or miss a good market because the train is late. It means that the railroad could shell out \$18,000 on a delayed movement of 100 cars, which explains why it could get these potatoes to Chicago in 89 hours if it had to because of a late departure or unexpected delays en route.

Green acres of cotton and alfalfa staked out by oil-well derricks soon give way to desertlands as Tehachapi looms ominously in the distance. The line begins to noticeably lift and there's a deafening roar in the steel caboose as the exhaust of the diesel helper behind reverberates inside tunnel No. ½. The grade stiffens; 2 percent is common, 2.5 is frequent. Before diesels it took four big 2-10-2s to take a train of this size over the hump.

**Above: Each standard 40-foot, ice-cooled reefer holds 360 sacks of potatoes. The five sacks here total 500 lbs.**

**Middle: The yellow reefers have their bunkers filled with ice at Bakersfield before heading to Chicago.**

*Two photos, Santa Fe*



**Just as on the spud train in author Morgan's article, a 5011-class 2-10-4 helps four F7s lift loaded reefers up-grade about 15 miles east of Belen, N.Mex., in July 1957.**

Ed Gerlits

This is centralized traffic control territory, and at Bealville Extra 261 East goes into the hole for SP's *San Joaquin Daylight*. At 10:20 the train is stopped; three minutes later the radio speaker in the caboose announces that the passenger train is nearing the east siding switch. Conductor Harding swings up into the cupola and waves a white flag at the helper engineer, who opens up his locomotive just enough to hold the back end of the train on the grade. . . . Three black diesels and a swish of orange-and-red cars slip by. . . . The radio mutters, "OK, let's go." . . . Harding gives a highball to the helper and the train is moving again at 10:26.

The long yellow train coils on up into the mountain, clinging to its walls and boring through tunnels where there is no other choice. The wheel-slip light in the helper's cab flashes on as its drivers fight for a grip on rails left greasy by freshly oiled reefer journal boxes, but 3,574 tons keep rolling — up, up, up to the summit. The top is reached after 3½ hours and 49 miles of the roughest kind of western mountain railroading. The helper cuts off, wyes, and returns to Bakersfield; Extra 261 East makes a brake test and is under way down the steep slope into Mojave.

Once out of Mojave, where Santa Fe trains regain home rails, it's a straight and level run of 71½ miles to Barstow, and crews figure it takes just 85 minutes to wheel a load of spuds across it.

The sun hikes on across the sky as Extra 261 East noses into Barstow, and a starry night blankets its run over the desert to Needles and the Colorado River. Now the four units on the head end have their work cut out for them because the 149.7 miles ahead to Seligman rise on a consistent

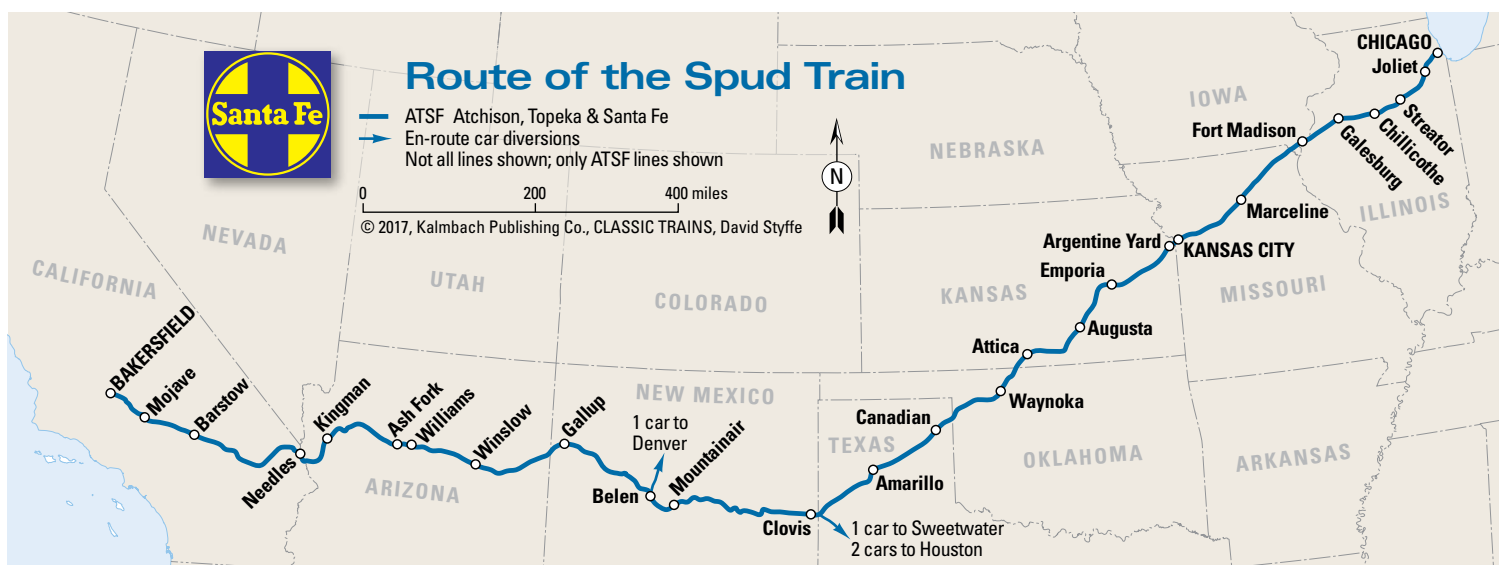
1.42 percent grade except for an intermediate breather of 12 miles from Louise to Walapai. The throttle is in the last notch, the speedometer needle sticks to 14 mph, the load-indicating meter reads 675 amperes D.C., and all the desert hears the sustained roar of four V-16 engines yelling their heads off. This is four units — 110,000 pounds' worth of drawbar pull — at work on more than 3,500 tons of train. The same units could take up to 4,700 tons unassisted; with steam, 2,900 tons was the limit for two fat 2-10-2s.

## 66 CARS, 23 DESTINATIONS

What is Extra 261 East? Is it just wide-open diesels on a long grade with 3,574 tons in tow and green signals ahead? That is the train as the operating men see it — but to the traffic boys the tale of Extra 261 East is tied up in the bundle of waybills that rests on the conductor's desk back in the caboose. To them the train is 66 refrigerator cars billed for 23 different destinations: for Grand Rapids and Pittsburgh and Brooklyn and Des Moines, for Fort Williams, Ontario, and Waterville, Ohio. The train is also 66 individual contracts between shipper and railroad to move perishables in car-load lots so far for so much. For instance, on a car of spuds billed from Shafter, Calif., to Kansas City, the freight charge totals \$447.23 plus \$79.35 for refrigeration.

Refrigeration is important on a big perishable handler like Santa Fe, so much so that the road has a separate department to take care of it. For example, the icing instructions on Extra 261 East call for the majority of the cars to be initially iced at Bakersfield and re-iced at all ice docks en route:





Needles, Calif.; Belen, N.Mex.; Wayneoka, Okla.; and Argentine, Kans. But there are a handful of exceptions. One shipper requests ice at Bakersfield but none thereafter; another wants initial icing at Needles; still others ask for re-icing at every other dock only. The variations arise from the quality of the spuds, the mileage they're making, their disposition, and from plain old shipper whim. Certain Department of Agriculture tests have shown that an en route temperature of 55 degrees will keep early potatoes marketable, but most shippers prefer full icing to insure a steady 38 to 40 degrees. Santa Fe itself is impartial. It'll keep the bunkers full if you like, or run the spuds east under "standard ventilation" — no ice at all (but leaving the roof hatches open when the weather outside is above freezing) — which is the way potato-chip manufacturers like their cars handled.

One refrigerator car in the consist of Extra 261 East isn't carrying spuds and it has not a cube of

ice, yet its lading of frozen strawberries billed for Jersey City is being cooled at 8 degrees below zero. The reefer is SFRD No. 3150, a 50-foot, 125-ton car (the average reefer loaded with spuds weighs 53 tons) dubbed an MTC, for mechanical temperature control. At one end of it a 6-cylinder, 52 h.p. diesel engine fed by fuel tanks suspended beneath the car is hammering away, operating a Trane Company refrigerating unit. Prior to the Santa Fe's purchase of 30 such mechanical reefers, frozen foods (such as syrup, citrus concentrate, etc.) had to be handled in standard reefers kept cool by ice and 30 percent salt. But not the 3150. Its refrigerating plant (which takes up only slightly more space than one ice bunker) will operate up to 12 days without attention, and by simply turning a knob on a panel located outside the car you can take the interior temperature down to 50 below.

This is the 3150's first revenue trip and it's running like a Hamilton watch.

**Top: A trainload of Kern County potatoes rounds a horseshoe curve east of Ash Fork, Ariz., on a rugged section of main line that the Santa Fe bypassed in 1960.**

Santa Fe



**An A-B-B set of dual-service, Warbonnet-painted F7s like the one that took over Morgan's spud train at Argentine Yard hustles a freight extra west toward Galesburg, Ill., in August '53.**

Kenneld DeSoltar

## BUSY TIME AT BELEN

Afternoon, June 5, and a Baldwin 2,000 h.p. helper is leaning on the tail of the train as it fights up the 2 percent grade out of Ash Fork, Ariz. The long yellow ribbon of reefers is pulled and shoved up through wooded terrain and around horseshoe curves. The speed is slow, steady, relentless.

The helper cuts off and Extra 261 East is out of Williams at 3:50, across the Arizona Divide at 4:53, through Flagstaff at 5:06, into Winslow at 6:25 p.m.

The first diversion occurs at Belen. As the potato train has been climbing mountains and crossing the desert, the shippers back in Bakersfield have been watching the market, checking where prices on early spuds are breaking, where they're holding. Then, if a man felt he had billed his car to a bad market, he simply called his local Santa Fe agent, who in turn wired ahead with the request that the car be rerouted. Diversion is a standard railroad service on perishable lading, and a shipper can divert the same reefer up to four times free of charge. At Belen, one car is diverted to Denver.

Belen is busy. The diesel units take on fuel, as they do three times between Bakersfield and Kansas City, and engine and train crews change, as they do 17 times from California to Chicago. Practically the entire train is re-iced. And finally an enormous 2-10-4, No. 5022, couples on to help the extra up to Mountainair, 41 miles and a lot of 1.25 percent grade away. At 6:03 a.m., June 6, the train is moving, and once the tandem of steam and diesel hits its stride the reefers ride upgrade at 45 mph.

Extra 261 East is now running over what Santa Fe calls its Southern District, a line of more moderate gradients than the northern route over Raton



Pass used by the streamliners and a line where traffic is expedited by one of the most advanced installations of centralized traffic control in the U.S. The sidings are miles long and trains can enter or leave them at 40 mph. Nonstop meets are common. Indeed, tonnage trains pass at such speed that the stranger feels obliged to check an operating timcard to be sure he's not on double track.

At Clovis there are two more diversions, one car for Sweetwater, Texas, and two for Houston, and the train is away at 2:32 p.m. Into Amarillo at 4:45, remove one car for local delivery, leave at 5:02. Dusk settles over Texas, but a phenomenon in the distance — heavy rain and a dust storm simultaneously — threatens the cool calm of late afternoon. Then just west of Canadian, Extra 261 East finds a red block, stops and flags on through to find another red. The sky darkens and rain begins to fall. And at the west end of the yard at Canadian two cars are lying on their sides!

The yard men say a tornado hit two hours ago, overturned four cars in the yard, and roared eastward along the main line snapping signal masts like toothpicks. The extra stands in the rain from 7:45 until 10:46 while westbound trains clear and two sections of the *Grand Canyon* slide past and into the uncertain darkness ahead. Finally the reefers move, but it's touch and go all the way into Waynoka, Okla., because not only must the train stop at each signal and flag through but a halt must also be made at each power switch to insure that it's lined for the main stem. It's a helpless feeling to be deep in CTC territory after a storm has knocked out the dispatcher's control over both signals and switches, but the trains, proceeding cautiously and





relying on the rule book, are moving. First the passenger trains, then the perishables.

### ARGENTINE ENGINE CHANGE

Extra 261 East clears Waynoka at 5 o'clock, June 7, Emporia at 11:39, and comes to rest in Argentine Yard in Kansas City, Kans., at 2:20 p.m. Some 1,747 miles after it coupled on in Bakersfield the blue-and-yellow diesel with the cross on its nose is taken off. It has fought up 2.5 percent grades at a walk, then stretched out the slack across the plains at 55 mph. It has brought its tonnage downgrade without air, its dynamic brake screaming like a buzz saw, and it has hauled its trains past uncountable fuel and water plugs without so much as a flap of its white flags. In return for its effort, the Santa Fe will give it a quick inspection, fill its tanks, and dispatch it west to California with more tonnage.

Meanwhile, Fairbanks-Morse yard engines are cutting the potato train apart, for at Argentine cars must be re-iced, diverted, and removed for local delivery. The yard's push-button hump-retarder facility is loaded with westbound classification work, so the FMs flat-switch the spuds. To fill out on tonnage, 30 reefers are added: 1 car of onions, 1 of lemons, 9 of potatoes, and 19 loaded with oranges.

The power out of Argentine is three-unit F7 No. 328, geared for 85 mph and fitted with steam generators for optional passenger service, and wearing stainless steel with red paint splashed over the cab.

At 5 p.m. its air horns sound off and the spuds are on their last lap, off over the Santa Fe's speedway to Chicago. It's no race track at the start, though, for it takes about an hour to move tonnage from Argentine through Kansas City. The tracks

hug the Kaw River, tighten up in 15-mph curves, thread past Union Station, then begin to climb between concrete retaining walls that funnel the line out of town. It's a headache — a forest of signals to obey, passenger trains to keep clear of, grades and curves to compensate for — but the engineer of Extra 328 East does a deft job of it and by 6:30 the train is bowling along.

Yet another night falls as potatoes and onions and oranges and lemons are hauled across northern Missouri and into Illinois. Chillicothe, Streator, and Joliet fall behind the markers.

Extra 328 East is "dead" at Corwith Yard, Chicago, at 12:45 p.m., June 8. The journey of 2,195½ miles from Bakersfield has been covered in 97 hours 38 minutes without straining. But the Santa Fe's work is not quite done. Once again, yard engines go to work. First the cars whose contents will be auctioned off next day are removed because they must be downtown and on display by 6 a.m. Next come the reefers billed for the Chicago Produce Terminal, the team tracks where the potatoes may be reloaded onto trucks for local delivery. Finally the through cars are blocked into transfer runs to eastern connecting lines. Their deadline is 3 a.m.

Santa Fe President Fred Gurley recently remarked, "We feel very strongly that a schedule is a pledge to the shippers."

Santa Fe Extras 261 and 328 East have kept that promise. ■

*DAVID P. MORGAN joined the TRAINS staff in 1948, became editor in 1953, and retired as editor/publisher in 1987. Widely regarded as America's greatest 20th century railroad writer, he died in 1990 at age 62.*

**A spud train rolls east between Ash Fork and Williams, Ariz., in 1953. Ahead of the caboose are perhaps 4 or 5 million "hot" potatoes.**

*Santa Fe*





# First 56, Engine

You are the engineer on a Nickel Plate Berkshire on a fast freight east — and the railroad is yours

BY JOHN A. REHOR

**Y**ou are a Fort Wayne Division engineman and you have received a 2:15 p.m. call to pilot Nickel Plate Fast Freight No. 56, the CB-12, from Fort Wayne, Ind., to Bellevue, Ohio. You report to the East Wayne yard office, pick up your clearance card and a 19 order which reads: *Eng 758 seven five eight displays signals and will run as First 56 fifty six East Wayne to Bellevue Yard.*

At 2:40 p.m. your train arrives from Calumet Yard in Chicago on 24 track, the 758 is cut off, and her Chicago Division engineman runs her up to the big concrete coal dock before calling it a day. Now it's your turn.

As you board the big Berkshire, the hostling force is already filling the tender and sand dome to capacity, tending the fire, and manning the Alemite guns to lubricate the rods. Once inside the cab, you begin the ritual that is as much a part of your life as shaving your face. You look over the water glasses and gauge cocks . . . switch on the headlight and engine markers . . . open the test valve of the Nathan low-water alarm . . . cut out the automatic train-control apparatus . . . try out the rail washer . . . test your air brakes with service and emergency applications. Your fireman has tried out the sanders and now goes forward to put up the green metal flags on the smokebox and turn the green marker lenses forward to indicate you will have a second section following. Back on the ground, you oil around, check the level in the oil glasses of the mechanical lubricators, and look over the guides and pistons for telltale blue or black. You walk to the rear of the tender and open the train-line angle cock to test the vent valve. Everything seems to be in good order.

You climb back into the cab and take a good chunk of waste to wipe down the seat, arm-rest, gauge glasses, and everything that will be touched during the course of the trip. After checking the Precision power reverse to see that it is working freely, you back the big girl away from the coal dock and couple onto your train, noticing as you do that the second section is already pulling into the west end of the yard. Now, recharge the train line to 70 pounds, make your terminal air test, and you are ready to roll.

According to the head man's list, you've got 71 loads, no empties, 3,487 tons, and a million

**Nickel Plate 2-8-4 No. 758 flies past the coal dock and signals at Yellow Creek, Ohio, with hotshot CB-12 for Buffalo. Green metal "flags" by the number boards tell that another section is following.**

John A. Rehor

dollars' worth of freezer and stock consist behind the 758. The yardmaster has noted that your head icer is the 12th car in. You sound your highball, look over to the man on your left and yell, "You ready, Fireboy?" He grins and nods, and you pull out your watch. It's a few seconds short of 3 p.m. Now you draw back slowly on the throttle and release it, stretching out the train. Up ahead the block is red over green over red, *Medium Clear*. The railroad is yours. You get the CB-12 rolling with half throttle and full cutoff. The 758, cracking sharply at the stack, accelerates slowly at first and then moves easily into the main track. Over the Wabash Railroad crossing and around the big sweeping curve into New Haven, the 2-8-4 picks up speed almost effortlessly. Ahead of you now is the fastest track on the Nickel Plate, 80 continuous miles of tangent.

## READY TO PERFORM

Three miles out of East Wayne Yard your train is rolling freely, the fire is in good shape, you have nearly a half glass of water, and the arch bricks are hot. The 758 is ready to perform and you widen out all the way on the throttle. The fireman begins to crack the feedwater pump, injecting at first only a tiny stream of water to the boiler which he will increase as the demand for steam rises. At Casad, he shuts down the stoker, allows the fire to burn freely for a few seconds, and then

## You sound your highball, look over to the man on your left and yell, "YOU READY, FIREBOY?"

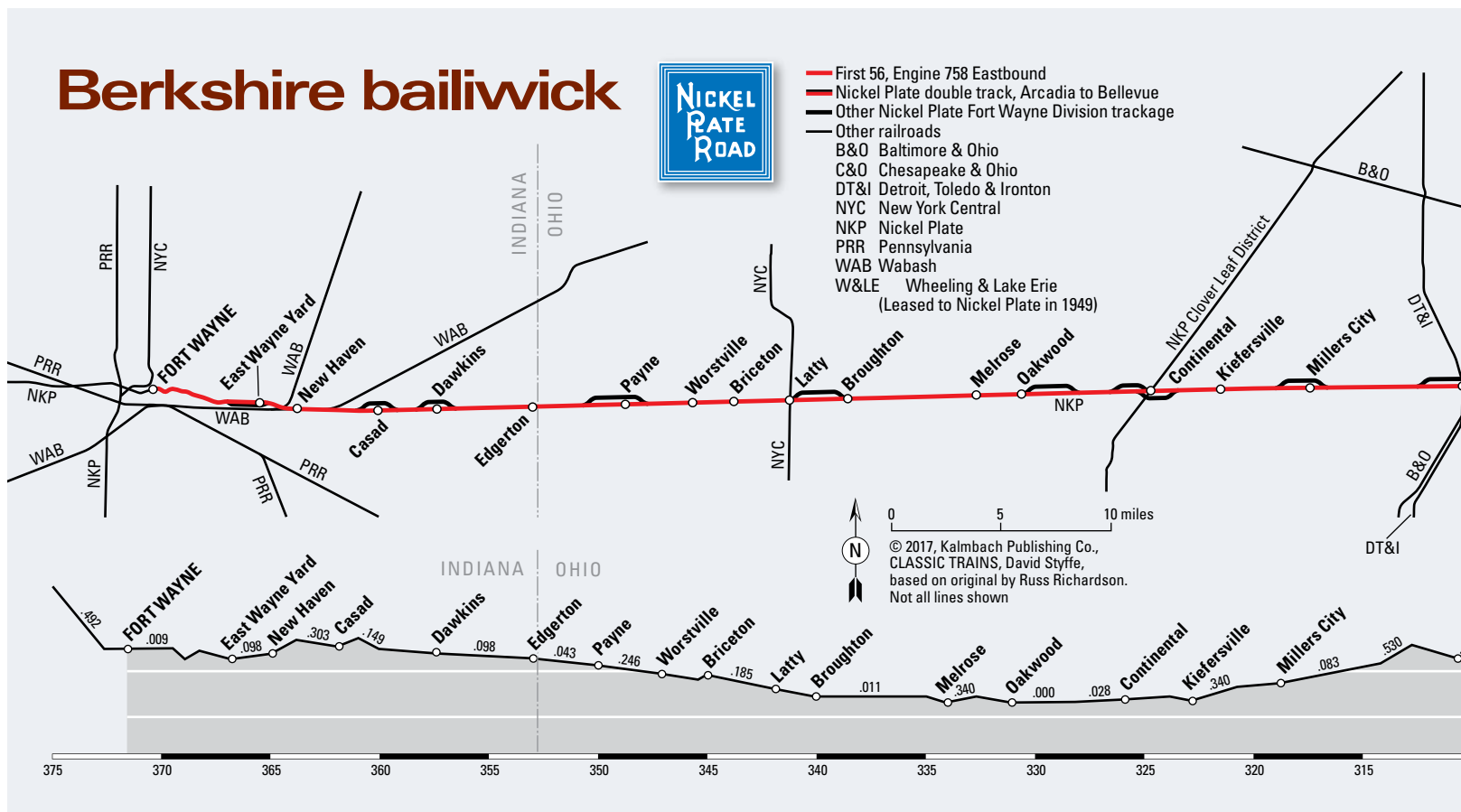
opens the butterfly firedoors to look it over. His fire is level, spread evenly across the grates. Satisfied, the fireman returns to his seat and resumes the operation of the stoker. This one's a good man and he'll give you 245 pounds all the way to Bellevue.

How beautifully this sweet machine responds. Thirteen miles out you are rolling through Edgerton and into Ohio at 50 mph. Five miles beyond, at Payne, the speedometer shows 60. To conserve water you've got the back pressure gauge indicating 10 pounds. The 758 is steaming in grand fashion and the exhaust is crisp and clear; you can hear the peal of the engine bell ahead of the stack. The big 2-8-4 surges onward in pulsating rhythm and you lean forward in your seat like a jockey on a racehorse, unable to relax, even for a moment. Ahead, the superb single-track main leads to infinity across this essentially flat, featureless country, the incredibly rich Black Swamp of northwestern Ohio. For 25 miles you hold this mile-a-minute pace through a half dozen granger hamlets — Worstville, Briceton, Latty, Broughton, Melrose, and Oakwood.

Before flashing across NKP's Clover Leaf

District at Continental, you begin to increase back pressure for the 13 miles uphill to Leipsic. East of Millers City the grade stiffens and speed drops to 55. By the time you reach the DT&I crossing at Leipsic, the 758 is barely holding 45. Now you roar down the other side of the hill and in 3 miles have the CB-12 moving at 60 again. Approaching the over-head coal dock at Yellow Creek, you overtake Time Freight 36 loping down the running track behind Berkshire 747. Thanks to the dispatcher in the little brick shack on Calhoun Street back in Fort Wayne, one signal after another is coming up clear and you keep hammering away for Bellevue.

West of McComb, at Milepole 303, you begin the assault on another grade, 12 miles long. At North Findlay you meet engine 765 with freight NC-3 standing on the passing track. You signal that you have a section following by sounding one long and two short whistle blasts. NC-3's engineer acknowledges with two shorts. Other members of NC-3's crew have situated themselves on both sides of the main track to observe the passing of your CB-12. They detect no trouble and highball the hind end. You come to the end





of the tangent and single-track running at Arcadia and curve full speed into the junction with the Lake Erie & Western District. Coming fast to follow you into Bellevue is your counterpart out of Peoria, the PB-12.

At FS tower, on the west edge of Fostoria, you make your first air application since East Wayne, 84 miles and 85 minutes ago. At full throttle and 25 percent cutoff, your service application reduces speed to 35 mph while keeping the slack stretched. You wend your way through Fostoria, across Baltimore & Ohio's Chicago Division, the New York Central, and the Chesapeake & Ohio. Factories are disgorging the men who toil in them. Homeward bound, they hear your crossing whistle and they turn and wave. There's not a man among them who wouldn't trade places with you. You send the tallowpot back to open the tank gauge cocks to inspect the water level in the tender. You've got three holes, enough to reach Bellevue, so you screw down the reverse and accelerate out of town without stopping for water. At Blair Yard you pass Berk 768 with a coal drag waiting to follow the herd of hotshots east, and coming up now on the westbound main is the 717 with the LE&W District's Second 47.

## CROWDING 60 AGAIN

Leaving Fostoria you have 15 miles of unbroken descending grade ahead, and by the time you reach Ilers, 5 miles out, the 758

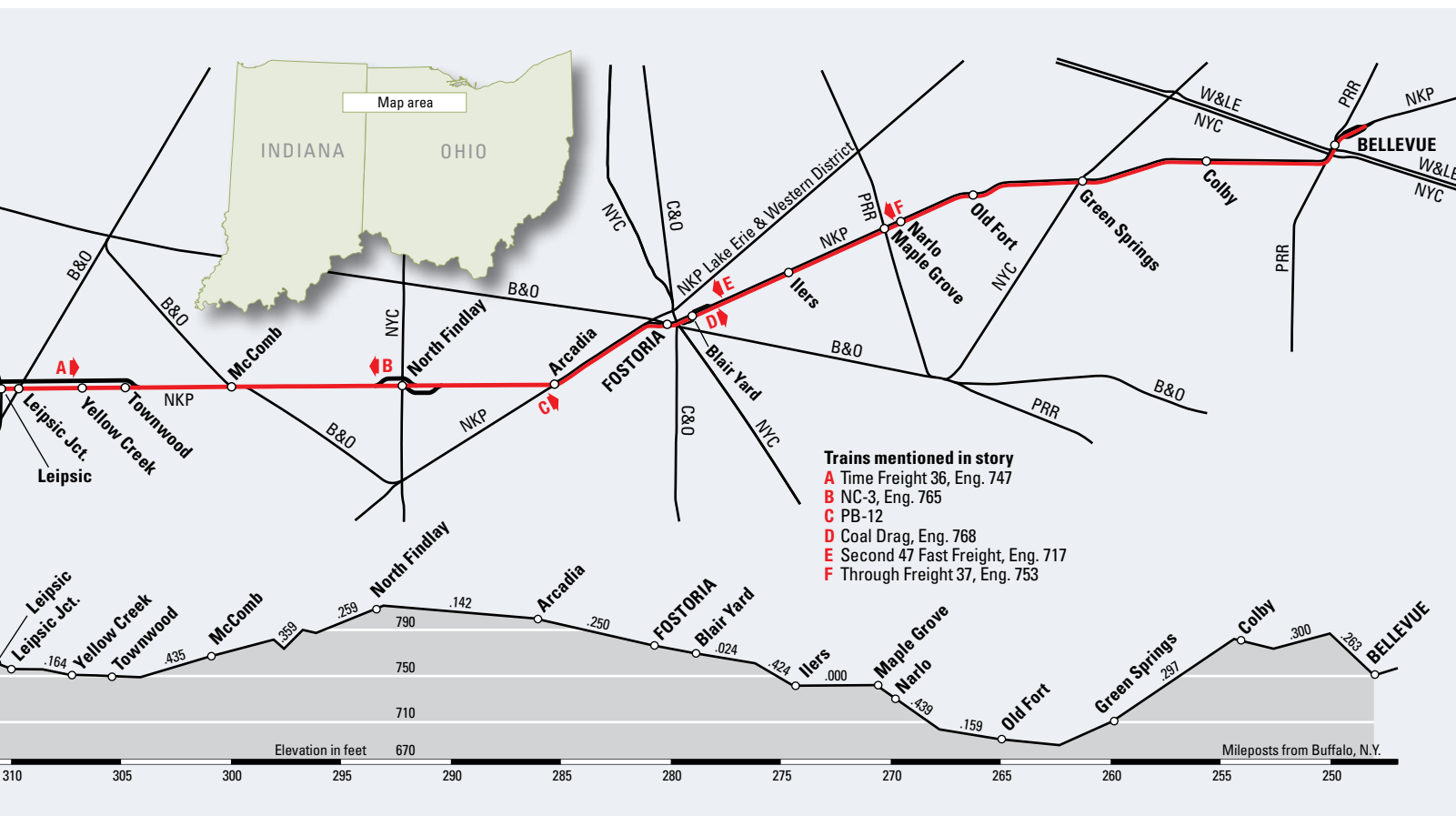
is already crowding 60. Before banging across the Pennsylvania at Maple Grove you've got to back her off to keep that speed needle where it belongs. You pass Berkshire 753, yanking a long train 37 out of the big aggregates plant at Narlo, and down at the east end of the yard you fly past a 2-8-2 patiently waiting to take the Stone Run back to Bellevue. This is still downhill running and you again reduce throttle to keep from violating the 60-mph limit. When you reach the Sandusky River at Old Fort, you widen all the way and begin to increase back pressure for the climb to Colby. East of Green Springs, a curve to the right lets you look back to take stock of your train. The sun, already low in the western sky, paints the "yellowbellies" a vivid orange. Before that sun rises again, those reefers will be on the Lackawanna, the Lehigh Valley, and the Erie.

