

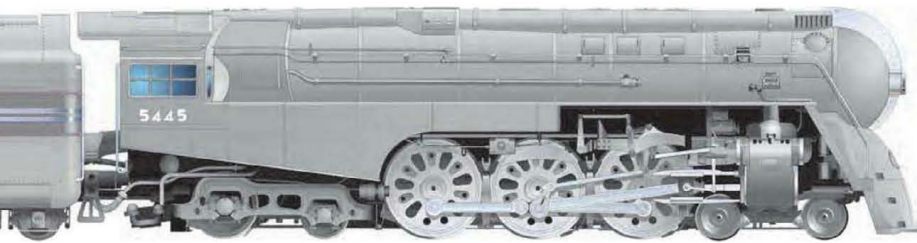


AMERICAN PASSENGER TRAINS AND LOCOMOTIVES ILLUSTRATED



Mark Wegman





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Mark Wegman

Voyageur Press

For Mom and Dad and my wife, Sally.

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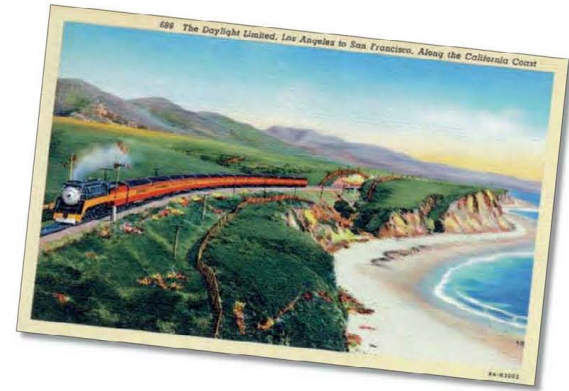
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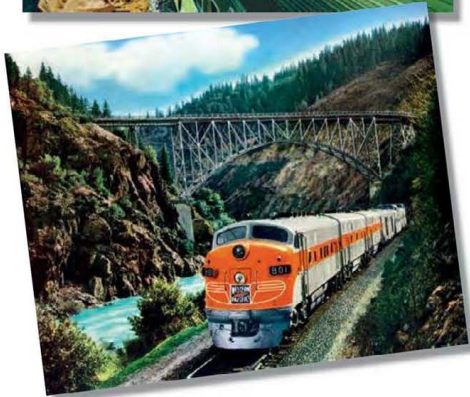
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INTRODUCTION

MY GRANDMOTHER, Amelia, always said that I acquired my love of trains from my grandfather, Gwynne Claytor. Grandpa was a railroad man who worked for the steam-powered operations of the Illinois Terminal System, a system better known for its electric interurban trains. He was a fireman on one of the Illinois Terminal's steam switch engines that populated the lines located in and around the industrial areas of Edwardsville, Granite City, Alton, and Madison, Illinois. Shortly before her death in 1993, Grandma gave me this photo showing my grandpa on one of the switchers. She had drawn a line and arrow pointing him out and added on the back. "Kind of a rough-looking crew, don't you think?" I never knew my grandfather, as he died shortly before my birth in 1951, but I've been told by quite a few that knew him that I resemble him.

As a child in the early 1960s, I would visit my grandmother who lived in the small, rural, south-central Illinois town of Mt. Olive, about 40 miles northeast of St. Louis. Grandma lived right next to the double-track main line of the Wabash Railroad's St. Louis–Decatur, Illinois, route. I would anxiously wait each day for the parade of high-speed "varnish" that would fly by in what seemed like seconds (Mt. Olive was too small to warrant a stop).

The *Cannonball*, *Banner Blue*, and the *Blue Bird* were all names I came to learn as these high-speed express trains sped off to

distant destinations like Decatur, St. Louis, Chicago, and Detroit. Later in the day, I would walk the few blocks over to the Illinois Central's single-track Springfield–Madison, Illinois, main to wait for the IC's sole remaining Chicago–St. Louis train, the *Green Diamond*. I returned in the summers of '64 and '65 to see the Wabash paint and lettering disappear from the locomotives and cars of the trains, replaced by lettering spelling out "Norfolk and Western." Every once in a while, a few head-end cars lettered for the Nickel Plate Road were mixed in. By this time I was older and had educated myself about railroads, so I knew perfectly well that this was the result of a merger and that winds of change were blowing over America's railroad landscape.

Summer vacations came and went quickly, during which my dad would take our family on a num-

ber of vacation trips. We rode the GM&O's *Abraham Lincoln* to Chicago, the B&O's *National Limited* to Washington, D.C., and the jointly operated *City of San Francisco* to the Golden Gate. I have fond memories of eating in the Union Pacific's famous dome dining cars and of sitting up late at night, trying to sneak a glance of the mountains from one of the Southern Pacific's home-built full dome cars while traversing the high Sierra. Growing up in the St. Louis area and making occasional visits to St. Louis Union Station, I was thrilled at seeing what seemed like a sea of trains: Pennsy, B&O, L&N, MoPac, and Frisco, were among the seemingly endless line of railroad names on the trains lined up along the concourse.

What I didn't realize at the time was that I was witnessing the end of an era. One by one, the trains would disappear, with only a few exceptions, by the end of that tumultuous decade. The "golden era" of American passenger trains had passed. It is my hope that you will revisit this time in the following pages. It is all that my grandfather—and many railroad men like him whose times have passed—would have wanted.



The author's grandfather, Gwynne Claytor (standing, top left). *Author collection*

PART ONE



1890s–1920s



CHAPTER ONE

THE EMPIRE STATE EXPRESS, PENNSYLVANIA LIMITED, LAKE SHORE LIMITED, AND 20TH CENTURY LIMITED

IF ONE TRAIN WAS QUALIFIED to be called America's greatest train, it was the grand express train that once plied New York Central rails between New York City and Chicago: the *20th Century Limited*.

Certainly fans of the great Pennsylvania Railroad would argue the case for the *Broadway Limited*, the Pennsy's grand limited that competed with the *Century* and matched the *Century* in equipment, speed, and service throughout the existence of both trains. Santa Fe Railway fans would have a legitimate argument for the *Super Chief*, which rivaled the *Century* in setting standards of overall excellence. What then set the *20th Century Limited* apart from all of the other great trains to qualify it as America's greatest train? The *20th Century Limited* became an American institution.

Its place in history is secured in much the same way that the Ford Model T, the Boeing 707 airliner, and the *Apollo* spacecraft represent particular eras in the development of American technology and culture. Its impact and significance in a historical context can only be appreciated by understanding the mood and dynamics of the world at the beginning of the twentieth century, which is considered the greatest era of technological achievement. The world at the end of the nineteenth century was populated

by a human race confident that it would soon master all it surveyed.

The New York Central traced its beginnings back to the Mohawk and Hudson Railroad, which was granted a charter on April 17, 1826, by the New York State legislature after much opposition from Erie Canal and turnpike interests. It wasn't until 1829 that actual construction of a 16-mile line began between Albany and Schenectady, New York. The completion of the Mohawk and Hudson initiated further railway construction, and by 1853 a network of rail lines extended from Albany to Buffalo and Niagara Falls. Merger talks were held in 1853 among 10 of the lines included in the east-west railway network, and on July 6, 1853, the New York Central Railroad came into being. The physical plant and efficiency were much improved after the merger, and by the 1860s the company was one of the largest corporate enterprises in the United States.

In 1863 shipping mogul Cornelius Vanderbilt began buying stock in the New York Central and let it be known that he had an eye on a seat of the board of directors. Vanderbilt had obtained control of the New York and Harlem Railroad as well as the Hudson River Railroad, which both ran northward from New York City along the Hudson River. Connections could be made by ferry to Albany, but most passen-

ger and freight traffic coming off the New York Central at the time traveled by riverboat to New York City.

A master at manipulating financial and political factions in his favor, Vanderbilt gained enough support by 1867 to become president of the New York Central. In 1869 a merger between the three lines under Vanderbilt's control was completed, and a new company emerged called the New York Central & Hudson River Railroad. Under the guidance of Vanderbilt's son, William H., the company obtained control of the Lake Shore & Michigan Southern and the Michigan Central. Shortly afterward, the New York Central obtained control of the Pittsburgh and Lake Erie; the Cleveland, Cincinnati, Chicago, and St. Louis (or the "Big Four"); and the Boston and Albany. These acquisitions extended the Vanderbilt system from New England westward to Chicago and St. Louis. By the 1880s the New York Central system had become a formidable force in the transportation network of the Northeast and the biggest rival to its neighbor, the Pennsylvania Railroad.

The New York Central introduced through passenger service between New York and Chicago on July 4, 1875. The train operated once a week and consisted of just two baggage cars and a coach. On its inaugural run the train was hauled between Albany and Buffalo, New York, by engine No. 110,

also known as the *Flying Devil*. The *Flying Devil* had been constructed in the line's own Syracuse shops and was a coal-burning locomotive of the 4-4-0 type. Its driving wheels were slightly over 6 feet in diameter and the engine was among the fastest in the Central's locomotive fleet. The new train proved that fast through train service could operate between the two cities.

On September 14, 1875, another new train called the *Fast Mail* was introduced on the New York–Chicago route. Under contract by the United States Railway Mail Service, the New York Central was charged with the task of providing 24-hour mail service (no passengers were carried) between the two cities. The mail cars were radiantly painted in white with gold trim. The Great Seal of the United States and the United States Post Office emblem were boldly displayed on the car sides. Mail was sorted by postal workers right in the cars and was picked up from mailbag hangers located along the right of way as the express train sped past.

On June 15, 1887, the Pennsylvania Railroad inaugurated new through New York–Chicago express

passenger service with a train called the *Pennsylvania Limited*, the first all-vestibuled train in North America. The New York Central soon followed suit in 1887 with a new fully vestibuled through passenger express train, the *New York & Chicago Express*. The train held to the same 24-hour schedule that the *Fast Mail* had maintained between the two cities. The Wagner Palace Car Company built elaborate sleeping, dining, and buffet-smoking-library cars for the train to match the Pullman-built cars in service on the *Pennsylvania Limited*.

A description of the sleeping cars from an 1889 advertisement for the New York Central's train proclaimed:

The interior of the car is divided into ten enclosed compartments, each intended for the accommodation of two persons, affording the utmost privacy and seclusion to occupants, and with the most artistic, costly and elaborate interior furnishings and decorations. Complete toilet accessories: chandeliers arranged for the Pintsch system of gas

lighting; and other convenient devices are provided in each compartment. . . . A handsome buffet from which is dispensed light refreshments and a well filled bookcase for the free use of passengers are popular innovations. . . . In elegance of finish and luxurious appointments the new sleeping cars are unsurpassed.

These trains were all about the ultimate in luxury and service. Great care and attention were given to even the most-minute details. For example, the extensive Wagner Palace Car Company Rules for Uniformed Employees, 1898, states, "Avoid putting hand in pockets in tails of uniform overcoats in cold weather giving employee a decidedly loafing appearance."

In 1890 the New York Central and its passenger agent and public relations genius George H. Daniels planned what would be the fastest scheduled train operating in the Western Hemisphere. On September 14, 1891, the New York Central & Hudson River launched a new train with the grand title the

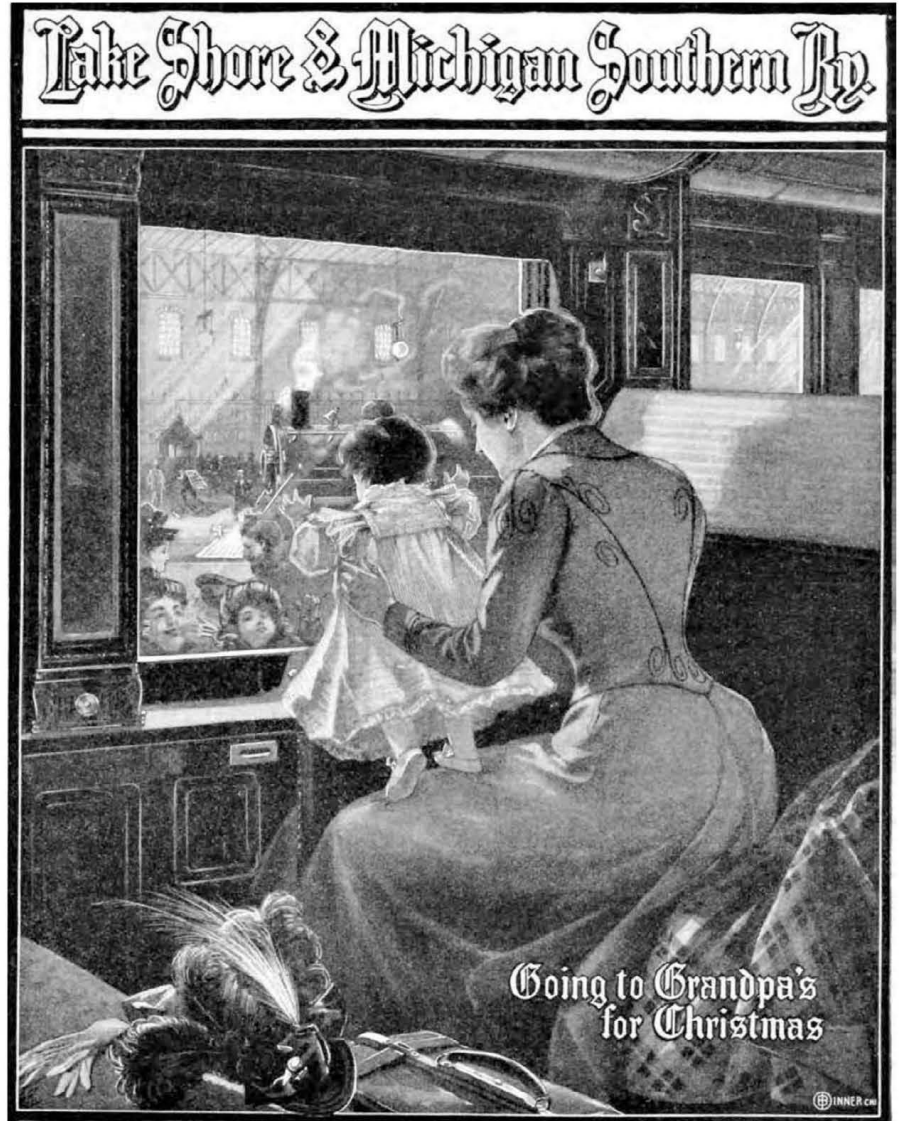


Pennsylvania 4-4-0 American-type locomotive No. 1510, Class D61, was an experimental unit built by Baldwin in 1892. No. 1510 was a good example of the Pennsylvania Railroad's efforts in the development of locomotive technology. The engine had experimental Vaucain compound cylinders and 68-inch driving wheels. It was retired in 1911.

Author collection



ABOVE AND RIGHT: 1898



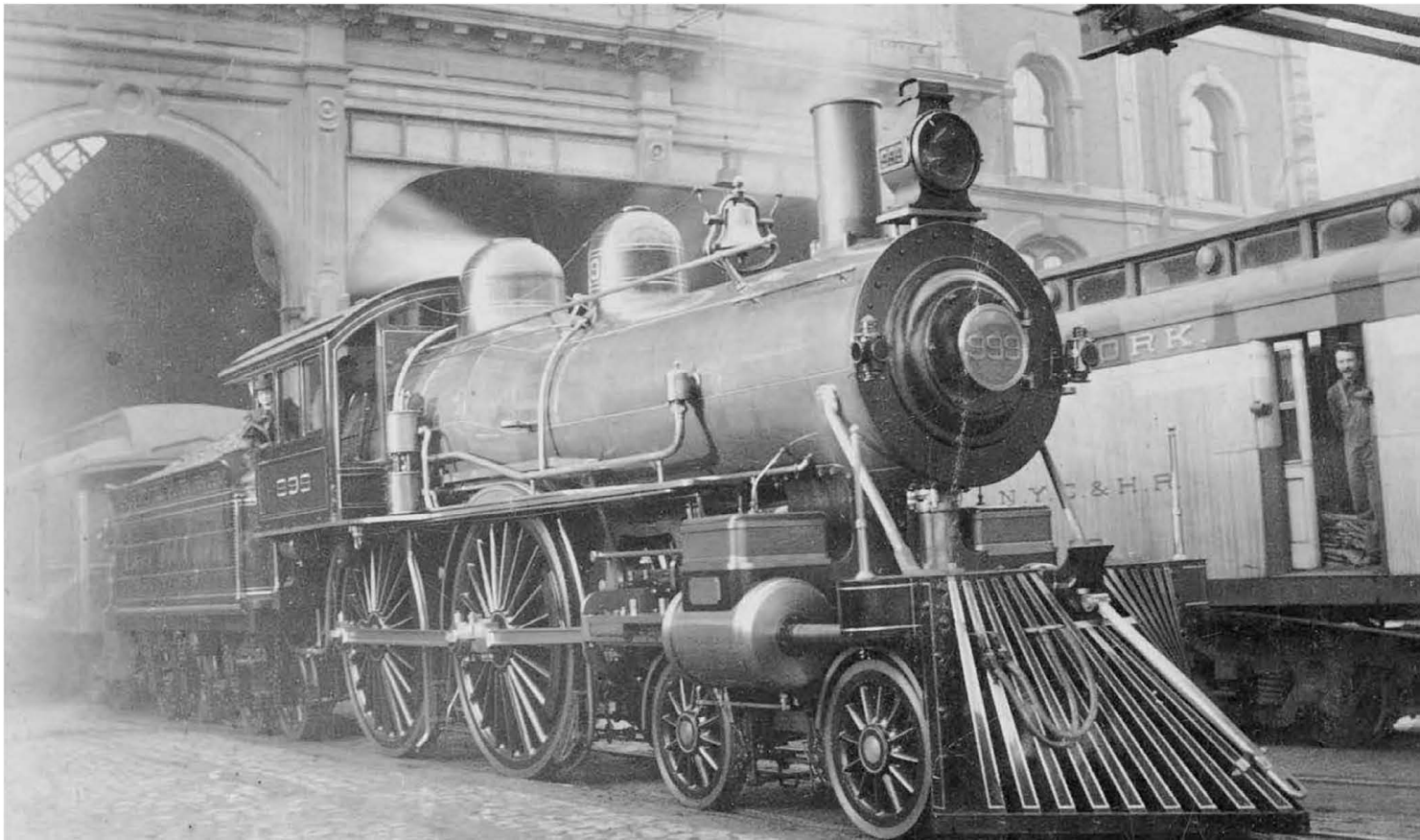
Empire State Express between New York City and Buffalo. The 440-mile run was made in just over 6 hours at an average speed of 52.3 miles per hour, including stops, establishing the train as the fastest scheduled passenger train in North America.

A skeptical public was warned by prophets of doom, spurred on by some of the Central's competitors, that running a train full of passengers at such speeds was not only reckless but criminally negligent. Hot boxes, derailments, and collisions were all predicted to end this insanity. Despite the harbingers of doom, the train continued running without any serious incident. It was perhaps not fate, but careful

planning, expert engineering, and immaculate track and equipment maintenance that resulted in the train's success and safety record.

Still not satisfied, Daniels went to work on something to top the success and publicity that surrounded the launch of the *Empire State Express*. On May 10, 1893, near Batavia, New York, locomotive No. 999 reached a speed of 112.5 miles per hour on a special test run set up by the railroad. This established a new world speed record and was the first time a locomotive had exceeded 100 miles per hour. The event was later commemorated on a U.S. postage stamp that was partially the result of Daniels' public relations

Locomotive No. 999 is shown at New York's Grand Central Terminal, heading the *Empire State Express* in the mid-1890s. Andrew Merrillees, *Library and Archives Canada*, Neg. No. Pa181395

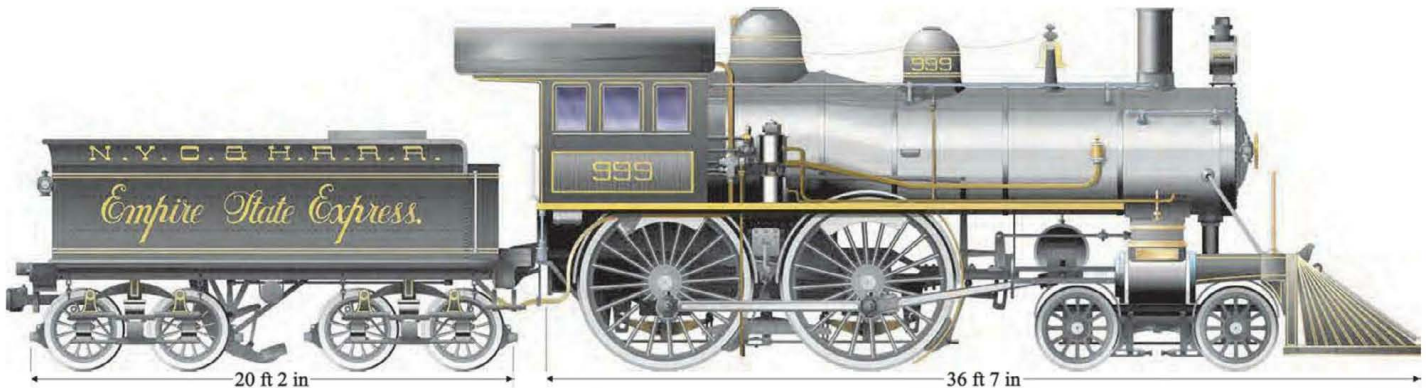




New York Central & Hudson River No. 999 became the world's first steam locomotive to exceed 100 miles per hour on May 10, 1893, when it achieved a speed of 112.5 miles per hour on a 1-mile stretch near Batavia, New York. Experts were skeptical: with four heavy Wagner Palace cars in tow, the steam-exchange capabilities of the engine's cylinders did not seem to make this possible. A timed run of 102.8 miles per hour from the previous evening seemed more believable, but it didn't matter. The huge publicity generated by the event was what New York Central passenger agent and public relations genius George Daniels had sought. The locomotive was displayed at the Columbian Exposition in Chicago that same year and appeared on a U.S. postage stamp in 1900. The locomotive was built to haul the *Empire State Express*, one of the fastest scheduled passenger express trains in the world at the time.

Specifications

Built: 1893
 Tractive Effort: 16,270 lb.
 Driving Wheels: 4 @ 86 in. ea.
 Heating Surface: 1,927 sq. ft.
 Steam Pressure: 190 psi
 Grate Area: 30.7 sq. ft.
 Cylinders: 19 in. x 24 in.
 Total Weight: 204,000 lb.
 Fuel: 15,400 lb. coal
 Water: 3,500 gal.



efforts. Detractors challenged the truthfulness and accuracy of this record run, but it didn't matter. The publicity and worldwide attention brought about by the event was just what Daniels had planned.

Daniels also initiated a new train to provide high-speed service for the eastern traveler wishing to visit Chicago's Columbian Exposition during the summer and fall of 1893. The train, operating on an astounding 20-hour schedule, was quite successful, but the service was withdrawn at the end of the exposition.