Colby Hill has slowed you to 40, but once over the crest you're back in the high-speed business. Three miles out of Bellevue, at Spencer's quarry, the distant signal indicates *Approach Medium*, yellow over green. At the twin poplars you make a service air application, leaving the throttle wide open and the cutoff at 18 percent. You're in the home stretch, and Bellevue's white frame houses and majestic elms are coming up now on the left. At Southwest Street the home signal is *Medium Approach* and your speed has been cut to 22 mph. You release the air, and when

the water comes back in the glass you shut off the throttle. Now you begin a gradual independent brake application and slowly bunch the slack. Gently now — you don't want to rough up the dandies in the caboose. You sound four shorts for the switchtender, and as the 758 rattles over the Wheeling & Lake Erie diamond, your speed is down to 15, maintained by the momentum of the train. You yank out the watch. It's a hair past 5 and you have made a good run — something you knew without checking the time.

The switchtender highballs you into Ice-house No. 2, and you bring the train to a stop with the 11th car just beyond the east end of the icing plant. When they cut the 758 loose it is 5:10 p.m. and you have made the 119-mile run in 2 hours 10 minutes nonstop. It takes you another half hour to run to the east end of Bellevue Yard, back down to the pit, and dock your charge. You mark off at 5:50 and it looks as though you'll get your beans at 6 like ordinary folks. As you walk toward town in the gathering dusk you don't feel ordinary though. What man could after bringing the CB-12 into Bellevue? ■

JOHN A. REHOR, a prolific and talented author and photographer, is best known for his book *The Nickel Plate Story* (Kalmbach, 1964 and 1994). His career was with NKP, N&W, and the National Transportation Safety Board, from which he retired in 1991. He died in 1993.











# How to handle the **HOT** ones

C&O's new yard at Russell, Ky., has all the latest tools to keep freight moving

BY FRANK E. SHAFFER

**H**ear the term "automated yard," and if you're a student of 1961-style railroading you will envision receiving and forwarding yards, cow-and-calf hump engines, automatic retarders, dictating machines, television, punch cards and tape, radar, and the ability to slice hours off the time once needed to classify trains. But visit Russell, Ky., home of one of the nation's largest terminals operated by a single railroad, and some doubts may begin to arise.

Listen to Superintendent O. W. "Red" Draper as he stands in the yardmaster's office some 30 feet above track level just west of the hump: "This is just as fine and modern a yard as there is in the country." Draper is speaking of Russell's newest addition, the \$5.5 million Fitzpatrick Yard created solely to handle westbound merchandise at the heart of the Chesapeake & Ohio system.

"We've had railroad men from all over the country visit us to see what Fitzpatrick can do. The first thing they ask is, 'Where's the forwarding yard?' I point out there" — he gestures toward the 32-track yard sprawled west of the hump — "and tell them they're looking at it. They find this hard to believe. Here's the newest automatic yard in the coun-

try and it doesn't have a forwarding yard."

Despite this, C&O's Fitzpatrick Yard ranks with the Santa Fe's Corwith in Chicago and the Seaboard's Hamlet in North Carolina as an ultramodern tool of transportation. By slashing classification time, Chessie tallies annual per diem savings in six figures. By living up to the sales department's quotation of published schedules, Fitzpatrick helps capture and hold highly rated merchandise traffic.

The 32 tracks Draper operates at Fitzpatrick top the 24 at Louisville & Nashville's new Tilford Yard at Atlanta but pale by comparison with the 107 at the Pennsylvania's giant Conway (Pa.) Yard west of Pittsburgh. But Conway, the nation's largest automated yard, operates on the same basic principles that are built into Fitzpatrick.

An analog computer, maintained in its own air-conditioned room at a constant 70 degrees Fahrenheit, is the brain. The electronic marvel accepts track assignments from the hump conductor's control panel 300 feet away, remembers how many cars are already on each track, digests the car's weight as it creeps away from the apex, considers the weather, measures radar impulses to calculate car speed, then orders retarders into action.

**Cars roll past the scale house at the apex of the hump in Fitzpatrick Yard, part of C&O's extensive facilities at Russell, Ky. Two Swift reefers are just hitting the master retarder.**

Chesapeake & Ohio



In a view from Fitzpatrick's control tower, boxcars pass over one of the yard's four group retarders; beyond the cars is the signal maintenance shop. Fitzpatrick opened in 1959, at the height of the "push-button" yard era. Note the C&O emblem on the console.  
Chesapeake & Ohio

The master retarder takes the first bite out of the downhill drop; group retarders make a final reduction. There is no intermediate retarder at Fitzpatrick. Rolling free at last, cars drift down into the bowl at a velocity that will take them at a safe coupling speed to the cars already on the track.

Fitzpatrick is just one part of Red Draper's domain. Russell Terminal is probably better known for its giant 52-track coal yard. But this 4-mile strip of Ohio River bottomland also has an eastbound yard — a flat-switching facility with receiving yard — plus a tie-treating plant, a railroad YMCA, a big carbuilding shop, a storage yard, rest pens for livestock, icing platforms handling 100 cars daily, and a giant engine facility.

All this adds up to a terminal with a rated capacity of 14,500 cars, five train-lengths ahead of the 12,649 cars the Pennsy could jam into Enola near Harrisburg, Pa.

### HEART OF THE C&O

Russell is the heart of the C&O. Its steady pulse beat of trains arriving or departing on an average of each 19 minutes of the day and night is felt in the most distant fingers of the

system. "We aren't just one terminal all to ourselves," Red Draper observes. "I point out constantly to the members of my staff that we can't afford to cut corners here. If we make a move that looks good on our cost sheet because it saves a yard crew, there's a chance that it might cost two crews at some other terminal. We're production men, and we have to gear our output to the pace of the entire system."

When Draper came to Russell in 1953, his domain stretched no farther than a whistle blast could be heard east and west of the roundhouse. Since then, C&O's main office in Cleveland has added the onetime Northern Division up to Columbus, the Big Sandy Subdivision down to a Clinchfield connection at Elkhorn City, Ky., and the subdivision westward to Lexington with trackage rights into Louisville on the L&N.

Although the C&O was riding a floodtide of coal in the early 1950s, Cleveland had pointed the way toward building up merchandise traffic to diversify revenues. Red Draper inherited a 52-track coal yard, the biggest in the nation, but he was also saddled with an antiquated merchandise yard. With

a rider hump at the east end and flat switching at the west, the congested yard threw extra work on Columbus and Cincinnati.

Diesels coming into general use in 1953 and '54 stepped up gross ton-miles per freight train-hour but the yard wiped out all advantages in time gained by the new motive power. Russell needed a truly modern yard for merchandise that could block traffic rapidly for western connections and enable Stevens Yard near Cincinnati to handle east-bound manifests exclusively.

Draper conceived the new facility, labored it into being, and delivered the spanking new youngster to C&O stockholders, who held their annual meeting at Russell and nearby Huntington, W.Va., in spring 1959.

"We checked several new yards around the country to see what they were doing and how the new automatic features were performing. Then we sat down and designed Fitzpatrick to do a job that would fit into the C&O's over-all pattern of operations," says Draper. That pattern was to take merchandise from the east and south and classify it rapidly for dispatch to the north and west. C&O manifests roll out of Fitzpatrick north-





**Two Baldwin road-switchers wait on Fitzpatrick's hump before classifying Second 95's cars while five F7s arrive with train 92 from Cincinnati. This view is from the control tower; the line to the right of the light tower takes passenger trains around the yard.**

Frank E. Shaffer

ward to Columbus, Toledo, and Detroit and westward to Cincinnati and Chicago.

Why no forwarding yard?

"We didn't have one in our original coal yard here in the days when it had only 26 tracks. When the yard was doubled in size in 1949 and the hump was double-tracked, the C&O didn't think it was necessary to add a forwarding yard. With that in mind when I looked over several new yards before Fitzpatrick was designed, it seemed apparent to me that we could continue this policy and save several hundred thousand dollars in the process. It has worked out as we planned. We can do the job expected of us and do it rapidly and economically."

Here's how Fitzpatrick works:

When the last car of an incoming train has been classified, the twin Baldwin hump engines ease their 3,000 horsepower over the apex, nose down through the retarders, and start pulling cuts from classification tracks.

Out at the west end, a "snapper" engine does the same. Most of the cuts are short. Since 26 of the classification tracks are relatively short, yard crews don't spend unnecessary time running up mileage in pulling the cuts. And since there's no forwarding yard, they don't run up mileage either in delivering cars to a distant point.

The heaviest classifications are sent down tracks 1-3 and 30-32. These will hold about half of a normal train and, in a sense, are small forwarding yards. When the hump engines and the snapper finish their work, about 60 cars are available on the long tracks. After one double, the road engine is ready to highball. Meanwhile, the hump engines have returned for another train in the receiving yard, and Fitzpatrick begins sorting out cars

from another inbound train.

"We don't have any conflicts," reports Yardmaster Bill Nalle. "I can start a new train over the hump while we're still making up out at the west end."

Fitzpatrick has only a single hump track. But that one track leads into a yard that, for operational purposes, is divided into two sections. Tracks 1-16 are used for Columbus, Toledo, and Detroit traffic; tracks 17-32 get cars for Cincinnati and Chicago. In mid-morning, two road crews are at work at the same time at the west end. One is doubling its train for Chicago; the other is making a double on its merchandise for Detroit.

## NOT JUST COAL

But for coal, Russell would have little claim to fame. Even Gateway Yard of New York Central subsidiary Pittsburgh & Lake Erie at Youngstown, Ohio, has more retarders and classification tracks than Fitzpatrick. But C&O's sprawling coal yard with its double-track hump is as much a showpiece as Fitzpatrick. Though Draper's men normally keep the yard fluid, it is jammed once each year. Near the end of June, as West Virginia and Kentucky miners prepare to lay down their tools for a 10-day vacation, Russell takes on the appearance of a vast coal field. Mine production is stepped up to the point where far more coal arrives than is needed by the steamers on Lake Erie, toward which most of the coal is headed. More than 7,000 cars with almost a half million tons of coal jam every

track in the westbound receiving yard and the coal classification yard. That amounts to 5 percent of the nation's coal production for a typical 1960 week on hand in one terminal. Up at Columbus and Toledo, additional hundreds of cars are stored. Mine-run assemblages in West Virginia hold many more.

This tonnage holdback enables Russell to continue to dispatch nine 160-car trains lake-ward every day. Lake steamers are able to dock to take on cargo on schedule even during the vacation period.

The coal yard's double-track hump didn't work out in the manner calculated by the planners in 1949. Running two trains over the apex simultaneously proved unhandy. It prevented the best use of the yard's 52 tracks for classifying various grades of coal. Each hump track fed only 26 tracks. While one crew could hump 1,200 cars in an 8-hour trick, the second

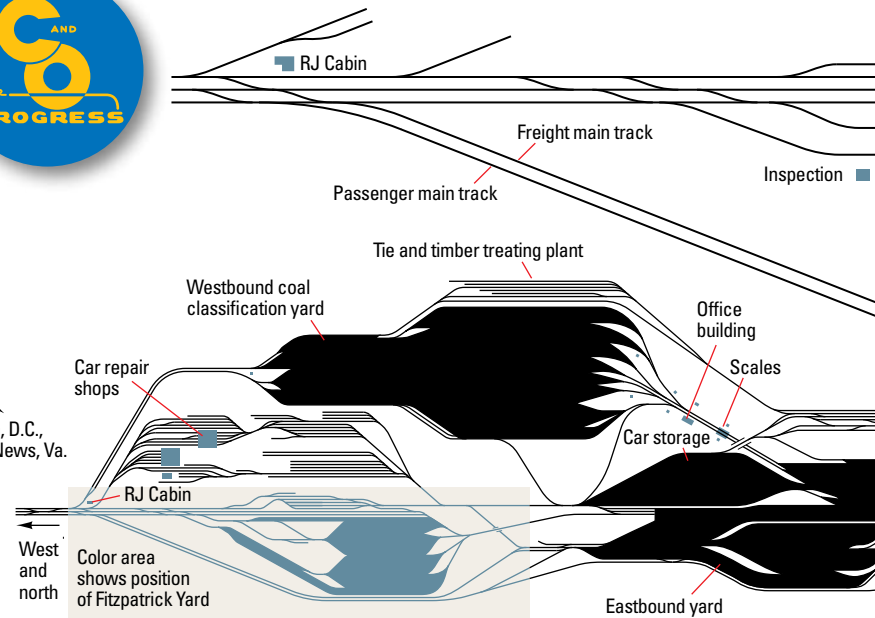
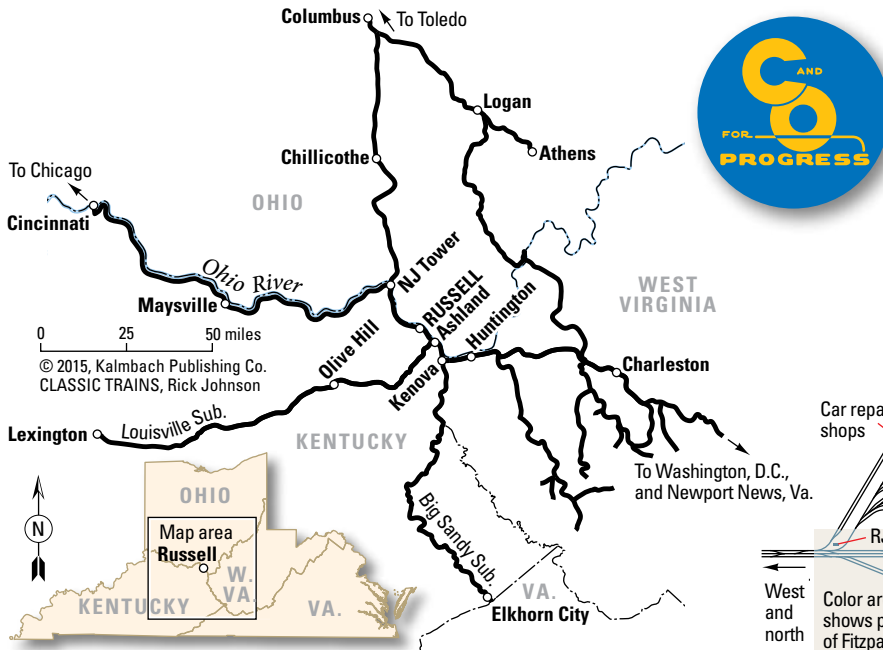
could add only 400.

"A slight change broke the bottleneck," Draper recalls. "We still use two crews when there's heavy tonnage, which isn't often these days. One crew takes about 40 minutes to handle a 160-car train. But he needs another 20 minutes or more for going back down to the receiving yard to get the next train.

"When we use two crews, the second one gets his train and moves up into position. As soon as the first has finished his train, the second starts shoving. The first crew meanwhile goes back and gets the next cut and is ready to move when the second man com-

**RUSSELL'S  
STEADY PULSE  
OF TRAINS  
ARRIVING AND  
DEPARTING  
EVERY 19 MIN-  
UTES IS FELT  
IN THE MOST  
DISTANT  
PARTS OF THE  
C&O SYSTEM.**

## Rundown on Russell



pletes his job. This method can give us more than 3,000 cars a day, which is a lot more than we need right now for coal."

In the mid-1950s, tidewater coal was a big item at Russell, although eastbound tonnage never compared with the heavy flow to the Great Lakes. With German mines finally rebuilt after the war and stepping up production, and with Russian-controlled Polish coal on the Continent, often at politically motivated prices, Russell soon found its tidewater coal trimmed down to levels approximating those before the European recovery boom. In 1960 this meant one train a day heading east from Russell.

While Russell handles eastern Kentucky lake coal from the Big Sandy, the Bluegrass State produces 300 cars daily that bypass the yard. These black diamonds, which originate on the western slopes of eastern Kentucky, are billed by the L&N as they move via Ravenna or Corbin through Winchester and northward to the big Decoursey terminal just south of Covington, Ky. (on the Ohio River across from Cincinnati).

A look at the map indicates that this lake coal would move normally across the river and pass through Cincinnati to the Baltimore & Ohio, PRR, or NYC. Each of these roads has routes between Cincinnati and Lake Erie ports. Each would be eager to move two additional revenue trains a day. But it doesn't happen that way even though much heavy tonnage is moved across the river by L&N transfer runs.

These 300 cars of L&N coal leave Decoursey and pass through Covington, turning eastward to the C&O's Stevens (Ky.) Yard, an important eastbound classification yard. C&O Geeps move the cars 110 miles

eastward along the Ohio to NJ Tower 30 miles west of Russell. This is the junction where the Northern Division bends away from the Cincinnati Division, crosses the Ohio, and parallels the Scioto River to Columbus. The Geeps set out the L&N coal and run light to Russell. A new crew, running light out of Russell, picks up the cars and blends into the flow of Russell coal blocks heading for the lakes.

Although this maneuver adds 135 more road miles to the coal's route than would be required by, for example, a B&O route through Dayton to Toledo, the tonnage is handled more smoothly and with less difficulty and in less time. Movement through the congested Cincinnati terminal with its curves, grades, and traffic is eliminated. In railroading often the longest route turns out to be the shortest.

### TRoubles AT Russell

Take a close look at Russell in action on the Saturday morning following the Fourth of July weekend, 1960. It was not a normal day. Not many days will fall into a routine pattern for a terminal that registers the effects of developments everywhere on the C&O system.

Russell had its troubles this day. The 52 tracks in the coal yard were idle. More than 7,000 empty hoppers yawned at the sky. Where a week earlier there had been nothing but loaded cars, the yard this day was storing empties and the hump was closed. But this wasn't real trouble; it happens every year when the miners take their vacation.

There was trouble in the west, however, and not far away. A vicious cloudburst a week earlier had dealt the C&O a one-two

punch. Torrential rains had flooded the Louisville Subdivision near Olive Hill for a two-count but had knocked out the double-track Cincinnati Division near Maysville.

Olive Hill was Draper's problem as a part of the Ashland-Russell Division. But Maysville cost more, was out of service longer, and had a greater effect on Russell. A four-car gap in the roadbed blocked the C&O's main route between Chicago, Cincinnati, and Hampton Roads, Va. Rerouting was necessary.

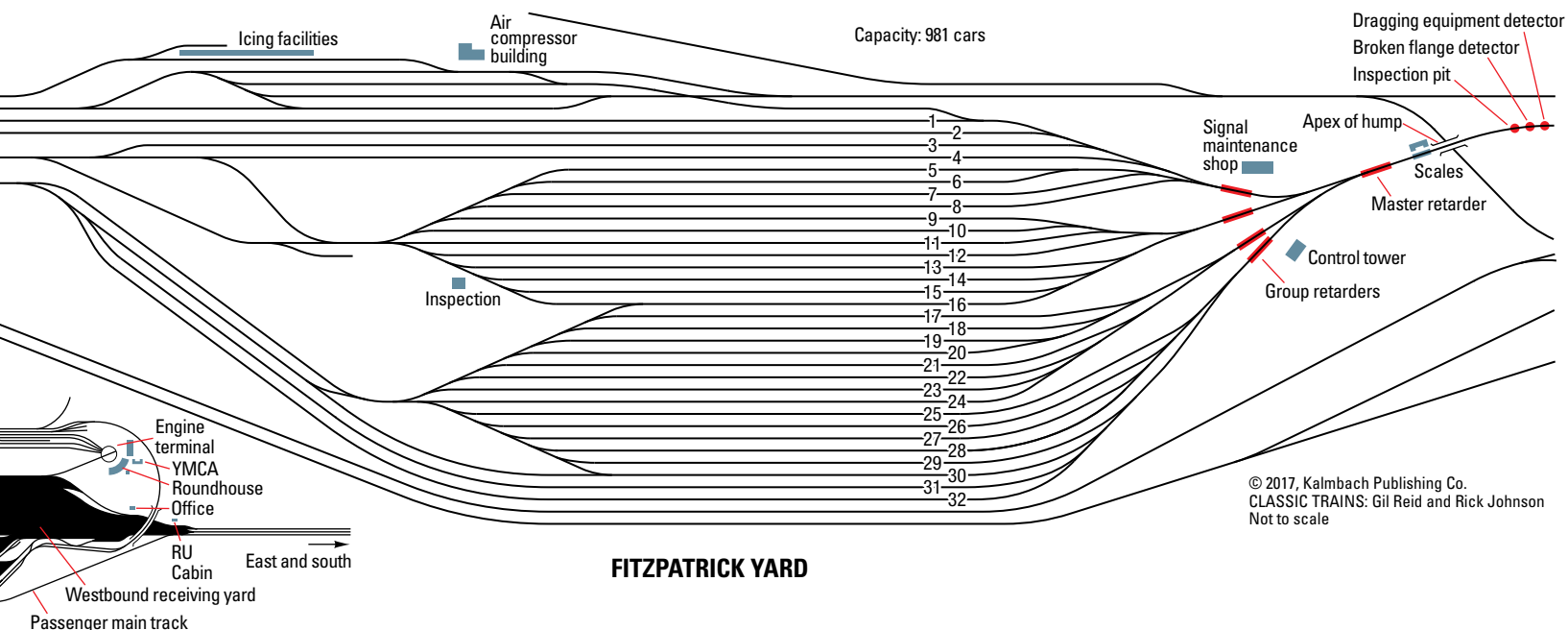
But C&O's men were thinking differently in 1960.

Had they acted as in earlier years, Norfolk & Western's Cincinnati-Kenova (W.Va.) route would have been utilized. Despite the disadvantages in shifting from C&O's low-level route to Kenova to N&W's line, this had been standard practice for as many years as the oldest man on the division could remember. For passenger trains it meant backing up between Kenova and Ashland. For freights it meant making extra miles between Kenova and Russell.

Since C&O was talking about merging with B&O in 1960, one of Draper's men had an idea. The rest of the staff wished they'd had it years earlier. By using the Northern Division between Russell and Chillicothe, Ohio, C&O could access B&O's Washington (D.C.)-Cincinnati main line. Russell could be used. C&O would keep traffic on its own rails for more miles. The interchange at Kenova could be eliminated. There would be no miles of backing up. C&O and B&O share a 5.8-mile section of double track at Chillicothe that provide a head-on connection.

The new route had some minor drawbacks: it was 21 miles longer, and trains required five instead of four diesel units.





Trains were limited to 100 cars. But, as one of the men in the tower at Fitzpatrick put it, "As long as we're going to merge with the B&O, we might as well make a down payment by running some trains over it."

Draper added management's footnote: "Reduction in train size caused some minor delays of equipment, and the addition of a fifth unit increased our motive power cost by 20 percent. But we slashed running time by an average of 2 hours over the old route and eliminated the backing up between Kenova and Russell. In all, it was a wise move which we should have made several years ago."

Another of Russell's troubles this July morning was a blanket of fog that had settled down on the Ohio River valley during the night. Floodlights glowed feebly from their towers, but men were out of sight a car-length away. Engine-to-tower radio communications were unimpaired, but the men who inspected the trains were hampered. Fitzpatrick could hump merchandise on schedule, but incoming trains were slow being cleared in the receiving yard.

At 9 a.m. the last wisps of fog still cottoned the air over Russell. Out at the west end of Fitzpatrick, the road crew of train 91 eased their diesels through the murky morning and locked couplers with the first half of their train on track 30. After pulling out, they backed onto track 31 for the balance of the train, pumped up the air, and waited for inspectors to make a walking check.

The manifest growled into action at 9:30 for Chillicothe, the B&O, Cincinnati, and Chicago. As far as Chillicothe, 91 would be running about 20 minutes behind No. 195, a Northern Division manifest that was high-balling Russell as 91 doubled up its train.



**From between the rails, an inspector watches for problems on the undersides of cars.**  
Chesapeake & Ohio

Back at the east end of the yard near the Russell passenger station, three Geeps were feeling their way off the main line into the receiving yard at 9:30 a.m. with Russell's hottest train, No. 97. The speedster was completing a run up the Big Sandy Subdivision from Elkhorn City, where the C&O interchanges Florida traffic with the Clinchfield.

An hour later the train had been inspected, air bled, and the twin Baldwin road-

switchers were ready to shove the 132 incoming cars over Fitzpatrick's hump.

### VIEW FROM THE TOWER

Up in the modernistic hump tower, Yardmaster Bill Nalle scanned his switch list . . . and waited. The yard office had swooshed a copy through a half mile of pneumatic tube an hour earlier. Nalle couldn't start breaking up the train, however, until the yard office

# A DECADE OF YARD AUTOMATION

**FACED WITH MOUNTING OPERATING COSTS** during and after World War II, the railroads entered a decade of sweeping change. First, diesels replaced steam.

A second big change soon followed. Stepping up mainline speed with diesels was useless if time gained was lost in terminals. Thus the manual hump operations that had replaced flat yards generations earlier gave way to automatic operation. Since 1949, 53 automated hump yards have been built, are under construction, or are on the drafting boards in 27 states and 4 Canadian provinces.

Biggest of all is the Pennsylvania's Conway Yard west of Pittsburgh. It is an assembly line capable of highballing a 150-car train each 24 minutes. Conway can accept, inspect, classify, assemble, and dispatch 9,000 cars each 24 hours. With two double-track humps, space for 12,000 cars, and 169 miles of track, Conway tops all automated yards.

While PRR has the continent's largest single facility, NYC in 1960 took first place in total automated yard capacity, by a small margin. Central's four yards with a 24,301-car capability are 300 cars ahead of the fast-moving Southern's.

Rock Island kicked off the decade of yard automation in 1949 with Armourdale at Kansas City, Kans.; 19 other automated yards opened over the next eight years. By 1957 the trickle of new yards had become a flood. L&N opened Tilford; SOU completed its quartet with Inman at Atlanta; NYC unveiled Frontier at Buffalo; and PRR put the spotlight on Conway.

Comparisons of automated yards are difficult to make. For example, a new plant shoehorned into an industrial area (such as CB&Q's at Cicero, Ill.) has a much different cost ratio than one laid on flat farmland. Rated capacity is not a suitable yardstick, either. Neither Fitzpatrick

nor Milwaukee's Air Line has forwarding yards, shaving up to 500 cars from their capacity compared with similar yards.