Desirous for faster service over the New York Central & Hudson River and Lake Shore & Michigan Southern routes, the two lines inaugurated a new service called the *Lake Shore Limited* in November 1897. Each train featured Wagner Palace Sleeping Cars and consisted of seven cars: a buffet-smoking car, a dining car, a parlor car, three sleeping cars, and an observation car. The train represented state-of-the-art railway technology and was fully vestibuled, electrically lighted, and fully heated.

Shortly after the dawn of the new century, the New York Central and Daniels began planning for an event that would make the railroad's previous and by no means diminutive events pale by comparison. New York Central set out to inaugurate a new high-speed express train between New York and Chicago and sought Daniels to apply his flair for publicity to launch the new service. Daniels convinced the Central's management that the train should have no equal on this continent in terms of speed, service, luxury, and equipment. The turn of the century had just passed with much fanfare and Daniels believed the train's name should link it with the progressive, forward-looking spirit that was prevalent. What better name than the *20th Century Limited*? he thought.

At 2:45 p.m. on June 15, 1902, an event took place that in its day was equivalent to the launching of a space shot in the 1960s. Representatives from all of the world's major newspapers were on hand to witness the inaugural run of the *20th Century Limited*. Press passes had been issued to many of the reporters on hand to accompany the *Century* on its first run. On completion of the first trip, reporters filed stories of amazement and awe at the level of luxury and speed at which travel between America's



Locomotive No. 999 sits at New York City's Grand Central Terminal in the 1890s. In an age when a man's image was determined by the shine on his shoes, likewise the image of a railroad rested on the shine and appearance of its finest locomotives. No. 999 brought the New York Central worldwide fame and attention, something Charles Daniels had hoped for and indeed achieved. *Author collection*

two largest cities was now possible. A reporter from the *London Times* incredulously proclaimed that the new train was surely only an experiment and that daily service maintained at this level was just not possible. He would soon be proven wrong.

The *20th Century Limited* was designed as an all-first-class accommodation for wealthy and famous patrons who demanded the utmost in luxury and service. Its 20-hour schedule beat the best previous schedule by 4 hours. Businessmen who valued time as much as money took advantage of the train's speed.

The first consist was made up of a buffet-library-smoking car, a dining car, two new Pullman-built sleeping cars, and a compartment-observation car. The train glistened in highly varnished Pullman green paint with ornate gold lettering and ornamentation.

Sleeping accommodations included several "staterooms," two of which could be opened and joined to form an elaborate bridal suite. A gentlemen's club car included a wine bar, a barbershop, and a full bathroom, along with the services of a professional stenographer. Stock prices were wired ahead to stations along the line and handed aboard for posting on the train. Ladies could enjoy the observation car, where a fully stocked library and the services of a personal maid were at their disposal. The dining car was lined with mahogany paneling



Locomotive No. 870 charges down the line at the head of a four-car *Empire State Express* in the mid-1890s. The locomotive was a 4-4-0 type and had been in charge of the inaugural *Empire State Express* on October 21, 1891. That train made a record-setting run between New York City and Albany, New York, when it traveled 143 miles in 183 minutes. Locomotives such as Nos. 999 and 870 helped establish the *Empire State Express*, at the time one of the world's fastest scheduled passenger trains. *Andrew Merriees, Library and Archives Canada, Neg. No. PA-181397*



1898

The dining car interior of the early *20th Century Limited* was built by Pullman and offered five tables that seated four each, as well as five tables that seated two each. The dining area featured rich mahogany and live ferns in planters built into the walls. *New York Central photo, author collection*

and had planters with live ferns inset into the walls. The cuisine soon earned a reputation among the finest to be found anywhere.

The attention to detail that New York Central management applied to the train didn't stop there. Each morning management presented the line's president with a report of the previous evening's schedule performance, gross revenues, and a list of celebrities on board, as well as any comments made about the service. When New York Central presidents traveled, the report was wired to them posthaste. Legend has it that New York Central president Alfred H. Smith had the daily reports handed to him on a forked stick by a native runner while on safari in Africa!

Each day at New York and Chicago a red carpet was unrolled along the approach to the train's cars. On board the train, the latest newspapers were placed under the stateroom doors each morning, and patrons were presented with boutonnieres as they entered the dining car for a breakfast that included fresh strawberries and cream. The New York Central would eventually describe its elegant *20th Century Limited* deluxe express as "an American institution." It was not an overstatement.



The era of Victorian opulence is exemplified by the ornate interior of this New York Central car of the 1890s.
Author collection

CHAPTER TWO

THE 20TH CENTURY LIMITED, PENNSYLVANIA LIMITED, AND BROADWAY LIMITED

IF ONE RAILROAD could be called “America’s Greatest Railroad,” the Pennsylvania Railroad (commonly referred to as the Pennsy”) would surely be one of the top contenders. The Pennsylvania Railroad grandly described itself as the “Standard Railway of the World.” If almost any other railroad had tagged itself with such a lofty title it would have been met with ridicule and embarrassment. With the Pennsy, however, such a statement was more fact than pretense.

The Pennsylvania Railroad possessed a history of originating standards and introducing new technologies that did indeed set the standard for railway operations and science, not just in the United States but around the world. The Pennsy’s long list of firsts included being the first U.S. railroad to standardize locomotive drivers, the first to standardize its locomotive fleet, and the first to utilize coal as the standard fuel for its locomotives. The Pennsy was also the first American railway to establish its own locomotive-testing facilities and, in fact, was one of a very few American railways with the capability to design, prototype, test, and build its own locomotives. In addition, the Pennsy was instrumental in introducing all-steel passenger-car construction with its renowned P-70 coach, which was built in different variations for a half century.

Early passenger service was established between Philadelphia and Pittsburgh with a train called the *Pioneer*. After the Civil War, the Pennsy expanded rapidly throughout the East and westward to Chicago

and St. Louis, becoming the largest and most profitable of all American railways for much of the nineteenth and twentieth centuries.

On June 15, 1887, the Pennsylvania Railroad inaugurated New York–Chicago luxury express passenger service with a new train called the *Pennsylvania Limited*, the first vestibuled train in North America. The Pullman Palace Car Company constructed and operated nine elaborate sleeping cars especially for the train. Four consists were placed in service, each with a composite car, a dining car, and three sleeping cars.

In November 1897, the New York Central & Hudson River and Lake Shore & Michigan Southern inaugurated a new train named the *Lake Shore Limited*. Not to be outdone by its competitor, the Pennsy introduced a completely reequipped *Pennsylvania Limited* on January 15, 1898. The “Yellow Kid,” as it would soon become known, matched the *Lake Shore Limited* at every level.

The train’s color scheme was a departure from the drab greens and browns applied to most passenger equipment of the day. When Pennsylvania Railroad officials visited the Pullman shops, passenger cars being built for President Porfirio Diaz of Mexico were in the final stages of completion. The officials were so impressed with the brilliant paint scheme, which displayed the colors of the Mexican flag, they stipulated that the new equipment for the line’s premier train would wear a nearly identical livery. The cars were painted green below the window

sash, and creamy white above with a red letter board adorned in gold lettering and trim. Each consist featured a parlor-smoking-library car, a dining car, three drawing-room-sleeping cars, and a compartment observation car that featured 5-foot-wide plate-glass windows—an innovation at the time. A barbershop and bathing facilities were provided, along with the services of a stenographer. Stock market quotes and sports scores were telegraphed ahead to major stops and posted at frequent intervals. The ladies on board could enjoy the services of a personal maid and a manicurist, which were provided in the opulent observation car. The Yellow Kid represented Victorian opulence with a flair unmatched by any train built at the time with the possible exception of the Wagons-Lits cars constructed for the *Orient Express* in Europe.

On the same day as the inauguration of the New York Central’s *20th Century Limited* in 1902, the Pennsy initiated its own new express service between the same two cities. The *Pennsylvania Special* was designed to compete with and match the *20th Century Limited*. Both trains held to a 20-hour schedule and initiated what became known as “The Great Speed War” between the two railroads. The Pennsy passenger cars were attired in a new solid “Tuscan Red” that earned the train the nickname “The Red Ripper.”

Despite the best efforts of the Pennsylvania Railroad, most observers believed that the New York Central had scored a public relations triumph with

the *20th Century Limited*. It seemed as though the Pennsy was merely trying to keep up with the Central. The Pennsy however, was about to stage a coup of its own that would rival the attention given to the inauguration of the *20th Century Limited*.

On June 8, 1905, the Pennsylvania Railroad placed advertisements in the major New York and Chicago newspapers announcing a then incredible 18-hour schedule for the *Pennsylvania Special* to begin on June 11. The ad proudly claimed the train to be "The fastest long distance train in the world."

The Pennsy had conducted three tests between Chicago and Crestline, Ohio, and another between Altoona, Pennsylvania, and Harrisburg, Pennsylvania, to ensure that the spectacular timing of the new schedule could be maintained. Six Atlantic-type locomotives—one per division—built at the Pennsy's Altoona shops were selected to power the train.

On June 11, Pennsy officials and local dignitaries joined a sizable crowd of excited onlookers at the Pennsy's Jersey City Terminal to see the train depart for the first westbound sprint to Chicago. Under the charge of engineer John H. Warren, locomotive No. 1416 lurched forward with a blast from the whistle and sped off toward Philadelphia. The train was composed of four Pullman cars: a combination car containing a baggage compartment, library-smoking compartment, buffet, barbershop, and bathing room; a dining car; a 12-section drawing room-stateroom car; and a six-compartment sleeping-observation-parlor car.

When the *Special* neared Philadelphia, it had to slow to allow the *Congressional Limited*—one of the fastest trains on the system, which had departed Jersey City prior to the *Pennsylvania Special*—to clear the main. The *Special* arrived at North Philadelphia 6 minutes ahead of schedule. The first locomotive change took place at Harrisburg in slightly less than 2 minutes—more than halving the 4 minutes allotted. Another locomotive change took place at Altoona, and the *Special* charged into Pittsburgh 10 minutes ahead of schedule. As the train passed through the city, crowds cheered, thrilled to catch a glimpse of the streak of iron, steel, and varnish as it passed. After another quick engine change the train departed westward, its crew and officials beaming

with satisfaction that everything was going their way.

Then there was a sudden turn of events. As the *Pennsylvania Special* approached Mansfield, Ohio, the locomotive's tender developed a hotbox and the train came to a grinding halt next to a cornfield. Crickets chirped in the warm night air as the crew frantically tried to cool the overheated journal. All the time the train had gained ahead of the already fast schedule was quickly lost. Railroad officials paced frantically, trying to figure out a solution to the predicament that was putting the reputation of the entire Pennsylvania Railroad on the line.

A solution was found in a rambling and tattered old switch engine that was pulled off a local freight train. This lowly pedigree of an engine was coupled to the Pennsy's finest and charged with the task of hauling the deluxe express into Crestline, Ohio, where locomotive No. 7002 waited to take charge. The ragged old switcher had never been pushed so hard in its life, but it entered Crestline 21 minutes later with the elegant rake trailing behind it.

All polished and steamed up for the task that lay ahead, locomotive No. 7002 was hurriedly coupled to the *Special*. The train departed Crestline 25 minutes behind the advertised schedule. Engineer Jerry McCarthy and fireman E. H. Tourgee were charged with the daunting task of making up as much time as possible. Tourgee fed coal to the engine's firebox with a machine-like pace while McCarthy pushed the engine to the absolute maximum. The engine's 80-inch drivers rolled over the rails at a pace that had never before been witnessed.


Company officials with synchronized stop-watches monitored the train's progress as it streaked past each tower and station along the line. The train flew by AY tower, appearing only as a blur of steam and smoke speeding toward Elida, Ohio, 3 miles down the line. As the train whirled by Elida, the officials checked their watches. The train had covered the 3 miles between AY tower and Elida in 85 seconds. After some quick calculating, the officials stared at each other in disbelief. The *Special* had traveled at an astonishing speed of 127.1 miles per hour between the two points.

Like the record established earlier by the New York Central's No. 999, skeptics and doubters were



dubious about the accuracy of the run. The timing, however, seemed to be verified by the train-sheet records, thanks to a telegraph line that had been left open all along the line to track the trains' progress. As the train approached each station or tower, the operator telegraphed the division headquarters that the train was approaching. All times were recorded utilizing the master clock in the office of the chief dispatcher. At the exact moment the tail car passed, the operator signaled "Now!" The timing established a new world speed record for steam-powered locomotion that would not be broken in the near future.

Dawn was just breaking over Fort Wayne, Indiana, as the now tardy express train rolled to a stop. McCarthy had made up 17 of the 25 lost min-



High Grade Service

Above is a reproduction of a photograph of the "Pennsylvania Special," the 18-hour over-night express en route from New York to Chicago.


It partially depicts the high standard of Pennsylvania Railroad service between New York, and the great cities of the country.

The multiple-track roadbed is a model of rock-ballasted, dent-free construction, and is as smooth and well protected as science and skill can make it.

The train is selected from "new catches" in observation placards, electric lighting and completeness and conveniently appointed. Safety, Comfort and Speed in admirable degree are the prominent characteristics of this service.

When you ride on a Pennsylvania Railroad train you know that you are getting the best the world affords.

For time of train, tickets, Pullman reservations and any information, apply to nearest Pennsylvania Ticket Agent.



PENNSYLVANIA RAILROAD



Look out for the 20th Century Limited!

Rooster's personal train is the "20th Century Limited," the train that, in practice, is a single track, to cover the one thousand miles of distance between Chicago and New York, leaving after the famous City of Rome and starting for the business day train.

Even the key to the picture has caught the spirit which the "Capital Service of the Lakes Shore-New York Central!"

and, across among its stations and which the "20th Century Limited" so truly exemplify. The Lakes Shore is the most modern and the service from its history, and the "20th Century Limited" is the finest service of American passenger train service.

Chicago-New York—18 Hours.

For copy of "Book of Tables" and information about your travel routes, address, undelivered, Printed by The New York Central, 1920. (Small) Printed by The New York Central, 1920.

LEFT: 1912; RIGHT: 1905

utes. Locomotive No. 7003 coupled on for the last lap into Chicago under the charge of W. H. Gates with J. E. Hoog firing the engine. Gates made up the 8 minutes and more: the celebrated train entered the Chicago terminal at 8:52 a.m., a full 3 minutes ahead of schedule!

The New York Central immediately went to work to close the gap. On June 12, a special "inspection train" consisting of a locomotive and three cars set out from Buffalo for Chicago. Including a 10-minute stop in Cleveland, the train covered 526 miles in 470 minutes. A week later, the New York Central announced that the New York–Chicago schedule of the *20th Century Limited* would be cut to 18 hours, matching the *Pennsylvania Special*. The company emphatically pointed out that this was accomplished by simply applying the 14-year-old schedule that had been held by its *Empire State Express* between New York City and Buffalo across the entire route from Gotham to the Windy City.

The first 18-hour trip of the westbound *20th Century Limited* was completed successfully on June

18. One newspaper even suggested, with tongue in cheek, that Chicago was to become a new suburb of New York.

Then on June 21, on only the fourth 18-hour trip from Chicago, the eastbound *Century* ran into an open switch at Mentor, Ohio. Twenty-one people, including train crewmembers, were killed. An investigation later showed that the switch may have been tampered with by a disgruntled tramp who had been put off a freight train. The Central announced almost immediately that the *Century* would permanently return to the previous 20-hour schedule. The Pennsy, however, expressed confidence that their 18-hour schedule could be maintained safely and stressed this in advertising. On June 26, the Central reversed its decision and announced that the 18-hour schedule would be resumed and could be done so safely.

In 1910 the Pennsy dealt another blow to the New York Central by opening its own large station in central Manhattan. Until then passengers embarked or disembarked at Jersey City, New Jersey, and transferred to Manhattan by ferry. Railway access to

the new station was achieved by tunneling under the Hudson River. New York City's smoke-abatement laws necessitated the use of electric locomotives through the tunnels, and passenger train consists were turned over to electric locomotives on the New Jersey side at a point that became known as the Manhattan Transfer. Pennsylvania Station, or Penn Station as it became known, was considered by many to be one of America's most beautiful terminals.

On November 24, 1912, the *Pennsylvania Special* was renamed the *Broadway Limited* to eliminate confusion with the *Pennsylvania Limited*. The name originally referred to the broad six-track main line between Jersey City and Philadelphia, not the famous boulevard in New York City as many have supposed.

In 1914 the Pennsy introduced a new Pacific-class passenger locomotive designated the K4s class. The new design was developed and tested at the line's Altoona locomotive shops. The design was so successful that 425 were built in different variations through 1928, and many remained in service after World War II. New all-steel passenger equipment was also put into service during this period, and telephone service was offered at Chicago and New York from the observation cars before departure. The *Broadway Limited* even had its own number listed in the telephone directories for the two cities. The United States Railway Administration discontinued the train during World War I, but service was resumed with the cessation of hostilities.

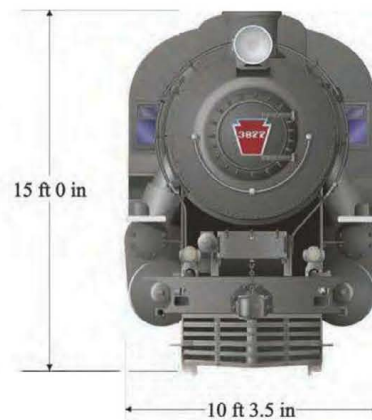
For many years the two great trains that shared almost identical departure times from Chicago put on one of the best shows on the rails. Both lines shared use of Englewood Station in the southern suburbs of Chicago to board passengers for New York. After leaving Englewood, the lines of the two competitors paralleled each other for a number of miles through the Indiana countryside. The great race between the *Century* and the *Broadway* was witnessed by passengers with all the excitement typically reserved for a horse race.

The Pennsylvania Railroad's K4s 4-6-2 Pacific locomotives were among the most famous and successful examples of that type. Four hundred twenty-five were built, and they were the mainstay of the railroad's nonelectrified passenger operations through World War II. Many remained in operation into the 1950s. The first K4s—No. 1737—was built at the Pennsylvania's Juniata Shops in June 1914. Seventy-five were built by Baldwin Locomotive Works, beginning with No. 5400. The last examples were constructed in 1928.

The Pennsy was conservative in the design of its locomotives. When it did adopt new technology, it was engineered to near perfection. The K4s's possessed large boilers but were conservative in that they had low boiler pressure and modest superheating capabilities compared to other locomotives of the time. This reduced required maintenance and, thus, the cost of running the engines. The steep grades of the Allegheny Mountains, coupled with the continual increase in passenger-train tonnage, often required the locomotives to be double- or triple-headed, which was made possible by the economies of operating these locomotives.

Specifications

Built: 1914–1928
 Tractive Effort: 44,460 lb.
 Driving Wheels: 6 @ 80 in. ea.
 Heating Surface: 4,040 sq. ft.
 Boiler Pressure: 205 psi
 Grate Area: 70 sq. ft.
 Superheater: 943 sq. ft.
 Cylinders: 27 in. x 28 in
 Total Weight: 533,000 lb.
 Fuel: 36,000 lb. coal
 Water: 12,000 gal.



CHAPTER THREE

THE NORTH COAST LIMITED

FUNDED BY THE U.S. GOVERNMENT, the Northern Pacific was the first of the northern-tier transcontinental railways completed and the first to offer sleeping and dining cars to the Pacific Northwest. On April 29, 1900, the line inaugurated a premier express named the *North Coast Limited*. The train held to a 62 ½-hour schedule between St. Paul, Minnesota, and Seattle, Washington, and remained in service until Amtrak took over most of the nation's passenger trains on May 1, 1971.

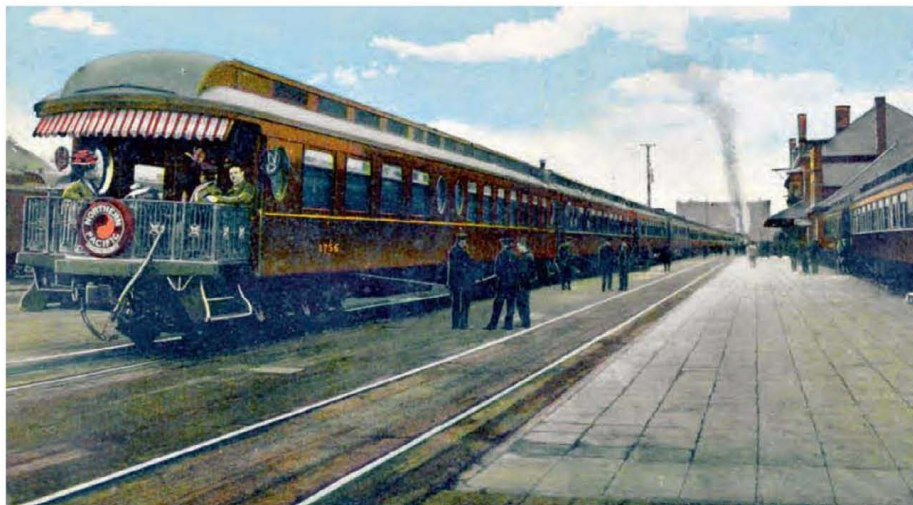


A bustle of activity surrounds a Northern Pacific passenger train as it makes a stop at Glendive, Montana, prior to World War I. The major transcontinental railways were instrumental in the expansion and development of the American West, providing a vital link to the rest of the country. *Author collection*



ABOVE: The 1900 version of the *North Coast Limited* trails behind 4-6-0 Class E5 locomotive No. 300 early in the train's life. No. 300 was built in 1893 by the Schenectady Locomotive Works. *History Images, Portland, Oregon*

ABOVE RIGHT AND RIGHT: Circa 1912. Northern Pacific passenger trains at Spokane, Washington.



CHAPTER FOUR

THE ORIENTAL LIMITED

THE GREAT NORTHERN RAILWAY offered direct competition with the Northern Pacific's *North Coast Limited* when in December 1905 it inaugurated its own deluxe transcontinental express, the *Oriental Limited*. The train held to a 58-hour schedule to cover the 1,829 miles between St. Paul, Minnesota, and Seattle, Washington. The express train connected with the Great Northern's own steamship, the *Minnesota*, which traveled to Japan and China, giving real meaning to the *Oriental Limited* moniker.

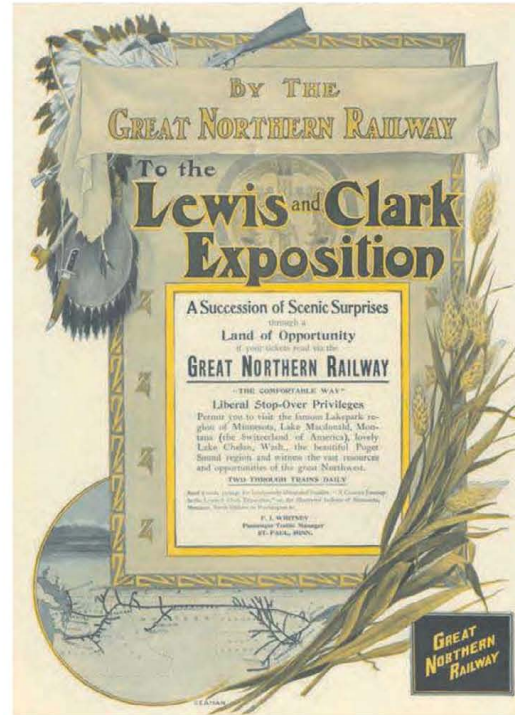
The *Oriental Limited* benefited from the 1909 Seattle World's Fair. In May 1909 the train became a through Chicago-Seattle express via the Burlington Route's Chicago-St. Paul line and held to a 72-hour schedule between Chicago and the Puget Sound.