The number of cars handled daily is subject to such wide interpretation that it is almost useless as a statistic. And because the yards listed on the opposite page are not all fully automated, their daily potential can be increased when traffic levels indicate the wisdom of installing additional controls. A few automated yards are completely new; others were dictated by economics to be up-grading projects of existing plants.

Cost is not a true yardstick, either. Seaboard's Hamlet, built in gentle country for just \$8 million, required more than \$1 million for a new diesel shop. But with CN's new Montreal, there is no provision in the \$28 million budget for a shop.

Thus anyone looking for a norm to weigh automated yards is forced to fall back on rated capacity for a yardstick.

What of the future?

Few of the new automated yards can be expanded physically. Seaboard can lay an additional 22 classification tracks at Hamlet. CN's Symington can accommodate two more group retarders and 18 more classification tracks. L&N can virtually double its Tilford classification bowl. But there is no room for expansion at such important yards as CB&Q's Cicero and MP's Neff. There will be other automated yards in the future. Erie-Lackawanna reportedly will build one at East Buffalo that neither of its components alone could afford before the merger.

The first decade of automated yards has ended. Just as diesels and CTC were changed, adapted, and improved to fit operating conditions, so the magic of electronics and the ingenuity of railroaders will make possible an ever-increasing number of modern yards. — F.E.S.

had checked all the waybills and rates and verified the routing instructions for each car.

"We do more than just classify cars here," Nalle explained. "This switch list is made up from Elkhorn City's teletype report of 97's consist. When 97 enters the yard, a clerk reads off the car numbers into a microphone. His words are recorded on a dictaphone in the westbound yard office. This information is then copied down by another clerk and is matched with the teletyped switch list. When all this is done and when the waybills are verified and when any bad-order cars are cut out, we're ready to roll."

Nalle grabbed the yard phone when it buzzed impatiently, noted six corrections on the switch list, then called the hump conductor. "The first line on your sheet" — he was referring to the first car on the list — "goes 14. The second to 18, the third to 13, and the fourth to 3 . . ." — and down the entire list.

Nalle had broken down No. 97's consist of 132 cars into 22 classifications. Six of the tracks would receive cars for the rebuilt No. 97. Many cars arriving earlier were already on these tracks. And of the 132 incoming cars, 49 were to continue with the new train.

Milwaukee Road boxcar 50880 from Charleston, S.C., to Columbus, Ohio, cruised down the hump onto track 14 at 10:32 a.m. It would stay at Russell for 2 hours before rolling on as a part of Northern Division No. 193. A tank car lumbered into track 18 (east-bound interchange) while a Pennsy boxcar followed down the hump to track 13 (Northern Division empties).

In ones, twos, and threes, the hump brakeman cut 97's cars loose, and Nalle watched them knife through switches and heard the hiss of compressed air from automatically controlled retarders. "We can cut loose as many as five at a time," Nalle offered. "There's enough space between the master and the group retarders for that many, but for convenience we hold to just three."

His words had scarcely been spoken when the hump brakeman cut loose nine reefers together. Nalle grinned at the apparent contradiction. "They're re-icers. I'm running them over beyond No. 1 track, and they'll go out on what used to be the old main line before Fitzpatrick was built. When they stop out there, a yard engine will pull 'em down to the re-icing dock out near the west end."

The hotshot's 132 cars were classified in 35 minutes despite a stop for handling explosives. Fitzpatrick humps every inbound car except livestock and explosives, a tribute to the velvet-glove handling ability of automatic retarders. Nalle ordered the snapper up from track 16 where it had been waiting. Keeping a car between the engine and the explosives, Nalle sent them back down track 16 through the yard, then secured them at the west end of track 27 to await the departure of Cincinnati Division No. 93.

Five minutes after the last car had been

One of the two double-track humps in Pennsy's Conway Yard west of Pittsburgh.  
Pennsylvania





classified, the hump engines went down onto the old main line, bagged the nine reefers from the yard engine, and pulled them east of the hump. When the chilled nine were classified, Nalle was ready to put together a new No. 97.

With the outbound cars on only six tracks, Draper's "no forwarding yard" operation went into effect. The hump Baldwins pulled 22 cars out of track 11 (Detroit) and shoved them into the 10 standing on track 4 (Canadian Pacific perishables). The second move was to get 13 from track 8 (Toledo connections) and put them up against the 37 standing on track 3 (C&O's Pere Marquette district).

Out at the west end, the snapper was at work. Eleven cars were pulled out of track 6 (for Fostoria, Ohio) and coupled with 18 on track 7 (for NKP at Fostoria). This cut of 29 cars was put onto track 4.

Four Geeps locked couplers with the 61 cars on track 4 at 11:30 at the west end of Fitzpatrick while the hump engines at the east end tacked a yellow caboose at the end of track 3. The road engines doubled onto track 3 and began pumping up the air in their 111-car train. Inspectors gave their seal of approval at 12:08 p.m.

Only 2½ hours had elapsed since 97 had gone dead in the receiving yard.

A check of the switch list indicated that the manifest had arrived with 31 cars for No. 193, 7 for holding, 16 for east-bound interchange, 2 for light repairs, and 49 for the new 97. Other cars picked up at Fitzpatrick as a part of the new 97 included 11 from local industries, 14 from No. 95 over the main line from the east, 9 from Lexington (Ky.) Subdivision No. 392, and 28 from No. 91.

But even as the reborn 97 traced a pattern of lights on the CTC board in RJ Tower at Russell's west end, Nalle was giving the OK for classification of a second section of 95. Back in the receiving yard, Advance 93 was bending off the main line at noon with 90 cars.

Fitzpatrick is a tool of modern railroad-ing. So were the first cars rolling over the hump from Second 95: shiny new piggy-back flats running empty to their new owners. On roller-bearing trucks, they silently swept through the switches for their first, and perhaps last, hump trip.

The old and the new: Russell and Fitzpatrick, boxcars and piggyback, bunker and mechanical reefers — signs of Chessie's modern railroading.

"And without a forwarding yard too," says Red Draper with a grin. 📌

*FRANK E. SHAFFER was business editor of the Charleston (W.Va.) Daily Mail when he wrote this story. He was Kalmbach's v.p., sales, 1967–69 before joining Modern Railroads magazine. He died in 1988.*

## WHERE THEY PUSH THE BUTTONS

| RAIL-ROAD | CITY (YARD NAME)                            | HUMPS        |              | RETARDERS | TRACKS         |       | MILEAGE | CAPACITY (CARS) | COST (MILLIONS) | IN SERVICE |
|-----------|---------------------------------------------|--------------|--------------|-----------|----------------|-------|---------|-----------------|-----------------|------------|
|           |                                             | SINGLE TRACK | DOUBLE TRACK |           | CLASSIFICATION | TOTAL |         |                 |                 |            |
| ATSF      | Chicago, Ill. (Corwith)                     | 1            |              | 5         | 33             | 227   | 70      | 5,871           | \$20.0          | 1958       |
| ATSF      | Kansas City, Kans. (Argentine)              | 1            |              | 12        | 56             | 486   | 167     | 7,173           |                 | 1949       |
| ATSF      | Pueblo, Colo.                               | 1            |              | 3         | 17             | 153   | 46      | 2,163           |                 | 1950       |
| B&O       | Cumberland, Md.                             | 1            |              | 5         | 33             | 53    | 49      | 2,976           | \$10.0          | 1960       |
| C&O       | Russell, Ky. (Fitzpatrick) [a]              | 1            |              | 5         | 32             | 54    | 19      | 1,861           | \$4.8           | 1959       |
| CN        | Montreal, Que.                              | 1            | 1            | 18        | 122            | 250   | 160     | 10,600          | \$28.5          | 1961       |
| CN        | Moncton, New Brunswick                      | 1            |              | 6         | 40             | 91    | 79      | 5,062           | \$15.0          | 1960       |
| CN        | Toronto, Ont.                               | 1            | 1            | 18        | 134            | 234   | 169     | 11,500          | \$44.0          | 1965       |
| CN        | Winnipeg, Man. (Symington)                  |              | 1            | 9         | 63             | 156   | 102     | 6,000           | \$24.0          | 1962       |
| CP        | Montreal, Que. (St. Luc)                    | 1            |              | 10        | 48             | 155   | 100     | 5,000           | \$13.0          | 1950       |
| CB&Q      | Cicero (Chicago), Ill.                      | 1            |              | 7         | 43             | 103   | 93      | 5,777           | \$6.5           | 1958       |
| MILW      | Bensenville (Chicago), Ill.                 | 1            |              | 16        | 70             | 95    | 125     | 7,497           | \$5.2           | 1953       |
| MILW      | Milwaukee, Wis. (Air Line) [b]              | 1            |              | 5         | 25             | 32    | 25      | 1,799           | \$3.0           | 1952       |
| MILW      | St. Paul, Minn. ("Pig's Eye")               | 1            |              | 8         | 35             | 48    | 47      | 3,245           | \$4.9           | 1956       |
| CRI&P     | Kansas City, Kans. (Armourdale)             | 1            |              | 10        | 39             | 85    | 38      | 4,980           | \$1.5           | 1949       |
| CRI&P     | Silvis, Ill.                                | 1            |              | 11        | 40             | 76    | 48      | 4,372           | \$3.3           | 1949       |
| D&RGW     | Grand Junction, Colo. (East)                |              |              |           |                |       |         |                 |                 |            |
| EJ&E      | Gary, Ind. (Kirk)                           | 1            |              | 11        | 58             |       | 47      |                 | \$4.9           | 1952       |
| E-L       | East Buffalo, N.Y. [c]                      |              |              |           |                |       |         |                 |                 |            |
| GN        | Minot, N.Dak. (Gavin)                       | 1            |              | 5         | 35             | 71    | 78      | 3,237           | \$6.0           | 1956       |
| IHB       | Riverdale, Ill. (Blue Island)               |              |              |           |                |       |         |                 |                 |            |
| IC        | Markham (Chicago), Ill. [d]                 | 2            |              | 23        | 109            | 164   | 103     | 9,827           | \$3.0           | 1950       |
| L&N       | Atlanta, Ga. (Tilford)                      | 1            |              | 4         | 24             | 52    | 50      | 2,141           | \$11.0          | 1957       |
| L&N       | Birmingham, Ala. (Boyles)                   | 1            |              | 6         | 40             | 122   | 95      | 6,151           | \$10.0          | 1958       |
| L&N       | Covington, Ky. (Decoursey)                  | 2            |              | 9         | 48             | 91    | 110     | 7,370           | \$11.5          | Indef.     |
| L&N       | Nashville, Tenn. (Radnor)                   | 1            |              | 11        | 56             | 96    | 67      | 7,905           | \$14.0          | 1954       |
| MP        | Kansas City, Mo. (Paul J. Neff)             | 2            |              | 11        | 72             | 120   | 120     | 7,156           | \$12.8          | 1959       |
| MP        | McGehee, Ark.                               | 1            |              | 4         | 24             | 36    | 39      | 2,608           |                 | 1962       |
| MP        | North Little Rock, Ark.                     | 1            |              | 6         | 40             | 69    | 65      | 4,659           | \$8.4           | 1961       |
| NYC       | Buffalo, N.Y. (Frontier)                    | 1            |              | 8         | 63             | 120   | 75      | 6,100           | \$10.5          | 1957       |
| NYC       | Elkhart, Ind. (Robert R. Young)             | 1            |              | 9         | 72             | 115   | 96      | 7,873           | \$14.0          | 1958       |
| NYC       | Avon (Indianapolis), Ind. (Big 4)           | 1            |              | 7         | 55             | 77    | 66      | 4,480           | \$14.0          | 1960       |
| P&LE      | Youngstown, Ohio (Gateway)                  | 1            |              | 6         | 35             | 142   | 73      | 5,848           | \$7.5           | 1958       |
| NYC       | Detroit, Mich. [c]                          |              |              |           |                |       |         |                 |                 |            |
| NYC       | Albany-Schenectady-Syracuse (N.Y.) area [c] |              |              |           |                |       |         |                 |                 |            |
| N&W       | Portsmouth, Ohio                            |              | 1            | 5         | 31             | 62    | 32      | 10,300          |                 | 1955       |
| N&W       | Roanoke, Va.                                |              | 1            | 1         | 8              |       |         |                 |                 | 1961       |
| NP        | Pasco, Wash.                                | 1            |              | 6         | 47             | 77    | 77      | 4,700           | \$5.5           | 1955       |
| PRR       | Conway (Pittsburgh), Pa.                    |              | 2            | 32        | 107            | 161   | 169     | 12,000          | \$35.0          | 1957       |
| SAL       | Hamlet, N.C.                                | 1            |              | 11        | 58             | 113   | 70      | 5,030           | \$8.0           | 1954       |
| SOU       | Atlanta, Ga. (Inman)                        | 1            |              | 10        | 65             | 107   | 20      | 7,800           | \$15.0          | 1957       |
| SOU       | Birmingham, Ala. (Norris)                   | 1            |              | 8         | 56             | 95    | 92      | 5,400           | \$10.0          | 1952       |
| SOU       | Chattanooga, Tenn. (Citico)                 | 1            |              | 9         | 60             | 94    | 100     | 6,300           | \$12.0          | 1955       |
| SOU       | Knoxville, Tenn. (John Sevier)              | 1            |              | 7         | 46             | 78    | 60      | 4,500           | \$4.0           | 1951       |
| SLSF      | Memphis, Tenn. (Tennessee)                  |              |              |           |                |       |         |                 |                 |            |
| SLSF      | Tulsa, Okla. (Cherokee)                     |              |              |           |                |       |         |                 |                 |            |
| SSW       | Pine Bluff, Ark.                            | 1            |              | 5         | 32             | 92    | 45      | 2,820           | \$4.5           | 1958       |
| SP        | Eugene, Ore.                                | 1            |              | 4         | 24             | 122   | 68      | 5,063           | \$2.0           | 1956       |
| SP        | Houston, Tex. (Englewood)                   | 1            |              | 9         | 64             | 134   | 113     | 7,179           | \$7.6           | 1954       |
| SP        | Roseville, Calif.                           |              |              |           |                |       |         |                 |                 |            |
| Union     | Pittsburgh, Pa.                             | 1            |              | 4         | 23             |       | 8       | 828             | \$4.5           | 1955       |
| UP        | North Platte, Nebr.                         | 1            |              | 9         | 42             | 114   | 43      | 3,900           |                 |            |
| UP        | Pocatello, Idaho                            | 1            |              | 9         | 40             | 75    | 50      | 4,812           |                 |            |

Notes:

[a] Classifies north and west merchandise only; is part of Russell Terminal with 14,500-car capacity.

[b] No departure yard; handles east and south traffic only.

[c] No formal plans announced.

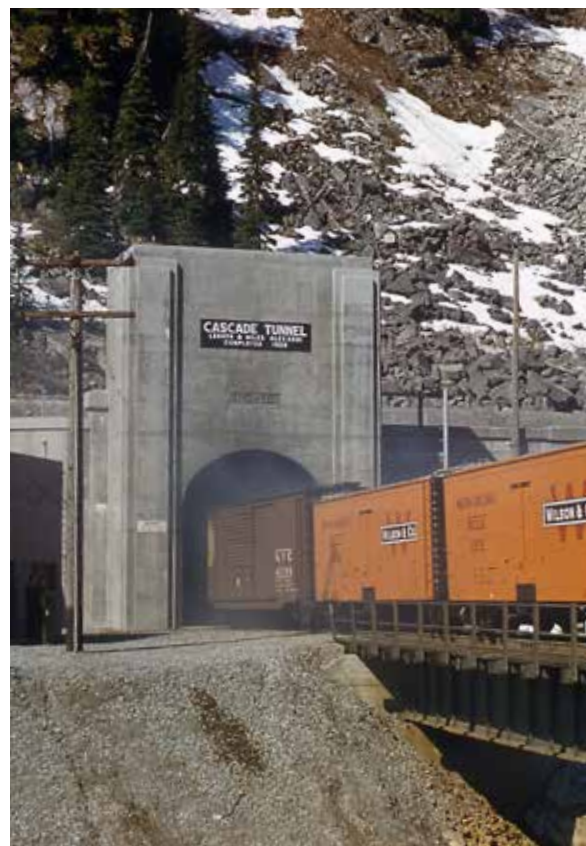
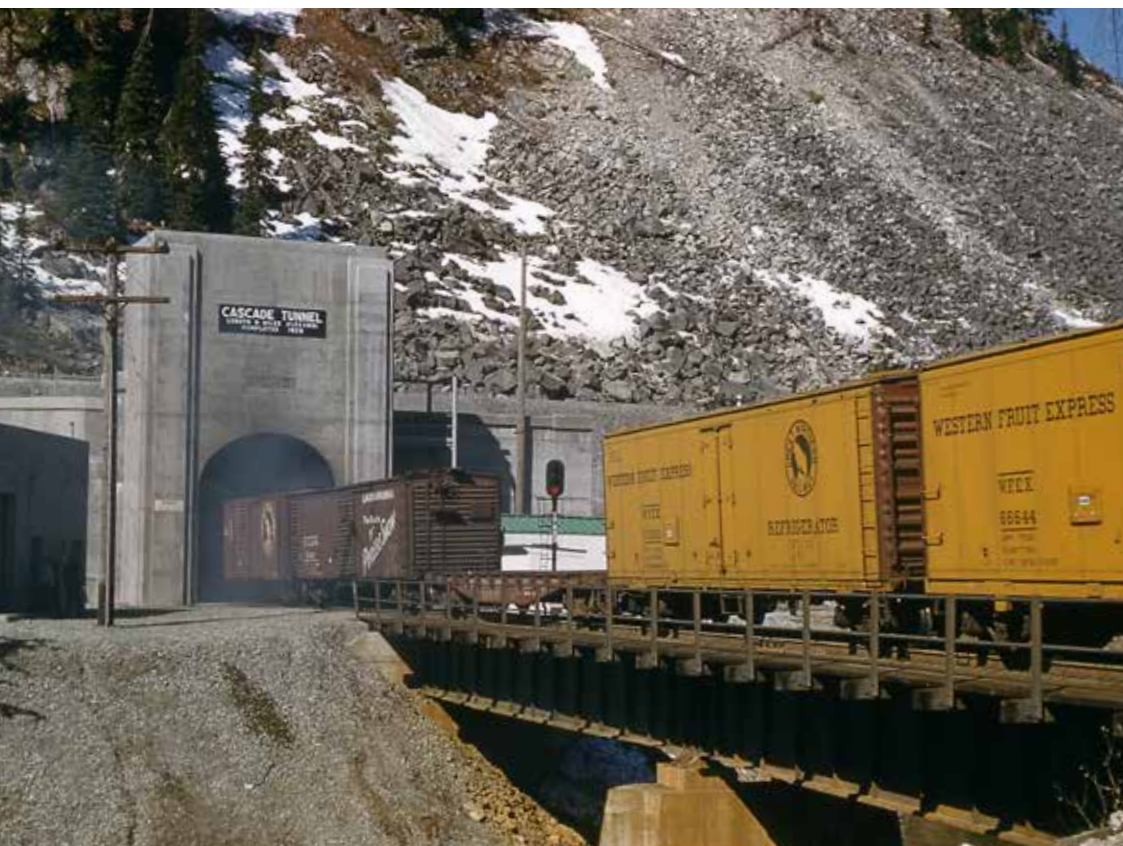
[d] Date shown is for south yard; north yard opened in 1951.



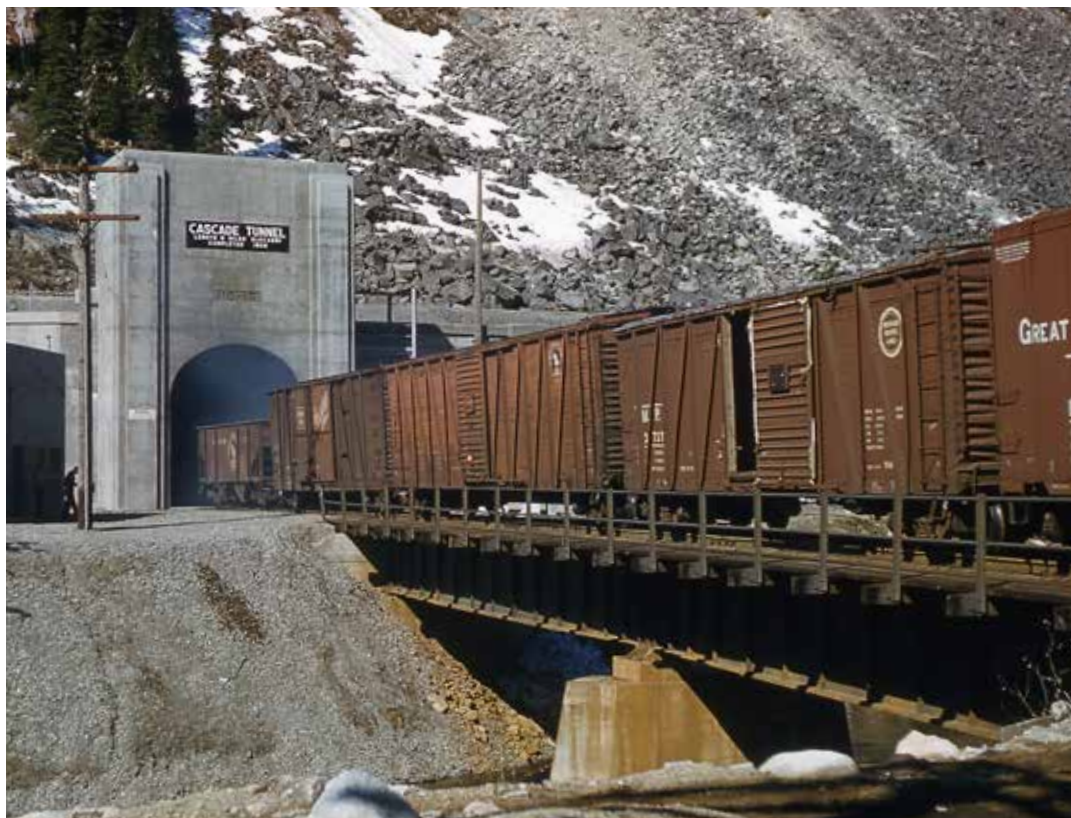
# Freights IN PHOTOS

**CASCADE EXIT:** Great Northern GP9s emerge from 7.8-mile-long Cascade Tunnel in central Washington with freight 246 from Seattle on May 1, 1958. The train's consist, only a portion of which is shown in this sequence of photos, includes a nice variety of boxcars (all-steel and composite), hopper cars, a flatcar, freight-service refrigerator cars, and some express reefers ahead of the caboose.

Five photos, M. L. Powell, J. David Ingles collection











**LOGGER:** Southwest Lumber Mills 2-6-6-2 No. 12 brings a log train into Flagstaff, Ariz., in November 1958. Built as a saddletanker, the 1929 Baldwin worked in Oregon and California before coming to Arizona in 1956. SWLM removed the tanks and added a tender. The network of logging lines south of Flagstaff was gone by 1970.

Harold F. Stewart, Stan Kistler collection

## Freights IN PHOTOS

**ORE KING:** A number of railroads derived substantial revenue from iron ore traffic, but the Duluth, Missabe & Iron Range was the biggest carrier with the greatest dependence on the commodity. The king of the ore roads also was late to dieselize: this view of a 2-10-2 and three SD9s working at Proctor, DM&IR's big yard above Duluth, Minn., is from April 25, 1959.

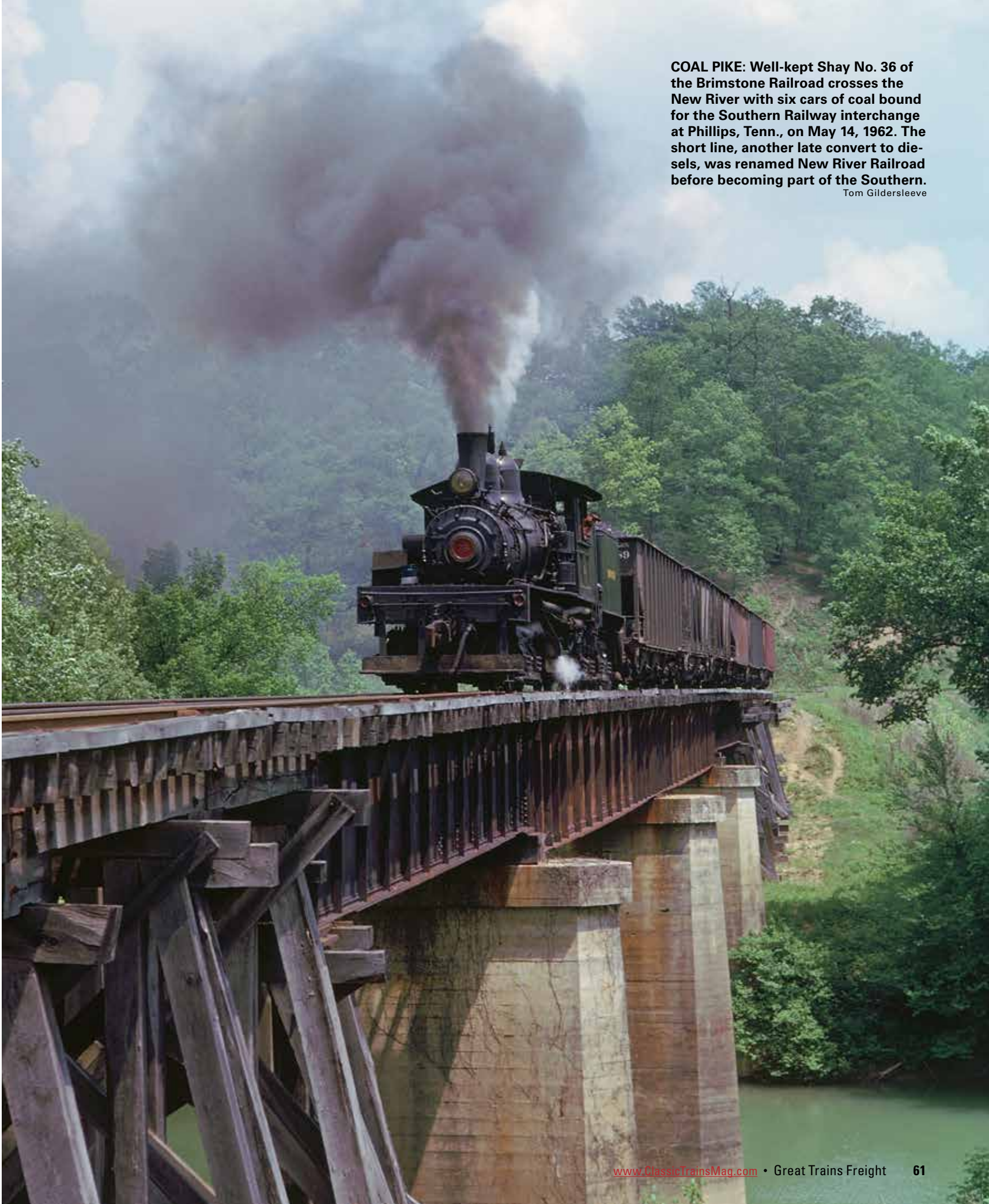
Robert C. Anderson





**COAL PIKE:** Well-kept Shay No. 36 of the Brimstone Railroad crosses the New River with six cars of coal bound for the Southern Railway interchange at Phillips, Tenn., on May 14, 1962. The short line, another late convert to diesels, was renamed New River Railroad before becoming part of the Southern.

Tom Gildersleeve





**INTERMODAL:** Four brand-new U25Bs head east from Collinwood, Ohio, with what today we'd call an intermodal train. When this photo was made in August 1964, the terms *piggyback*, *TOFC* (trailers on flatcars), and *COFC* (containers) were used for such rail-highway service. NYC was a leader in the business, particularly with its innovative Flexi-Van containers, seen behind the piggyback loads in this train.

J. David Ingles

## Freights IN PHOTOS









**CABOOSE CREW:** Inside an old wooden bay-window caboose on the Milwaukee Road's Terre Haute Division sometime around 1950, flagman Draper (left) makes out the train's wheel report while conductor Ferguson brings the delay report up to date.