Sleeping cars on the *Oriental Limited* were originally owned by the Great Northern, but in 1922 Pullman took over ownership and operation and provided new steel equipment.

The new version of the *Oriental Limited* contained barber and valet services for men, and bath, manicurist, and maid services for women. Fresh flowers from the company's own greenhouses were placed in the train's dining car. Afternoon tea was served in the observation lounge, which featured pastries and cakes. The *Oriental Limited* soon gained a reputation as one of the finest trains in the land.

In 1923 the Great Northern purchased 28 P2-class 4-8-2 locomotives from Baldwin to power the refurbished *Oriental Limited*. On June 1, 1924, the schedule was speeded to 68 hours between terminal cities.

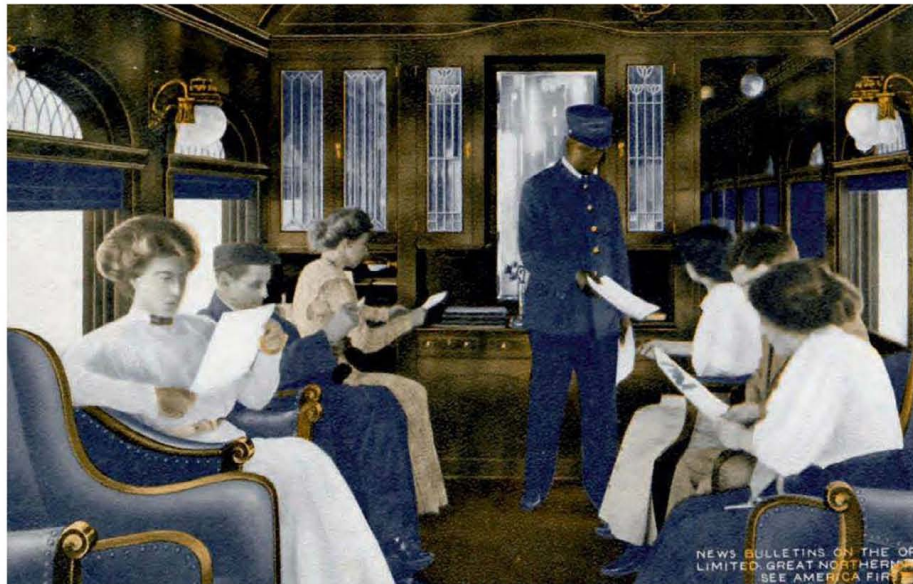
The *Oriental Limited* remained the Great Northern's top train until 1929 when it introduced a new train given the popular nickname of the railroad's founder, James J. Hill: the *Empire Builder*.



1909



The early *Oriental Limited's* observation lounge and platform afforded passengers a spectacular view of the Northern Rocky Mountains.



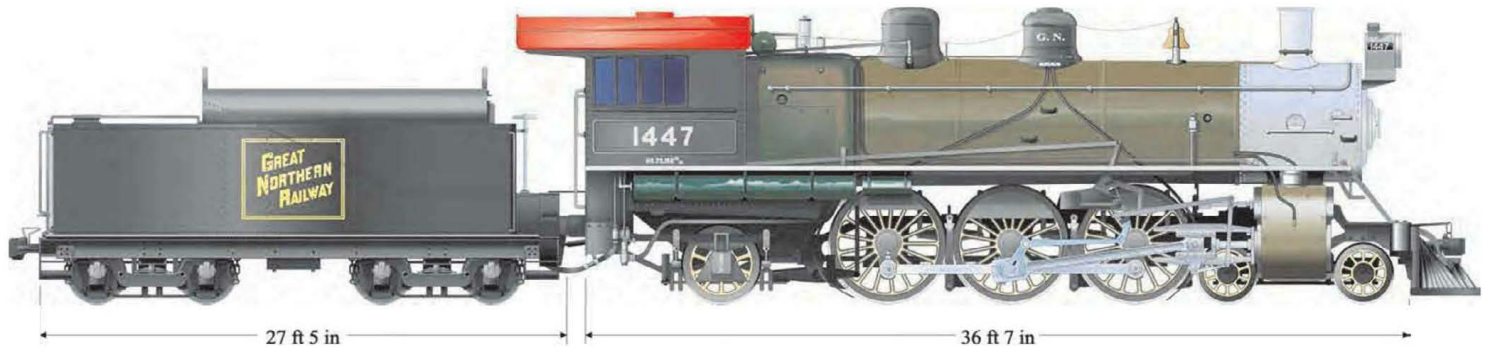
News bulletins are distributed in the lounge of the compartment-lounge-library car on the early version of the *Oriental Limited*.

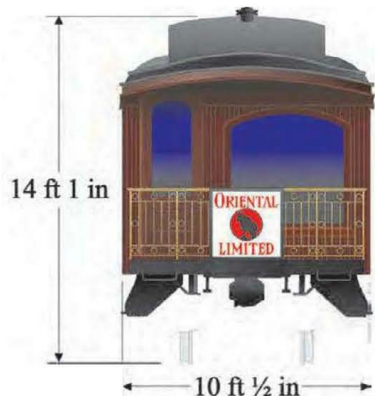
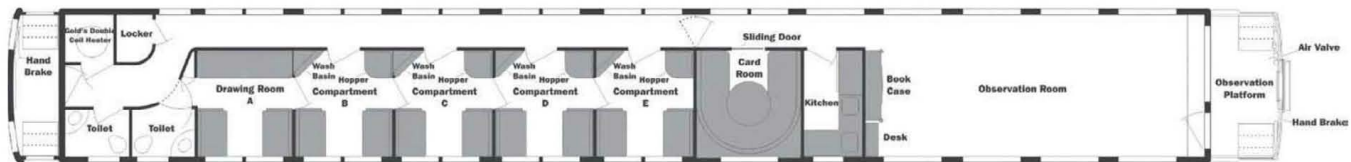


No. 1447 was one of a group of 4-6-2 Pacifics built by Baldwin for the Great Northern Railway in 1909 and designated class H4. With the exception of a Belpaire firebox, the engines were typical examples of the type at the time. Upon delivery, the locomotives were put into service on the line's deluxe St. Paul–Seattle *Oriental Limited* for service to and from the Seattle World's Fair. An additional 25 engines were constructed by the Lima Locomotive Works in 1914.

Specifications

Built: 1909
 Tractive Effort: 35,690 lb.
 Driving Wheels: 6 @ 73 in. ea.
 Steam Pressure: 210 psi
 Cylinders: 23 1/2 in. x 30 in.
 Total Weight: 235,690 lb.





Compartment-observation-library car No. 9007 was representative of cars built by Pullman for the early version of the *Oriental Limited*. The cars contained four compartments, a drawing room, a card room, a buffet, and an observation-lounge-library car. Like all Great Northern sleeping cars of the time, the cars were owned by the Great Northern Railway instead of Pullman.

CHAPTER FIVE

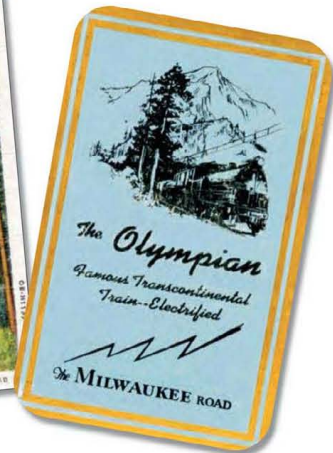
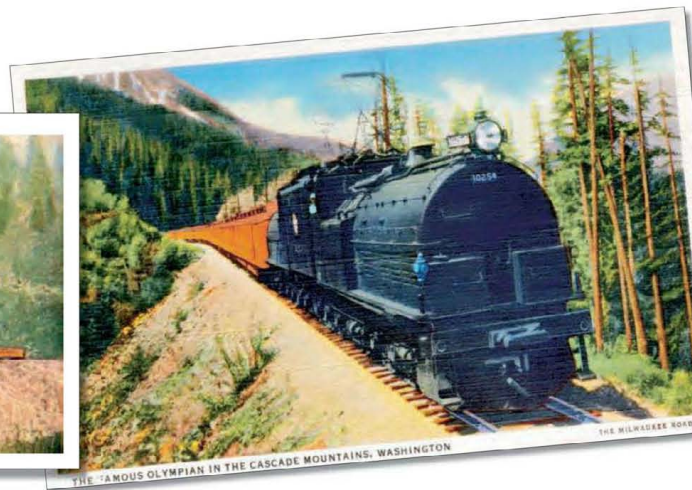
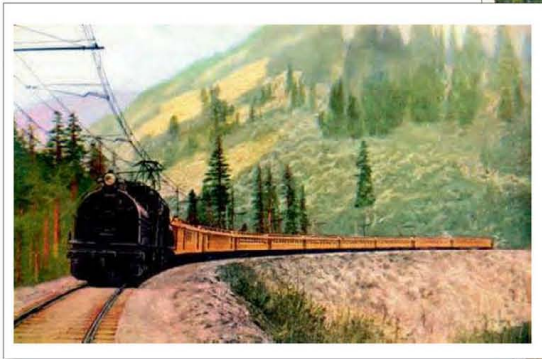
THE OLYMPIAN

THE CHICAGO, MILWAUKEE, ST. Paul & Pacific Railroad, known as the Milwaukee Road, was the last of the transcontinental railways built across the western United States. The railroad's "Pacific Coast Extension" to Tacoma and Seattle, Washington, began operation in 1909, and through passenger service began in 1911. The Milwaukee kept a keen eye on the implementation of a three-phase electrification system installed on competitor Great Northern's 2.63-mile Cascade Tunnel after a number of incidents in which passengers were nearly asphyxiated when trains stalled on the steep grade within that tunnel.

The Milwaukee had a large number of tunnels on its route, particularly in the Bitter Root Mountains, and complaints from passengers and crews about smoke and gas were common. In addition, the Milwaukee did not have a number of coal mines in Idaho and Washington as the Northern Pacific did. Transporting coal over great distances to keep its steam locomotives fueled was an expensive proposition, which resulted in the decision to undertake the largest mainline electrification project in the Western Hemisphere. Early in 1917, electric operation began over the 438 miles between Harlowton, Montana, and Avery, Idaho; by 1919 the 239-mile

distance between Othello and Tacoma, Washington, also began electrified operation.

The Milwaukee's premier transcontinental express, the *Olympian*, began service on May 28, 1911. The train featured drawing room and compartment sleeping cars, tourist sleepers, and high-back-seat coaches. The *Olympian* was electrically lighted throughout and featured vacuum-process cleaning. The train remained the Milwaukee's top train over the route to the Pacific Coast, becoming the *Olympian Hiawatha* when it was modernized in 1947. Passenger service ended on the route on May 24, 1961.



Locomotive No. 10251 was the first of a class of five units engineered and built by the General Electric Company specifically for passenger operations over the Cascade Mountains on the Milwaukee's electrified Othello-Tacoma, Washington, Coast Division. Built to a 1-B-D-D-B-1 configuration, the units were capable of pulling a 960-ton, 12-car train against a grade of 2 percent at 25 miles per hour. They entered service in 1920. Fourteen cars could be hauled if required, but this strained the locomotives' heating system. Their unique design eliminated motor-train gearing and associated equipment by placing the motor armatures directly on the driving axles. This unusual placement required a "bi-polar" or two-field type of motor. The lack of gearing made the locomotives extremely quiet, and the "hum" of the motors became more pronounced when the motors drew more current while traveling upgrade. In 1956 the units were transferred east to haul the *Olympian Hiawatha* over the Rocky Mountain and Missoula divisions between Harlowton, Montana, and Avery, Idaho. The unique locomotives were finally removed from service from 1958 to 1960. No. 10251 is preserved at the Museum of Transport in St. Louis, Missouri.



Specifications

Built: 1919
Driving Axles: 12
Total Weight: 530,000 lb.
Tractive Effort: 42,000 lb. (continuous)
Horsepower: 2,760 hp (continuous)
Maximum Speed: 80 mph



CHAPTER SIX

THE ALTON LIMITED

THE CHICAGO–ST. LOUIS rail corridor was one of the most competitive and lucrative routes in the United States. By the first decade of the twentieth century, the route included four major competitors. It was also, literally, one of the most colorful in an age when most passenger locomotives and cars were painted a somber green, brown, or even black.

The Illinois Central operated its *Daylight Special*, commonly referred to as the “green train,” which was painted black-brown below the pier panels and bright green above. The Wabash ran the crack *Banner Limited*, painted royal blue with gold striping and referred to as the “blue train.” The most famous on the route, however, and the first to paint its cars in bright colors was the *Alton Limited* of the Chicago & Alton Railroad. The maroon and red train, commonly referred to as the “red train,” set a standard of luxury, speed, and comfort that its competitors were forced to match in order to provide credible competition.

The Chicago & Alton is rich in history. In 1858–1859, George Pullman converted coaches Nos. 9 and 19 of Chicago & Alton predecessor Chicago, Alton & St. Louis Railroad into primitive sleeping cars that were among the first in the country. In 1863 he developed a design that would become the first Pullman sleeping car, the *Pioneer*, completing it in 1864 and placing it into service over the Chicago & Alton in 1865. The company was also the first to operate a bona fide restaurant dining car, the *Delmonico*, which Pullman built and put into service in 1868.

The funeral train of assassinated President Abraham Lincoln, the *Lincoln Special*, completed the last 184 miles of its 1,654-mile journey over the C&A, bringing the deceased president to his final resting place in Springfield, Illinois. The train departed Washington, D.C., on April 21, 1865, and carried

Lincoln's body to several memorial functions in cities including Baltimore, New York, Buffalo, Columbus, Indianapolis, and Chicago. At each stop, thousands gathered to pay their respects. On the evening of May 2, the train departed Chicago over the Chicago & Alton bound for Springfield, and on the morning of May 3 it arrived at its final destination.

The Chicago & Alton's top flyers in the late 1890s were the *St. Louis Limited* (Chicago–St. Louis) and the *Chicago Limited* (St. Louis–Chicago), both of which operated on a fast schedule of 7 hours and 53 minutes (1 minute longer northbound). In 1899 the C&A came under the control of the E. H. Harriman syndicate; with that transition a new train, the *Alton Limited*, was built to become the line's premier passenger express.

The *Alton Limited* featured fully enclosed vestibules and anti-telescoping devices, and all revenue cars were electrically lighted throughout. The cars also featured large rectangular windows with curved, leaded glass panels above them. Most notable, perhaps, was the brightly colored paint scheme that was applied to the train and that established the C&A (later Alton, then Gulf, Mobile & Ohio) passenger livery that lasted right up to the Amtrak era. Each car was painted dark red below the pier panels. The pier panels themselves were a brighter red, and the letter boards were a shade between the two. The railroad's name was spelled out in gold extended lettering across the letter boards, and the name of each car (the cars possessed numbers, but they weren't displayed on the cars) was centered below the pier panels, accentuated by gold striping. The underframe and trucks were painted olive green.

On November 9, 1899, two new *Alton Limited* trains left from both Chicago and St. Louis terminals and covered the 284-mile route with the same

timings as those previously carded by the *Chicago Limited* and *St. Louis Limited*. The “Handsome Train in the World,” as the C&A promoted the *Alton Limited*, became the most popular and preferred train over the route and the standard to which all competitive trains were compared.

With the arrival of the 1920s, the wooden cars constructed for the *Alton Limited* in 1899 and 1905, elaborate as they were in their day, had become worn and out-of-date. The introduction of all-steel passenger cars in the period before World War I had rendered the wooden cars constructed prior to that obsolete. Advancements such as steel axles and roller bearings, along with electric lighting, made the steel cars safer to operate and more comfortable for passengers.

Competitor Wabash began introducing steel cars in its trains just prior to the Great War, and by the early 1920s both the Illinois Central and the Chicago & Eastern Illinois were operating all-steel cars as well. With the exception of a couple all-steel dining cars provided by Harriman's Union Pacific in 1914, the *Alton Limited* was still using the wooden cars constructed for the original train.

The Chicago & Alton fell into receivership in 1922. Passenger business, however, still thrived on the Chicago–St. Louis corridor, and the line continued to hold more than 50 percent share of the total passenger trade between those cities. The financially ailing company realized that in order to maintain its preeminent position, it had to acquire modern equipment. After months of development and design work, an order was placed with Pullman Car & Manufacturing to construct a new *Alton Limited*. The train cost a then staggering \$1 million, each car averaging \$56,000 in an era when \$50,000 purchased the most elaborate and expensive cars available. Special financ-

ing was arranged to pay for the new equipment, as the line was financially bankrupt with little or no credit. With the new train, the C&A again set the gold standard that its competitors would have to attempt to match.

A 1924 booklet issued by the C&A to promote the new train read, "There is no better train on any railway. There is no passenger train affording service between Chicago and St. Louis on a better schedule. Further; there is no train on any railway affording so many new and distinctive features of travel luxury."

The car interiors were finished in fine South

American rosewood. The dining car contained silver candelabra deck chandeliers and had a refrigerated cigar humidor. Telephone service was available at station stops along the way. The cars that stood out the most were the parlor-observation cars, which featured a women's lounge that included a Japanese tearoom in which afternoon tea was served by Japanese hostesses clad in kimonos. At 90 feet in overall length, the *Alton Limited's* observation cars were the longest cars constructed by Pullman to that date. Two consisters were built, each containing a postal-RPO car; a baggage-smoking car; two coaches; a 36-seat dining

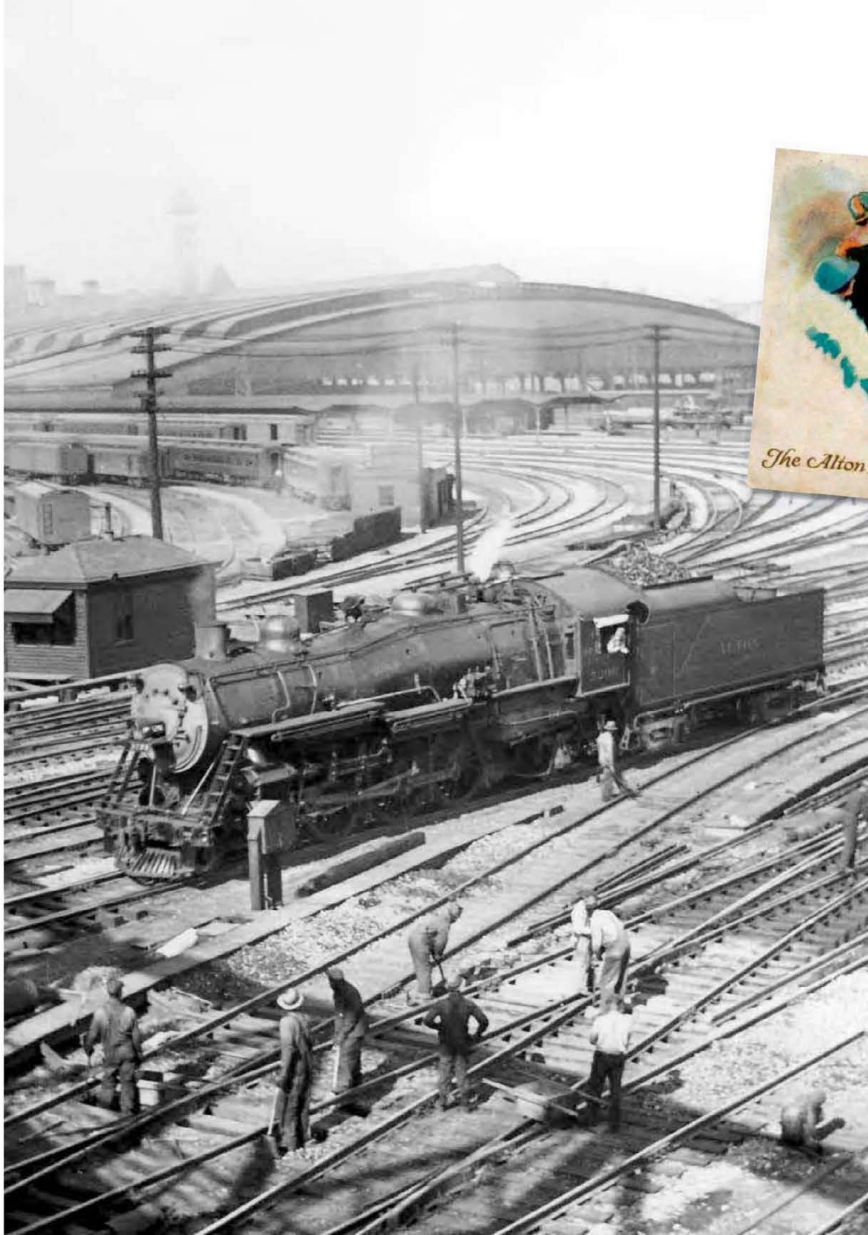
car; three parlor cars; and a parlor-observation car.

The grandiose new express train also reduced its running time to 6 ½ hours, cutting 1 ¼ hours off the fastest previous schedules and forcing both the Wabash's *Banner Limited* and the Illinois Central's *Daylight Special* to match the new *Alton Limited's* schedule.

The Alton Limited flourished through the 1920s even as the Chicago & Alton struggled to emerge from bankruptcy. Finally, in 1931, the C&A came under the control of the Baltimore & Ohio, which renamed the company the Alton Railroad.



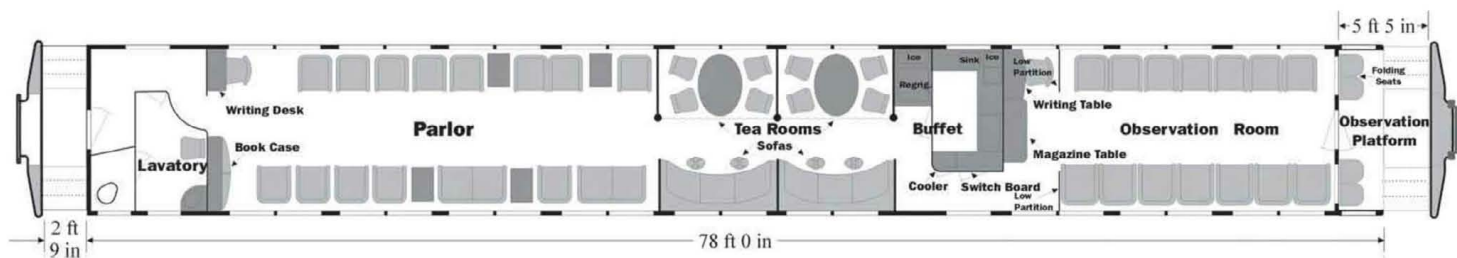
Led by a heavy Pacific, the *Alton Limited* approaches Joliet, Illinois, in June 1932. Between 1935 and 1938, six of these locomotives were modernized and designated Class P-16. These were the heaviest Pacifics on the Alton. In their prime the boilers, cylinder jackets, and tenders were painted maroon with gold striping. *DeGoyler Library, Southern Methodist University, Dallas, Texas, Ag1982.0231*



LEFT: Alton P-16A No. 5296, a 4-6-2, passes track workers as it backs to its waiting train, which lies under the immense train shed of St. Louis Union Station in 1941. *Gordon C. Bassett collection*

ABOVE: Tearoom menu

Parlor-observation car *Chicago* and sister car *St. Louis* truncated the Chicago & Alton's famous *Alton Limited* of 1924. The "red train," as it was known, lived up to its name with its two-tone livery with gold stripes. The roof was painted silver, and the trucks and undercarriage were black. The line's emphasis on appealing to female passengers was manifested with two Japanese tearooms in which afternoon tea was served from the adjacent buffet. Two half-moon sofas in Venetian blue velvet were provided, along with smoking stands exclusively for the use of female smokers. A large women's lavatory and salon were provided at the head end. The observation-lounge featured chairs upholstered in green velvet and a writing desk with a telephone for use en route. Unlike previous equipment used on the train, the 1924 equipment was owned by the Chicago & Alton and not Pullman, accounting for the C&A initials in gold at each end of the cars.



CHAPTER SEVEN

THE CRESCENT LIMITED

THE *CRESCENT LIMITED* began as Nos. 37 and 38, the *Washington & Southwestern Vestibuled Limited* of the Richmond & Danville Railroad, which ran between Washington, D.C., and Atlanta, Georgia. As its name suggested, the train featured all vestibuled cars. These were built by the Pullman Palace Car Company, and the train was one of the first all-Pullman trains operated in the South. The train made its inaugural run in January 1891 and operated on a 20-hour schedule between its terminal cities. It was one of the most luxurious express trains to operate in the United States at the time. In 1894, the Richmond & Danville was incorporated into the

Southern Railway and the train became the Southern's flagship luxury express.

On April 26, 1925, a new extra-fare Pullman express took Nos. 37 and 38 and made its first run between New Orleans and New York. The train operated over a consortium of railways made up of the Louisville & Nashville, the West Point Route, the Southern Railway, and the Pennsylvania Railroad. The train was named the *Crescent Limited* to honor the "Crescent City" of New Orleans that it served. Five new consists, including locomotives, were built for the train and each included a club car, a dining car, and an elaborate observation car devoted to the

patrons of the new Pullman sleeping cars.

In 1925 Southern president Fairfax Harrison visited his railroad's namesake in England and was impressed by its green livery, which adorned both locomotives as well as cars. It was decided that the new *Crescent Limited* would wear a similar livery of "Virginia green" and a lighter sylvan green. The *Crescent Limited* became not only one of the most luxurious express trains operating in the United States, but one of the most colorful.

In 1938 the train was rechristened the *Crescent*. The Southern continued to operate its most famous train until 1978.



Southern Railway 4-6-2 Pacific No. 1394 heads the nine cars of the *Crescent Limited* at Spartanburg, South Carolina, on August 5, 1932. *Otto Perry, Denver Public Library, Western History Collection, Neg. OP-15261*



1906



1898



1900



A posed scene that would be repeated numerous times through the years depicts the triple-crossing of three great railroads in Richmond, Virginia. This postcard from shortly after the turn of the twentieth century shows trains (top to bottom) of the Chesapeake & Ohio, Seaboard Air Line, and Southern Railway.

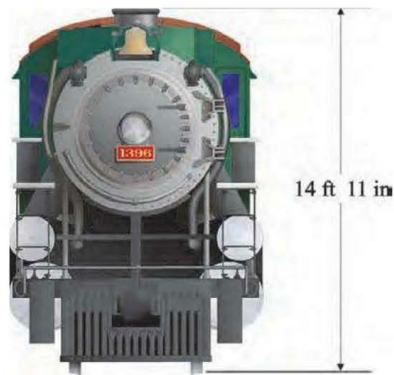


ABOVE: Southern Railway's Class Ps4 Pacific locomotives were based on the "heavy" 4-6-2 design developed by the United States Railroad Administration during World War I. The first batch of 36 were built by the American Locomotive Company in 1923 and delivered in basic black. In 1925 Southern president Fairfax Harrison visited the Southern Railway in England and returned highly impressed by the English line's green locomotives. He decided that his line's Ps4s should be painted similarly and chose a brighter shade of green adorned with gold lettering and striping.

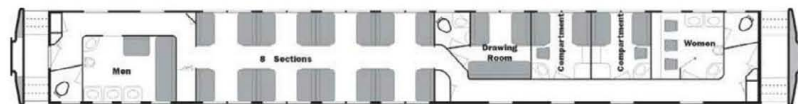
The later engines possessed Elesco feedwater heaters, except No. 1409, which had a Coffin heater and later a Worthington SA heater. Nos. 1394, 1395, and 1396 were painted in a special scheme with the deluxe Washington, D.C.–New Orleans train name, the *Crescent Limited*, spelled out across the tender (the letter *C* was formed by a stylized crescent). A crescent and stars also graced the locomotive cab and cylinder jackets. Many consider the Ps4s the most beautiful examples of the Pacific type ever built. Today, No. 1401 is preserved at the Smithsonian in Washington, D.C.

Specifications

Built: 1923–1928
 Tractive Effort: 47,500 lb.
 Driving Wheels:
 6 @ 73 in. ea.
 Heating Surface:
 3,689 sq. ft.
 Boiler Pressure: 200 psi
 Grate Area: 70.5 sq. ft.
 Superheater: 993 sq. ft.
 Cylinders: 27 in. x 28 in.
 Total Weight: 562,000 lb.
 Fuel: 32,000 lb. coal
 Water: 11,600 gal.



BELOW: Built in 1929 by Pullman, the *William Rufus King* was one of a group of cars expressly built to equip the *Crescent Limited*. The car contained eight sections, one drawing room, and two compartments and was named in honor of the thirteenth vice president, who also served as a U.S. representative from North Carolina and as a U.S. Senator from Alabama. The car was one of a group of 35 Pullman cars painted in Virginia green contrasted with a lighter shade and with gold lettering to match the green Ps4 locomotives.




SHORTEST AND QUICKEST ROUTE SOUTH

TRAVEL IN COMFORT

TO FLORIDA

Your Rest is Unbroken on the Smooth Rock Ballasted roadway — No Change of Cars

Your Meals à La Carte are not Surpassed in the best Hotels — Finest Natural Scenery in America



VIA **QUEEN & CRESCENT ROUTE AND SOUTHERN RAILWAY**

DOUBLE DAILY SERVICE
 24-HOUR SCHEDULES BETWEEN CINCINNATI, LOUISVILLE, JACKSONVILLE AND NEW ORLEANS

W. J. MURPHY W. C. RINEARSON
 GENERAL MANAGER GENERAL PASSENGER AGENT

1903

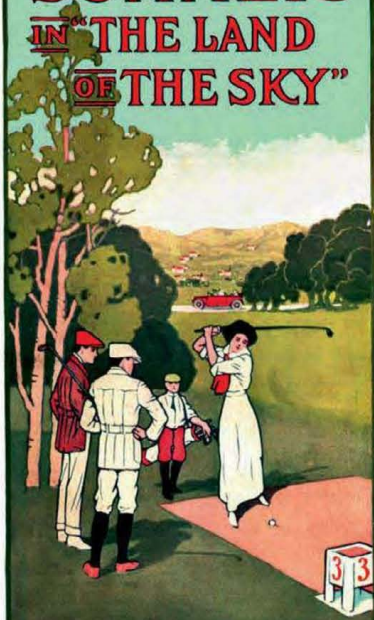
COOL PLACES IN SUMMERTIME



RESORTS ALONG THE SOUTHERN RAILWAY
 PREMIER CARRIER OF THE SOUTH

ABOVE AND RIGHT: 1914

SUMMER IN "THE LAND OF THE SKY"



RESORTS ALONG THE SOUTHERN RAILWAY
 PREMIER CARRIER OF THE SOUTH

CHAPTER EIGHT

THE EMPIRE BUILDER

THE GREAT NORTHERN'S PREMIER *Oriental Limited* was completely refurbished in 1924, and in 1929 the railway placed into service a new train possessing the popular nickname of the line's founder, James J. Hill, who was often referred to as the "Empire Builder." Hill built a railroad that traversed the most northern expanses of the United States. Despite initially being labeled "Hill's Folly" by his detractors, the Great Northern became a great success.

The new train named the *Empire Builder* was launched on June 10, 1929, between Chicago and Tacoma–Seattle, Washington. The train's name adorned each car, spelled out in extended lettering. The *Empire Builder* became the premier train on the line, with the *Oriental Limited* assuming a secondary role. New Pullman equipment was put into service on the train, including new 36-seat dining cars where a steak dinner could be had for \$1.25. The most elegant cars on the train were the solarium-observation lounge cars. Besides offering a view of the beautiful scenery from the solarium, the cars had a radio and featured four o'clock tea served in the lounge from the car's buffet. The luxurious cars also featured a barbershop and men's and women's showers. Stock reports were distributed on a regular basis throughout the journey, which took slightly over 60 hours from Chicago to Tacoma. Today, the *Empire Builder* name continues to operate under the Amtrak banner over much of the train's original route.

LEFT: A period postcard features the interior of the solarium-observation-lounge car on the refurbished *Oriental Limited*.

RIGHT: A period postcard shows the interior of the 36-seat dining car on the refurbished *Oriental Limited*.





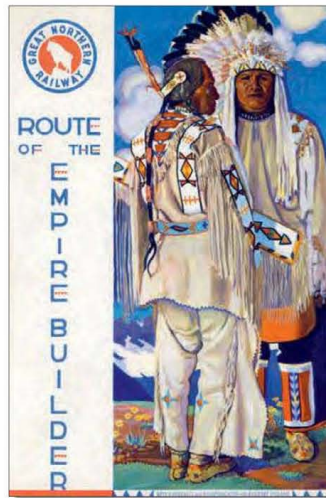
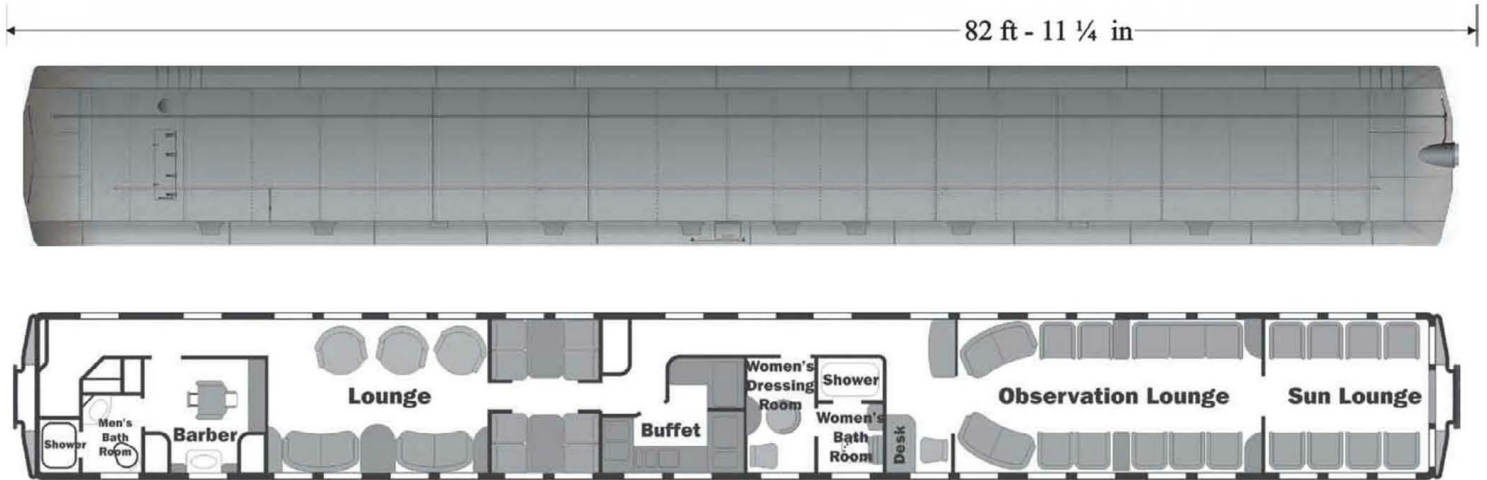
Locomotive No. 2588, a 4-8-4 type, leads train No. 1, the *Empire Builder*, over the Flathead River near Glacier Park, Montana, on August 5, 1938. *Otto Perry, Denver Public Library, Western History, Neg. OP-12053*



82 ft - 11 1/4 in



The James J. Hill was one of seven solarium-observation cars built by Pullman in 1929 to equip the new deluxe express the *Empire Builder*. The car's amenities included a barbershop, men's and women's showers, and a radio. Each car was named after a person instrumental in the building of the Great Northern.



A dinner menu from the *Empire Builder* features the colorful dress of Native Americans.

PART TWO



1930s



CHAPTER NINE

THE M-10000 AND THE ZEPHYR

A REVOLUTION OCCURRED IN 1933. It was one that will not be recorded in most history books, but one that nonetheless changed the face of modern society. As depression affected the nation's economy with no relief, the nation's railways looked for means of cutting operating costs of passenger trains. It has been said that necessity is the mother of invention, and no better example can be made than the development of diesel-powered, lightweight passenger equipment in 1933.

Railway passenger cars had become increasingly elaborate, resulting in a proportional increase in weight. This required the motive power to become more powerful and, accordingly, larger and heavier. The cost of operating and maintaining these steam-powered behemoths was significant. As the nation's economy sank into depression and unemployment hit an all-time high, ridership on the nation's trains decreased. The cost of operating passenger trains was tolerable on longer-distance trains with heavier patronage, but on shorter-length routes with lighter loads the cost of operation was marginal at best. Railways were open to innovative ways to attract passengers.

The management of two of the nation's major passenger carriers, Union Pacific and the Chicago, Burlington & Quincy, recognized the problem. W. A. Harriman, chairman of UP's board of directors, issued a press release on May 23, 1933, stating, "The executive officers of the Union Pacific several months ago reached the conclusion that to save and restore passenger business to the rails would necessitate the development of a radically different type of passenger equipment." The Burlington's president, Ralph Budd, was like-minded and formed a consortium that included the Burlington, General Motors' Electro-Motive Corporation, and the Edward G. Budd Manufacturing Company (no relation) to

develop a solution. Union Pacific turned to Pullman to be its partner along with Electro-Motive.

The results were two trains that possessed similar characteristics but differed in detail. Both emerged as three-unit (including power unit), lightweight, articulated trains powered by 600-horsepower internal combustion engines produced by Electro-Motive's Winton subsidiary. Union Pacific placed an order with Pullman in May 1933 for a three-unit "Streamliner" that was given the designation M-10000. The M-10000 was constructed using aluminum alloy, which allowed the train to weigh one-third as much as a similar train of steel construction without sacrificing structural strength. The Burlington named its train the *Zephyr* after the Greek god of the west wind, Zephyrus; it would become the first diesel-powered streamliner, as the M-10000's locomotive was fueled by distillate (a diesel had been planned but was not ready in time for operation). The Budd Company had developed and patented a shot-welding process for stainless steel, a notoriously difficult-to-work-with material, and covered almost the entire exterior of the *Zephyr* with it.

The M-10000 was delivered on February 12, 1934, and almost immediately set out on a nationwide publicity tour. While in Washington, D.C., the train was inspected by President Franklin Roosevelt, who was even given a brief ride in the new streamliner. Over one million people visited the technological wonder as it toured the country before arriving at the Chicago Century of Progress Exposition where it was displayed along with the new *Zephyr*. Two million additional visitors toured the trains; in an era when confidence in America's engineering and manufacturing abilities were being questioned, the trains pointed to a brighter future for all.

The Burlington placed an order for the three-

unit *Zephyr* in June 1933, and the first test run took place on April 9, 1934. Nine days later, the *Zephyr* began a publicity tour that lasted nearly a month and a half. Then, on May 26, the glittering *Zephyr* set out, after a short delay to repair a motor bearing, on a highly publicized high-speed, nonstop dash from Denver to Chicago. The Burlington had scheduled the trip for a 14-hour timing between terminals, nearly halving the usual 26-hour schedule held by the Burlington's fastest trains. Between Yuma and Wray, Colorado, the *Zephyr* reached a speed of 112 miles per hour and continued to maintain 100 miles per hour for a 19-mile section of the main line. Onlookers lined the main line just to see the flash of silver fly by as it charged across the American heartland.

The *Zephyr* arrived at Halstead Street in Chicago, where a timing tape was placed. The result was even better than the Burlington had hoped for: the train had made the high-speed dash in 13 hours, 4 minutes, 58 seconds, establishing an average speed of 77.61 miles per hour. The stainless-steel wonder had made the trip nonstop, an unthinkable feat for a steam-powered locomotive.

The *Zephyr* was the first of the two streamliners to enter actual revenue service, when on November 11, 1934, the train began operation between Lincoln, Nebraska, and Kansas City, Missouri, via Omaha. The M-10000 began revenue service on January 31, 1935, operating between Kansas City, Missouri, and Salina, Kansas, and was given the name *City of Salina*. On November 11, 1936, two years after it began revenue service, the *Zephyr* was renamed the *Pioneer Zephyr* to eliminate confusion with other *Zephyrs* both planned and active.

The two revolutionary trainsets achieved what the management of both railroads had sought: attracting new customers and significantly reducing operating



Burlington's No. 9900, which became known as the *Pioneer Zephyr*, at Aurora, Illinois, on May 28, 1934. Author collection

costs. Both railroads almost immediately began planning and building similar trains. The subsequent trains became larger and took over a number of long-distance express-train operations. The Burlington built six more "shovel-nose" *Zephyrs* through 1939; Union Pacific constructed six more streamliners through 1936.

The M-10000 would have a short life. It was retired in December 1941, after the distillate engine became deteriorated and it was determined that refitting the train with a new diesel was not cost-effective. Sadly, the train was scrapped in 1942. At the time, aluminum for the war effort took precedence over any preservation considerations.

The *Pioneer Zephyr*, in contrast, was the first and, in fact, would become the last of the shovel-nose *Zephyrs* to operate. It was working as a St. Joseph, Missouri–Lincoln, Nebraska, train when it was finally retired in March 1960. The train was taken to Chicago's Museum of Science and Industry where it can be seen today in all its glory, thanks to a complete restoration in the late 1990s.

The concepts proven by these innovative, experimental trains shocked the traditionally stodgy and conservative American railroad industry out of complacency, and a whole series of streamliners emerged as the 1930s progressed. Probably no other decade witnessed more dramatic change in the history of U.S. passenger railroading.

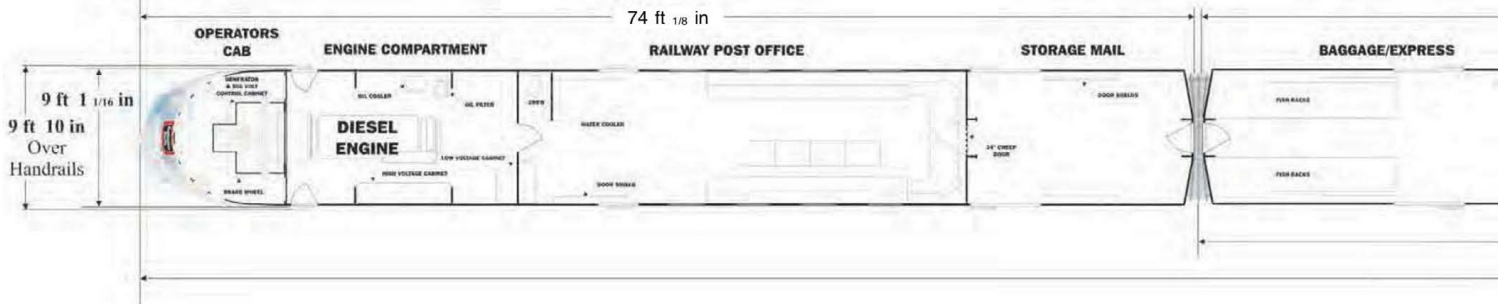


The Chicago–Twin Cities *Twin Zephyr* trains cruise side by side at West Hinsdale, Illinois, in April 1935. These trains were highly similar to the original *Zephyr*. CB&Q photo, author collection

12 ft 1 3/16 in



The Burlington's three-unit lightweight trainset, the *Zephyr*, was built of stainless steel by the Budd Company in Philadelphia, utilizing the shot-welding process developed by Budd. The train weighed 79 1/2 tons total and was powered by a Winton 600-horsepower, two-stroke diesel engine powering a generator that fed two traction motors on the leading truck. The lead car, numbered No. 9900, contained the power unit and a Railway Post Office that included space for mail storage. The second car contained a baggage section, buffet-grill, and seating for 20 passengers. The tail car contained 40 coach seats and a 12-seat observation lounge.