Jesse Lunger



**YARD WORKER:** Another Milwaukee Road scene shows cars cresting the hump at Pig's Eye Yard, St. Paul, Minn., in January 1959. An employee (along with an unseen counterpart on the other side) checks the oil level in each journal box and adds lubricant as required with an oil gun. The box covers were opened during the inspection of the incoming train.

William D. Middleton

## Freights IN PHOTOS





**LOADING COTTON:** Workers prepare bales of cotton for loading into boxcars at Rio Grande City, 73 miles west of Harlingen, Texas, at the end of a Missouri Pacific branch line along the Mexican border, under the high midday sun in August 1948.

Philip R. Hastings

**CARFERRY:** A crewman on the Wabash's open-deck carferry *Detroit* signals as the boat is unloaded after a trip across the Detroit River from Windsor, Ont. It's 1950, and the *Detroit* has been in service for 45 years, having been built for the Michigan Central but rendered surplus with the 1910 opening of MC's tunnel under the river.

W. A. Akin Jr.







**INTERURBAN, NORTHWEST:** In south-central Washington, Yakima Valley Transportation Co. steeple-cab No. 298 (GE, 1922) hauls four boxcars south on Yakima's 6th Street at McKinley in August 1978. The 20-mile Union Pacific subsidiary ended electric freight service in '83, and was mostly abandoned two years later, though a portion survives for tourist trolleys.

Robert S. Kaplan



**INTERURBAN, MIDWEST:** Trees bright with the colors of an Iowa autumn flank Mason City & Clear Lake motor No. 52 as it switches cars in Clear Lake on October 15, 1955. Linking its two namesake towns, MC&CL became the Iowa Terminal Railroad in 1961. Steeple-cab 52 was among several pieces lost in a 1967 fire, but the line, now called Iowa Traction, still runs in 2017 as the last electric freight operation on the American rail network.

W. C. Janssen, Krambles-Peterson Archive

**HEAVY ELECTRIC:** The Virginian Railway was as wedded to coal as the Missabe was to iron ore. Near Princeton, W.Va., on VGN's 133-mile mountain electrified district, a giant two-unit EL-2B locomotive (GE, 1948) takes empty hoppers back to the mines in 1956, three years before Norfolk & Western absorbed the Virginian.

B. L. Stone, Krambles-Peterson Archive

## Freights IN PHOTOS









**L&N**  
THE DIXIE LINE



# Following Mr. Goodson's FORD

The story of one  
of the 180,000  
new automobiles  
L&N delivered  
in 1962

BY **DAVID P. MORGAN**

PHOTOS BY **LOUISVILLE  
& NASHVILLE STAFF**

The American automobile industry produced more than 4 million 1962-model cars. Some 400,000 of them were Galaxies, the standard-size Ford. One of these, a raven-black Fordor Galaxie 500 Town Sedan bearing serial number 2U62X166992, belongs to Atlanta businessman Ralph Goodson Sr. Or rather, to his wife. For Goodson ordered the car in July as a birthday present for her. There was no question of make; he had owned 37 Fords previously, including a 1941 that accumulated 300,000 miles and a 1959 that already has 82,000 on its odometer. He naturally placed the order with Atlanta's Crest Motors, whose owner Robert H. East is a fellow member of Grace Methodist Church. Once the signature was dry on the order blank, railroading became inseparably involved with the construction and delivery of the car on two counts. No matter where it's assembled, a Ford Galaxie consists of body stampings from Buffalo, Cleveland, Chicago, and/or Dearborn, Mich.; a transmission from Cincinnati; an engine from either Cleveland or Dearborn; trim from Utica, N.Y.; a frame from Dearborn; steering gear from Indianapolis; and glass from Dearborn and Nashville. And although the Ford Motor Company operates 16 U.S. assembly plants, including one on the outskirts of Atlanta, the nearest plant in which Goodson's choice could be manufactured was in Louisville, Ky. — 461 rail-miles distant.



So far as delivery of components goes, the automobile manufacturers have been volume rail shippers since they first began to decentralize production in regional assembly plants (Ford, for example, began mating bodies and chassis at the rate of 12 a day in two small shops in Louisville as early as 1913). Auto parts such as axles, fenders, wheels, frames, and engine blocks create ideal high-rated volume carload business and can underwrite daily hotshot schedules such as Southern's renowned "Sparkplug" and make a huge impact upon a strategically located railroad's annual report; Wabash, for example, was dependent upon automobile traffic for 7.1 percent of its tonnage and 18.9 percent of its freight revenues in 1961. Ford's present Louisville plant, completed in 1955 with 35.8 acres under roof, can park 70 freight cars inside. About 90 percent of the 8,000 parts that go into each of the 31 Galaxies which Louisville builds per work-hour are rail-delivered.

The assembled automobile itself represents business that the rails had, then lost, and now are retrieving. Strangely, assembled automobiles originally were carried in the open on flats and even were stacked double — in principle, just as they are today. But by the beginning of World War II the rails had built a fleet of 35,000 automobile boxcars (Association of American Railroads class XAR), all equipped with special loading devices inside and some fitted with end doors for easy access. But the automobile traffic all but vanished after the war to the tractor-trailer haulaway operator, who offered factory-to-dealer flexibility, faster service — and a better rate. By 1959 Louisville & Nashville, for example, was moving only 25 boxcars of setup automobiles a week. True to its nature, the new car had finally deserted the steel highway for the paved one, in what the trucking fraternity reckoned to be the most natural mating of the age.

The rails didn't go out after the assembled automobile

**3 P.M., TUESDAY, JULY 24, 1962**

**Inside Ford's Louisville plant, the chassis that will become Ralph Goodson's Galaxie is carried by an overhead conveyor belt.**



**5:10 P.M., TUESDAY, JULY 24**

**A plant worker drives Goodson's completed Galaxie off the assembly line for testing.**





**10 A.M., WEDNESDAY, JULY 25**

The black Galaxie 500 is driven onto the top, or C, deck of TTX flat 500953 at L&N's automobile transport terminal in Louisville.

**3 P.M., WEDNESDAY, JULY 25**

Alco S4 2366 pulls auto-racks from the loading area past the yard office at Strawberry Yard in Louisville to make up the *Automobile Special*.



**4:40 P.M., WEDNESDAY, JULY 25**

Power is tied on in the southbound departure yard at Strawberry and will move once car inspectors have completed an air-brake test.



business per se; they more or less backed into it through the medium of piggyback. Once the practicability of trailers on flatcars had been demonstrated, it became apparent that any trailer — including haulaway rigs bearing four standard-size cars — was fair game for the railroad traffic solicitor. Inseparable from such salesmanship was the ratemaking freedom the industry won in the Transportation Act of 1958, as well as the Interstate Commerce Commission-approved Plan V piggybacking formula which, in this instance, permitted joint rates between railroads and motor convoy operators. It was just a short step then to discarding the haulaway rig and carrying autos on platform or rack cars — 8 standard cars or 10 compacts on a bi-level or 12 to 15 on a tri-level.

## FROM TOFC TO RACKS

Historically, Louisville & Nashville's experience was typical. In January 1960 the road first began moving Fords out of Louisville on trailers mounted on conventional 85-foot Trailer Train flats (reporting marks TTX). On September 27 of that year, an interline bi-level load of Comets and Falcons en route from Ohio to Miami and handled by L&N from Cincinnati to Atlanta marked the first rack movement. At year's end L&N had moved 3,179 flats' worth of new cars and trucks for a gross of close to \$1 million. Tri-level service was inaugurated, again with Fords from Louisville, on January 10, 1961, and by October L&N was running solid piggyback-automobile rack specials. Auto revenues jumped 255 percent last year to a total of \$3.5 million. Nor could all the desk-pounding of Teamster President James M. Hoffa or the pressure of his drivers' lobbyists persuade Congress to repeal the legislation of 1958 which underwrote this wholesale shift from road to rail. The economics were as obvious as the fact that 600 new cars, say, require 100 haulaway drivers but only a five-man train crew to move. En route, the automobiles were less subject to jolting and strain; and there was freedom from damage caused by overhanging tree branches or highway gravel and dust.

This is not to say that the automobile business fell into the railroad's lap or was accommodated with indifference. L&N's current annual volume of 15,000 rack cars implies a large and expensive pool of custom equipment. Figure about \$16,000 for an 85-foot piggyback flat plus \$7,000 for a tri-level rack with built-in shock-cushioning gear — or double the price of two reasonably fancy boxcars. Further, the road was obliged to provide auto transport terminals. In Louisville L&N paved 7 acres under fence opposite three sidings with a combined capacity of 23 long flats; in Atlanta the road has 12 acres paved under fence with four sidings holding 20 cars; and so it goes in Memphis, New Orleans, and other major transshipment gateways. Clearances constituted an even greater obstacle to rack traffic than to conventional TOFC. A tri-level load stands at least 18½ feet above the rail on L&N, which keeps the adjustable racks 62 inches apart for rapid loading and safe movement of even the largest standard cars (a Ford station wagon's height is 56.8 inches). L&N, which is aiming for a systemwide mainline clearance of 20 feet, was happily free from the challenge which the "Rathole Division" posed for rival Southern, but there were incidents. For example, Alabama and Louisiana auto traffic had to be routed via Atlanta and thence over the West Point Route to Montgomery, Ala., until L&N could lower its tracks through a tight river bridge into Decatur, Ala. Now that this and similar bottlenecks have been erased, the railroad is happy about the whole thing because not only tri-levels but all "high, wide" cars are assured a direct routing.

In the final analysis — as Ralph Goodson's Galaxie 500 proves — the national assembly plant system of the manu-



**5:26 P.M., WEDNESDAY, JULY 25**

**Extra 522 South — two GP9s, a GP7, an FP7, an empty flatcar, 30 tri-level racks, and caboose — rolls across Crooked Creek near Lebanon Junction, Ky.**



**5:49 P.M., WEDNESDAY, JULY 25**

**The four units on the *Automobile Special* gun for the big grade out of Lebanon Junction that lifts the L&N out of the Ohio River valley.**

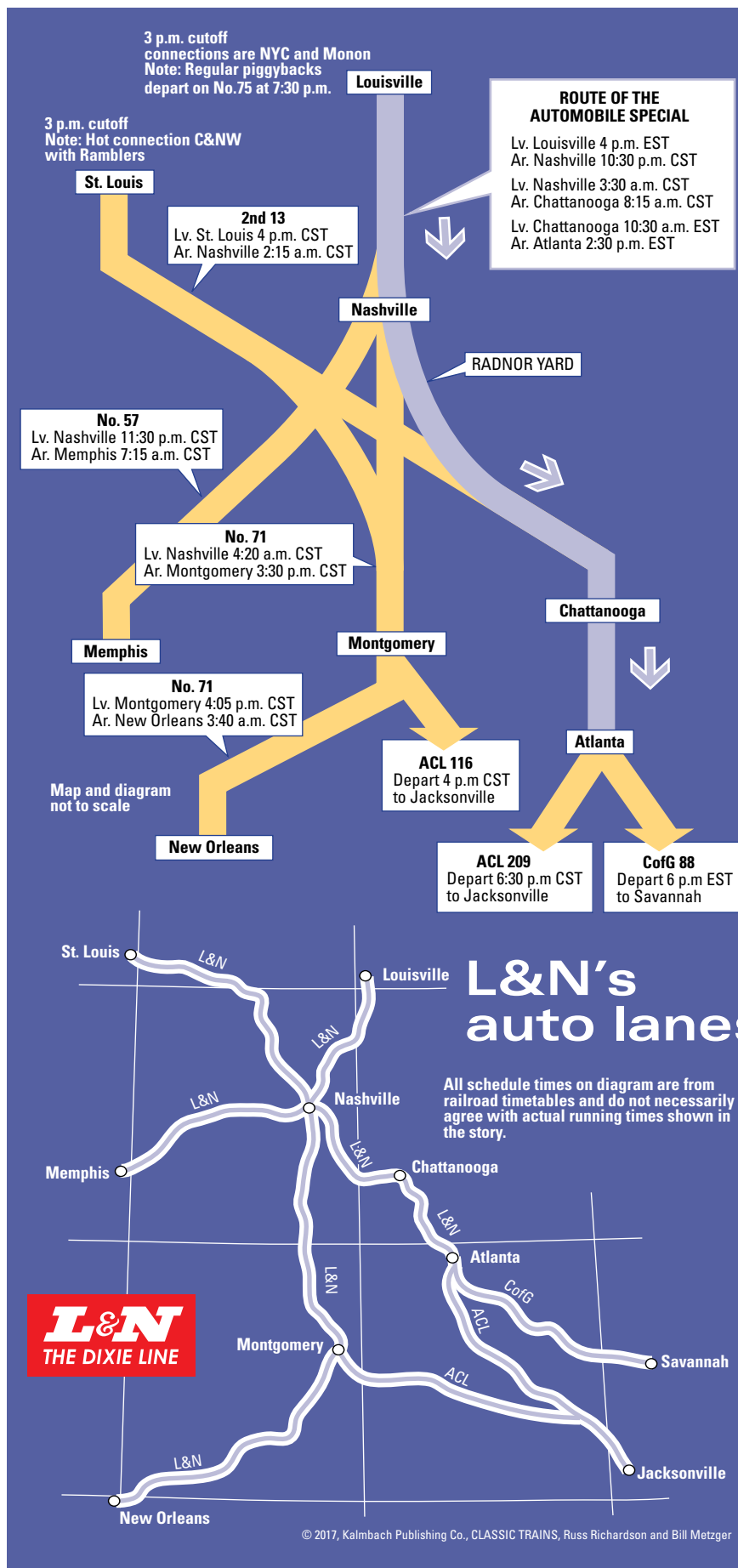




**6 P.M., WEDNESDAY, JULY 25**  
The 1.5 percent of Muldraugh Hill temporarily reduces speed to 15 mph.



**8 P.M., WEDNESDAY, JULY 25**  
The yardmaster and a railroad policeman inspect TTX 500953 at Bowling Green, Ky.; Goodson's Ford is at top left.



facturers really put rails back under new autos. The tri-level car possesses no competitive cost advantage over the haulaway tractor-trailer rig on runs of 300 miles or less (L&N's shortest rack haul, for example, is Louisville–Memphis, 406 miles) when you consider that rail movement means an additional loading and unloading for each car versus direct factory-dealer shipment over the road. It is obvious that if each of Ford's 16 assembly plants across the U.S. produced all models sold by the company, from Falcons to Lincoln Continentals, then most car-buyers would be within economic truck movement of a factory. But the myriad makes and models cataloged by each manufacturer make plant specialization imperative. Ford's Louisville plant, for example, supplies Galaxies to all the South and heavy-duty and extra-heavy-duty trucks to all the U.S., plus overseas.

### PRECISE TIMING

Goodson ordered his Galaxy July 13. Within a week its 8,000 components were flowing through more than 7 miles of subassembly lines toward 5:15 p.m., Tuesday, July 24 — the time the electronic scheduling machines in the front office had picked for the car to be driven off the final assembly line. Moving inexorably along at a smooth speed, the innards of Job 319 (as the factory ticketed Goodson's order) neared completion. A few minutes before 4 p.m., the 220 h.p. V-8 engine went onto the frame; at 4:12 the body was "decked" on the chassis; and at 5:08 serial 2U62X166992, now a completed auto, was cranked up for the first time and driven off the line for the battery of tests which every car must pass before it's allowed out of the plant. In a complete reversal of the era when Henry Ford turned out Model Ts in any color you wanted as long as it was black, this black Galaxy 500 was very much Goodson's own car, built to his specification with such options as a modified Thunderbird engine, air-conditioning, power brakes, backup lights, radio, power steering, and Cruise-O-Matic transmission. The invoice pasted by law on a rear window totaled \$3,764.50.

Just a short haulaway drive across the south side of Louisville, another brand-new car, this one mounted on flanged wheels instead of tires, was being spotted at the L&N auto transport terminal on the flank of Mapother Yard. TTX 500953 had been turned out by Pullman-Standard's Butler (Pa.) plant on May 23, 1962 — an 89-footer resting on 28-inch wheels encased in ASF ride-control trucks with Timken roller bearings. And next morning at 10 o'clock its tri-level rack reverberated as a dozen Galaxies, including Goodson's car in position C2 (second back, top deck), were driven aboard. Each car was tied down at four frame points with chains and ratchets; all ignition keys were collected and placed in the glovebox of one car; then that car was locked and its key secreted elsewhere aboard the flat in a location known only to Ford and the L&N. Adjacent racks were being loaded for Birmingham, Jacksonville, Tampa, Miami, Winston-Salem, Memphis, and Hazelwood, Mo., and there was one bi-level of trucks billed for Los Angeles.

### GETTING UNDER WAY

Now, at noon on July 25, 1962, Louisville & Nashville is once more gearing itself to move autos in million-dollar lots. To ensure Atlantic Coast Line and Central of Georgia connections in Atlanta, L&N will run the autos as a solid train, on a Wednesday-Sunday schedule. Out of Louisville itself, such exclusiveness will be rendered economically feasible not only by Ford but also by interchange from both Monon and New York Central. The cutoff time for all three is 3 p.m. Alco yard goats trundle out of Mapother and up into the city to pick up the interchange: 8 racks from Monon,



**11:30 P.M., WEDNESDAY, JULY 25**  
Car inspector R. A. Bostleman checks the tiedowns of Goodson's Galaxy in Radnor Yard, Nashville.



**10 A.M., THURSDAY, JULY 26**  
A power change at Nashville has left the *Special* in the care of two F7s, which curve past Coon Mountain near Chattanooga with 420 automobiles and 12 truck trailers.





**10:30 A.M., THURSDAY, JULY 26**

At Chattanooga's Wauhatchie Yard, the *Special* is blocked so Atlanta transfer crews will only have to "cut and run." A third F7 will be added here.

**11:08 A.M., THURSDAY, JULY 26**

L&N's *Automobile Special* is reassembled after Wauhatchie yard engines make 32 switches to preblock Atlanta deliveries.



**4:05 P.M., THURSDAY, JULY 26**

Less than 24 hours out of Louisville, the *Special* arrives Tilford Yard, Atlanta, with 36 cars totaling 2,100 tons behind an A-B-A team of F7s.



10 from NYC. Even as yard crews put the long cars together, the locomotives — two GP9s, a GP7, and an FP7 totaling 6,500 h.p. — ease by the yard office. At 4:25 p.m. the train is complete; the caboose is on at 4:30; the engines are on at 4:34; and Extra 522 South pulls at 4:52 with 30 loads, 1 empty, and 1,554 tons in the consist. It hasn't required long for the diesels to bring the air pressure up to 90 pounds since L&N switches the racks under air, but today 7 minutes are chalked up to locating and fixing a leaking air hose.

The four EMDs pick their way out of the terminal; enter the main at 5 p.m., less than 30 minutes behind the every-other-day *South Wind*; and then begin accelerating toward the road's 50 mph freight-train speed limit. It's "all black" on the gentle curves as the head brakeman checks over his train of 400 Galaxies, Tempests, Corvairs, Plymouths, F-85s, Darts, Larks, Chryslers, and Falcons. The sun is sinking to the western horizon as the *Automobile Special* slips through Lebanon Junction, Ky., and tackles the ruling grade of Muldraugh Hill, which limits each unit to 1,250 tons (1,125 for the FP7). For the next 5 miles the double-track main ascends through 5- and 6-degree curves on continuous 1.2 to 1.58 percent, and the load-indicating ammeter verifies the intensified exhaust: 425 amperes at 25 mph, then 525 at 15 mph. The rock walls of the cut bounce back the full-throated voices of four V-16s as Extra 522 South tops the summit at 18 mph, then recovers to 30, 35, 40, and 45. Munfordville is passed at 6:46, Cave City at 7, and then the *Special* crosses the Barren River and enters Bowling Green at 7:34. (For simplicity, all times in this article are Eastern Standard, although L&N operates on Central Standard Time between Lebanon Junction, Ky., and Chattanooga, Tenn.)

L&N flat-switches the *Special* in Bowling Green because the main is normally unoccupied at dinnertime and a yard engine is on duty; to block in Radnor Yard, its \$15 million push-button hump facility in Nashville, would mean pulling past Radnor's 4-mile length to reach the receiving yard, then running the racks that same distance again over the hump, into the classification bowl, and out into the departure yard. So Bowling Green does the blocking; from the caboose forward are four cars for Nashville, three for Memphis, and the rest for Atlanta. During the work, an L&N policeman examines the train for vandalism and loose tie-down chains. By 8:50 p.m. the Alco switcher is done; the road units couple on at 9, and at 9:05 the *Special* is moving out.

Adapting his strategy to the peculiarities of auto rack cars (which crews consider hard to start, easy to roll, and hard to stop, versus conventional cars), the engineer pours on the power, holds to the speed limit, and has his train by Amqui, Tenn., at 10:31 p.m. and inside Radnor at 10:54.

## HEART OF THE L&N

As the schematic schedule diagram on page 73 indicates, Nashville is the geographic heart of the L&N. Here the *Special* drops off its Memphis racks for relay beyond in freight No. 57, and Alabama and New Orleans racks for forwarding in No. 71. Simultaneously, the *Special* acquires racks off Second 83 from St. Louis, an important connection for Wisconsin-built Ramblers received from Chicago & North Western. On any given midnight in Nashville, give or take a couple of hours, from Wednesday through Sunday, L&N may have custody of more than 1,000 brand-new sedans, hard-tops, wagons, and convertibles — say, \$2 to \$3 million worth of Detroit hardware. And tonight the waybills include TTX 500953 bearing a black Galaxie 500, serial 2U62X166992.

At 5:15 a.m. on Thursday, July 26, the *Special* leaves Nashville with the dawn, its 42 loads and 2 empties totaling 2,247 tons behind a pair of F7s. Aboard are 420 automobiles



**4:35 P.M., THURSDAY, JULY 26**

**In Atlanta, SW1200s reach into the *Automobile Special* for the Central of Georgia transfer cut.**



**5 P.M., THURSDAY, JULY 26**

**En route into downtown Atlanta, the transfer run holds for CofG's *Nancy Hanks II* to clear.**





**8 A.M., FRIDAY, JULY 27**

Next morning, TTX 500953 (with Goodson's Galaxie second from left on the top deck) is spotted at Ford's Hapeville, Ga., plant for unloading.



**8:30 A.M., FRIDAY, JULY 27**

Goodson's Galaxie is driven off the auto-rack car and down a Buck Equipment ramp (left), then to the truck terminal, where it is mounted atop the tractor of a Motor Convoy haulaway rig (below) for delivery to the dealership.



and 12 semi-trailers. Between Radnor Yard, Nashville, and Wauhatchie Yard, Chattanooga, the single-track CTC-equipped Chattanooga Division main (backbone of the former Nashville, Chattanooga & St. Louis until L&N absorbed it in 1957) are 143 miles of curving gradients ranging from 1 to 1.5 percent and attaining a maximum elevation of more than 1,100 feet atop Cowan Hill. The F units are rated at 1,595 tons each, though, so the engineer has power to spare and takes the division at an average speed of 30 mph to arrive Wauhatchie at 10:11 a.m.

As soon as the road units are off, yard crews go to work on each end of the *Special*, blocking the consist so Atlanta transfer engines will only have to cut and run to make their deliveries. It takes 32 individual moves to reassemble the racks (and regular piggybacks, which the *Special* picked up in Nashville) from caboose forward in this breakdown for connections and local deliveries: Southern Railway, Atlanta "proper," SAL, ACL, and CofG. The road units — an A-B-A set of F7s — tie on at 11:28 a.m. and pull at 11:41. A half hour later, 36 cars and 2,100 tons are moving alongside the Tennessee River in the shadow of Lookout Mountain.

Down across north Georgia through Ringgold and Tunnel Hill and Dalton, where a century ago a Rogers 4-4-0 driven by Union saboteurs stunned the countryside, today the automobile train brings a fresh surprise. The motorist, the woman in the front-porch rocking chair, and the farmer barely glance up when the F7s blow for a grade crossing — but a glimpse at their consist rivets undivided attention. After all, where else does one encounter more than 400 brand-new automobiles rolling along three deep at 50 mph within an overall distance of less than 3,000 feet?

## COUNTDOWN TO DELIVERY

The *Special* is by Cartersville at 2:28 p.m., Acworth at 3, Marietta at 3:38, and into Tilford Yard, Atlanta, at 4:05. L&N operates an auto transport terminal next to Tilford, but all Fords for local delivery are sent to Ford's assembly plant at Hapeville, Ga., 8.4 miles south of the city on the Central of Georgia. So, soon after the *Special* is in, a pair of SW1200s ties onto the CofG cut and at 4:37 p.m., sets out on the 11-mile run through the city to CofG's Industry Yard. The EMDs run an obstacle course of rush-hour-congested grade crossings on a route through downtown Atlanta which goes right under Terminal Station. They arrive at CofG's yard at 5:15, in time to make its No. 88 for Savannah as well as its early-morning switch run to Hapeville.

TTX 500953 is spotted at the Hapeville unloading dock at 5:55 a.m. on Friday, July 27, 1962, and at 8:25 Ford's crews are removing the tie-down chains from a raven-black Galaxie 500 on C deck. For its services, which included loading in Louisville, L&N has billed Ford \$405 for the movement of a dozen Galaxies from Kentucky to Georgia — or a trifle more than \$34 per auto. (If Ford wants to move the rack car back to Louisville under load within 48 hours — say, with Falcons assembled in Atlanta — the rate will be only \$205.)

Motor Convoy delivers the car to Crest Motors, whose servicemen check it over from bumper to bumper, add deluxe wheel covers, and wash it for delivery.

And, at 4:45 p.m., Ralph Goodson Sr. and his wife accept the keys to their brand-new Ford.

Thus does the automobile with serial number 2U62X166992 become the proud, personal possession anticipated only two weeks before when Mr. Goodson signed a customer order at Crest Motors. The black Galaxie now is permanently recorded in Louisville & Nashville's 1962 traffic accounts, too, as one of some 180,000 brand-new autos the railroad carried this year. ■



**4:45 P.M., FRIDAY, JULY 27**

Crest Motors dealer R. H. East (left) presents the Galaxie's keys to Mr. and Mrs. Goodson.

**4:50 P.M., FRIDAY, JULY 27**

The Goodsons drive their new Ford away from the dealership two weeks after ordering it.