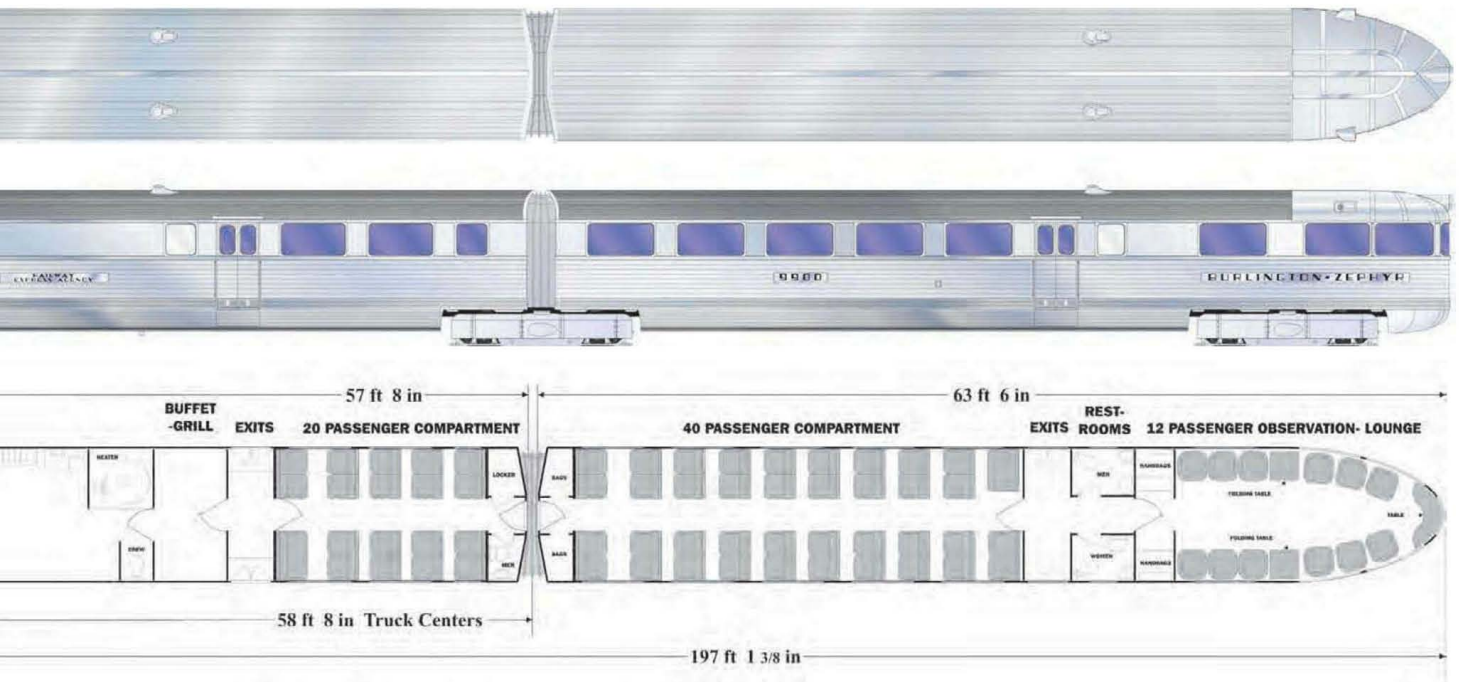
THE DENVER ZEPHYRS

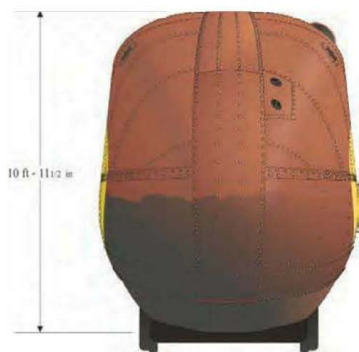
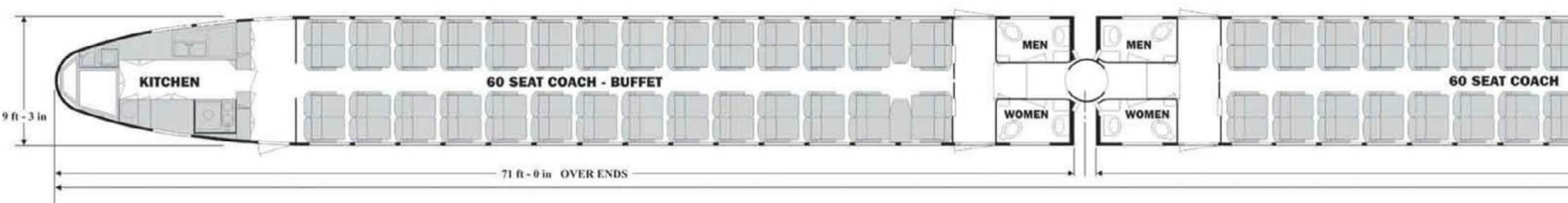
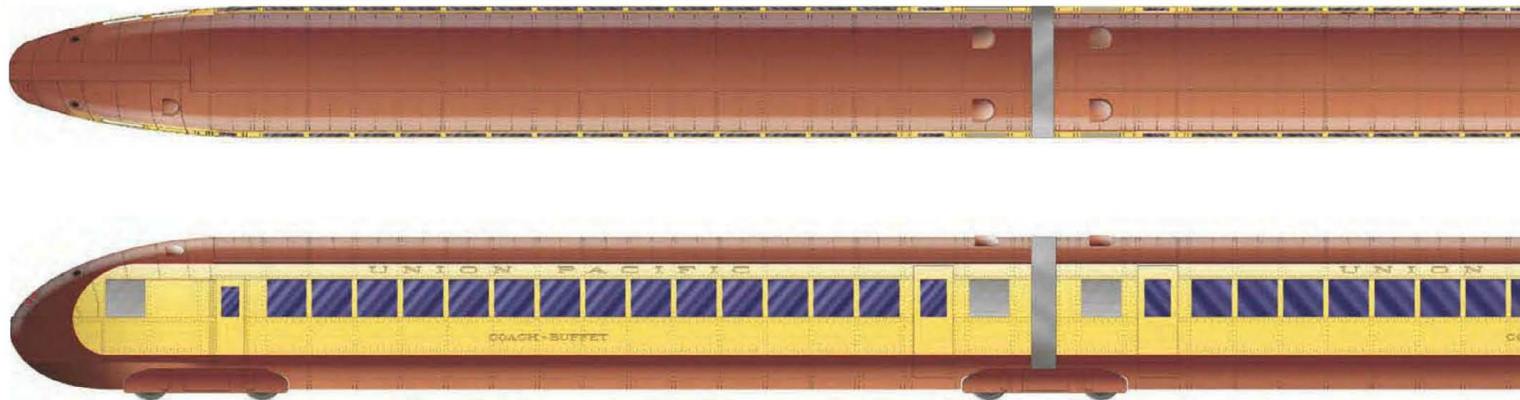
DIESEL POWERED STAINLESS STEEL

OVERNIGHT EVERY NIGHT
between
CHICAGO and DENVER

SCHEDULE

Westbound		Eastbound	
5:30 pm	Lv. Chicago	Ar. Chicago	8:35 am
1:10 am	Ar. Omaha	Lv. Omaha	12:45 am
1:15 am	Lv. Omaha	Ar. Lincoln	12:40 am
2:12 am	Ar. Lincoln	Lv. Lincoln	11:45 pm
8:30 am	Lv. Denver	Ar. Denver	4:00 pm





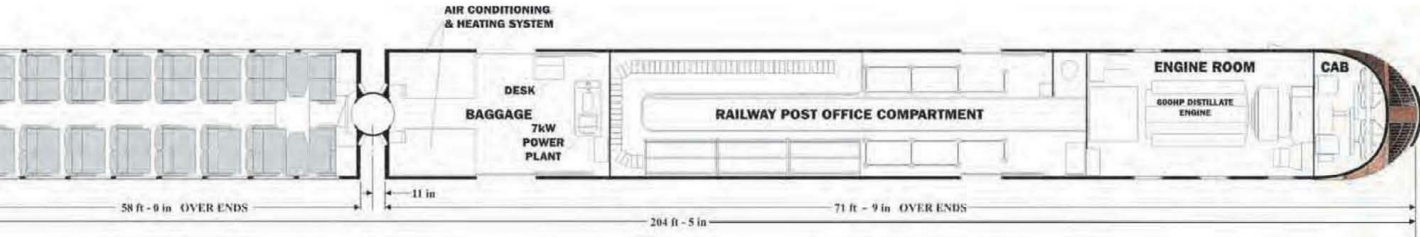
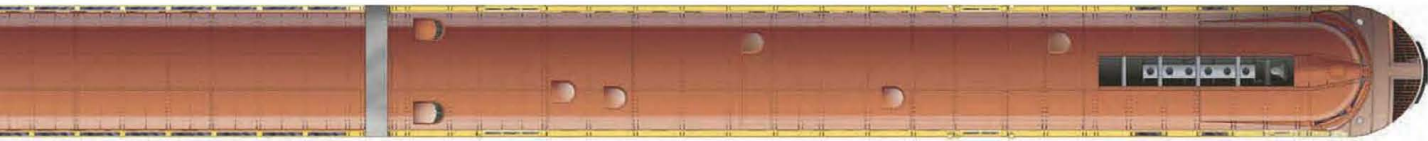
Union Pacific Railroad's M-10000 streamliner trainset was built as an integral, articulated three-car unit consisting of a power-mail-baggage unit, coach, and a coach-buffet. The train was constructed of aluminum alloy by the Pullman Car & Manufacturing Corporation in Chicago; the entire trainset weighed about the same (85 tons) as a single heavyweight passenger car of the time.

Power was provided by the Winton Engine Company of Cleveland, Ohio, a division of General Motors' Electro-Motive Corporation, in the form of a 12-cylinder, 600-horsepower distillate, spark-ignited internal combustion type engine. A diesel engine was in development at the time but was not ready for installation, thus the distinction of the first diesel-powered articulated streamliner trainset fell to the Burlington's *Zephyr*.

The M-10000's streamlined concept came from wind tunnel tests conducted at the University of Michigan. Spaces between

cars were covered with rubber to eliminate wind resistance and noise produced by air turbulence between cars. The lightweight aluminum cars differed from conventional car construction by eliminating an underframe entirely; each car was constructed as a section of structural tubing. Trucks were fabricated from a new COR-TEN steel alloy and incorporated newly developed "decelorometer" brakes to prevent wheel locking and skidding.

Car interiors were designed by Marie Harriman, wife of the chairman of the UP board. They were decorated with an off-white ceiling with increasingly darkening shades of blue toward the floor with each shade separated by aluminum strips. Indirect lighting was used throughout and offered three levels of intensity. Light meals were prepared in a small kitchen installed at the rear of the tail car and served from a rolling cart that contained a steam table to ensure meals were kept hot.

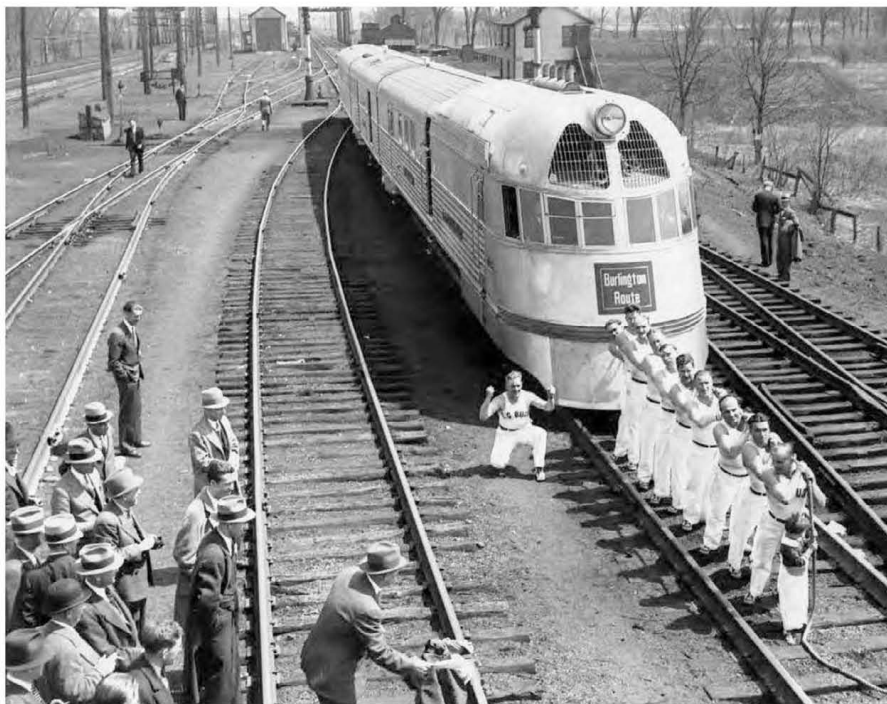


Union Pacific's revolutionary M-10000 was promoted as "Tomorrow's Train Today" when it was introduced in 1933.
Pullman photo, author collection





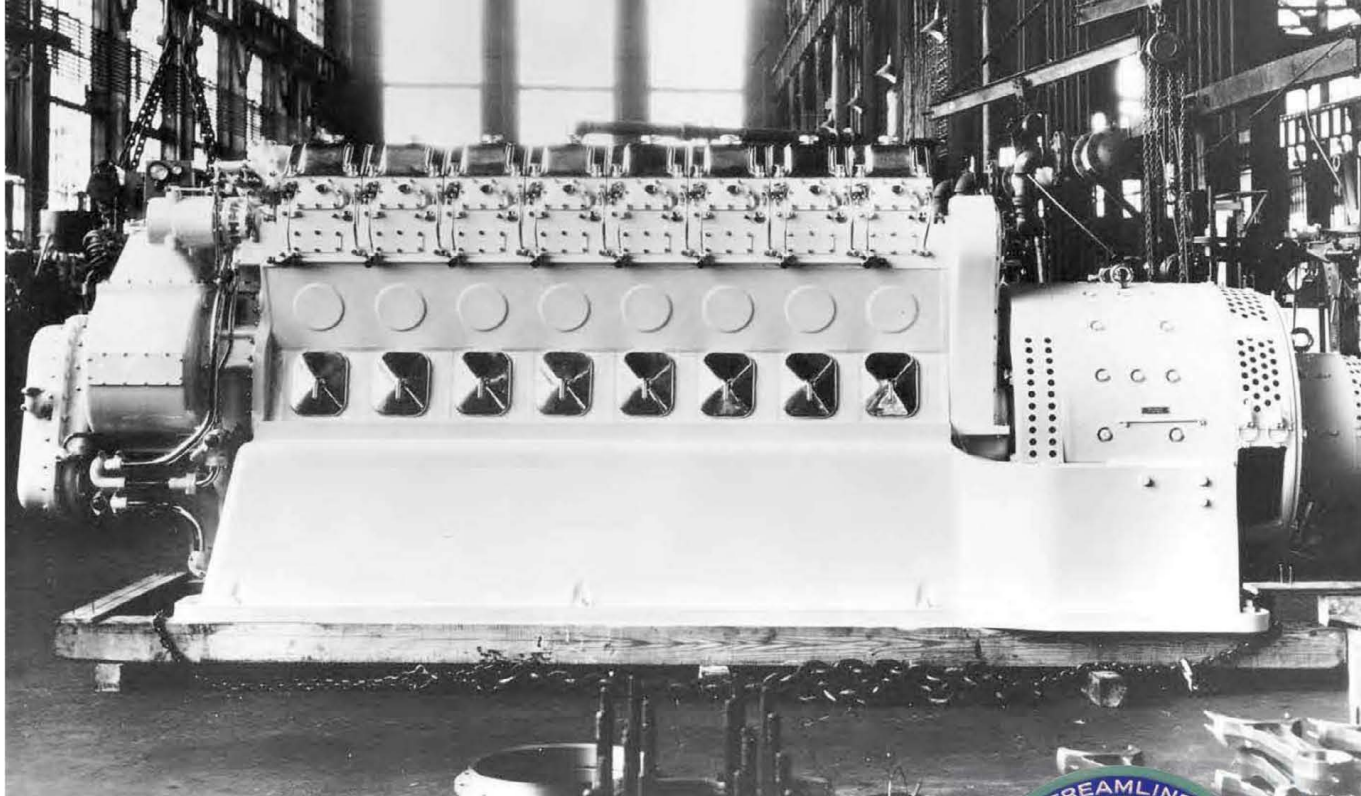
ABOVE: The *Zephyr's* observation-lounge offered a panoramic view. This was in contrast to the tail of Union Pacific's M-10000, whose wasp-like end was completely enclosed by metal and contained a small kitchen. *CB&Q photo, author collection*



LEFT: To demonstrate the light weight of its new diesel-powered, stainless-steel streamliner, a team from the Budd Company pulls the *Zephyr* unassisted at the company's Philadelphia facilities. A short time later, the sparkling train traveled over the Pennsylvania Railroad's main line between Hopewell and Skillman, New Jersey, at a speed of 100 miles per hour on a special test run. *International News Photo, author collection*



The *Pioneer Zephyr* was America's first diesel-powered, stainless-steel streamliner. *CB&Q photo, author collection*



The little engine that could. The Winton 8-201-A in-line eight-cylinder, 600-horsepower diesel engine is shown prior to installation in the *Zephyr*. The engine powered an electrical generator that then powered traction motors located in the power unit's leading truck. This concept eventually revolutionized American railroading and is the basic concept by which diesel-electric locomotives operate on most American trains today. The engine is now displayed at the Smithsonian in Washington, D.C. *CB&Q photo, author collection*



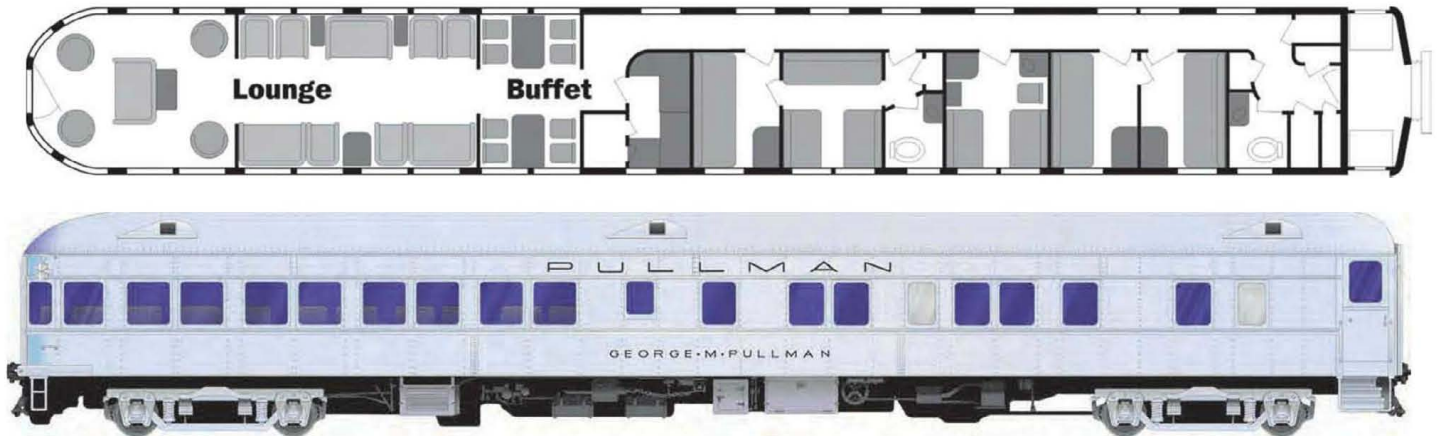
CHAPTER TEN

THE GEORGE M. PULLMAN

THE SLEEPING-LOUNGE-OBSERVATION CAR *George M. Pullman* was a pioneer in that it marked the transition of Pullman's passenger-car design away from heavy-weight and toward lightweight design. Lightweight aluminum was used extensively in the car's construction, and even some of the car's insulation was made from crumpled aluminum foil. Built in 1933, the car was displayed at the Century of Progress Exposition in Chicago. It was truly an innovation at the time, and it helped pave the way for future lightweight passenger-car construction. It saw service as part of the earliest version of the *Super Chief*.



1933



At 96,980 pounds, including air-conditioning equipment, the *George M. Pullman* weighed half that of a standard heavyweight car constructed of steel. The lighter weight allowed it to ride on four-wheel trucks, also fabricated of cast aluminum.

CHAPTER ELEVEN

THE CITY STREAMLINERS

THE SUCCESS AND POPULARITY of the M-10000 prompted Union Pacific to place five additional streamliner trainsets into service in 1935 and 1936. Each contained successively increased motive power and larger consists.



The *Little Nugget* club car, built in 1937 for the City of Los Angeles, was one of the most spectacular and elegant railcars ever built. Red velvet draperies, lace curtains, marble tabletops, and chandeliers made to appear like gas lights all evoked a "Gay Nineties" atmosphere. The car even included a brass-gilded birdcage complete with a mechanical bird that sang! *Author collection*

The streamliner M-10001, the *City of Portland*, rests inside Chicago's North Western Station shortly after entering service. *Author collection*



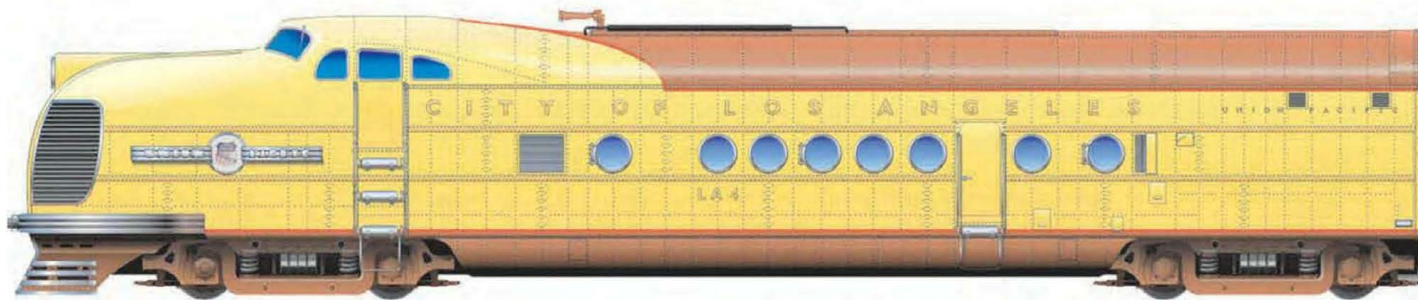
M-10006, the *City of Denver*, glides across the midwestern prairies on its journey between terminal cities in the mid-1930s. *Union Pacific Railroad Museum*



Union Pacific City Streamliners

Train No.	Train name	Date in service	No. of cars
M-10000	<i>City of Salina</i>	April 19, 1934	3
M-10001	<i>City of Portland</i>	June 6, 1935	7
M-10002	<i>City of Los Angeles</i>	May 15, 1936	11
M-10004	<i>City of San Francisco</i>	June 14, 1936	11
M-10005	<i>City of Denver</i>	June 18, 1936	12
M-10006	<i>City of Denver</i>	June 18, 1936	12





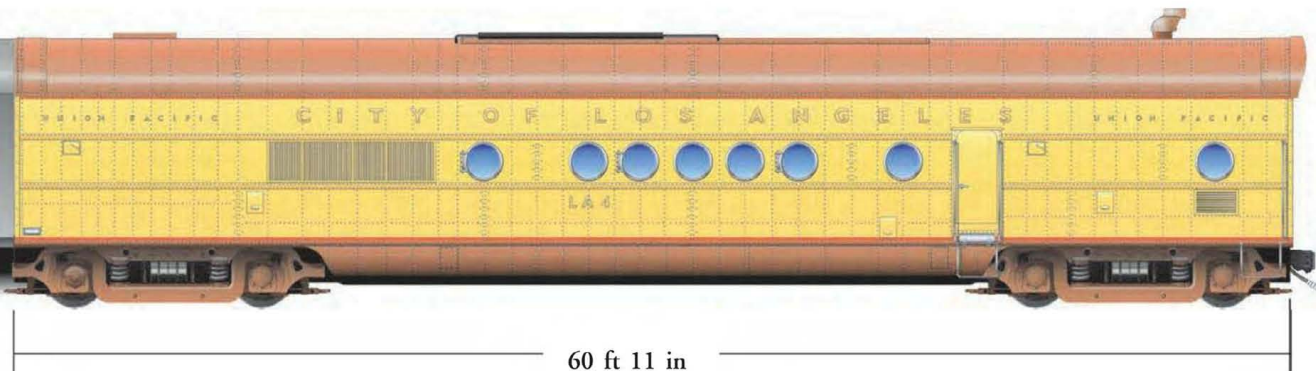
68 ft 3 in



Two of Union Pacific's automotive-grille-nosed, 2,400-horsepower diesel locomotives stand side by side with one of two jointly owned 1,800-horsepower E2A diesels in Chicago's North Western Station. Three 2,400-horsepower units were constructed, each consisting of a 1,200-horsepower cab A unit permanently coupled to a like-powered cabless B unit. These 2,400-horsepower units powered the M-10004 *City of San Francisco* (the power unit for this train was jointly owned by Union Pacific and Southern Pacific), along with the M-10005 and M-10006 *City of Denver* trains.

Two E2 diesel sets were constructed, each operating in an A-B-B configuration and providing 1,800 horsepower per unit. One set was numbered LA-1 for operation on the *City of Los Angeles* and was jointly owned by Union Pacific and Chicago & North Western. The other set was numbered SF-1 (seen in the photo) and served on the *City of San Francisco*. It was jointly owned by Union Pacific, Southern Pacific, and Chicago & North Western. The railroads' heralds were displayed on the nose of the A units, and the train name was emblazoned in gold art deco lettering over a red stylized design on the unit sides.

Author collection



Originally built in June 1936, the A and B diesel units of the M-10004 *City of San Francisco* train are shown after they were rebuilt and transferred to *City of Los Angeles* service in September 1938. The units were renumbered LA-4 and were replaced in June 1939 by new Electro-Motive E3 diesels. The custom chrome-plated Union Pacific logos were taken from one of the original *City of Denver* trains. The units were rebuilt again in September 1939 with the cab A unit transformed into a cabless booster unit. The articulation was also removed at this time, allowing the units to be operated independently. The units then served as booster power for the increasingly heavier *City of Denver* consists.

CHAPTER TWELVE

THE GREEN DIAMOND

THE ILLINOIS CENTRAL became an early player in streamlining its trains by introducing several diesel-powered, lightweight trains prior to World War II. In November 1934 the company placed an order with Pullman-Standard for a five-car, articulated streamlined Chicago–St. Louis train to be called the *Green Diamond*. The train was constructed of a COR-TEN steel frame under a tubular aluminum body. The train was similar to the M-10000, M-10001, and M-10002 trains built for Union Pacific, most notably in the wasp-like end of the diner-lounge car at the end of the consist and the large automotive-style grille at the front of the power car.

The interior of the train was dominated by aluminum, which was used liberally for chair frames,

tables, window and door frames, and decorative moldings. Above the window panels were curved, stylized aluminum strips that originated at the curved interior edge of the forward upper corner of each window pair. Large aluminum strips ran the length of the cars, framing indirect lighting.

The exterior of the train was painted two-tone green. Dark “Cypress Green” was used at the front of the power car and was stepped down and ran the length of the train. Above the dark green, a lighter “Cedar Green” began above the power-car windows and ran the length of the train. Scarlet and silver stripes separated the two shades of green.

The train was delivered on March 27, 1936, at St. Louis and immediately carried out a series of test and promotional runs for the press. The train then

toured the south-central United States; 414,000 people toured the new streamlined wonder. On May 17, 1936, a large crowd gathered at Central Station in Chicago to witness the launch of the train on its first revenue run to St. Louis. The ceremony was broadcast nationwide on the NBC radio network.

The *Green Diamond* operated on a fast 4-hour, 55-minute schedule between the two cities. To some, the train represented the zenith of art deco styling, while others derisively referred to it as the “tomato worm.” The original *Green Diamond* operated on the Chicago–St. Louis route until 1947, when it was transferred south to operate as the Jackson, Mississippi–New Orleans *Miss-Lou*. It was retired in 1950, and unfortunately the unique and innovative trainset was scrapped.

Illinois Central Train No. 50, the *Green Diamond*, glides past the 14th Street coaling tower leaving St. Louis, Missouri, on August 16, 1940. Otto Perry, Denver Public Library, Western History Collection, Neg. OP 12361

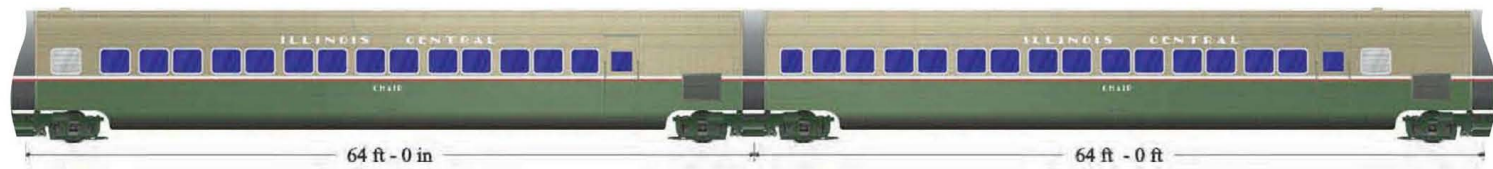
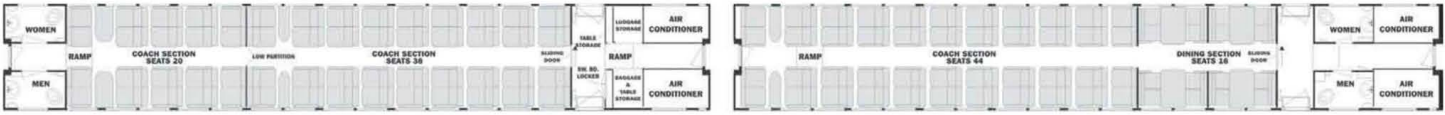
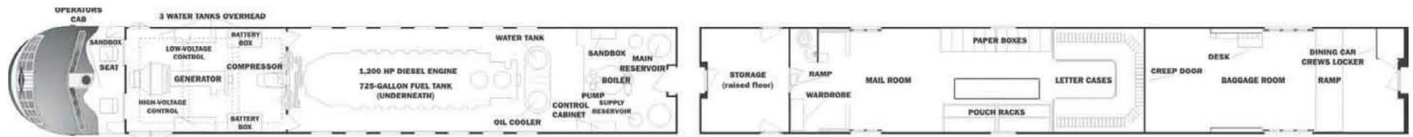


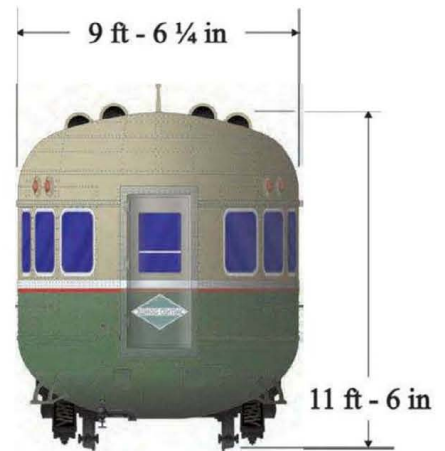
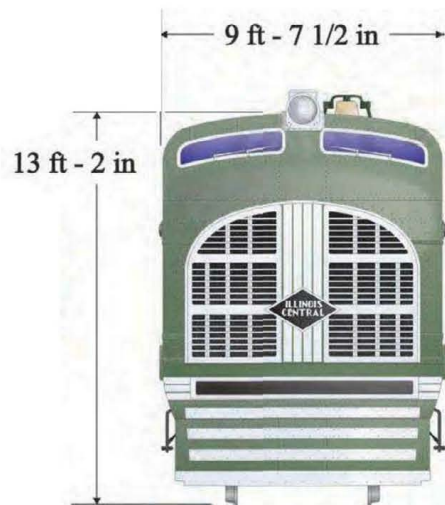
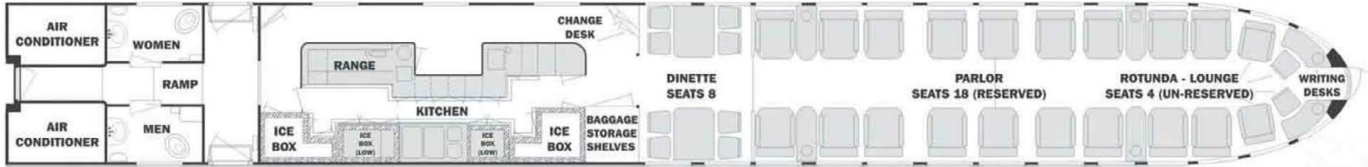


A huge crowd gathers on May 17, 1936, at Central Station in Chicago to witness the launch of the *Green Diamond* on its first revenue run to St. Louis. *Author collection*



ILLINOIS CENTRAL





CHAPTER THIRTEEN

THE ROYAL BLUE, CAPITOL LIMITED, AND ABRAHAM LINCOLN

THE MOVEMENT TOWARD operating lightweight, streamlined trains initiated by the Burlington and Union Pacific was joined by the Baltimore & Ohio when two nonarticulated, lightweight streamlined trainsets were ordered in May 1934 from American Car & Foundry to operate over the B&O's Jersey City, New Jersey–Washington, D.C., route on the line's crack *Royal Blue* service. The new trains began service in summer 1935.

One trainset was constructed of COR-TEN steel, while the other was constructed of aluminum alloy materials. The B&O also constructed two experimental steam locomotives to haul the new streamliners: a 4-4-4 type named *Lady Baltimore* and a 4-6-4 type tagged *Lord Baltimore*.

The B&O acquired the first self-contained, nonarticulated diesel locomotive operated in revenue service in the United States: No. 50. After a time supplementing the *Lord Baltimore* on the Royal Blue, the boxcab diesel was sent to B&O subsidiary the Alton Railroad to power its new Chicago–St. Louis streamliner, the *Abraham Lincoln*. Using B&O equipment, the Alton train was assembled hastily to counter the introduction of Illinois Central's diesel-powered streamliner the *Green Diamond*.

By 1937, rising numbers of complaints about the ride quality of the aluminum *Royal Blue* trainset prompted B&O management to permanently transfer both lightweight trainsets to its Alton subsidiary where they became the *Abraham Lincoln* and *Anne Rutledge*. For a few brief months, the *Abraham Lincoln* was the only streamliner in operation over the lucrative Chicago–St. Louis route, depriving the Illinois Central of the claim that its new *Green Diamond* diesel-powered streamliner was the first to operate over the route.

It was the conviction of B&O president Daniel Willard that nothing could beat the ride quality of a standard heavyweight passenger car, and a study was made to determine the cost of modernizing a number of the railroad's existing heavyweight cars for service on the B&O's premier trains. It was calculated that the standard heavyweight cars could be modernized at a cost ranging from 25 to 50 percent of the cost of acquiring equivalent lightweight streamlined equipment. The modernization included rebuilding the exterior of the cars for a streamlined appearance, including rounded roofs and side skirting similar to that of lightweight cars. In addition, all cars were air-conditioned, something the B&O

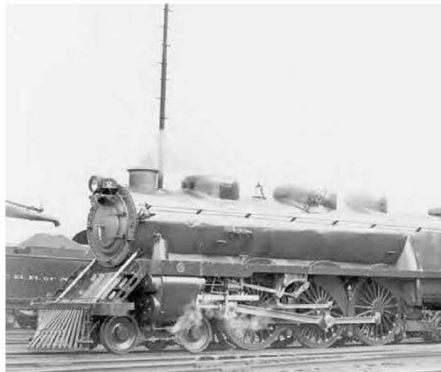
also pioneered when it introduced the first all-air-conditioned train, the *Columbian*, in 1931.

Prominent industrial design consultant Otto Kuhler was commissioned to oversee the project and came up with a new hue of the line's traditional "Royal Blue" to be contrasted with a light gray. This new livery was intended to reflect the geographical location of the road's main lines, many of which were located along the Mason-Dixon Line, thus Union blue and Confederate gray. Kuhler also stream-styled one of the B&O's President-class Pacific locomotives, the bullet-nosed No. 5304.

The new *Royal Blue* was a hit with travelers, and the B&O went on to modernize more cars for its premier New York–Chicago *Capitol Limited*. These cars were coupled behind the line's brand-new EA/EB diesel sets acquired from Electro-Motive Corporation. The EAs and EBs were the first E Series diesel units to emerge from the La Grange, Illinois, Electro-Motive shops (they were built concurrently with 11 similar E1 units ordered by the Santa Fe) and initiated what became one of the most famous passenger diesel types ever built. The *Capitol Limited* became the first diesel-powered streamliner between America's two largest cities. In 1940 the line also modernized its premier New York–St. Louis express, the *National Limited*.



The *Lady Baltimore*, Type 4-4-4, Class J-1, emerged from the B&O's Mount Clare Shops in fall 1934. Like her larger brother, the *Lord Baltimore*, she had 84-inch drivers. She is shown here in service with the *Royal Blue* in the mid-1930s.
Author collection



Baltimore & Ohio No. 2, Class V-2, the *Lord Baltimore* at Communipaw, New Jersey, on July 18, 1935. The Hudson was assigned to the *Royal Blue* at the time. *Theo. A. Gay photograph, author collection*



Lord Baltimore prepares to depart Chicago's Grand Central Station in the late 1930s. The Hudson 4-6-4 was one of the last steam locomotives acquired by the B&O. *Author collection*



B&O No. 5304 was a rebuilt Pacific stream-styled by noted industrial designer Otto Kuhler. It entered service on the *Royal Blue* on December 9, 1937, three months after the train's lightweight cars were replaced by modernized conventional cars, also designed by Kuhler.
Author collection



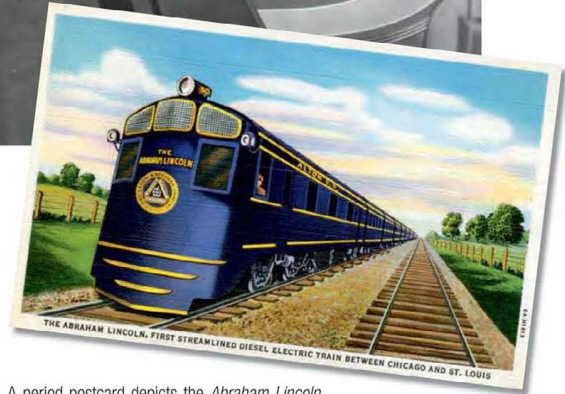
B&O EA diesel unit No. 51 completes its first run from New Jersey into Washington, D.C., on May 25, 1937, alongside the railroad's historic *Tom Thumb* locomotive.
Author collection

EA No. 52 heads out of Chicago with a passenger express in the "as delivered" livery. *Author collection*





Complaints about the ride quality of the aluminum lightweight streamlined passenger set acquired by the B&O for the *Royal Blue* prompted the road to commission prominent industrial designer Otto Kuhler to develop a train consisting of rebuilt conventional heavyweight cars. Sleek, rounded roofs and full side-skirting gave the train a modern “tubular” streamlined appearance. The car interiors were also fully modernized. The dining car presented a pleasant change from the conventional arrangement, with this lounge located in the center of the car. The long side seats were upholstered in buff-colored leather with art deco-styled railings and tables. *Kaufmann & Fabry Co. photo, author collection*



A period postcard depicts the *Abraham Lincoln* behind box-cab diesel unit No. 50.



General Motors' Electro-Motive Corporation built 12 E Series diesel units for the Baltimore & Ohio from May through June 1937: six cab A units (EA Nos. 51–56) and six cabless B units (EB Nos. 51X–56X). The EAs and E1s built concurrently for the Santa Fe were among the first EMC diesel road units possessing the cab-above, rounded nose that became the prominent feature of later E Series units. Both the EAs and E1s differed from later models in that the headlight was inset in the locomotive nose. The EA and EB units were delivered with an all-gray roof. Later units received a black roof.

Each EA unit contained two 12-cylinder Winton 201-A diesel engines that together produced 1,800 horsepower. Each unit rode on two three-axle A-1-A trucks. EA unit No. 52 was later sold to the Alton Railroad and was inherited by the Gulf, Mobile & Ohio when that road purchased the Alton in 1947. It was rebuilt into an E8A unit in 1953. The body of No. 51 now resides at the B&O Railroad Museum in Baltimore, Maryland.

The EA diesel units were originally delivered with a large chrome plate mounted on the nose (see page 64). The plate surrounded the headlight and numberboards and came to a point just below the windows. Problems with reflections in the crew's eyes prompted a revised plate with horizontal lines as shown in this drawing.

CHAPTER FOURTEEN

THE ROCKETS

THE CHICAGO, ROCK ISLAND & Pacific joined the diesel-powered lightweight streamliner movement in 1937 with the introduction of a fleet of trains that it dubbed the *Rockets*. The name dates back to 1852 when the railroad's first train steamed into Joliet, Illinois, behind a 4-4-0 steam locomotive named the *Rocket*.

Four three-car sets, along with two four-car sets, were ordered from the Budd Company. Each three-car set consisted of a baggage-dinette-coach, a 76-seat coach, and a coach-parlor-observation car; each four-car set consisted of a baggage-dinette car, a 60-seat coach, a 76-seat coach, and a parlor-lounge-observation car. The passenger cars were constructed of stainless steel, utilizing Budd's revolutionary shot-weld technology introduced on the Burlington Zephyr in 1933. All of the cars were fully articulated with the exception of the observation cars, which operated as separate entities.

Six TA-class diesel locomotives were built by the Electro-Motive Corporation to power the *Rockets*. Utilizing the round-nose carbody truss construction that Electro-Motive introduced on the E Series that same year, the TAs differed from those units by virtue of B-B trucks versus the E units' C-C configuration. The TAs also possessed a single 1,200-horsepower Winton 201-A V-16 engine, in contrast to the twin V-12 diesel engines used in the E units. The TAs were also shorter than their E unit cousins: 54 feet compared to 70 feet. The *Rockets'* art deco paint and lettering scheme was used for many years, albeit in modified form, as the passenger scheme for the Rock Island.

One of the four-unit trainsets began service as the *Peoria Rocket*, operating between Chicago and Peoria, Illinois. The other four-unit set became the *Des Moines Rocket*, operating between Chicago and Des Moines, Iowa. The three-unit trainsets began

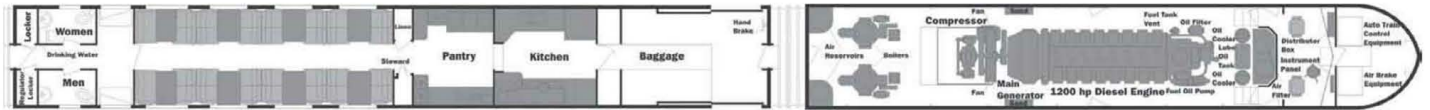
operation as the Fort Worth–Houston, Texas, *Texas Rocket*; the Kansas City, Missouri–Denver, Colorado, *Denver Rocket*; and two Minneapolis, Minnesota–Kansas City, Missouri, *Kansas City Rockets*.

The *Rocket* name became the trademark of the finest trains throughout the Rock Island system.

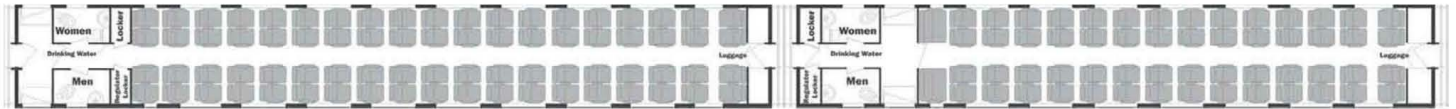
The *Peoria Rocket*, along with the *Quad City Rocket*, continued to operate well past “Amtrak day” in 1971, when both trains joined a small group of passenger trains that continued to operate under private ownership. Both remaining *Rockets* made their last runs on December 31, 1978.



The six TA-class locomotives built by EMC in 1937 to power the Rock Island's *Rocket* trains incorporated the cab above a rounded nose-carbody truss construction introduced that year on Electro-Motive's E units. *EMC photo, author collection*

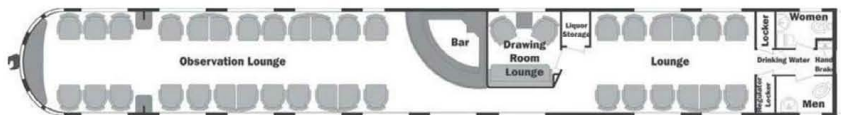


No. 400 *Joliet* baggage-dinette.



No. 300 *La Salle* 76-seat coach





No. 450 *Peoria* parlor-lounge-observation



TA 1200-horsepower locomotive



No. 306 *Ottawa* 60-seat coach

CHAPTER FIFTEEN

THE 20TH CENTURY LIMITED AND THE BROADWAY LIMITED

IN MARCH 1937, the Pennsylvania Railroad and New York Central, along with Pullman-Standard Car Manufacturing Company, issued a joint announcement that the premier trains of both rail lines would be upgraded with new streamlined passenger cars. The Pennsy dubbed its new equipment “The Fleet of Modernism,” while the Central chose “The Great Steel Fleet” as a moniker.

For stylists, each railroad tapped a renowned industrial designer of the day. To design the new trains, the Pennsy brought in Raymond Loewy, who had so successfully styled its GG1 electric locomotives. In 1928 the Pennsy began to electrify its main lines between New York City and Philadelphia south to Washington, D.C., and from Philadelphia west to Harrisburg, Pennsylvania.

The project was completed in the mid-1930s and was the most advanced such electrification of the

time. General Electric, Baldwin, Westinghouse, and the Pennsy’s own Altoona, Pennsylvania, shops constructed 139 of the Loewy-designed locomotives for the new electrification. Designated GG1, they became one of the most successful classes of electrically powered locomotives and symbolic of the Pennsy’s leadership in railway technology. Many remained in service until the Penn-Central merger in 1968; a number operated on New Jersey Transit commuter trains into the 1980s.

For the Fleet of Modernism, Loewy developed a two-tone red scheme accented with narrow gold striping and gothic lettering. Loewy also styled one of the Pennsy’s classic K4s Pacific-type locomotives especially for the train.

The Central brought in Henry Dreyfus to design its new trains, which would be “what hall-marked silver and 18 carat gold are to those seeking

superlatives of excellence,” according to a 1938 New York Central publication. Dreyfus designed streamlined styling for 10 of the line’s highly successful J-3a Hudson 4-6-4 steam locomotives, which were built by the American Locomotive Company. The Hudsons were among the most successful American passenger locomotives, and the styling Dreyfus brought to them is considered a classic example of art deco, as were his passenger cars, elegantly decorated in subtle shades of gray, blue, rust, and tan, combined with dark wood furniture and cabinetry.

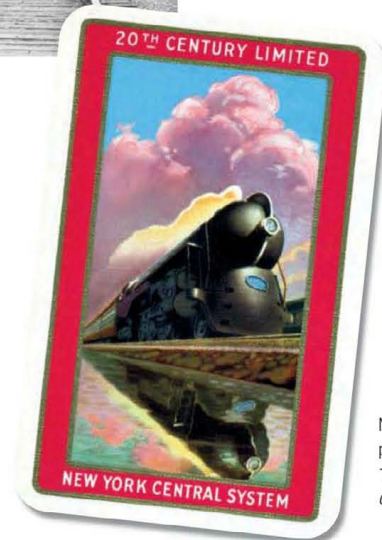
The new *20th Century Limited* and *Broadway Limited* both made their first runs on June 15, 1938, and were immediate hits with travelers. The two were the first all-room trains operated in North America, and the first trains to offer private showers in rooms. With the arrival of new streamline equipment in 1938, the schedule was reduced to 16 hours over both routes.