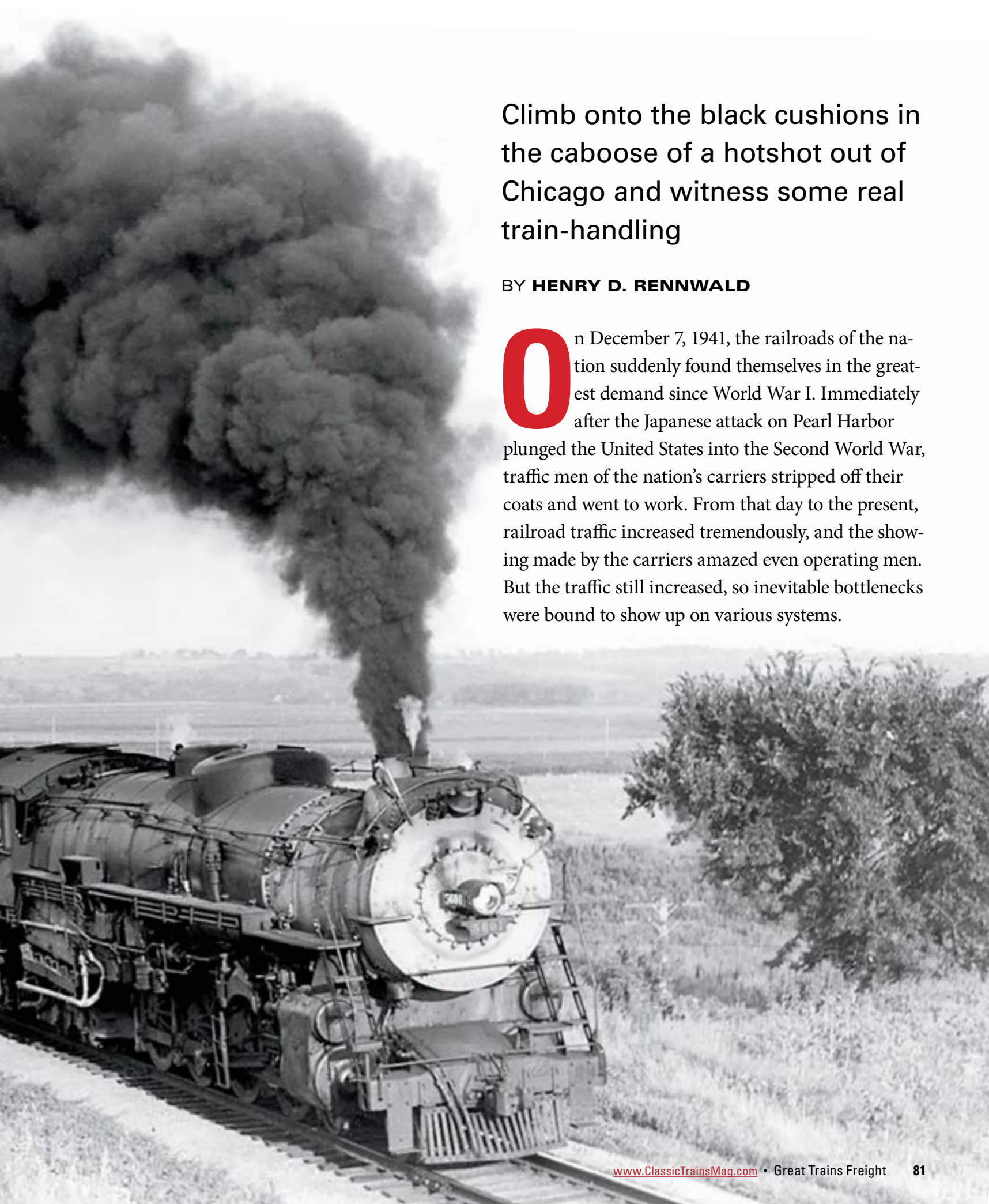


# Wartime freight ON THE BURLINGTON

Doing its part for a nation at war, Burlington class O-5 Northern 5601 hustles with fast freight 61 about 2 miles west of Red Oak, Iowa, in July 1942.

Bernard Corbin





## Climb onto the black cushions in the caboose of a hotshot out of Chicago and witness some real train-handling

BY **HENRY D. RENNWALD**

**O**n December 7, 1941, the railroads of the nation suddenly found themselves in the greatest demand since World War I. Immediately after the Japanese attack on Pearl Harbor plunged the United States into the Second World War, traffic men of the nation's carriers stripped off their coats and went to work. From that day to the present, railroad traffic increased tremendously, and the showing made by the carriers amazed even operating men. But the traffic still increased, so inevitable bottlenecks were bound to show up on various systems.



Crews are putting the finishing touches on the new hump yard at Galesburg, Ill. — hub of the CB&Q system — in a photo dated October 13, 1942.

Burlington Route







**A few years after Galesburg Yard's completion, freight cars crest the hump and then are slowed by the master and group retarders.**

Henry J. McCord

Galesburg, Ill., 163 miles west of Chicago, is sometimes called "the heart of the Burlington System." This is because practically all traffic on the Burlington system, except direct Chicago–Minneapolis business, goes through Galesburg. The Burlington had one hump yard in operation there, but as business boomed with the war, it soon became evident in early spring 1942 that the yard would be unable to cope with the situation.

S. L. Fee, general superintendent of the CB&Q in charge of lines in Illinois, Wisconsin, and Minnesota, commuted between his headquarters in Galesburg and Washington, D.C., presenting arguments before the War Production Board to build a new hump yard to speed traffic in all directions. After numerous appearances before the board, with his engineers, purchasing agents, and other interested parties, Fee finally received permission to build the new yard. Construction began on June 6, 1942, and the yard was in full operation on November 18. Costing a million dollars, the new hump yard, used for westbound traffic, gets freights through Galesburg from 2 to 20 hours faster than they formerly moved through the yards when flat switching was used.

Let's follow a fast freight out of Chicago and see how the new hump yard works.

On a foggy morning, engine 5617, one of the Q's fleet of 36 big 4-8-4s, 28 of which were built in the road's own shops, whistles off and First 67 eases out of the yard in Cicero, Ill., at 10:40. Soon she is out on the main, pulling 48 cars totaling 1,500 tons. Just east of Aurora we pull into the yard at Eola and fill out our train. Having arrived at 11:47 a.m., by 12:25 p.m. our train is complete and we pull out, with 82 cars and 3,800 tons.

At Earlville, 72 miles from Chicago, we're switched to the eastbound main and run against the current of traffic. After coaling up and taking water at Mendota, the 5617 begins rolling. As First 67 moves along at 45 mph on the eastbound track, we're passed by First 39, the *Exposition Flyer*, en route to Denver and the Pacific Coast. We continue on the eastbound track until Princeton, when we cross back over onto the westbound. At Buda we head into the passing track to allow Second 39 to whiz by, then follow it into Galesburg.

Arriving at the yard limits, we switch off the main line and begin moving over the freight tracks toward the yard. Promptly at 5 o'clock the 5617 arrives at the top of the hump, cuts off, and backs down the running track to the roundhouse to be serviced for the continuation of the trip to Omaha while

the train is being switched. Now we see how the movement is speeded up.

As soon as the train comes to a stop, a messenger is waiting at the caboose to get the wheel report and waybills from the conductor. The messenger places them in a pneumatic tube for movement to the general yard office two miles away, where clerks sort the bills and look through them for diversions. While inspectors are going over the entire train, an operator in the office puts the list of the train on the teletype circuit, where it is transmitted simultaneously to the two switching towers.

Up in the tower the teletype begins to click, and looking at it you see something like this:

67 Eng 5617 from Cicero to Galesburg Ill  
1 GN 567342 42 tons steel rails Denver  
2 SP 43541 42 cement Ottumwa  
3 Penn 64345 42 furniture Paducah  
4 Q 34567 mty Galesburg  
5 MKT 342178 48 machinery Cody Wyo

This jargon indicates the position of the car in the train, owing railroad, car number, tonnage, lading, and destination. There are 35 tracks in use on the westbound hump, with, for example, track 45 for Denver, 44 for west of Denver, 43 for points west of Lincoln,





In a view from the caboose, CB&Q freight No. 62 forges east somewhere in Iowa or Illinois. The hotshot is heavy with stock cars and reefers, and the car just ahead might be a drovers' car.

Burlington Route



**Electro-Motive FT diesels helped CB&Q and 22 other roads cope with wartime traffic. Here a four-unit FT set rolls 129 cars west near Keenesburg, Colo., on December 3, 1944.**

Otto C. Perry

Nebr., 42 for Lincoln proper, etc.

As the list is completed on the wire, Yardmaster "Ackie" Johnson moves to a telephone, connected by a loudspeaker device with all points in the yard, and soon we hear him say: "No. 1 on 45 . . . 2 on 12 . . . 3 on 11 . . . 4 on 12 . . . 5 on 9."

Johnson is advising his men of the tracks onto which the cars are to be switched. At 5:28 p.m., a huge switcher, 2-10-2 No. 6001, begins shoving the cars over the hump. As the first car is cut off, it hits a 4 percent grade for 150 feet, then Tower 1 applies the first retarder. The grade eases to 3.5 percent into the next retarder, where the car can be further slowed, allowed to go through unchecked, or brought to a complete stop by one of the operators in Tower 2, who sends the car to its ultimate track.

At 6:09 p.m. the caboose of 67 is shoved over the hump, and the train is completely classified. Now switcher 556, a hefty 0-8-0 rebuilt from a 2-6-6-2 in the mid-1920s, moves in and does a job of "trimming" by going through the various tracks and shoving the cars toward the west end of the yard, near the departure tracks.

By 8 o'clock, Second 67 has arrived and been sorted out, after which the yardmaster at the departure yard gets busy. He hands a list to the engine foreman reading: "45 to 43 to 37 to 41 to 36 to 18 to 12." Cars from those tracks will be assembled into the outbound train, with Denver cars on the rear, western Nebraska points next, Lincoln and Northwest, and the other cars, in station order, near the engine.

At 9:02 p.m. No. 67 pulls out with 57 cars and 2,641 tons, headed for Denver.

Under ordinary conditions, without the heavy fog which slowed operations this day, a train of 125 cars can be classified and switched in 20 to 25 minutes. The second-trick towermen recently handled 1,387 cars over the hump between 4 p.m. and midnight.

The new Galesburg yard, westbound, has a capacity of 1,460 cars. The longest track will hold 165 cars. The overall length of the new yard, from the apex of the hump to the departure yards, is 3 miles, while the bowl of the classification tracks is three-quarters of a mile long. Yard trackage at Galesburg now totals 210 miles.

There are 17 retarders on the westbound hump. They are operated by air, and as the towerman turns a handle, the brakes come into play on the outside of the rail to pinch the wheels of the car passing over. All retarders operate at 100 pounds of air pressure, but an application of 20 pounds is sufficient on some cars, lightly loaded, to slow them down. The track switches are controlled by triggers, with a light showing if the switch is open or closed. The operator in Tower 1 controls the first retarder and three lead tracks, while the two men in Tower 2 control the 16 remaining retarders and all classification tracks on their panels.

The Burlington hopes that, in addition to speeding service, the new yard will save 104,025 freight-car-days annually, 960 car-days every 24 hours during peak periods, and approximately 45,000 tons of coal a year. ■

*HENRY D. RENNWALD wrote about railroads in a variety of publications, including newspapers, books, and TRAINS, in which he had at least five bylines between 1943 and '58.*



# MEAT

Two GP7s and a GP9 are eastbound at Freeport, Ill., on Illinois Central's Iowa Division with a train of meat-laden refrigerator cars circa 1955.

M. L. Powell, J. David Ingles coll.



**MORE MEAT** — almost 50,000 loads a year — rolls across Illinois Central's Iowa Division than over all other railroads in the state combined. Ride the Geeps of hotshot CC-6 to see why

# TRAIN

BY WILLIAM D. MIDDLETON





**S**outh Omaha's business is meat. Its raw material is livestock, fattened on the plains of the Midwest. The finished products of its slaughterhouses are carcasses and dressed meat as well as hides and dozens of other packinghouse by-products. The pens, runways, and loading ramps of its Union Stock Yards Co. cover more than 100 acres. No less than 18 packing plants, including four major producers, are located there. Every year South Omaha, Nebr., receives nearly 6 million head of cattle, calves, hogs, and sheep from 30 states and Canada; ships more than 1½ million head to Mexico and every part of the United States, both for feeder stock and to packing plants; and sends out nearly 360,000 tons of processed meat. Bawling, steaming, malodorous South Omaha can produce figures to show that it has nudged out Chicago as the world's largest livestock market and meat packing center.

### ACTION AT SOUTH OMAHA

On a mid-October afternoon in 1957, the day's work was almost finished for most of South Omaha's nearly 15,000 packinghouse and stockyard workers. But for hundreds of transportation workers — truckers and railroad men alike — the workday was just reaching its peak. Shortly, afternoon crews of the South Omaha Terminal Railway, which switches all but two of South Omaha's packers, had started their early pulls from the packinghouse sidings and livestock loading tracks, and they would be making late pulls up to 5:30 p.m. Union Pacific and Burlington Route crews switched the other two plants.

Transfer runs from the Chicago & North Western, Milwaukee Road, Rock Island, and Illinois Central began drifting into the crowded South Omaha Terminal yard. Each crew set out its caboose on a yard track, then dropped down to the lower end of the yard to wait in the clear while the Terminal switchers began putting together their eastbound meat and livestock trains. In its own yard, Burlington was assembling its eastbound hotshot, and in the UP yard a westbound counterpart was being made up.

Most of South Omaha's meat production and a good part of its outbound livestock movement is eastbound traffic, and no fewer than five railroads, not to mention a growing, aggressive trucking industry, compete for a share. All five railroads offer comparable fast, overnight Omaha–Chicago dispatch freight schedules designed primarily for meat traffic. To get a better-than-average share of the traffic takes a little something extra in the way of service and dependability. Illinois Central, and its premier meat train, CC-6, provide just this.

To begin with, CC-6 is fast. Illinois Central operating men regard it as the fastest of



**An inspector checks a car of livestock in the South Omaha Terminal Railway yard at the Omaha Union Stock yards. It will go east in hotshot CC-6, IC's "Meat Train" to Chicago.**

Two photos, William D. Middleton

the system's considerable fleet of dispatch freights, and in matters of freight-train speeds IC defers to few railroads. Then there's the matter of dependability. Much of Omaha's eastbound meat traffic is headed for Chicago connections with eastern railroads. For IC it means there's a daily connection to be made with the Indiana Harbor Belt at Broadview Yard, west of Chicago. There's a 1:30 p.m. cutoff time at Broadview, and if CC-6 isn't there with the meat, IHB goes without it. A look back through IC's daily records of connections made finds few days when CC-6 wasn't at Broadview by the appointed hour.

The advertised schedule for CC-6 calls for a 4 p.m. departure from South Omaha, but on this day it wasn't going to be even close to that. It was almost dark before the Terminal switchers were really in the swing of making up the meat trains.

A little after 6, Missouri Pacific's *Missouri River Eagle* came gliding through the yard on its way to Omaha Union Station from Kansas City. Then the Terminal switchers waited in the clear while a UP switcher delivered a long cut of reefers from the Wilson plant. I joined IC Trainmaster Bill Johnson for a steak dinner at one of the stockyard eateries while the switchers worked. By the time we returned our train was almost ready.

An eastbound Rock Island freight soon showed up behind a pair of Geeps to deliver five cars of stock for Waterloo for which we'd

been waiting. Then a Terminal switcher shoved in the last of our 16-car transfer cut, a glass-lined, refrigerated tank car of animal blood for a Chicago laboratory.

After the four roads' meat runs were made up, the transfer engines came up from the lower end of the yard, coupled on, and began pumping up the train lines while car inspectors looked over the trains.

Burlington's meat train was the first one off that evening. It came booming out of the CB&Q's yard to the north behind three Geeps, headed through the Terminal yard, and disappeared to the south. The Milwaukee Road transfer run was ready next, and it headed out on UP tracks to Omaha and Council Bluffs. Close on its markers followed the North Western run. We were next in the parade, and at 8:12 p.m. IC GP7 No. 8976 eased 16 cars and caboose into motion. I tossed my camera and bag at the caboose platform and made a stab at the grab iron. Our fast freight run to Chicago was under way. Behind us a single Geep was struggling out of the yard with the Rock Island's train.

Our consist was made up of two parts. In what IC terms a "city block" were six cars destined for Hawthorne and Congress Street yards in Chicago. Among them were four carloads of meat due out next evening on IC's crack freight SE-1 for Birmingham and Miami. The rest of our consist was blocked for setout at other points en route. There was one



carload of vermiculite for Fort Dodge, and nine loads for Waterloo — one meat reefer and eight cars of stock for the packing plants.

Strictly speaking, this was not yet dispatch freight CC-6, for CC-6 is a Council Bluffs–Chicago train, eastward second-class train 76 on the timecard, operating daily. More than 15 miles away in Council Bluffs Yard, the main body of CC-6 was being put together.

The rear of the North Western caboose stood out in our Geep's headlight beam as we followed the train upgrade to Summit. Still on UP rails, we dropped down into Omaha, passed Union Station, through an industrial district, then headed north to Illinois Central track and IC's Missouri River bridge.

At 9:10 p.m. we were in Council Bluffs Yard, and the rest of CC-6 was waiting. The transfer engine shoved the Waterloo and Fort Dodge cars on the head end of the train, then took the "city block" around to the rear end. Three GP9s backed on and began pumping up the train line, and a switcher coupled on at the rear to speed up the job.

## OUT OF COUNCIL BLUFFS

At 9:55 p.m. Omaha District engineer A. A. Kullman eased open the throttle, and CC-6 was under way. Congress Street Yard was 511 miles ahead. Sparks and a thin blue exhaust shot skyward as the units accelerated. Kullman held his train to 30 mph for a slow order just out of the yard, then he picked up

to a steady 50 mph. We were almost 4 hours behind the advertised schedule for CC-6, and Kullman was going to make up a little time. Back in the second unit's cab, I adjusted the heat control against the chill October night, made myself comfortable, and prepared for the 135 miles of nonstop running that separated us from Fort Dodge.

Behind Kullman's three GP9s were 4,529 tons of train. In conductor Ed O'Connor's waybills for our consist of 77 loads and 9 empties were listed not only the predominant cargoes of meat and livestock that give CC-6 its unofficial title of "Meat Train," but such items as hides, soap, and oil; salt, wine, grapes, and canned goods; lumber, plaster, glass, and copper.

Between Council Bluffs and Tara, just west of Fort Dodge, CC-6 runs on the freight-only Omaha District. It's single track, operated by timetable and train order, with not a block signal in sight until Tara.

CC-6 is on the Iowa Division all the way until it reaches Broadview, less than 15 miles from Congress Street. The largest of IC's 13 divisions and terminals, the Iowa Division embraces all of what the road terms its "western lines." The division's 964 route-miles reach from Illinois to Iowa, Nebraska, South Dakota, Minnesota, and Wisconsin.

The Iowa Division is a railroad in itself. It is an east-west traffic artery on a system that is otherwise mostly a north-south railroad.

And it is almost entirely a freight railroad, for the Iowa Division operates but two passenger trains: the Chicago–Sioux City *Hawkeye* and the Chicago–Waterloo *Land O' Corn*.

Iowa Division freight trains haul many things: coal, manufactured products, gypsum, lumber, agricultural implements, and machine tools. But more than anything, Iowa Division trains move food.

Although it does in fact reach six states, the Iowa Division is largely an Iowa railroad. On the black loam surface of the Hawkeye State is located a quarter of America's finest farmland, and within the state's borders one-tenth of the nation's food is produced.

Nine large packing centers and three major livestock markets are located on the Iowa Division, and the division handles nearly 50,000 carloads of meat and packing-house products a year. Illinois Central moves more meat and meat products in Iowa than all other railroads in the state combined.

Both Omaha and Sioux City have grain exchanges, and grain storage and shipping is an important industry all along the division. Some 15,000 carloads of wheat, corn, oats, and soybeans move over the division yearly.

IC moves not only the food produced along its Iowa Division lines but a lot more delivered from its western connections.

CC-6 is far from a unique train on Illinois Central; it's but one of a fleet of 49 similar schedules that reach almost every point of



IC GP7 8976 is ready to depart the South Omaha yard with 16 reefers and stock cars for CC-6, which originates in Council Bluffs. A Rock Island Geep and C&NW Baldwin switcher will also cross the Missouri River with transfers for road trains east out of the Bluffs.



In the beam of CC-6's headlight, shining through a light mist just before 2 a.m. on October 12, 1957, a green signal shows that the way is clear out of the yard at Fort Dodge.

Three photos, William D. Middleton



Crushed ice is added to a carload of meat at Waterloo, headquarters of the Iowa Division. Here, CC-6 sets out cars of livestock for packing plants and picks up loaded reefers.

consequence on the 6,500-mile system. The Iowa Division alone operates 13 dispatch freights. Similar to CC-6 are SCF-6 and SFC-6, which move eastbound meat and livestock from plants at Sioux City and Sioux Falls. AC-2 is the "Apple Train," originating at Albert Lea, Minn., where it picks up fruit and other freight from the Northwest off a Minneapolis & St. Louis connection. CC-4 is another Council Bluffs–Chicago schedule, specializing in the movement of California fruits and vegetables delivered by the UP. Waybills of their westbound counterparts list such items as eastern manufactured goods, Florida citrus fruits, and Central American bananas, which IC moves to Chicago on expedited schedules from New Orleans.

Fast freight is second nature to the Iowa Division.

### 50 MINUTES AT FT. DODGE

*Green home signal ahead!* CC-6 was an hour and a quarter out of Council Bluffs and bearing down on the North Western crossing at Dow City. The steady pounding of 48 diesel cylinders dropped to an idle as engineer Kullman shut off just before the units hit the diamond, then they resumed their even beat.

The headlight beam picked out the gaunt form of an abandoned concrete coaling tower at Denison. The Iowa Division was IC's first to go all-diesel (in 1955), but steam's mark is not yet gone from it.

*Red order board!* The fireman scooped up a clearance form from the waiting operator as we hit Cherokee District trackage at Tara, where the Sioux City/Sioux Falls line comes in. It was 12:52 a.m. and we'd picked up 20 minutes over CC-6's scheduled running time on the Omaha District.

We were in block-signal territory now, and a procession of green lights led us through 6 miles of sweeping curves as CC-6 dropped downgrade into the Des Moines River valley. Engineer Kullman's night's work was all but wrapped up as he took his train across the river bridge, past the big Hormel packing plant, and into Fort Dodge Yard at 1:05 a.m.

Westbound Waterloo–Council Bluffs dispatch freight WC-3, train 71 on the time-card, was holding the main line, and CC-6 went into a yard track. The low-pitched chant of the diesels bounced back at us as we slipped between two strings of cars.

Kullman brought his three units to a halt opposite the depot for the change in crews. The new head-end crew brought out a lead to test the diesel's automatic train stop equipment. Then Waterloo District engineer Louis Kruse took the train through the yard to clear the main for WC-3's departure, and cut the locomotives away to let the yard switcher work the train's head end.

Just 50 minutes after it had come to a halt, CC-6 was off and running again. During that time IC had managed to change crews, test its ATS equipment, switch out 7 cars, add



9, inspect 88, and test the air.

Eastbounds out of Fort Dodge face a stiff 2½-mile grade out of the Des Moines River valley. Engineer Kruse had 4,384 tons of train and 500 feet of 1.4 percent maximum grade working against him — and a night mist to make the rails slippery. With the diesels at full throttle and the sanders working, the Geeps cut the hill down to size.

Not too many years before, 2-10-2s were taking the tonnage up this hill, and no doubt it was a satisfying sight and sound. But the purposeful roar of three wide-open GP9s piling into the grade with close to 100 cars of fast freight behind them was an event of nearly equal drama.

The 100-mile run from Fort Dodge to Waterloo is the Iowa Division's fastest piece of track. The district is equipped with automatic train stop and has a 60-mph limit for freight trains. Elsewhere on the division, with the exception of high-speed track shared with the Burlington, the limit is 50 mph. The Waterloo District's only passenger train, the overnight *Hawkeye*, is limited to 79 mph in ATS territory, but on Illinois Central's only other ATS installation, a 125-mile stretch between Centralia and Champaign, Ill., passenger trains are allowed a cool 100 per. With automatic train stop there are no wayside signals, except at interlocking plants and at ends of sidings. ATS's cab signals give the engineer a continuous picture of track conditions ahead with a green "clear" indication or a red signal that limits him to 15 mph. He has just 6 seconds to acknowledge a restrictive indication before brakes are automatically applied.

## NIGHT RIDE ACROSS IOWA

*Green over red ahead at Gypsum!* As CC-6 hammered over the Fort Dodge, Des Moines & Southern crossing, I noted the absence of a trolley wire over the erstwhile interurban. All-diesel and freight-only since 1955, the



CC-6's engineer picks up orders from the operator at Portage, Ill., on the 13 miles of line along the Mississippi River IC shares with CB&Q and Chicago Great Western.





**Approaching Dubuque, reefers full of meat from Waterloo stand out in the morning sun during CC-6's brief stop before crossing the Milwaukee Road, whose track along the west bank of the Mississippi is at left. It was the only stop between Waterloo and Freeport.**

Two photos, William D. Middleton

"Fort Dodge-Des Moines Line" is still an important short line.

Gypsum Tower, 3 miles east of Fort Dodge, draws its name from one of the area's leading industries. Local plants manufacture plaster, wallboard, roof decks, and dozens of other building products from the versatile white mineral. Clay products are important to Fort Dodge, too, and the city ranks as the world's largest single producing center of gypsum and clay products.

Webster City was half an hour out of Fort Dodge. There was a clear board at the North Western crossing, and just north of the tower a green-and-yellow diesel waited with a southbound freight. Webster City is in another valley, this one the Boone River's, and the eastbound grade out of the valley dropped our speed to a steady 30 mph.

Meat traffic from Sioux Falls moves to Cherokee on dispatch freight SFC-6, No. 776 on the division timecard. At Cherokee the Sioux Falls meat train is combined with a similar Sioux City-Fort Dodge schedule, dispatch freight SCF-6, No. 676 on the timecard. From Fort Dodge to Chicago the meat traffic from both of these trains moves on CC-6's schedule, as train 76. Because of CC-6's late start from Council Bluffs, the Sioux City/Sioux Falls traffic had arrived at Fort Dodge well ahead of us and was already on

its way east as First 76. Our Council Bluffs section of CC-6 would run the rest of the way to Chicago as Second 76.

The Iowa Division has just two stretches of double track, and when we hit the beginning of one of them — at a place called Susie — it meant we were just 2½ miles from Waterloo, the location of the division's largest yard and a centrally located headquarters for Division Superintendent J. W. Dodge. The double track, which eases congestion outside the yard limits, extends some 4½ miles east of Waterloo to Hilltop.

Once again, at West Tower, CC-6 crossed the rails of a onetime interurban, the Waterloo, Cedar Falls & Northern. Although the "Cedar Valley Road" is diesel-operated now, the trolley wire is still up. It is required for trips to and from the yard by the line's Waterloo-Cedar Falls trolley, Iowa's last passenger electric line. WCF&N has been known as the Waterloo Railroad since the IC and Rock Island teamed up to buy it in 1956. WCF&N's strategic industrial belt line at Waterloo was the big attraction for the steam-road buyers.

There was a lot of work to be done on CC-6 at Waterloo, but it wouldn't take long — less than an hour. Illinois Central puts its fast freights together with speed in mind, both over the road and in the yard.

Waterloo is an icing point for perishables,

and its big icing dock can accommodate a string of 60 cars. If necessary another 60 can be doubled over to the other side of the platform. This time we had just a single car of meat that required an application of chipped ice. When the occasion demands, though, the crew can ice up to 70 cars an hour.

It was 4:25 a.m. as engineer Kruse braked his train to a stop alongside the icing platform, waited for the head brakeman to cut off the three units, then headed for the roundhouse.

While the icing crew started to ice down the carload of meat, the yard crew went to work on the switch list. Waterloo is one of Iowa's leading packing centers, and a good many of the 49 cars blocked for setout there were livestock for the packing plants. Almost all of the 52 cars added to CC-6 were colorful Rath meat refrigerator cars, owned by the city's biggest packer. Depending on their ultimate destination, they were placed at the head or rear of the train.

A GP7 and two GP9s locked couplers with 81 cars of fast freight. Fresh power and a new crew were taking CC-6 over the 160-mile Dubuque District to Freeport, Ill. Couplings banged in a chain reaction as engineer Jerry Colgin took out the slack. He eased his train to a stop at Rath Tower; then the home signal flashed to green and CC-6 crossed the east





side of the Waterloo Railroad's belt line around the city. It was 5:28 a.m. and the first dim light of the dawn was showing ahead.

Our meet with westbound train 11, the *Hawkeye*, was overdue. The overnight coach-and-Pullman train had been reported close to an hour late, and we would probably meet her at Wise or Independence. Sure enough, a yellow block was ahead as we approached Wise siding, then a waggling headlight made its appearance. No. 11 had already taken siding, and two brown-and-orange E units were slowly moving their heavyweight train through the long siding as we pounded by.

### NEARLY NONSTOP

For mile after mile of sweeping curves, engineer Colgin worked the air-brake valve as he dropped his 4,620-ton consist down-grade through the hills approaching Dubuque and the Mississippi River valley. CC-6 plunged through a final cut and emerged on a track above the riverbank, parallel to the Milwaukee Road's north-south line which follows the west bank of the river from Muscatine, Iowa, to Hastings, Minn. Colgin brought his train to the brief halt required at the Milwaukee crossing, then headed through Dubuque Yard. It was the only time CC-6's wheels stopped rolling during the 160-mile run to Freeport. Dubuque is yet another important meatpacking center on the Iowa Division, but the traffic moves on other trains.



**Freeport District engineer Don Schlegel is at the controls of GP9 9109 on CC-6 east of Freeport. Late to dieselize its freights, IC bought nearly 400 Geeps but no F units.**



**At Freeport, Ill., train 1-76, carrying meat traffic from Sioux City and Sioux Falls, departs for Chicago while 2-76 — the operating designation for CC-6 — waits to follow.**  
Three photos, William D. Middleton

CC-3, a Chicago–Council Bluffs merchandise run, was waiting in the yard for us to clear the single-track line. Its three Geeps already had their train rolling as we passed.

Our trio of Geeps plunged through a silvery lattice of structural steel as CC-6 bridged the Mississippi. The Dubuque bridge, owned by Illinois Central, is shared with Chicago Great Western mainline trains as well as with Burlington switch runs. The structure ends abruptly with a right-angle crossing of the Burlington's Twin Cities–Chicago line and a sharply curving tunnel that carries the rails through a vertical riverbank cliff. For 13 miles, between East Cabin and Portage, IC becomes a double-track, high-speed railroad, shared with Burlington and CGW trains. Freights are allowed 60 mph over the line, and we were crowding the limit as CC-6 headed southward along the river.

Chicago Great Western is noted for its long freight trains and its prodigious application of diesel motive power. A good example was provided by Chicago–Oelwein manifest freight 91, which came hustling along near Portage behind six F units, trailing close to 200 cars.

*Form 19 orders at Portage!* Engineer Colgin leaned out and snared a clearance form, a wait order on westbound local freight train 61, and a wad of messages from the operator.

Burlington rails continue south along the river another 13 miles beyond Portage to Savanna before turning away from the river toward Chicago, and the Great Western follows the Burlington just one more mile from Portage before leaving the valley on its own track at Galena Junction. But CC-6 took a sharp left turn at Portage on IC's single track up the Galena River valley for the long, hard pull out of the Mississippi valley. The

summit at Warren was some 30 miles and a good hour's running away.

In the 1840s Galena was a thriving river town and the center of a prosperous lead mining industry. It was the goal of Chicago's earliest westward railroad construction. The pioneer railroad, the Galena & Chicago Union, later became a part of the Chicago & North Western, but it never did reach its original goal. Today Galena is just another station on the IC and the end of a Burlington branch line. It was hard to imagine Galena's onetime importance as CC-6 slammed through the pleasant little city, shattering the early morning tranquility.

The speed recorder needle dropped to 40 mph, then to 20 as the diesels began to feel the 7 miles of 0.8 percent grade from Bowden to Scales Mounds. At Scales Mounds a track gang was at work lengthening a siding, a reminder that dieselization is more than just a new look in motive power. Diesels have meant fewer but faster and longer trains. All along the Iowa Division IC has been pulling out no-longer-needed sidings and lengthening the remainder to an average of 150 cars to accommodate diesel-length trains.

Waddams Grove was passed at 9:20 a.m., and the subject of our wait order — local freight 61 — was safely in the clear for us.

*Hot box!* Just east of Lena, sharp-eyed engineer Colgin caught a telltale trail of smoke halfway back in the train. Freeport was just a few miles away, so the crew could set out the offending car in the yard there.

## FINAL DASH TO CHICAGO

Ever since Fort Dodge we'd been picking up time on the Sioux Falls/Sioux City meat train, running ahead of us as First 76. It was still in Wallace Yard at Freeport when Colgin

brought his train to a halt on the westbound main, but soon it was under way again behind a trio of GP9s.

There was no switching to be done on CC-6 at Wallace, only a change to fresh motive power and a new crew. A Freeport District crew backed on with three more of the ubiquitous GP9s, then pulled out the boxcar with the hot box, its dry journal squealing in protest. Engineer Don Schlegel put his train back together and made ready for the last, fast lap on the Meat Train's run for Chicago. Eastbound train 14, the daytime streamliner *Land O' Corn*, was past due when CC-6 was ready to roll. Almost half an hour late, the *Corn* came in behind a pair of E units, made a brief station stop downtown, and raced off for Chicago. The block cleared, Schlegel wound up his three V-16s, and CC-6 was rolling again. It was 10:20 a.m. and he had a comfortable 3 hours 10 minutes to cover the 102 miles that separated CC-6 from its 1:30 appointment at Broadview.

CC-6 had no scheduled stops, and the three Geeps were putting the miles behind them at a steady 50-mph pace that would have us into Broadview well ahead of time. Then, east of Rockford, the steady procession of green block signals changed to yellow and finally, at Charter Grove, to red. First 76 was having trouble. Traveling Engineer D. D. Fulfer was at our throttle, and he eased his 80-car train past the red block and brought it to a halt several hundred yards behind the stalled train.

First 76 was having engine trouble and the crew was setting the malfunctioning GP9 out on a siding. By the time the train was out of the way and CC-6 was moving again it was 12:10. With First 76 ahead of us short of power and Broadview still 43 miles away, our extra time margin was gone.

But the two remaining units were making a remarkably good showing with First 76, and Fulfer was soon following a steady series of green signals. At 12:45 CC-6 bridged the Fox River and began to cross and recross the railroad web that surrounds Chicago. Grade crossings and new suburban tract housing became more and more frequent as the Geeps throbbed along on the last few miles into Broadview.

Thirty cars back, the head brakeman pulled the pin. Engineer Schlegel moved ahead, then shoved the block of yellow reefers into the Broadview interchange track. It was just 1:30 p.m. and CC-6 had chalked up another "IHB connection made" for the record. An Indiana Harbor Belt EMD switcher and a transfer caboose were waiting to hustle the meat to its connections.

First 76 had already made its delivery and was waiting in the yard. It was scheduled to tie up at Hawthorne Yard, in west suburban Cicero, so the crew had 8 cars for Congress Street to trade for our 11 Hawthorne cars. We picked up 2 more Congress Street cars





**The Meat Train crosses the Chicago Drainage Canal at Bridgeport, just a few miles from the end of its run at Congress Street Yard.**

from a local freight and were under way again by 2:10 p.m.

CC-6 threaded its way through Chicago's industrial West Side; paused at the 21st Street crossing while three Tuscan red E units pounded across the diamonds with a 13-car Pennsy flyer, minutes away from its Union Station destination; and finally emerged on IC's lakefront trackage opposite Soldier Field.

It was just a quarter after 3 when Schlegel dropped his train at Congress Street. For some of the meat cars, the journey would resume a few hours later when dispatch freights SE-1 and MS-1 headed out on their overnight trips to Birmingham and Memphis. But for CC-6 another run was over. Council Bluffs was 511 miles and 17 hours 20 minutes behind it. Don Schlegel ran his three GP9s around the train and headed for the 27th Street roundhouse. 📷

*WILLIAM D. MIDDLETON had more than 80 articles, and hundreds of photo credits, in TRAINS, beginning in the late 1940s. He also wrote or coauthored 23 railroad books. A civil engineer by profession, he served 30 years in the U.S. Navy. Middleton died in 2011.*



**GP9 9109 creeps into CC-6's destination, Congress Street Yard, Chicago. The new Prudential Building rises above the IC tracks; Lake Michigan is a quarter mile to the right.**



# CENTRAL STATES

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WESTERN MARYLAND engine 1401, a sister to the 4-8-4 that powered the second leg of author Abbey's *Central States Dispatch*, heads up a hotshot at Cumberland Narrows, Md., in 1952.  
Bob Milner



# DISPATCH

Get aboard — it's time to go. This isn't a "hurry up and wait" freight route; you'll cover some 630 miles in 33 hours, thanks to sharp handling on seven railroads

BY WALLACE W. ABBEY

“**T**his is Cumberland, sir.” The porter takes your suitcase to the vestibule, and you look out of the window on a city virtually imprisoned in the breathtaking Maryland Alleghenies. Naturally, since you're about to get off, the rainstorm that has chased you all the way from Pittsburgh is waiting gleefully to dampen your gabardines.

Cumberland is as far as you're going on the Baltimore & Ohio's *Shenandoah*, although your ultimate destination is Boston. From here, you are going to ride a freight train over a route that the average passenger wouldn't — and in some cases couldn't — consider. But it is, as any B&O freight agent will be glad to tell you, a route highly regarded by shippers whose cars move into New England from the central Midwest. You're going to ride the *Central States Dispatch*, a seven-railroad freight train that will leave Cumberland at 8:30 tonight.

Service over the *Central States Dispatch* route dates to September 1, 1892, when 11 roads combined to give shippers a service that extended beyond their individual limits, and to put themselves collectively in a better competitive position with larger, more direct railroads. Through the years, the CSD route has come to comprise parts of the B&O, Western Maryland, Reading, Jersey Central, Lehigh & Hudson River, and New Haven.

The Pennsylvania enters the CSD picture, too, inasmuch as the L&HR uses part of the Pennsy's Belvidere Branch as a link between its own line and the Jersey Central. And you won't use it this trip, but the Delaware & Hudson and the Boston & Maine afford an alternate CSD routing into New England.

At first, the CSD route had its own general manager, freight solicitors, and audit bureau. Each road that formed part of the route supplied a share of the rolling stock and painted it with a distinctive CSD emblem. CSD solicitors and auditors were discontinued years ago, and now the B&O and the other roads handle the tub-thumping in their regular freight agencies. The special cars are gone, too, and today a CSD freight enjoys little visual distinction from any other,

except that it might have a “foreign” road's engine on it.

Part of the success of the CSD service, as you will see, lies in the fact that in certain instances train crews don't climb off their charges at the end of their particular company's property, but deliver them to a more logical and convenient interchange point. In a couple of cases that point is considerably beyond their bailiwick.

It all adds up to this: The *Central States Dispatch* will put you into Boston on the second morning after the B&O starts you out of Cumberland, where, now that you are safely inside the depot, that rainstorm has stopped.

## BALTIMORE & OHIO

You might say that the *Central States Dispatch* route begins in Evitts Creek Yard, the eastbound yard at Cumberland, and you would be correct. But in a larger sense, the CSD route has a much more nebulous origin, and Cumberland is merely the point where blocks of cars collected from anywhere on or beyond the fingers of the B&O — fingers that stretch out across Ohio, Indiana, and Illinois — are classified over the hump into solid trains.

You inspect the Cumberland roundhouse, which dispatches the B&O's mammoth class EM-1 2-8-8-4s. The big engines now work east out of Cumberland, since diesels have bumped them off the big grades over toward Cincinnati. You eat dinner — your last hearty meal for quite a while — in an obscure but eminently satisfactory home-cookery tucked away on a side street, and you go back to the yard and watch through the blue-green glass windows of the control tower as cars of eastbound coal roll off the hump and into Evitts Creek's 16 tracks.

Now you and Ed Cavey, the B&O trainmaster, and I. B. Chambers, a like official of the Western Maryland, stand on the back porch of the CSD's caboose, watching the yard and listening to it and waiting for the highball that will start you on a 33-hour, 632-mile train ride. The day is waning, and although the yard is quiet under the





BALTIMORE & OHIO assigned an EM-1 2-8-8-4 for its portion of the CSD, Cumberland, Md., to Cherry Run, W.Va., but the engine stayed on as far as Hagerstown. EM-1 No. 675 (ex-7625) moves out after a stop for coal at Warwick, Ohio, in May 1957.

R. R. Malinoski, Frank and Todd Novak collection



floodlights, you can hear the gentle urging of a switcher as it works someplace over beyond the hump. It sounds very far away.

You are riding what is officially First CSD-96 out of Cumberland, behind engine 7620, one of the big EM-1s. Your crew was called for 7:30 p.m.; your leaving time is 8:30. But there's one thing that you're going to have to get used to on this trip, and that's barreling across country apparently ahead of schedule. In most cases, symbol freight trains run extra on the roads you'll be on, and there's no reason why, if they can pick up some time here and there, they shouldn't run ahead of the schedule that's circulated to shippers and freight agents.

So now, quietly and with no slack action, you are moving. You roll past the tower and out onto the main line at 8:19 p.m. — already 11 minutes ahead of time.

You hang onto a couple of handrails and watch Cumberland become myriad twinkling lights sprinkled on the darkening hills behind you. Your engineer is soon taking advantage of the 50-mph "fast freight" speed limit, whenever the meanderings of the right of way, which follows the Potomac River, will allow it.

The B&O's share of the CSD route is the 64 miles between Cumberland and Miller Tower at Cherry Run, W.Va. In that 64 miles are some of the quaintest station names and local designations for cuts and curves to be found in American railroading. It appears that generations of picturesque mountain folk and railroaders who were adept with colloquialisms named practically everything that might need a name. There are stations named Green Spring, Okonoko, Little Cacapon, Paw Paw, Magnolia, Green Ridge, Doe Gully, Great Cacapon, and Sleepy Creek. And there are Steers Run, Upper Turkey Foot Curve, Turkey Foot Curve, Round Top Curve, and Grasshopper Hollow Curve.

You stay on the platform until the acrid smoke inside a tunnel forces you into the caboose, which is a veteran and shows it. You sit at the scarred desk, and the conductor turns up the kerosene lamp and slips the string off the package of waybills. This, in a hip-pocket-size package, is the story of First CSD-96.

The bills show that your train contains principally high-grade merchandise and perishables. You see that most of the cars are going to be with you for the major portion of your trip. You have 5 cars destined for the Jersey Central at Allentown, Pa., and 65 for Maybrook, N.Y., where the New Haven takes over and distributes them throughout New England.

Now you're at Miller Tower, near Cherry Run, and you roll across the Potomac for the last time and onto the Western Maryland. Here is the first of those instances where a crew takes its train "out of bounds." The B&O crew, engine, and caboose go right on into Hagerstown, Md., 19 miles up the Western Maryland.

The operator at Miller hands up a sheaf of train orders and a message addressed to "C&E Extra B&O 7620 East," which states simply, "No helper." Trainmaster Chambers explains that your train will not require the services of 2-10-0 No. 1211, waiting nearby, for the 1.8-percent climb from Williamsport to the yard at Hagerstown. You consult your watch — 9:34 p.m. Not bad! You're not due by Cherry Run until 10 o'clock!

## WESTERN MARYLAND

The run into Hagerstown is short and, considering Williamsport Hill, rapid. It's only 10:14 when the flagman cuts off your caboose on the fly as the train heads into the yard. Even though you're not due to leave for more than an hour, the yard diesel, a big Baldwin road-switcher, attacks your train as if it were considerably behind time. The yard crew couples on a spotless WM caboose, and you climb aboard to find coffee brewing on the stove.

It's 10:50 p.m. when you begin to roll. You're now running as Western Maryland No. 96, behind engine 1402, a 4-8-4, headed for Lurgan, Pa., and Rutherford, the Reading's terminal on the eastern outskirts of Harrisburg. You're 35 minutes ahead of time, but Chambers is muttering about 15 minutes' delay while the yard force pulled out a bad-order car.



Young R. R. Cullison, the conductor, motions you up onto the cushions across the cupola from him. You slide back the window and let the clean night air blow on your face. You're speeding northeastward across Pennsylvania now, through country that lies comparatively flat between distant mountain ridges. It's double track most of the way. Several red-and-white telegraph offices swim past your caboose, their lights and the wave of the operators momentarily brightening the dark landscape.

Then you're in Chambersburg, crawling the length of a quiet city street. The rolling cadence of the wheels is multiplied and thrown back at you by the dark, quiet buildings. You think of the people who have long since learned to sleep through that racket.

## READING COMPANY

Just as the transfer of your train from the B&O to the Western Maryland at Cherry Run was as brief as it could be, so the transfer from the WM to the Reading at Lurgan is merely a matter of streaking past a telegraph office. You see the operator seated at his interlocker, and you can imagine that he'll call the dispatcher now and report you by at — let's see — 11:57 p.m.

The lullaby of the rolling caboose is slowly putting you to sleep. There's none of the *whang-bang* slack action that you've encountered on more hilly railroads, but rather there is just a gentle sway of the cupola and the incessant chant of the wheels. Without realizing it, you doze off. Something — perhaps a change of pace of your train — registers on your subconscious, and you awake and look out of the window on the yard at Rutherford. What happened to Harrisburg? Must have slept right through one of the biggest cities on the run!

For the second time, your *Central States Dispatch* undergoes the ritual of changing engines and cabooses. This time you get a set of Reading diesels, and you leave steam behind for the rest of the trip. In fact, about the last steam engine you'll see is the switcher that boosts you out of the yard a scant 30 minutes after it swipes the Western Maryland caboose, which is replaced by a Reading hack. You leave Rutherford as Reading train HO-6.

This, the third leg of your junket, is a fairly long one: 84 miles from Rutherford to Allentown, the next terminal. On the way you scoot through such Pennsylvania communities as Hershey, Lebanon, and Reading itself, the nerve center of your present host. In the purest sense of the term, yours is a through train — no stops until Allentown.

The next thing you know, you're plugging along past an impressive shop and through a considerable amount of trackage. Assistant Trainmaster L. A. Fisher, who is holding down the other side of the cupola, sees you stir, and explains, "This is Reading. We're starting up Temple Hill." You nod in reply, slip back into sleep, and then you hear a rooster sounding off. Train HO-6 is standing still, stretched across the Lehigh River, waiting for a track in the Jersey Central yard at East Allentown. That, you think, was a mighty short 84 miles!

## LEHIGH & HUDSON RIVER

Fisher turns you over to Superintendent Paul W. Early of the Lehigh & Hudson River while a yard engine gives the train its first reshuffling. Early, undoubtedly the veteran of countless all-night freight-train rides, thoughtfully produces a sweet roll and a cup of coffee for you from a paper bag.

The L&HR's caboose is the homiest of the hacks that you've been in yet. But you accept Early's invitation to see his railroad from the engine, so you stow your suitcase in the caboose and the two of you walk up through the yard. At the head end you find a pair of road-switchers — two-elevenths of the L&HR's locomotive fleet, Early tells you. He adds that his line is dieselized with Alco-GE road-switchers, and that two more are on order.

He points out the old Lehigh Canal, which the yard parallels, and he takes you up along the lead track and shows you where the Jersey Central plans to enlarge its terminal. The bray of an air horn signals the fact that your train is ready to go. You swing aboard as the train begins to move, and you settle in the cab of the second diesel.



Your guide outlines the way the *Central States Dispatch* — now L&HR train HO-6 — is routed out of Allentown. It travels over the Jersey Central to Easton, Pa.; crosses the Delaware River to Phillipsburg, N.J.; and follows the river on the Belvidere Branch of the Pennsylvania to Belvidere. There it starts over the L&HR itself.

You're still ahead of schedule — 40 minutes ahead, in fact — as you snake out of the East Allentown yard onto the three-track main line at 5:55 a.m. You finally get a look at some of Industrial Pennsylvania in the daytime. The track follows the north bank of the Lehigh River to Easton, and you get a good view of the immense Bethlehem Steel works across the river at Bethlehem. But the *Central States Dispatch* disdains to handle much of the freight born of this industry. You've still got those Maybrook cars, plus enough coal picked up at East Allentown to give you 79 cars and 4,500 tons.

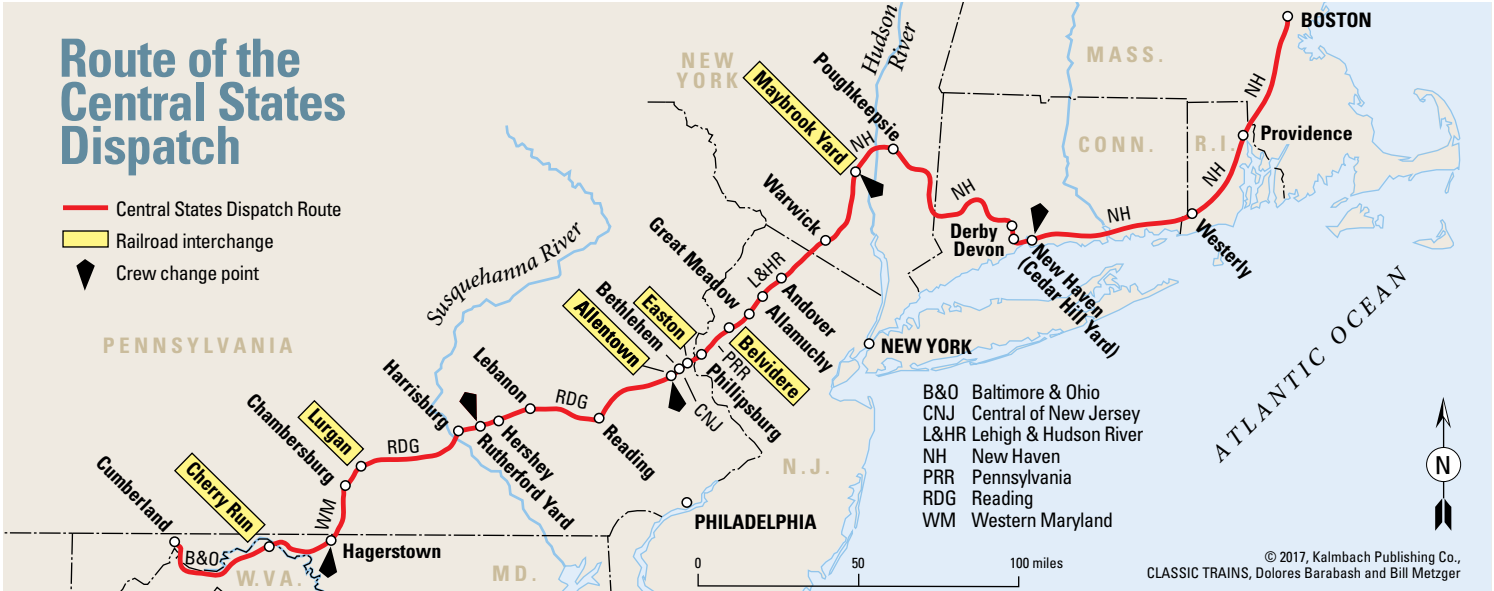
On the Pennsy, the scenery changes abruptly. You're out in the country again, and the Delaware River banks are beautiful. Early speaks close to your ear so he can be heard over the sound of the diesels — you're at Belvidere and on the L&HR. Right away you see one difference — the L&HR has color-light automatic block signals, whereas the PRR branch line had manual block operation. The ride is smoother, too.





READING COMPANY whisked the *CSD* from Lurgan to Allentown, swapping a WM 4-8-4 for its own diesels at Rutherford Yard. Here, an F7 and FB1 are near Bridgeport, Pa., around 1960.

Jim McClellan





It doesn't take you long to decide that the L&HR is a handsome little railroad. It's well ballasted and well maintained, and it moves you right along. You climb steadily for the 10 miles to Great Meadows, and then the grade tapers off and you're ambling through rural vistas and farming communities that give no indication of their proximity to the teeming cities of the Eastern Seaboard.

The 72 miles of the L&HR slip rapidly behind you. You meet a ballast train at Allamuchy, pick up new running orders at Andover, and wave at everybody as you pass the general office at Warwick, just over the line into New York. The grades, mostly descending now, are steeper, and the hills on the horizon are a little higher. Now you're pulling out of the last sag and coming around the last curve into Maybrook Yard.

Maybrook, N.Y., is obviously much more of a center of railroad activity than a center of population. From the cab you see all track

and no town. You pull into the eastbound receiving yard next to an Erie train that you tentatively identify as New England 98, a hotshot perishable job. Your train is too long for the yard track, so you run up on the hump and double your head cars over onto another track.

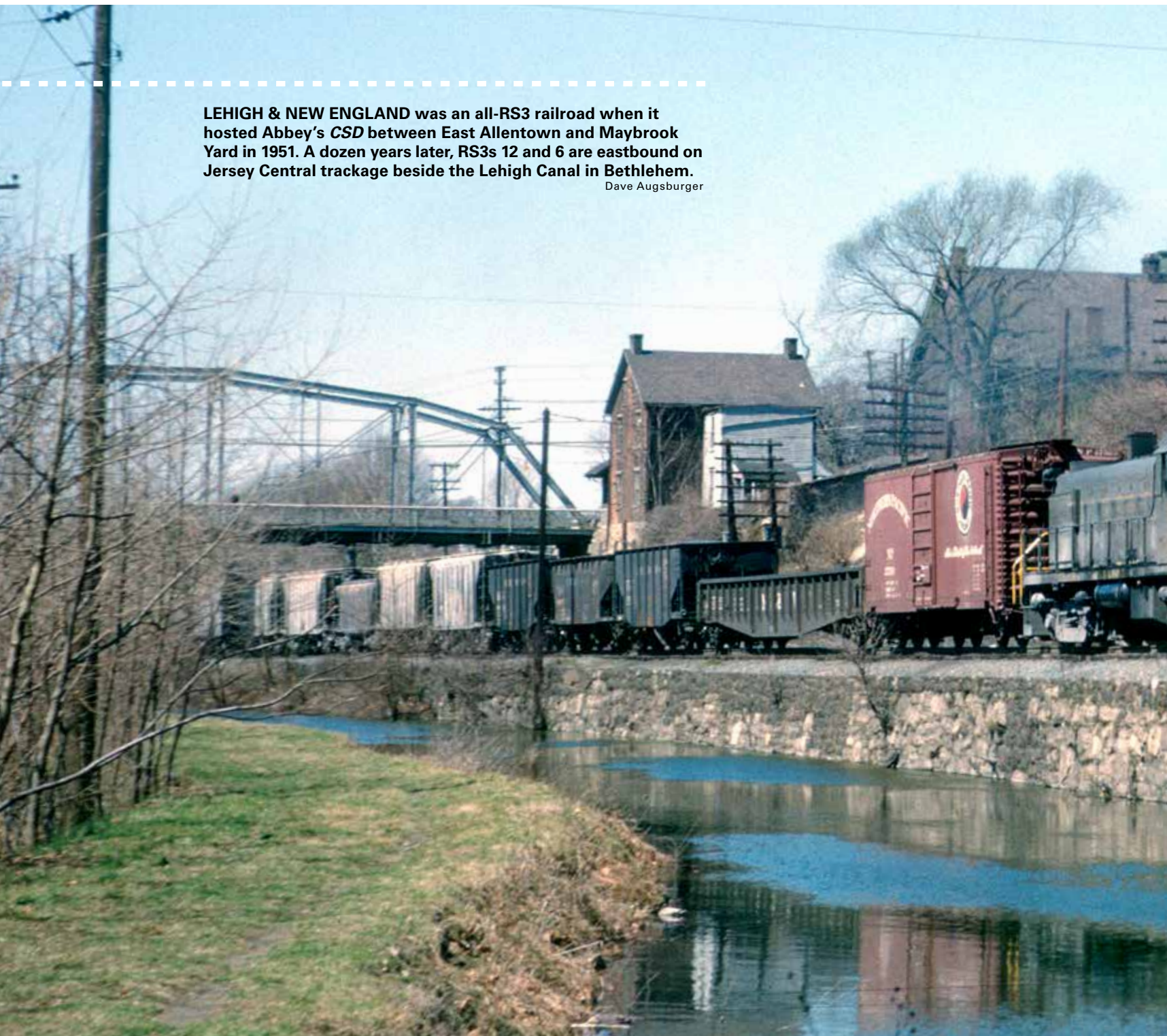
Superintendent Early leaves you in the care of the secretary of the Railroad YMCA, who gives you soap, a towel, and a knowing smile. It dawns on you, presently, that the begrimed, unshaven mug staring at you out of the washroom mirror is yours. You look as if you'd been riding freight trains all night. It feels good to be clean again, and it feels good, too, to lean on a lunchroom counter and dig into a true railroad man's meal.

## NEW HAVEN

The New Haven gives the *Central States Dispatch* a pretty thorough reclassification at Maybrook, for it must pigeonhole its cars according

**LEHIGH & NEW ENGLAND was an all-RS3 railroad when it hosted Abbey's CSD between East Allentown and Maybrook Yard in 1951. A dozen years later, RS3s 12 and 6 are eastbound on Jersey Central trackage beside the Lehigh Canal in Bethlehem.**

Dave Augsburger





to their destinations throughout New England. It must also work into trains the cars brought to Maybrook on the other lines — the Erie; New York, Ontario & Western; and Lehigh & New England. Consequently, the wheel report that the conductor of train OB-4, which is your CSD connection on the New Haven, shows you lists this order of cars: 1 for Providence, 6 for Worcester, Mass., 16 for Boston, 53 for Providence, 1 for Hartford, 1 for Springfield, and 4 more for Hartford. Thus, with a total of 82 cars weighing 4,468 tons and pulled by three Alco-GE diesel units, you leave Maybrook at 5:15 p.m.