The first section of the Pennsylvania’s *General* is still using conventional equipment as it departs Chicago on June 15, 1938, the same day that the line’s new streamlined *Broadway Limited* launched. *Author collection*





New York Central's *20th Century Limited* departs Chicago for the overnight journey to Gotham on June 5, 1937. In a little over a year, the conventional heavyweight cars were replaced by new streamlined lightweight equipment. *Author collection*



New York Central playing cards, 1938. *Author collection*

1938

TWO HISTORIC TRAINS REBORN

...ready to make new history

THE WORLD MOVES FORWARD WITH STEEL

20th Century Limited
NEW YORK CENTRAL SYSTEM

TWO HISTORIC TRAINS REBORN

with U.S.S. Cor-Ten Steel!

Broadway Limited
PENNSYLVANIA RAILROAD

1937 In 1937 the New York Central's *Twentieth Century Limited* and the Pennsylvania Railroad's *Broadway Limited* began their New York-Chicago run. In the 1930s, when these trains had made their final journey, their consist of cars were heavy, cumbersome.

Now these two trains are making new history. A beautiful *Twentieth Century Limited* and a handsome *Broadway Limited* are being reborn. The public has been invited to see them in display at the new *Cor-Ten Steel* exhibit, *United States Steel* Building, New York City.

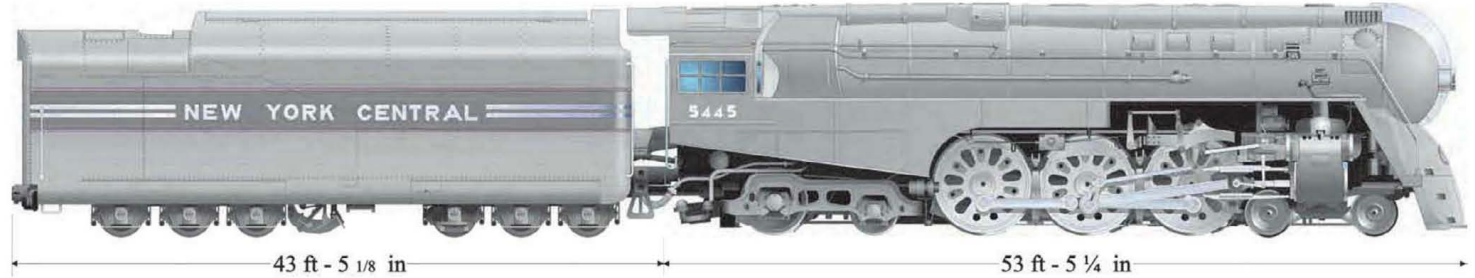
These trains have been reborn with all of our latest steel (called *U.S.S. Cor-Ten* and *Mar-Ten*). These steels, made with a carefully proportioned alloy, give them the strength, toughness, and resistance to rust that are the outstanding characteristics. They are a big factor in the new generation of the *Cor-Ten* and *Mar-Ten* steels.

NEW YORK CENTRAL SYSTEM **BROADWAY LIMITED**

UNITED STATES STEEL



The first trip of the eastbound Henry Dreyfus–designed *20th Century Limited* is about to commence as the engineer awaits the highball at Chicago's La Salle Street Station on June 15, 1938. *Author collection*

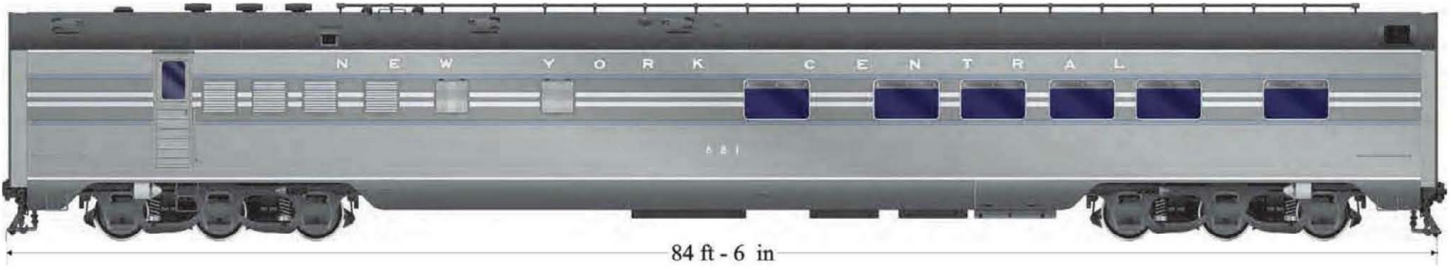
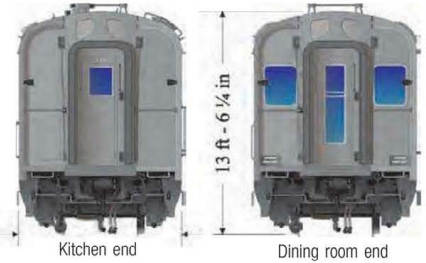
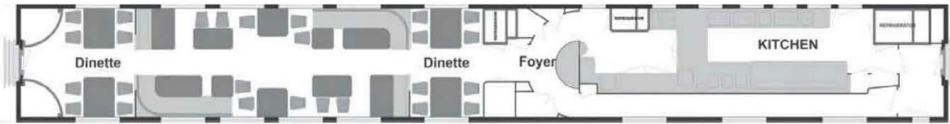


The New York Central acquired its last Pacific-class locomotive in 1926 and initiated an effort to acquire a new type that would offer an increase in starting tractive effort, increased power, and better balance to minimize track wear. The J-1 Hudsons, as the railroad named the 4-6-4 type, were highly successful and evolved into the J-2 class, the last of which were built in 1932. A new, more powerful and efficient version tagged the J-3a went into production in 1937. A total of 50 were ordered from Alco, the last 10 of which (Nos. 5445–5454) were stream-styled by Henry Dreyfus to head the new lightweight *20th Century Limited*. Half of the engines (Nos. 5450–5454) possessed Scullin-type driving wheels with circular openings, while the remaining five (Nos. 5445–5449) had Boxpok wheels with oval openings (the example illustrated here). Dreyfus designed the locomotives to be functional and to allow easy access for servicing.

Specifications

Built: 1937–1938
 Tractive Effort: 41,860 lb.
 Driving Wheels: 6 @ 79 in. ea.
 Heating Surface: 4,187 sq. ft.
 Steam Pressure: 265 psi
 Grate Area: 82 sq. ft.
 Superheater: 1,745 sq. ft.
 Cylinders: 22.5 in. x 29 in.
 Total Weight: 780,000 lb.
 Fuel: 56,000 lb. coal
 Water: 13,600 gal.





Six 38-seat dining cars, Nos. 680-685, were built for service on the 1938 *20th Century Limited*. Windows were built into the dining room car ends, along with larger door windows at that end. The cars were operated with these ends coupled, giving the appearance of a large dining area. When the diners operated by themselves, mirrors were placed over the windows.



Henry Dreyfus' design for the 1938 *20th Century Limited* oozed art deco, from the metal fin on the front of the streamlined steam locomotives to the stylized tail sign on the observation cars.

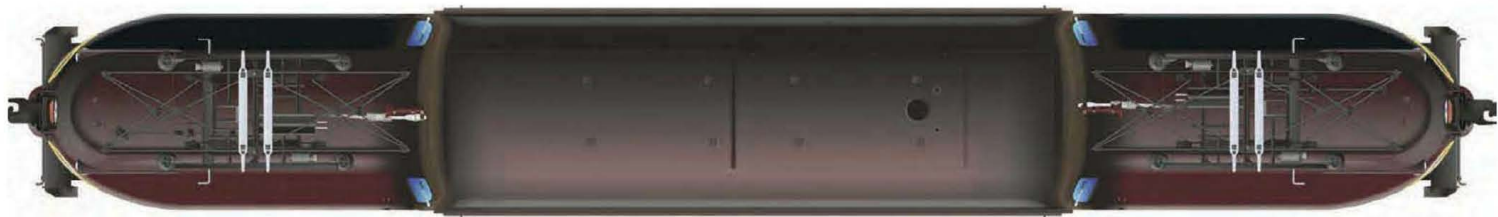


Henry Dreyfus also designed two streamlined Hudsons for service on the New York Central's new streamlined version of the *Empire State Express*—introduced on December 7, 1941. J-3a Hudson Nos. 5426 and 5429 were shrouded in a design similar to the design for the 1938 *20th Century Limited*: a striking black and aluminum livery was highlighted by Budd stainless-steel fluted panels that ran along the lower rear side.

The train name was spelled out in cast-metal lettering just above the pilot. The Budd Company constructed 26 cars to equip the train. Unfortunately, world events overshadowed the introduction of the train. *New York Central photo, author collection*



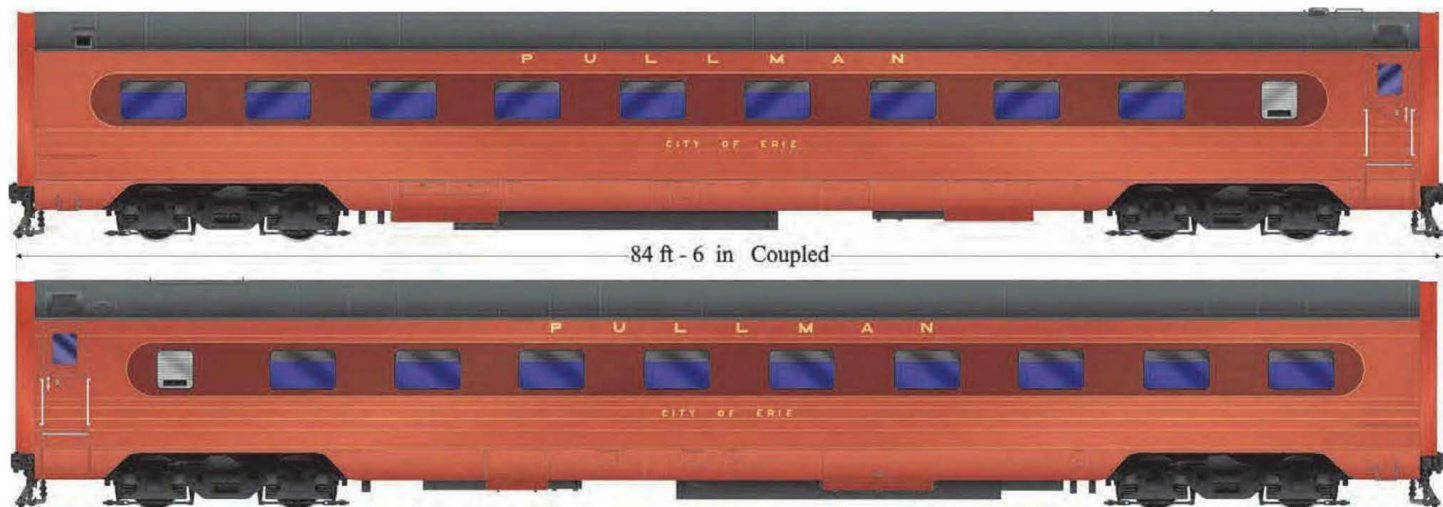
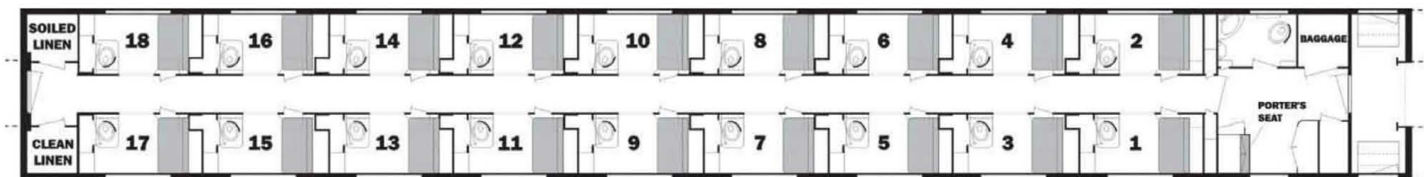
Pennsylvania GG1 locomotive No. 4857 powers the 1938 streamlined version of the *Broadway Limited* shortly after its introduction in 1938. *Pennsylvania Railroad photo, Corbis Corporation*



The GG1 electric locomotives developed by the Pennsylvania Railroad for express passenger operations on its electrified lines were based on a proven New Haven Railroad 20-wheel 2-C-C-2 configuration. Raymond Loewy stylized the engines, and his design proved highly successful. Each of six driving axles was powered by a pair of 410-horsepower traction motors.

Specifications

Total Weight: 477,000 lb.
Tractive Effort: 70,700 lb.
Horsepower: 4,930 hp (continuous)
Maximum Speed: 100 mph



In 1938, Pullman built City series sleeping cars for service on the Pennsylvania Railroad and the New York Central. The Pennsy cars contained 18 roomettes; the New York Central cars were nearly identical with the exception of containing 17 roomettes with an open section located where section nine was in the PRR cars and used as the porter's station. The roomettes were sold for the same price as an open section.

CHAPTER SIXTEEN

THE CHIEF AND SUPER CHIEF

THE ATCHISON, TOPEKA & Santa Fe Railway was the only railroad to have a rail route from the Midwest rail center of Chicago to California entirely over its own rails. The AT&SF—or the Santa Fe, as it was more commonly called—built a line that entered Los Angeles in 1887. In 1892, the railroad began operation of a first-class limited train called the *California Limited* over the route.

In December 1911, an ultra-luxurious extra-fare train named the *De-luxe* began once-a-week operation. The train was one of the most advanced built at the time and featured “air-cooling” in the dining car, as well as recessed lighting, both innovations at the time. The passenger load was limited to 60 persons, and a then-astronomical extra fare of \$25 was charged on top of the regular Pullman fare for the privilege of riding it. The *De-luxe* ceased operation with the onset of World War I.

The *California Limited* remained the Santa Fe’s premier train until November 14, 1926, when a new luxury express called the *Chief* was inaugurated over the route. The new train operated on a 63-hour schedule between Chicago and Los Angeles and offered daily service. The *Chief* was the glamour train of California travel through the late 1920s and early 1930s, with many movie stars and famous personalities traveling aboard. In the mid-1930s Santa Fe management decided to provide a train that would cut 15 ¼ hours off of the timing of the already-fast *Chief*. The train would have no equal in terms of speed, service, and luxury appointments. The new train was called the *Super Chief*.

The faster schedule put in place by the *Super Chief* required not only new diesel-powered locomotives and streamlined lightweight passenger cars, but also extensive improvements to the right-of-way.

Orders were placed with the Electro-Motive Corporation for 11 E1 diesel locomotives (8 A units and 3 cabless B units). The diesel units were among the first E Series diesel units built. Nine stainless-steel cars were ordered from the Budd Company and were among the most lavishly appointed cars ever built.

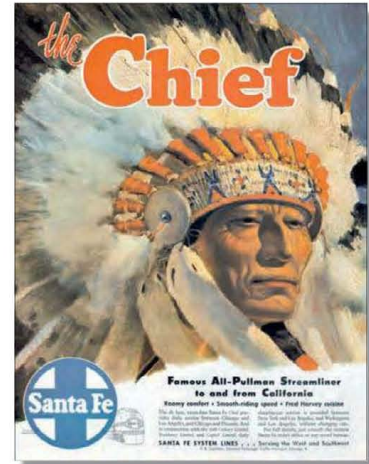
On May 12, 1936, an early version of the *Super Chief* began operation utilizing refurbished heavy-weight cars previously in service on the *Chief*. The train was powered by boxcab diesel locomotives Nos. 1A and 1B. The diesel units were constructed in November 1935 by the St. Louis Car Company with Electro-Motive supplying a pair of 12-cylinder Winton 201-A diesel engines to power each of the locomotives. These 1,800-horsepower units rode on a pair of four-wheel trucks and quickly acquired the affectionate nicknames “Mutt and Jeff.” This train proved the faster schedule could be maintained.

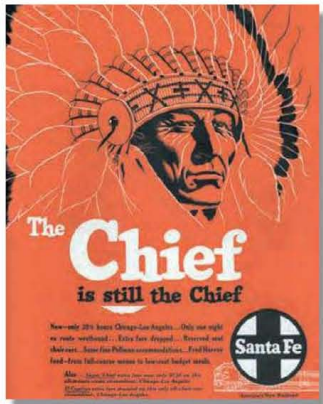
Finally, on May 18, 1937, a gleaming new *Super Chief* began twice-weekly operation. The shiny stainless-steel consist was headed by two new E1 diesels painted in the now famous “warbonnet” livery. The interiors of the new cars were appointed with rare and exotic woods, including American holly, Ceylonese satinwood, Macassar ebony, English sycamore, African rosewood, and Burma teak. The luxurious interiors were decorated in muted tones and motifs influenced by the American Southwest and, most notably, Native American designs.

The *Super Chief* operated on an incredibly fast schedule of 39 ¾ hours between terminals. It quickly gained a reputation and name recognition equal to the famed *20th Century Limited* of the New York Central. The train became so popular that a second consist was ordered, which was built by Pullman and Budd.

The schedule for the *Chief*, which made more stops en route, was also reduced. The *Chief* also received new streamlined equipment that went into service on January 31, 1938. Six 10-car consists were acquired with new cars built by both Budd and Pullman. Until after World War II, the new *Chief* used mostly steam power: Santa Fe’s 3400 series Hudsons (4-6-4), including streamlined No. 3460, between Chicago and La Junta, Colorado, and Santa Fe’s excellent Northerns (4-8-4) west of La Junta. The gleaming silver, streamlined train trailing one of the Santa Fe’s enormous 4-8-4s made for quite a sight.

Both the *Chief* and the *Super Chief* enhanced the Santa Fe’s already considerable reputation for being synonymous with speed, service, and luxury.





1954



Streamlined steam locomotive No. 3460, also known as the *Blue Goose*, is at Streator, Illinois, in September 1938. *Author collection*



With 12 cars in tow, Santa Fe 4-8-4 No. 3767 glides down Raton Pass near Morley, Colorado, on January 16, 1944. *Otto Perry, Denver Public Library, Western History Collection, Neg. OP-1916*



The Santa Fe missed being the first railroad to use the 4-8-4, or Northern type, locomotive. Instead, the type was named after the Northern Pacific, which introduced its 4-8-4s only a short while earlier. The Santa Fe engines were delivered in 1927 (Nos. 3751–3764). These coal-burning locomotives were later converted to oil-burners. A second oil-burning batch was delivered in 1938 (Nos. 3765–3775), and a third and final group was delivered in 1941 (Nos. 2900–2929). All were built by Baldwin of Philadelphia. The last batch became the heaviest pure main-line passenger locomotives ever built, necessitated by wartime restrictions on the use of high-tensile steel alloys. Thus, the locomotives of the final batch weighed 510,150 pounds apiece, versus the 494,630 pounds of the earlier engines.

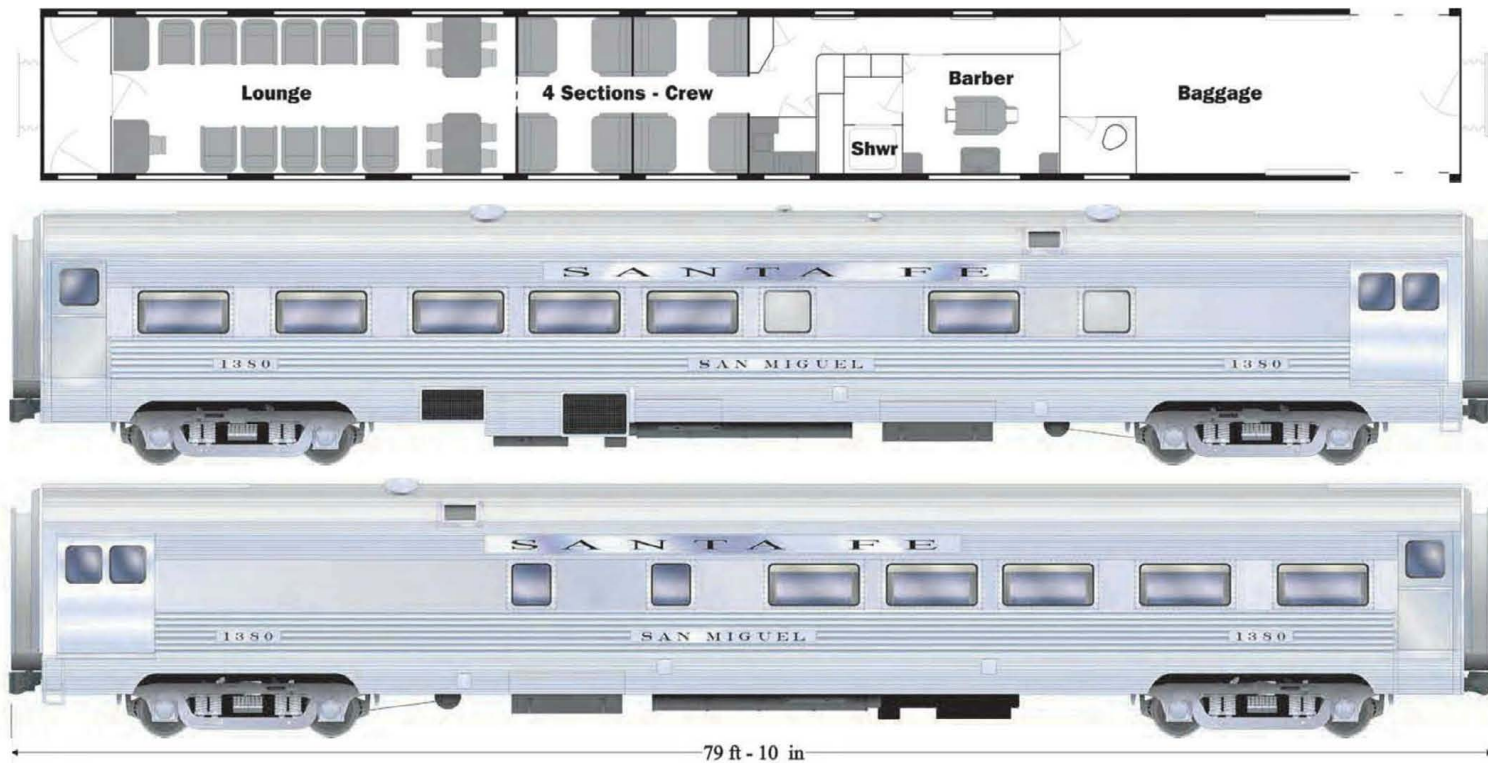
The Northern types were used over the entire Santa Fe system, although they were primarily concentrated west of Kansas City. The locomotives saw extensive service hauling the lightweight streamlined version of the *Chief* before diesels eventually took over. It was not unusual for a single locomotive to power the *Chief* or *California Limited* over the entire Kansas City–Los Angeles leg of the route. Specifications listed apply to the final batch of locomotives.