There are two places on NH's Maybrook line that stick in your memory: Poughkeepsie Bridge and West Pawling Mountain. The bridge spans the Hudson River in a tremendous leap of some 6,768 feet. You stand on the caboose platform and look down at the Hudson 212 feet below you. The conductor tries to make you feel that Poughkeepsie Bridge means little to him — "People come for miles to

see it and I cross it twice a day," he comments — but you notice that he's out there pointing up and down the river, showing you all there is to see. It's almost as if you were flying over the river — in slow motion, of course, for your train is restricted to about 5 mph.

You remember West Pawling Mountain as you saw it at sunset — the way your train crawled up around the knob; how it slithered around the hairpin curve at the top and crowded through Poughquag Rock Cut; how, far ahead of you, the orange diesel units stood out against the green background; and how they seemed to be pulling another train higher up on the mountain.

"All black!" You are in the cupola now, doing some pretty sincere playing at inspecting the left side of your train as it practically falls down into the Housatonic River bottom toward Derby, Conn. The conductor is making out his reports, and you and the rear brakeman are exchanging signals across the dark cupola. You come out onto the







electrified New York–New Haven main line at Devon, and you recall the warning plate that was bolted to the cab wall of the diesel that brought you down to the caboose at Maybrook — keep away from the wires, it said in effect, unless you think you’d look better broiled.

The train slips unobtrusively through the passenger station at New Haven, and then is engulfed in Cedar Hill Yard. OB-4 dives directly into the middle and halts in the Shore Line departure yard. You find the yard office among the floodlight towers and scurrying diesel switchers, and introduce yourself to the man at the desk. He phones someone and then tells you to wait, that there’ll be a switch engine along shortly to take you down to the caboose for the run from Cedar Hill to Boston.

So you wait. The yard engine shows up, and you hoist yourself onto the deck. You find that OB-4 has been moved, and that its engine is on what had been the rear end when you pulled in. This time you have a pair of the 2,000 h.p. Alco-GE dual-service cab units that started the New Haven toward dieselization before World War II. Your chauffering switcher clumps through the yard adjacent to OB-4 and stops alongside its caboose.

“Well, are you going to stay awake or sleep?” the conductor asks. You cogitate — last night you made a sincere attempt to stay awake and see what was going on. But that was last night, and today has been a long day. Tonight, you decide, you’re just too tired to argue with the sandman.

The conductor gives you a quick summary of your consist — 44 Providence cars and 46 Bostons — and bunches up his coat for a pillow on one of the padded leather cushions. You watch until OB-4

is out of the yard and onto the Shore Line headed for dawn and Boston. You check the time — 12:40 a.m. Then you climb aboard that caboose-cushion cloud and float off to the lullaby of singing wheels.

While you sleep, oblivious to any motion of your conveyance, OB-4 rolls along the remarkable, aptly named Shore Line. If it were daylight, and if you were awake, you would see Long Island Sound lapping at the Connecticut shore almost continuously from Cedar Hill to Westerly. Then you turn inland and cut across Rhode Island to Providence, the state capital and the hub of many NH operations.

You awake momentarily at Providence, after your train has set out its cars for that city and is getting under way again. But the interruption is brief, and then, almost as if a Pullman porter had joggled your berth curtain, something tells you it’s time to get up.

The feeble light of dawn enables you to spot a milepost, and you check it against the thick book that contains operating schedules for the entire New Haven. You’re practically in Boston! The double-track main line splits, and you take the right fork, the freight line that ends in a yard down close to the Commonwealth piers. The conductor comes down out of the loft and offers, when OB-4 is tied up in the yard, to call a taxi for you. And you, being a perfect stranger to Boston, readily accept.

And then you’re at the end of the line. The conductor admonishes you to stay aboard the caboose until it has stopped, and then he, accustomed to boarding and alighting from moving trains, drops off at the yard office. By the time you’ve lugged your suitcase back the dozen carlengths to the office, a yard diesel is busily cutting OB-4 into more easily manageable chunks.





NEW HAVEN handled Abbey's CSD with Alco-GE FA1s (above, posed at Maybrook for a railfan event in 1947) and dual-service DL109s (below, on a passenger train at New Britain, Conn., 1954).

Frank and Todd Novak collection; below, Thomas J. McNamara

## REFLECTIONS ON THE CSD

You crawl into the taxi. The ride, by the way, wins all honors, hands down, as the wildest of your journey. You let the miles of railroad that you've just covered speed across your closed eyelids. Let's see — your *Central States Dispatch* is merely a matter of record now. There's another CSD train eastbound around Allentown someplace, and it'll be about 16 hours before the next one whistles off back in Evitts Creek Yard.

The extra-special recollections of your trip pass in review: the organized confusion of Cedar Hill Yard . . . West Pawling Mountain at sundown . . . Poughkeepsie Bridge and a conductor who wasn't fooling anybody . . . the efficient little Lehigh & Hudson River . . . the brightly lit office at Lurgan, where the Western Maryland gave you to the Reading . . . the dark, long street in Chambersburg . . . the beauty of Evitts Creek Yard under the floodlights, two evenings ago. You decide that the CSD route is not necessarily the best way for a passenger to get from Cumberland to Boston, but that it's mighty fine for through freight shipments.

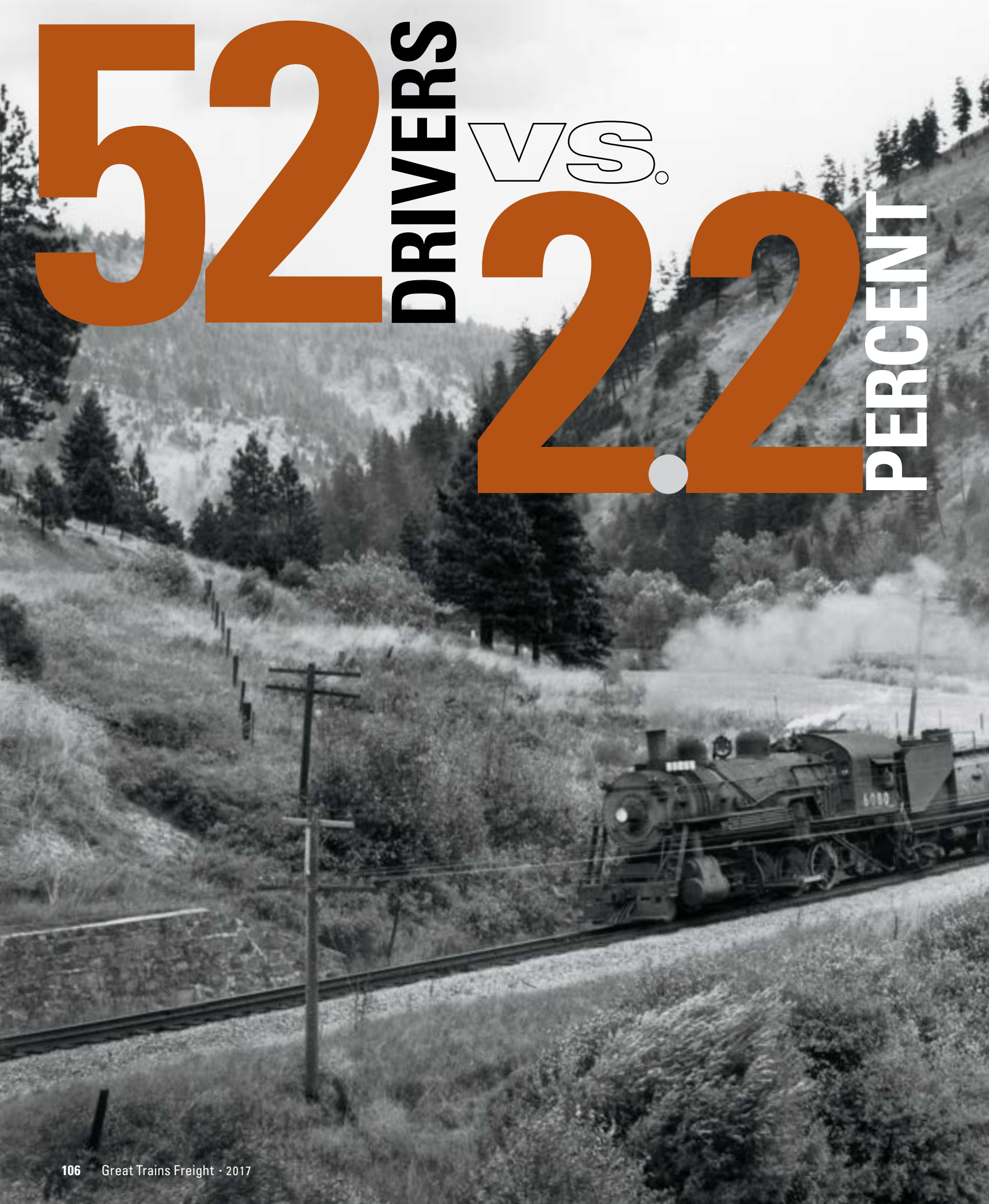
And then you chuckle as you think of the ticket agent at Cumberland and what he must have thought about the screwball desires of some people as he penned an unusual routing on a special form for you. In a way, you shouldn't have had that ticket at all. What you needed was a waybill! 📄

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

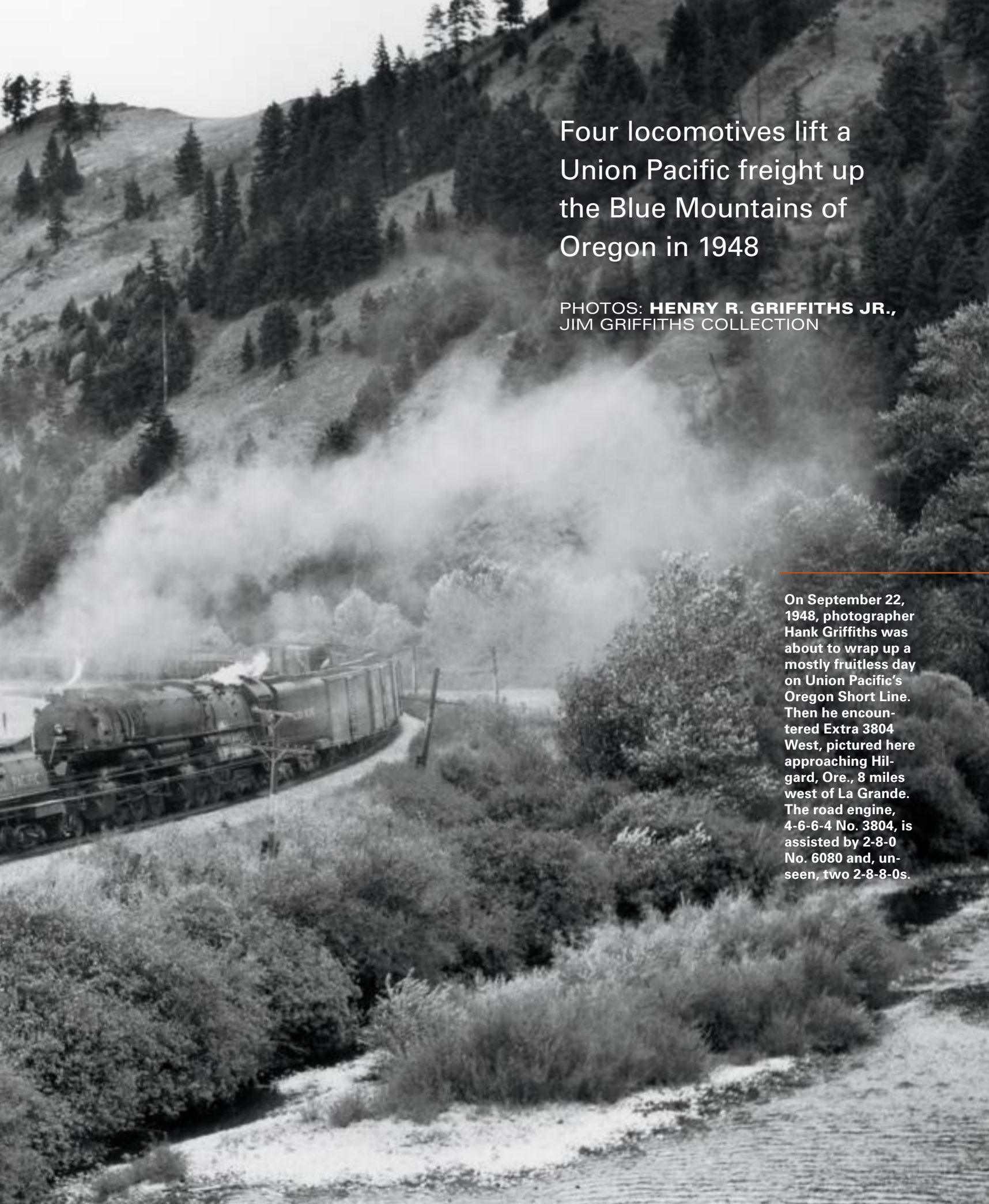




# 52 DRIVERS vs. 22 PERCENT







## Four locomotives lift a Union Pacific freight up the Blue Mountains of Oregon in 1948

PHOTOS: **HENRY R. GRIFFITHS JR.,**  
JIM GRIFFITHS COLLECTION

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On September 22, 1948, photographer Hank Griffiths was about to wrap up a mostly fruitless day on Union Pacific's Oregon Short Line. Then he encountered Extra 3804 West, pictured here approaching Hilgard, Ore., 8 miles west of La Grande. The road engine, 4-6-6-4 No. 3804, is assisted by 2-8-0 No. 6080 and, unseen, two 2-8-8-0s.





On the 2.2 percent grade now, the train is about 14 miles out of La Grande as it nears the west end of Motanic siding, passing up the water tank accessed by the siding.

A few more miles up the hill, Extra 3804 continues west. Head-end helper 6080 was built in 1907 for UP's Los Angeles & Salt Lake; 1936-built 3804 is one of the first Challengers.







Giving it all they've got, 6080 and 3804 are just below Nordeen. Centralized traffic control, installed in 1943-44, helped speed war traffic through this bottleneck.







The train has nearly completed the 18-mile climb to the summit of the Blue Mountains as it enters Kamela. Swing helper 3516 and rear helper 3521 continue to work even though the front of the train is over the top. Here the two 2-8-8-0s and 2-8-0 6080 will be cut out, turned on the wye, and sent back down the hill to La Grande. 📷





# As the RABBIT chases the

Climb aboard a fast freight as it threads its way up one of the Southern Railway's hottest main lines

BY MICHAEL E. IDEN





As seen from the third unit on a train waiting to depart Chattanooga's DeButts Yard in March 1974, an SD45 and two older SD24s arrive from Cincinnati with hotshot 123.

Michael E. Iden

# BEAGLE up the RATHOLE

**"Tunnel Twenty-Three,"** the fireman shouts back over his shoulder as he turns to crank up his cab window. The dark hole looming ahead grows bigger until the nose of the locomotive is swallowed by the Tennessee mountainside. The headlight reveals only a pair of shining rails surrounded by rock.

Big drops of water fall from the tunnel roof and smash on the windshield. Suddenly the engineer's face is illuminated by the eerie blue light of the wheel-slip indicator: wet rails. Instinctively he throttles back and reaches with his right hand for the sander valve — a normal reaction. But he's never before done it in this type of cab, for this is

his first trip on a diesel-electric road locomotive — the FT, from Electro-Motive, demonstrating on the Tennessee mountain rails of the Southern Railway for the first time.

The year is 1940. The line is the Second District of the Cincinnati, New Orleans & Texas Pacific Railway between Danville, Ky., and Oakdale, Tenn. But train crews seldom refer to the district by its official name, for they know it from its choking tunnels, the big 2-8-2s that plod over these Cumberland Mountain grades, and the human endurance required to coax trains between terminals. Out of their experience they have christened this line the "Rathole Division."





**SD45 3134 and two other six-motor EMDs cross the Southern's Ohio River bridge as they depart Cincinnati with piggyback train 129 in July 1975. Just to the right of the bridge in the distance in this view from Ludlow, Ky., is the dome of Cincinnati Union Terminal.**

**T**he CNO&TP extends 338 miles between Gest Street Yard in Cincinnati and Chattanooga, where the south end lies at the front door of a hotel (the famous Chattanooga Choo-Choo in the Southern's former passenger terminal there). For practical purposes the south end of active track is at milepost 334 in DeButts Yard in Chattanooga. Southern has been the parent of CNO&TP since 1895 and has owned all CNO&TP stock since 1970, and the Cincinnati–Chattanooga line is operated, maintained, and equipped as an integral part of the Southern Railway System. Also in 1970, CNO&TP absorbed four wholly owned subsidiaries (Chattanooga Traction Co.; Cincinnati, Burnside & Cumberland River Railway; Harriman & Northeastern Railroad; and New River Railway).

Neither Southern nor CNO&TP actually owns the line, though. The owner of the physical plant — track, bridges, structures, and tunnels — is the Cincinnati Southern Railway, formed by the City of Cincinnati on May 4, 1869, when the Ohio Assembly

passed an Act authorizing the construction of a railroad to Chattanooga. The goal of the measure was to provide the Queen City with its own rail link to the South, enabling Cincinnati to be competitive with neighboring Louisville. Necessary state charters had to be granted, and more than four years passed before the first shovelful of dirt was turned. The first passenger trip between Ludlow, Ky. (on the Ohio River opposite Cincinnati) and Somerset was completed on July 23, 1877, and freight service commenced on August 13. The line entered Chattanooga on December 10, 1879. Through passenger trains operated for the first time on February 21, 1880, and through freights on March 8.

In planning their railroad, the Cincinnati city fathers had selected a 5-foot track gauge. However, excessive time spent in changing trucks at Cincinnati to match the standard-gauge northern connections soon suggested a change. Three years of debate and discussion ensued before the big decision was made to standard-gauge the entire line. On Sunday, May 30, 1886, all schedules were annulled,

and road gangs regauged the entire 338-mile route. Similarly, mechanical forces changed the wheel sets of all rolling stock. The monumental task was completed in 13 hours.

The Cincinnati Southern had 27 tunnels and 105 bridges, including large spans over the Ohio, Kentucky, Cumberland, New, and Tennessee rivers. The Kentucky River crossing north of Danville was especially notable. A 1,241-foot-long suspension bridge was initially planned there, but the CS decided on a cantilever design (the first in the U.S.) instead, and the span was completed in 1877. That structure was replaced in 1911 by a sturdier one, today known as "High Bridge."

In the first year of operation, the CS earned approximately \$2,200 per mile. Profits were used to pay back the CS bondholders and the City of Cincinnati. Everyone connected with the line soon decided that operating a railroad and profiting from it were two different matters. Hence on September 7, 1881, the CS's trustees formed their own company, the Cincinnati, New Orleans & Texas Pacific Railway, and successfully bid for an operating





Upon leaving Ludlow, CNO&TP trains face a stiff climb out of the Ohio River valley known as Erlanger Hill. In July 1977, an SD40-SD24-SD35 consist crosses the first of three big trestles on the hill; the rear of the train is probably still on the Ohio River bridge.

**Farther up the hill at Crescent Springs, two GP7s push against the caboose of a southbound train in March 1972; they'll cut off at Erlanger, just over 2 miles ahead.**

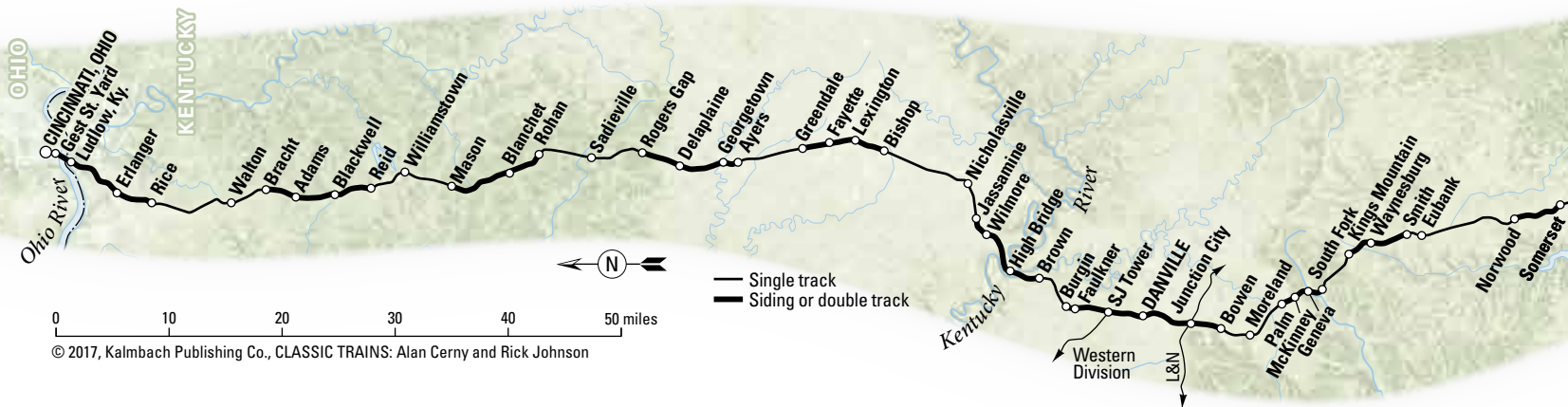
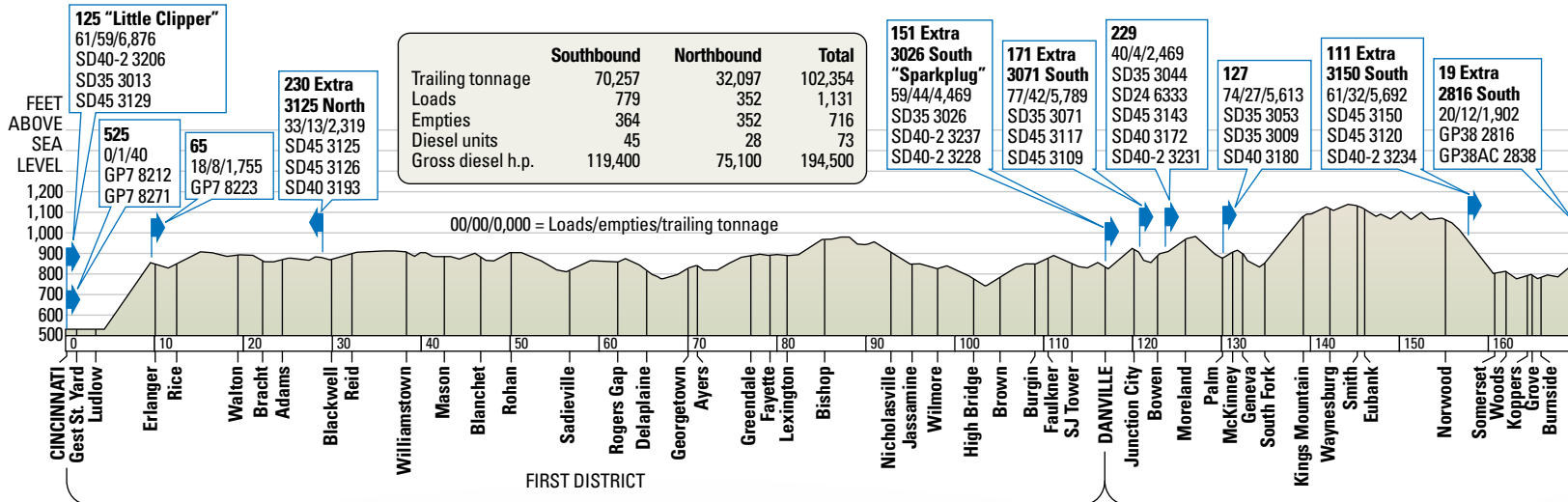
Three photos, David P. Oroszi

lease on the CS. Shortly afterward, though, CNO&TP fell into bankruptcy and was snatched from the brink of disaster by the Southern. On August 3, 1896, the citizens of Cincinnati narrowly rejected a proposal by the city to sell the CS to the CNO&TP (and Southern), so municipal ownership continued.

Subsequently the lease was extended to 1906 and then to 1966; the present one expires in 2026. All revenues from operation of the CS go to Southern. In return, the railroad is required to pay a fixed rental fee annually to Cincinnati, along with a contingent rental based on a percentage of the company's net profit. In 1974, Southern's lease payment to Cincinnati totaled \$4,122,000. Of the annual sum, a large portion is devoted to improvements in the line's physical plant, thus ensuring that Southern constantly upgrades faci-



# As the DS sees the CNO&TP at noon 12:01 P.M., April 17, 1974



**Freight 124 speeds up the Rathole near Huffman, Tenn., in an August 1974 view from the cab of the train's third EMD unit.**

Michael E. Iden

ties to meet future demands. CNO&TP, which represents 3.7 percent of the Southern system's route mileage, earns approximately 10.9 percent of its operating revenues.

Let us return to the Second District of the CNO&TP for a look at the Rathole of the 1970s. We will observe Southern's busiest main line in action from a cab on a northbound freight on a summer Saturday in 1974.

## ALL ABOARD THE BEAGLE

The telephone rings. "Four-thirty." The operator at the Holiday Inn in Harriman, Tenn., wakes you. After you are up and shaving, you hear a familiar rumble. Outside across U.S. 27, three SD40s accelerate southward. They're passing EG Tower, now just a remotely controlled point where double track becomes single.

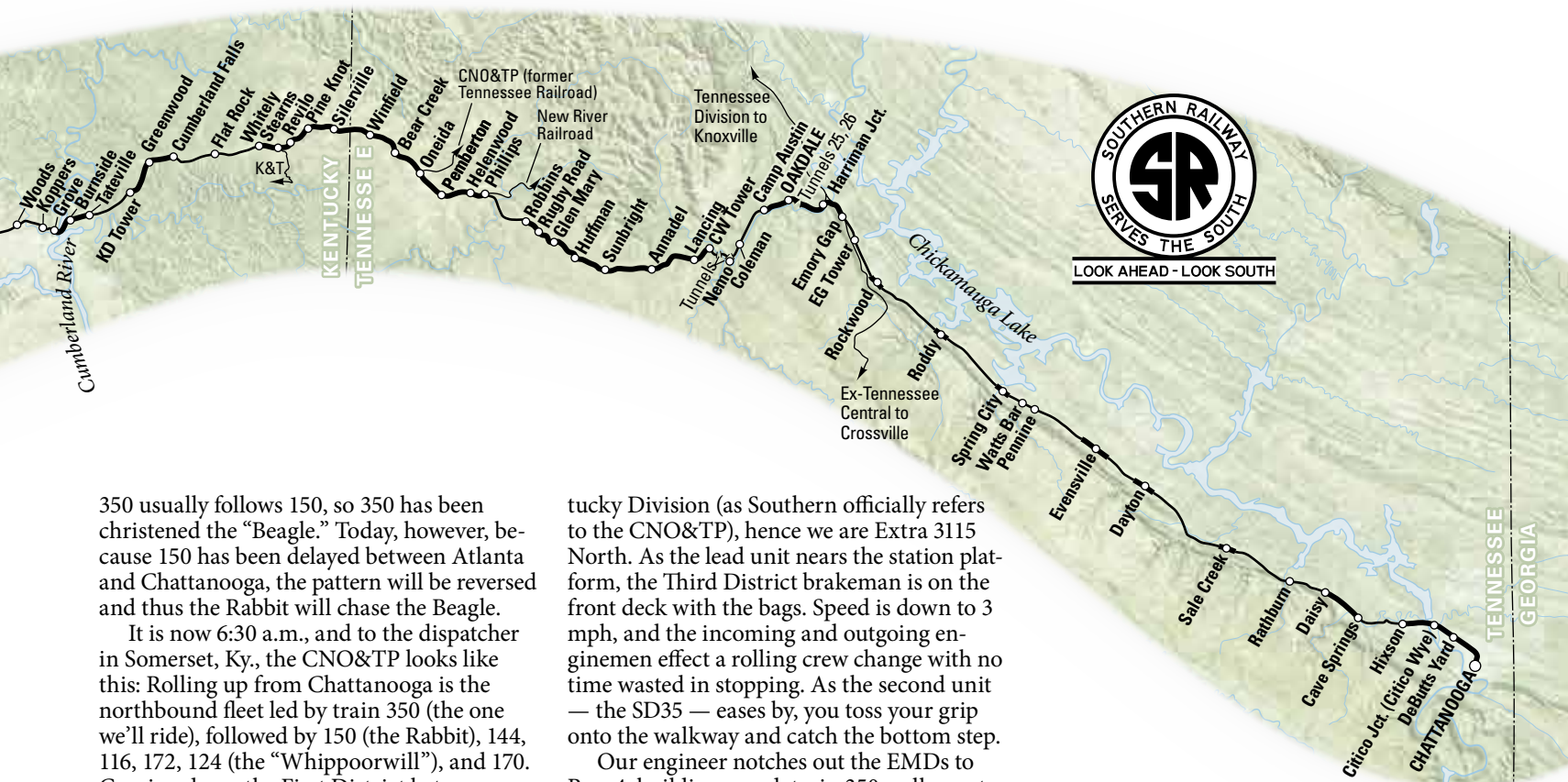
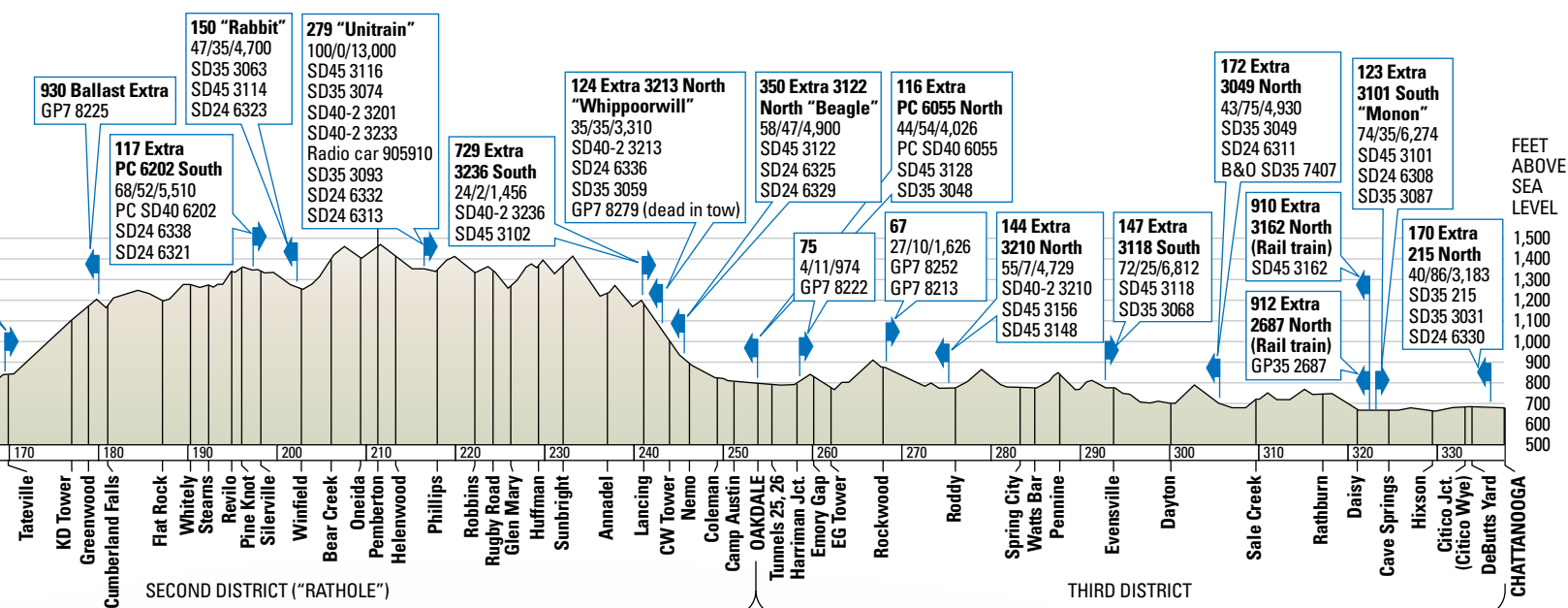
The drive north to Oakdale through the morning mist takes 15 minutes. You walk into the crew office and introduce yourself, and the agent points out the crew for your train on the platform. The two crewmen quickly peruse your pass, then return to their conversation of standard railroad talk. Who's

on which train today? Have you seen so-and-so lately? Shortly the conductor for your train, No. 350, walks up with word that it is passing Rockwood, 14 miles to the south.

This morning 350 is leading the northbound CNO&TP fleet. As a consequence of traffic patterns and interchange schedules, both northbound and southbound trains run over the line in daylight hours in fleets. Traffic out of Cincinnati is mainly from Penn Central and Chessie System; northbound traffic comes from other Southern divisions and the Louisville & Nashville. Many CNO&TP trains operate through to and from Atlanta, bypassing DeButts Yard in Chattanooga by changing crews and exchanging blocks of cars at nearby Citico Junction, known locally as "the Wye."

Several names have been bestowed on CNO&TP trains by the crews, among them "Sparkplug" for 151, Southern's auto-parts hotshot from Cincinnati to Atlanta. The Sparkplug's northbound counterpart, train 150, which carries empty hy-cube boxcars and loaded auto-racks, has an equally fast schedule and is known as the "Rabbit." Train





350 usually follows 150, so 350 has been christened the "Beagle." Today, however, because 150 has been delayed between Atlanta and Chattanooga, the pattern will be reversed and thus the Rabbit will chase the Beagle.

It is now 6:30 a.m., and to the dispatcher in Somerset, Ky., the CNO&TP looks like this: Rolling up from Chattanooga is the northbound fleet led by train 350 (the one we'll ride), followed by 150 (the Rabbit), 144, 116, 172, 124 (the "Whippoorwill"), and 170. Coming down the First District between Cincinnati and Danville, Ky., is the southbound contingent: train 123 (the "Monon" from Louisville, where connection is made with the Milwaukee Road from Chicago and formerly was made with the Monon Railroad), 147, 117, 111, 279 (a unit train), 229 (a Jacksonville-bound piggyback train), 171, and 151 (the Sparkplug).

In a few minutes, an SD45 sticks its high short hood out of Tunnel 25 at the south end of Oakdale yard. This is today's Beagle: SD45 3115, SD35 3030, and SD40-2 3208 with 75 loads, 38 empties, 6,070 tons trailing. Our train is not listed in the timetable of the Ken-

tucky Division (as Southern officially refers to the CNO&TP), hence we are Extra 3115 North. As the lead unit nears the station platform, the Third District brakeman is on the front deck with the bags. Speed is down to 3 mph, and the incoming and outgoing enginemen effect a rolling crew change with no time wasted in stopping. As the second unit — the SD35 — eases by, you toss your grip onto the walkway and catch the bottom step.

Our engineer notches out the EMDs to Run 4; building speed, train 350 walks past the Oakdale station and along the five-track yard. Soon, anticipating word over the radio, the hogger makes a slight reduction on the throttle, checking the Beagle's speed at about 5 mph. Over the radio comes, "Kentucky Division 350, rear comin' up. . . Kentucky Division 350, rear man on. Highball." Our conductor is on board. The SDs are notched out: Run 5, 6, 7, 8. Ammeter needles bounce up to 700 amps, and speed starts to climb.

## TALL, WIDE TUNNELS

The searchlight signal at milepost 253 shows high green. Three turbocharged EMD

engines are churning out the horsepower as we strike northward.

At Coleman we swing through a No. 20 turnout onto single track. The SD45 attacks curves of 2 and 3 degrees — first right, then left. The grade is constant, 0.5 percent. Speed has leveled off at 17 mph. We go through a curve, and a tunnel appears. As the lead unit nears the opening, you're startled by the immense size of the bore. This tunnel is not like any on the Rathole of yesteryear — it's 30 feet high and 20 feet wide. There is enough room alongside the track for maintenance machin-



**At aptly named High Bridge, Ky., a piggyback train led by three SDs flies high above the Kentucky River on a muggy August 29, 1979.**

Ralph W. Bostian

ery to work, and the tunnel is more than high enough for the tallest load. Blue exhaust gases sweep down around the SD35's cab; you turn on the walkway lights. The faint image of the SD45 suddenly swings to the right, and your sense of equilibrium tells you of motion in that direction. This is Nemo tunnel — with a 3-degree curve to the right for its entire 2,700-foot length. Soon the north end appears and you're out, but a half mile later you're into another bore with a left-hand curve in the middle.

Back into daylight, speed has dropped to 8 mph. Ahead, the engineer looks down at the ground. You glance at the ammeter in the SD35: zero amps. In the tunnel, the SD35 stopped loading. On the engine control panel, the ground relay light glows, indicating a high-voltage ground. The brakeman, sensing trouble, comes back from the lead unit. He pushes in the ground relay reset button, and the SD35 momentarily takes up the load, picking up 600 amps; then it slips back to idle and no load. The brakeman breaks the metal seal on the traction motor cutout switch and turns it to isolate pairs of traction motors to search for the faulty circuit; motors 1 and 4 have the problem, so the SD35 will have to run with only four motors engaged.

The grade has increased to 1.1 percent. Climbing Little Lancing hill, speed drops to 15 mph. After we're over the top at Lancing, the speed briefly climbs to 35, and then the assault on Pilot Mountain begins.

Past Annadel, a retired prison guard named Saxon waves from his porch. Remember how on your first visit here in 1972 he chased after you in his car when you drove away from the right of way? He suspected you had been stealing signal cable. When you returned several months later and introduced yourself, he remembered you and promptly produced his notebook containing your license plate number.

We're on double track now. On a curve we meet train 123, which swings by behind three SD45s; toward the rear are two radio-controlled SD40s. Southern was a pioneer in the development of radio-controlled trains and still uses the technology today. By dividing the tractive and braking power on heavier trains, the road reduces the likelihood of train separations and improves handling response. Certain SD35s and SD45s (identified by their white number boards) equipped with radio control panels above the engineer's control stand in the cab lead every radio train; in midtrain are the slave units and a radio control car that receives the signals from the lead unit and converts them to conventional electrical impulses for the slaves.

Leaning to the right, the Beagle's SDs curve past a vacant concrete platform that once supported a station; the signpost reads SUNBRIGHT. The old main line wanders off to the left toward a dead end at Sunbright Lumber a mile away; the line was replaced in 1963 by a new alignment bypassing Tunnel 16.

Now the main line is downhill on 1.1 percent. Our engineer notches the throttle back to idle. In the high-voltage cabinet in the SD35's cab, relays chatter into position as the EMDs are set up for dynamic braking. The whine of the traction motors in braking mode reverberates off the cuts alongside the track, and heat waves boil off the diesels' hoods. Ten miles of roller coaster profile are ahead.

## DOWN TO THE NEW RIVER

At Robbins, train 350 returns to single track; at the north end of town, the old right of way diverges through a cut. The south face of old Tunnel 15 is barely visible in the distance down the abandoned line. Trains from the north had struggled out of the New River valley on a 4-mile grade that had culminated in Tunnel 15. The new track, laid in 1963, carries us across several fills and through 100-foot-deep Black Creek cut, typical of the new excavated areas of the Rathole.

The searchlight signal in the cut shows high green as we begin our descent into the New River valley. We pass through a curve, and suddenly the ground drops away from the track. This is New River bridge, the masterpiece of bridge-building on today's CNO&TP. The steel span, constructed in 1963, replaced the original bridge located about a mile to the east. The train rolls out over the green valley at 40 mph, and you look down from the SD35's cab to see the emerald New River flowing more than 307 feet below.



If you look carefully, you see birds flying *under* the bridge. Soon we're at the north end of the 1,618-foot-long span: Phillips. To the right, the old main line survives as a connection to the New River Railway (formerly the Brimstone Railroad) below the old bridge.

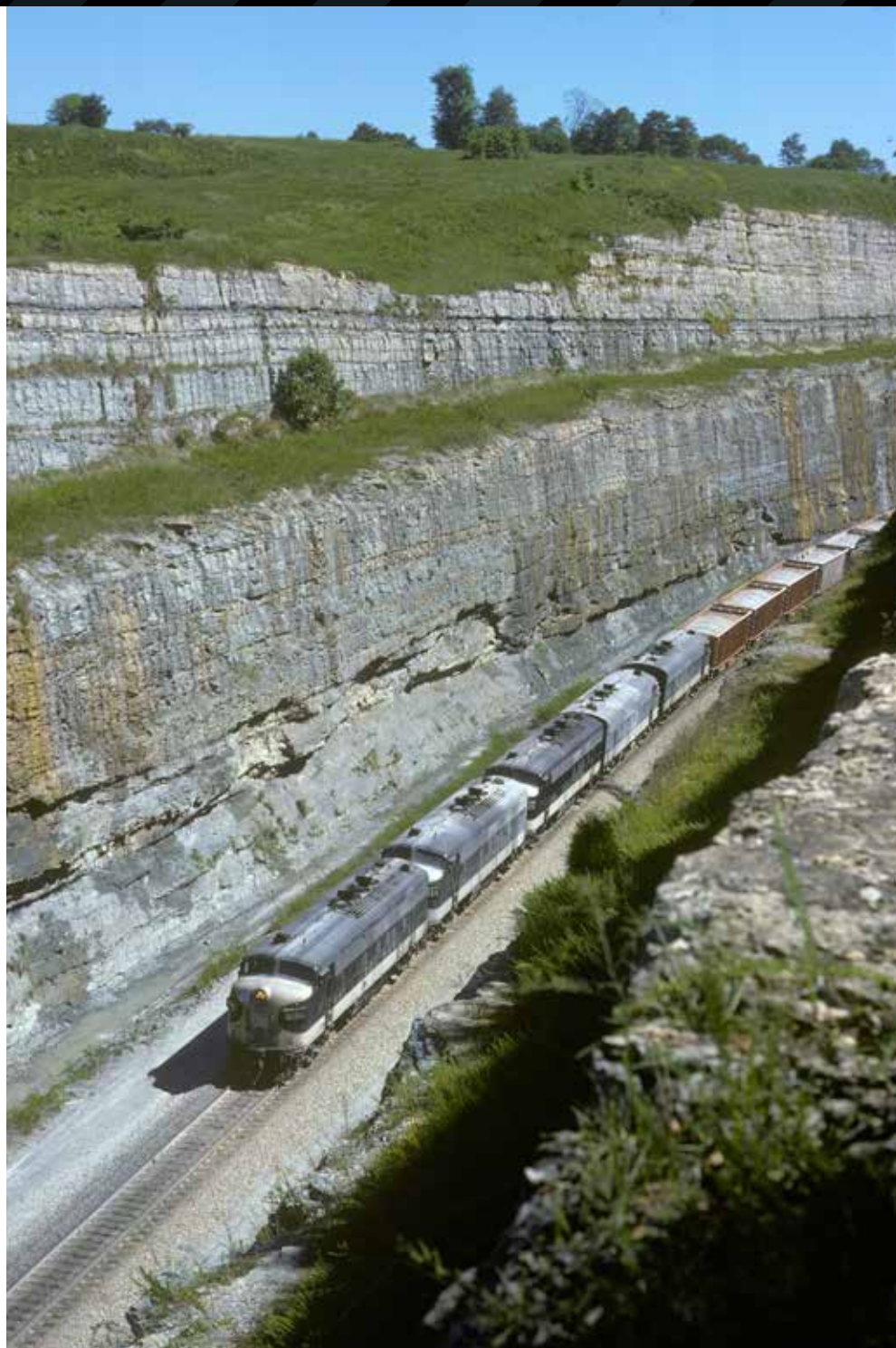
At Helenwood we pass train 147, which is trailing a cloud of blue brakeshoe smoke as it descends the grade in anticipation of receiving a clear signal for its trip across the single-track bridge. As the locomotives meet, the crews exchange waves, and the greeting is followed by a brief radio conversation in which the crews inform each other that visual inspections of both trains had shown nothing out of the ordinary.

Our engineer has the units back in Run 8 as the Beagle builds momentum for the climb to Pemberton that culminates on 1 percent. We now have reached the highest point on the CNO&TP, elevation 1,508 feet. Once over the crest, it's downgrade through Oneida, where two Southern GP38s are sorting hoppers in the old Tennessee Railroad yard. Prior to Southern's purchase in 1973 of this 43-mile tributary of the Rathole, RS1s powered the coal-hauling short line. In a siding along the Oneida station is a local powered by a lone GP7. With its single unit and several "Big Red" hopper cars, the local seems out of place on this railroad of high-horsepower consists and 6,000-ton trains.

A mile north of Oneida we encounter train 117, the southbound run-through from the Penn Central. As evidence, there's a PC SD40 tucked in between the Southern SD35 and SD24. The black PC unit blends with the colors on Southern's SDs, but the northerner's low nose looks out of place in these parts. After 117 passes through Oneida, the GP7 will dart out onto the main line with its local to follow it southward.

At Bear Creek the track drops downgrade, and our SDs once again are placed in dynamic braking. Through the bottom of the dip at Winfield, the units are put back into power throttle, although the engineer notches out slowly until he is sure the slack has run back out as gently as possible. If he were to pull out the slack too fast, the train would be in danger of breaking in two. With 8,900 horsepower on the front end, the response of the motive power is anything but sluggish. (That figure of 8,900 h.p. is broken down as follows: 3,400 for the SD45, 2,500 for the SD35, and 3,000 for the SD40-2; Southern rates its SD45s at 200 h.p. less than the factory rating as a fuel-conservation measure.)

Passing into Kentucky south of Silerville, 350 tops another rise and dynamic braking once again is called into action. Dropping through Stearns, we pass the shops of the Kentucky & Tennessee Railway, which was the home of Tennessee Valley Railroad Mu-



**The extensive earthworks that helped tame the Rathole are evident in this September 12, 1976, photo of five FP7s on a ballast train heading north near Kings Mountain, Ky.**

David E. Lichtenberg, David P. Oroszi collection

seum's ex-Southern Mikado 4501 before she entered excursion work.

The signals at Stearns station display Approach; brakeshoes grip 350 and drag us to a slow pace short of the signal at Whitley. Visible ahead is the headlight of a southbound train coming off the single track onto No. 2 track adjacent to us. The freight is 13,000-ton unit train 279, bringing Indiana coal down the Rathole. An SD45 radio master and three

SD24s lead 70 of Southern's aluminum "Silver-side" gondolas, a radio control car and three SD35s, 30 more Silversides, and a caboose. The conductor of 279 advises the dispatcher over the radio that 279 is clear of Whitley; soon the No. 2 turnout aligns for our track and the signal changes to high green. Our SDs accelerate, and the Beagle's 5 mph walk increases as we start the 9-mile run to Cumberland Falls. This stretch is





Three SD40-2s, dapper in Southern's "tuxedo" scheme, roll though Harriman Junction, Tenn., with a piggyback train in July 1978.



An SW1500 mated with a slug looks on as a northbound mixed freight pulls out of DeButts Yard, Chattanooga, on May 15, 1981.

Two photos, David P. Oroszi



comparatively straight with long tangents and curves no tighter than 4.5 degrees.

At Cumberland Falls, the signal shows Approach Diverging, and 350 swings onto the No. 2 track for some lefthand running. On the No. 1 track, a rail train is picking up used welded rail displaced earlier in the week by new steel from the Atlanta rail-welding plant. The rail-puller car at the end of the train cautiously guides the long strands of steel into the roller-rack-equipped flat cars behind. A GP35 powers the train.

We return to single track at KD Tower (milepost 178) and roll down Greenwood Hill in dynamic braking. The dispatcher requests our location, and you hear him communicating with southbound 111, nearing Grove 10 miles north of us. To effect the meet, the Beagle returns to the lefthand No. 2 track at Tateville and 111 continues down track 1. Past Burnside, we cross the Cumberland River just as 111 does the same on the adjacent steel span. Somewhere to the east, the piers of the old Cumberland bridge protrude from the river (a flood-control project necessitated CNO&TP's new twin spans and track realignment).

The grade levels, and our speed climbs to 50 mph through Grove, where we regain single track. Our 113-car train passes Koppers and Woods and enters double track again in Somerset Township. Inside Somerset station is the chief dispatcher who not only controls the pulse of the CNO&TP but also regulates movements on the Western Division, which north of Danville diverges toward Louisville and St. Louis.

For the next 6 miles, 350 attacks the stiff 1 percent grade of Norwood Hill. Speed drops to 18 mph. Our climb is steady, punctuated by the mixture of turbocharger whistle and electric whine of the traction motors. You look down at the ground, where the 11:30 a.m. shadows of the SDs are distorted by heat from their radiators.

### THREE-WAY MEET

The radio comes to life — the dispatcher is talking with 229, a Jacksonville-bound piggyback train, and 151, the Sparkplug. Ten miles north of us, 229 is entering double track at Kings Mountain, and the Sparkplug is 4 miles behind 229 at South Fork. The decision is made to arrange a meet involving 229, 350, and the "Plug" on the double track between Kings Mountain and Smith. Train 350 rolls along toward both 229 and the Sparkplug; the Plug is to overtake the pig train.

We pass Smith, where double track begins, and a mile beyond there train 229 slowly rolls by us. Near milepost 142, the Beagle slows to 45 mph and steps through a cross-over to No. 2 track. Shortly, down No. 1 track comes the Plug, gaining on 229 for the over-



**In October 1973, Cincinnati–Chattanooga train 123, the "Monon," has an SD45 and radio-receiver car cut in between boxcars and auto-racks. The hotshot is waiting on double track at Evensville, Ky., as Mikado 4501 approaches with an excursion train.**

Michael E. Iden

take north of Smith. Through a combination of radio communication, high-horsepower locomotives, centralized traffic control, and 45-mph track turnouts, the CNO&TP's dispatcher has deftly executed a maneuver calculated to keep the Rathole flowing freely.

Near Kings Mountain, the extent of the earthmoving in the 1963 daylighting project becomes apparent. The new alignment, bypassing several old tunnels, passes through deep cuts that required the removal of as much as 2 million cubic yards of shale and limestone. Overhead, country roads cross the CNO&TP on modern steel bridges. The multistep terraced construction of these cuts is in sharp contrast to the original cuts (which had necessitated a minimal amount of earthmoving) that survive along the Rathole.

At Kings Mountain our engineer sets up dynamic braking, but only a minimum of retarding effort is used — the SDs hold the Beagle in check as it rolls downhill between 45 and 50 mph on the curving single track. As we cross the Green River, the units are put back into power, and the Beagle takes to No. 2 track at South Fork, where double track resumes. Two miles north, the signals at Geneva show Approach, and dynamic brakes bring 350 down to a crawl. At Palm, where double track ends, a stop signal brings the Beagle to rest for the first time since we left Oakdale 5 hours ago. We must wait for 171, the last of the southbound fleet, which has just left Danville Yard. Our three SDs bask in the sun on a curve. The engines are in idle, and the monotony is broken only by the occasional *psst* of the air reservoir drain valves

opening to dump condensate. You open the cab doors and windows on the SD35 in an attempt to catch a brief wind, but sitting on the cab steps outside proves to be more comfortable. The scene is tranquil; bees circle the daisies alongside the tracks.

Fifteen minutes pass before EMDs can be heard approaching from the north. Shortly an SD45 running long hood forward appears, and 171 roars by, marching upgrade toward McKinney. As 171's caboose passes, its crew exchanges greetings with our head-end crew. The turnout ahead grinds into position for us, and the signal flicks to high green.

The Beagle charges out of Palm, the throttle in Run 8 for Moreland Hill. Over the top, we rumble downgrade into Bowen and onto double track. Our engineer advises the Danville yardmaster of 350's location: 5 miles out. We cross the L&N at Junction City, and our EMDs briefly dart along at 45 mph. Then the hogger notches back and puts the units in dynamic braking as we approach the yard limit. Rolling down the main line through the center of Danville Yard, 350 passes several SW1500s marshaling cars for the Western Division. Near the yard office, our engineer drops the throttle into Idle and makes the final brake application, bringing the Beagle to a stop. We're at the northern terminal of the CNO&TP's Second District and have completed our jaunt across the Rathole. The time is 1:15 p.m., approximately 6 hours out of Oakdale. In 5 more hours, the Beagle will be in Gest Street Yard to be broken up for interchange to Penn Central and Chessie.

The two head-end crewmen descend from

the SD45, and you climb down from the SD35. As you hit the ground, you realize that this trip across the Rathole has been made in comparative comfort: capable motive power; welded-rail track with high-speed turnouts; CTC and radio. Few of the features that earned the division its nickname are present today.

## WIRES ON THE RATHOLE?

What is the future of the CNO&TP? The line has changed much in the past several decades, so we can expect more change. In general, traffic on the route has risen every year. In all probability, the CNO&TP will continue to be Southern's most heavily trafficked and foremost moneymaking route.

The biggest change on the horizon might be in motive power, because Southern is studying the possibility of electrifying the 481-mile route between Cincinnati and Atlanta (the Kentucky Division [CNO&TP] between the Queen City and Chattanooga and the Georgia Division on to Atlanta). Southern remains noncommittal about electrification, saying only that studies are under way and that potential sources of electric energy are being lined up with Tennessee Valley Authority, Kentucky Power, and Cincinnati Gas & Electric. The estimated cost of the project would be \$60 million for the power-distribution system and 60 or so locomotives. Diesels still would play an important

role, however, because trains to and from the Western Division at Danville and the Tennessee Division at Harriman Junction would be diesel-powered. To avoid swapping units or having to "float" electric locomotives to intermediate terminals, Southern might power those interdivisional trains on the CNO&TP with straight diesel consists.

The work needed to electrify the line would consist mainly of erecting the catenary and power distribution systems and modifying the signal system to eliminate electrical interference. Approximately 56 percent of the CNO&TP is double track, and Southern appears to be headed toward eventual double-tracking of the entire Second District with the exception of the New River bridge and the four tunnels. When Southern daylighted the Rathole in 1963, the company provided adequate room, even in cuts, for catenary supports. Also, the 30-foot vertical clearance of the remaining tunnels would facilitate any installation of catenary.

For Southern to electrify the CNO&TP, the projected rate of return would have to be greater than the comparable figure for an upgraded dieselized operation. Electric locomotives with an expected lifetime of 35 years could prove to be more economical than diesel-electrics with a typical 15-year lifetime.

Whatever the outcome of any electrification decision, Southern Railway is assured of the CNO&TP's continuing to be an impor-

tant source of revenue and of the need for the road to perform some fancy, fast-footed rail-roading on it. The Rathole, in more than one way, will remain in the middle of it all.

**We began this look** at the Rathole in 1940 on board the first trip of the pioneer FT as the freight diesel entered one of the Rathole's old tunnels. We're almost out of that bore, for sunlight appears ahead . . . and the year is 1985. The railroad still is the CNO&TP, and the locomotives still wear gold Southern lettering. But wait — this is no FT, or even an SD45. The whine of traction motors is still audible, but the resonant throb of the diesel engines is missing. Overhead, a slender wire rides over the Rathole. The pantograph on top of our locomotive is tapping the electric energy in that wire. The brakeman slides open his window and mentions how hot the old bores used to be, back in the days when diesels still reigned. But he and his fellow railroaders still call this line the Rathole — out of respect for what it was and always will be. ■

*MICHAEL E. IDEN has been involved in operations planning and research; track maintenance planning; and locomotive manufacturing, operations, and maintenance over his 45-year (and counting) rail career. Mike's last name was Iczkowski when he wrote this article.*



A crewman from a northbound freight is down to look over 151, the "Sparkplug," at Whitely, Ky., the end of a stretch of double track, in mid-1974. Today Norfolk Southern runs the CNO&TP, and the electrification that seemed likely in the '70s has not occurred.

Ron Flanary



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