Specifications

Built: 1927–1941
 Tractive Effort: 66,000 lb.
 Driving Wheels: 8 @ 80 in. ea.
 Heating Surface: 5,313 sq. ft.
 Boiler Pressure: 300 psi
 Grate Area: 108 sq. ft.
 Superheater: 2,366 sq. ft.
 Cylinders: 28 in. x 32 in.
 Total Weight: 961,000 lb.
 Fuel: 7,000 gal. oil
 Water: 24,500 gal.



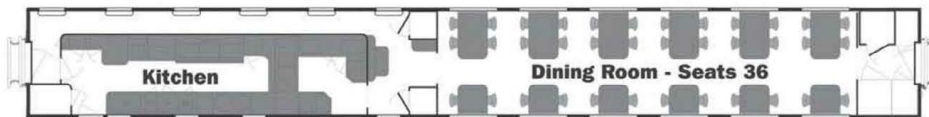
Santa Fe 4-8-4 No. 2921 hauls a fast freight in better days. She now resides in Modesto, California, a victim of a flood. *Author collection*



The *San Miguel* was one of six baggage-buffet-lounge cars Budd Company delivered to the Santa Fe in October 1937. The cars contained a barbershop with shower and four sections to accommodate the train crew. Cars were named and numbered 1380 *San Miguel*, 1381 *San Marcial*, 1382 *San Fernando*, 1383 *San Simon*, 1384 *San Ignacio*, and 1385 *San Pascal*.

Santa Fe E1 No. 7 at San Diego in 1939. Santa Fe's E1 diesel units were the first locomotives delivered resplendent in the red, yellow, black, and silver "warbonnet" livery. *Gordon C. Bassett collection*





Santa Fe Dining Car No. 1474, *Cochiti*, was delivered by the Budd Company in April 1937. It was part of the original eight-car consist of the *Super Chief*. *Cochiti* was named for a 700-year-old pueblo located on the Rio Grande River about 30 miles southwest of Santa Fe, New Mexico. It was one of only two Santa Fe dining cars to ever possess names, the other being No. 1485 *Awatobi*, built by Budd for the second *Super Chief* consist of 1938.



American Locomotive Company, or Alco, along with partner General Electric, entered the passenger diesel market in January 1940. After witnessing the success of General Motors' EMC E Series diesels, by then in the E6 model version, Alco charged its designers and engineers to come up with a design to challenge Electro-Motive. Their answer was the DL-109, along with a cabless booster unit designated the DL-110. Like the E Series locomotives, the DL-109s featured twin 1,000-horsepower diesel engines providing a combined 2,000 horsepower, and rode on a pair of A-1-A trucks.

Styled by noted designer Otto Kuhler, the locomotives were very distinctive. The Santa Fe purchased a pair of the units: a DL-109 and a DL-110 booster numbered 50 and 50A, respectively. For a time they could be seen heading the famed *Super Chief* and *Chief* before they were relegated to less glamorous duties. The DL-109s are considered to be among the most exotic diesel cab-unit locomotives ever built. There are no known surviving units.





Boxcab locomotives Nos. 1 and 1A head the first run of the stainless-steel cars of train No. 17, the *Super Chief*, leaving Raton, New Mexico, in 1937. *Otto Perry, Denver Public Library, Western History Collection, Neg. OP-2113*

First Streamlined Super Chief, May 1937

No. 2	EMD E1A locomotive
No. 2A	EMD E1B locomotive
3430	Baggage car
<i>Isleta</i>	Sleeping car (8 sections, 1 drawing room, 2 compartments)
<i>Taos</i>	Sleeping car (6 double bedrooms, 2 drawing rooms, 2 compartments)
1370 <i>Acoma</i>	Buffet-lounge car (barbershop, crew dormitory)
1474 <i>Cochiti</i>	Fred Harvey dining car
<i>Oraibi</i>	Sleeping car (6 double bedrooms, 2 drawing rooms, 2 compartments)
<i>Laguna</i>	Sleeping car (8 sections, 1 drawing room, 2 compartments)
<i>Navajo</i>	Observation lounge car (3 compartments, 2 drawing rooms, 1 double bedroom)

Second Streamlined Super Chief, February–July 1938

No. 3	EMD E1A locomotive
No. 3A	EMD E1B locomotive
1387 <i>San Acacia</i>	Baggage-dormitory-buffet-lounge car
<i>Chinle</i>	Sleeping car (17 roomettes)
<i>Wupatki</i>	Sleeping car (8 sections, 2 compartments, 2 double bedrooms)
<i>Klethla</i>	Sleeping car (4 compartments, 2 drawing rooms, 4 double bedrooms)
1377 <i>Agathla</i>	Buffet-lounge car (barbershop, crew dormitory)
1485 <i>Awatobi</i>	Fred Harvey dining car
<i>Polacca</i>	Sleeping car (4 compartments, 2 drawing rooms, 4 double bedrooms)
<i>Yampai</i>	Sleeping car (8 sections, 2 compartments, 2 double bedrooms)
<i>Chaistla</i>	Observation lounge car (4 drawing rooms, 1 double bedroom)



CHAPTER SEVENTEEN

THE HIAWATHA AND THE 400s

ONE OF THE MOST fiercely competitive rail corridors in the United States was from Chicago to the Twin Cities of St. Paul and Minneapolis, Minnesota. Although seven different railroads provided some form of service between the three cities, three were considered the route's major carriers, all vying for their share of passengers.

The Chicago & North Western possessed the shortest route of the three at 408 ½ miles. Next was the Chicago, Milwaukee, St. Paul & Pacific, commonly known as the Milwaukee Road, with a 412-mile route. Finally, the Chicago, Burlington & Quincy, more commonly known as the Burlington Route, had the longest line at 427 miles.

Spurred on by the success of its *Pioneer Zephyr* train of 1933, the Burlington placed an order for two similar three-car (including power car) trainsets from the Budd Company of Philadelphia in August 1934. Nos. 9901 and 9902, the *Twin Zephyrs*, began revenue service between Chicago and the Twin Cities on April 17, 1935. The trains' success was such that it prompted the Burlington to order two new seven-car articulated trainsets from Budd. These replaced the original trains on December 18, 1936.

The Burlington had thrown down the gauntlet with its announcement to operate sleek, modern streamlined trains. Chicago & North Western decided against immediately adopting the movement toward lightweight streamlined trains as introduced by the *Pioneer Zephyr* and Union Pacific's M-10000 trains. The line instead chose to rebuild four Class E-2 Pacific steam locomotives and to modernize and refurbish 10 conventional heavyweight cars in its Chicago shops. As this "new" train was planned to cover the approximately

400-mile route in 400 minutes, it would be named the *400*. The choice to renovate and modernize existing equipment allowed the North Western to launch its train several months before the new Burlington and Milwaukee Road streamliners were ready.

The *400* entered service on January 2, 1935, and was a big success. At the time it was the fastest scheduled passenger train in the United States; more than 10,000 passengers rode the high-speed express in its first month of operation. A somewhat unique feature of the train was three uniformed hostesses attending to passenger's needs.

In January 1939 the North Western placed orders with Electro-Motive for two sets of E3A diesel locomotives. An order was also placed with Pullman for 20 new lightweight cars painted in "Armour Yellow" and brown—a color scheme that became the standard for the road until the end of its passenger operations. The new diesel-powered streamlined *400s* began operation on September 24, 1939.

The Milwaukee Road was one of the few American railroads with the capability of building its own passenger cars. In February 1934, two experimental coaches were finished at the road's Milwaukee, Wisconsin, shops. One of these, No. 4000, was rebuilt from a sleeping car, *Great Falls*. The other car, No. 4400, was completely new. Both emerged from the shops as lightweight cars. This experiment prompted the Milwaukee to begin building a group of 50 cars based on the same all-welded, lightweight steel design. Aware of the diesel-powered streamlined trains being planned by the Burlington, as well as the high-speed express quietly being developed by the Chicago & North Western, the Milwaukee Road

decided to put into service a new high-speed streamlined express train to compete with its rivals.

In fall 1934 an order was placed with Alco for two new 4-4-2 Atlantic-type streamlined locomotives to power the trains. The locomotives would be among the first streamlined steam locomotives built in the United States. The locomotives, designated Class A, were a radical departure in appearance from steam locomotives of the past. Smooth, clean surfaces replaced the mechanical appendages that traditionally protruded from steam locomotives. The design in itself seemed to exemplify speed, especially the placement of a large chrome winged emblem on the front of the engines.



Milwaukee Road 4-4-2 No. 4 charges through Kirkland, Illinois, with the *Midwest Hiawatha* in the late 1930s. *Johnson Wax Company photo, author collection*

The new streamlined passenger express was named for the Native American hero made immortal in Henry Wadsworth Longfellow's epic poem, "The Song of Hiawatha." After a period of test runs and exhibitions, the new *Hiawatha* entered revenue service on May 29, 1935, just in time to steal some of the thunder from the Burlington's new *Twin Zephyr*. The train was so popular with travelers that the Milwaukee began operating another version of it on October 11, 1936, still utilizing the Atlantic-type locomotives but with new nine-car consists that introduced the famous "Tip Top Tap" bar-lounge and "beaver-tail" parlor-observation cars.

In February 1938, the Milwaukee Road announced that it was building another batch of 35 cars in its own shops for yet another upgraded version of the train. The road remained loyal to steam power, placing an order with Alco for six streamlined 4-6-4 Hudson-type engines that were delivered in late summer 1938 and designated Class F-7. Noted industrial designer Otto Kuhler, along with Alco and Marshall Field & Company, collaborated in the design of the new version of the *Hiawatha*, and the results were stunning. In terms of sheer beauty, the F-7 Hudsons today are considered in the same league as the streamlined

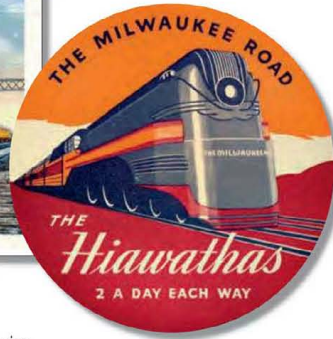
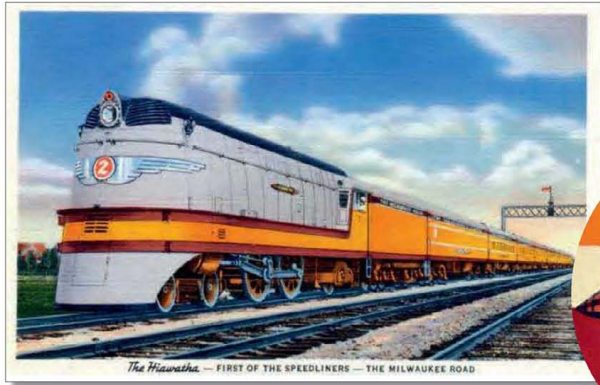
Hudsons built for the *20th Century Limited*, and the Southern Pacific 4-8-4s built for that line's *Daylight*.

On September 19, 1938, the third version of the *Hiawatha* began service. It was one of the fastest scheduled passenger runs on the planet; speeds of 100 miles per hour were not uncommon.

The *Zephyrs*, *400s*, and *Hiawathas* all became well-known names among travelers, as well as premium trademarks for their respective railroads. Each railroad incorporated these famous train names in additional fleets of trains that extended to other parts of their systems.



Milwaukee Road F-7 Class 4-6-4 locomotive No. 103 at Chicago, Illinois, on November 25, 1938. Jay Williams collection



BELOW: No. 2908 was one of four 4-6-2 Pacific-type locomotives refurbished for service on the Chicago & North Western's 400 trains of 1935. It was the only one of the four to carry the illuminated logo sign located on the front of the engine. *Author collection*



The Milwaukee Road's Class F-7 4-6-4 Hudsons were among the most stylish and successful high-speed streamlined steam locomotives of the 1930s. The 4-4-2 Atlantics built to haul the original *Hiawathas* were quite adequate pulling the streamliner's lightweight nine-car consists, but they were not suited for traditional heavyweight express trains or larger lightweight trains necessitated by heavy holiday passenger loads. Thus, the Milwaukee ordered six 4-6-4 Hudson types (Nos. 100–105) from Alco. They were delivered in late summer 1938.

The Hudsons represented a reversion to coal (the Atlantics had been oil-burning). They were truly high-speed machines, capable of 120 miles per hour hauling the streamlined train on level grades. When the *Hiawatha* schedule was modified in 1940, the 4-6-4s powered the train on the fastest point-to-point scheduled American passenger run up to that time: 81.25 miles per hour for the 78 1/2 miles between Sparta and Portage, Wisconsin.

Specifications

Built: 1938
 Tractive Effort: 50,295 lb.
 Driving Wheels: 6 @ 84 in. ea.
 Heating Surface: 4,166 sq. ft.
 Boiler Pressure: 300 psi
 Grate Area: 96.5 sq. ft.
 Superheater: 1,695 sq. ft.
 Cylinders: 23.5 in. x 30 in.
 Total Weight: 791,000 lb.
 Fuel: 50,000 lb. coal
 Water: 20,000 gal.





No. 4004 was one of nine green and gold streamlined 4-6-4 Hudson-type locomotives built by Alco for the Chicago & North Western in 1938. Designated Class E-4, the locomotives were considered for the line's elite 400 but instead were utilized on the Chicago-Omaha *Overland Route* trains. *Author collection*



A 400 train departs Chicago's North Western Station behind E3 Nos. 5002 A and B in the early 1940s. *Chicago & North Western photo, author collection*



ABOVE: Period postcards illustrate the Chicago & North Western's commitment to service. *Author collection*



The Chicago & North Western received 12 4-6-2 Pacific-type locomotives from Alco in 1923. Designated Class E-2, the locomotives had 75-inch drive wheels, 210-psi boiler pressure, and 45,000 pounds tractive effort. When rival Milwaukee Road announced in 1934 it was building a new high-speed steam-powered lightweight streamliner, the North Western quietly went about producing a train to beat the competition to the punch. Four of the E-2 Pacifics—Nos. 2902, 2903, 2907, and 2908—were rebuilt with 79-inch Boxpok Type A driving wheels, and boiler pressure was increased to 225 psi. The rebuilt locomotives were designated Class E-2-A.

One other modification was a fuel change from coal to oil, eliminating time-consuming fuel stops, ash-pan cleanings, and locomotive changes at Adams and Altoona, Wisconsin. When the line introduced its new 400 train in January 1935 it was the fastest regularly scheduled passenger train in the western United States. With the success of the E-2-As, the other 4-6-2s were rebuilt and designated Class E-2-B.

Specifications

Built: 1923, rebuilt 1934
 Tractive Effort: 45,800 lb.
 Driving Wheels: 6 @ 79 in. ea.
 Boiler Pressure: 225 psi
 Cylinders: 26 in. x 28 in.
 Locomotive Weight: 295,000 lb.
 Fuel: 5,000 gal. oil
 Water: 32,000 gal.

Chicago & North Western No. 2908 sports the illuminated train sign. *Author collection*



CHAPTER EIGHTEEN

THE SILVER METEOR

“**T**HROUGH THE HEART OF THE SOUTH” was the slogan of the Seaboard Air Line Railroad—most fitting for a railroad that provided vital freight and passenger service to the southeastern United States. The Seaboard was the main rival to the Atlantic Coast Line in this region. Both railroads operated first-class express passenger service on the lucrative New York–Florida routes for many years in a rivalry that could be compared to that of the New York Central and the Pennsylvania Railroad in the north.

The smaller Seaboard was forced to innovate in order to remain competitive, and originated many firsts on this route, including the introduction of diesel-powered locomotives (in 1938), air-conditioned cars, and an all-streamlined lightweight streamliner from New York to Florida.

Seaboard’s passenger service catering to the developing Florida passenger trade was inaugurated on January 4, 1903, with a train called the *Seaboard Florida Limited*. The train became the main competitor for rival ACL’s deluxe all-Pullman *Florida Special* and attracted the same clientele. The first run of the *Seaboard Florida Limited* attracted steel magnate Andrew Carnegie, who wanted to attach his own extravagant private railcar to the rear of the train for the first run. After seeing the luxurious appointments contained in the new train, however, Carnegie instead booked a Pullman drawing-room suite offered as part of the regular service.

Florida passenger trade increased by leaps and bounds in the Roaring Twenties, and the Seaboard stepped forward to capture as much of it as possible. A new all-Pullman train, the *Orange Blossom Special*, was introduced on November 21, 1925. In 1927 the Seaboard completed its own trackage into Miami and

extended its trackage in western Florida to Naples. Like the ACL, the Seaboard previously had relied on a connection with the Florida East Coast for access to Miami.

In January 1934, the Seaboard began advertising the *Orange Blossom Special* as the “first air-conditioned train to Florida.” In 1938, the road began operating both an East Coast and West Coast section of the *Orange Blossom Special*, reflecting the train’s popularity even as the nation emerged from the Depression. New, brightly colored EMD E4 diesel locomotives were introduced on the *Special* in 1938, another first for the Florida route introduced by the Seaboard.

The Seaboard had been hit hard by the Depression, and like many railroads of the era, it was forced into receivership. But the financially strapped line took a gamble that surprised many when it announced that it would introduce the first all-diesel-powered, all-streamlined lightweight train over the New York–Florida route. A contest to name the new train received over 76,000 entries, and the winning name chosen was the *Silver Meteor*. The \$500 grand prize had to be split among 30 persons, who all had submitted the name.

The new train featured seven bright stainless-steel cars built by the Budd Company. The consist included a 30-seat coach-dormitory; three 60-seat coaches; a 30-seat coach-tavern; a 48-seat dining car; and a chair-lounge-observation car. The train offered fast, first-class travel on a schedule of 25 hours from New York to Florida.

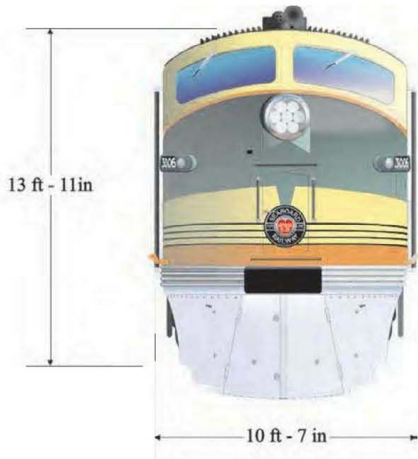
The *Silver Meteor* was introduced at the 1939 New York World’s Fair with much fanfare. The new train left on its inaugural run at 11:45 a.m. on February 2 from World’s Fair Station on the Long Island

Rail Road and proceeded under the East River to Penn Station (from where it would normally operate) to begin the journey south. The Pennsylvania Railroad hauled the bright and shiny train south to Washington, D.C. From there, the Richmond, Fredricksburg & Potomac took charge for the brief run to Richmond, Virginia, where the Seaboard took command of its new pride and joy for the rest of the journey south.

The *Silver Meteor* operated on an every-third-day schedule out of New York, while the Florida terminals of Miami and St. Petersburg alternated every other departure. This continued until April 30, 1939, when every-third-day service began to both cities by splitting the consist at Wildwood, Florida. A coach and the coach-tavern were detached from the seven-car consist and sent on to St. Petersburg behind a streamlined 4-6-2 locomotive. Three light Pacific-type steam locomotives—Nos. 865, 866, and 868—were streamlined and painted in the Seaboard’s colorful “citurus” paint scheme for this purpose.

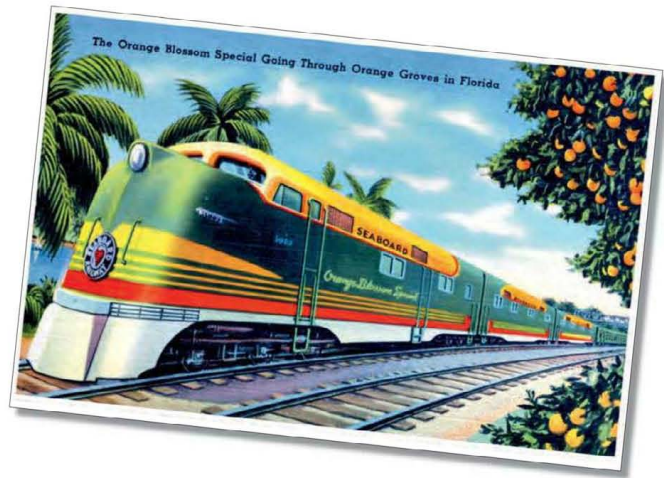
The popularity of the train became so great that demand soon outdistanced supply, and reports of ricket scalping surfaced. The Seaboard ordered two new trainsets in December 1939, along with additional cars. In 1941, the *Silver Meteor* began carrying sleeping cars of the conventional heavyweight type. These were painted silver with what is known as “shadow line” striping to simulate the corrugated fluting on lightweight cars and help blend them in with the streamlined consist.

The introduction of the *Silver Meteor* jolted the Atlantic Coast Line and Florida East Coast to reexamine their passenger services. The unprecedented success of the *Silver Meteor* prompted the ACL and FEC to introduce a seven-car Budd-built train



Electro-Motive's E4 passenger road diesel units were built only for the Seaboard. Oddly, the first E4 units were delivered before the first E3 units. The E4s were identical to the soon-to-come E3 units with the exception of a pull-out door in the locomotive's nose, allowing crewmembers access to another locomotive located right ahead. The E4s were the only "slant nose" E Series (E3 through E6) locomotives built with this feature.

The Seaboard purchased 14 A units (Nos. 3000-3013) along with 5 B booster units (Nos. 3100-3104) through December 1939. The units possessed an unusual seven-bulb headlight that was one of several designs offered by Electro-Motive at the time. The bright green, yellow, orange, and silver paint scheme developed for the engines became known as the "citrus" scheme, appropriate for the line's premium Florida express trains. Side plates bearing the names of the Seaboard's most famous trains, the *Silver Meteor* and the all-Pullman *Orange Blossom Special*, were affixed to several units.



similar to the Seboard's premium flyer. The new train was placed in service in December 1939 and operated on a similar 25-hour schedule between terminals. The name of the new express was the *Champion*. Conventional Pullman sleeping cars were added to the consist in May 1941, and the cars were painted purple and silver to match the Budd-built cars.

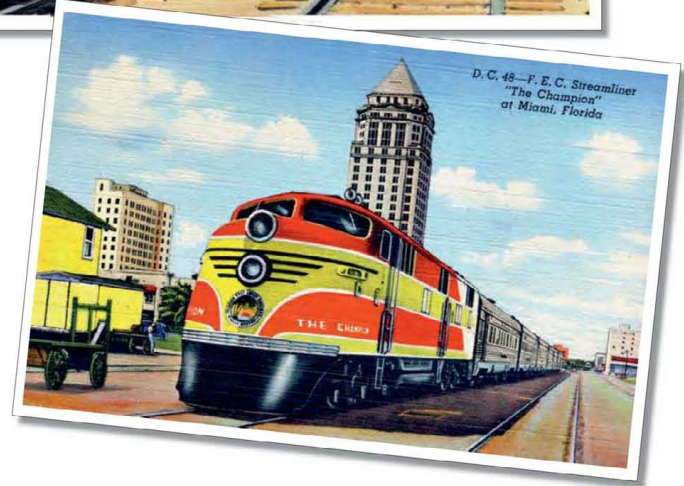
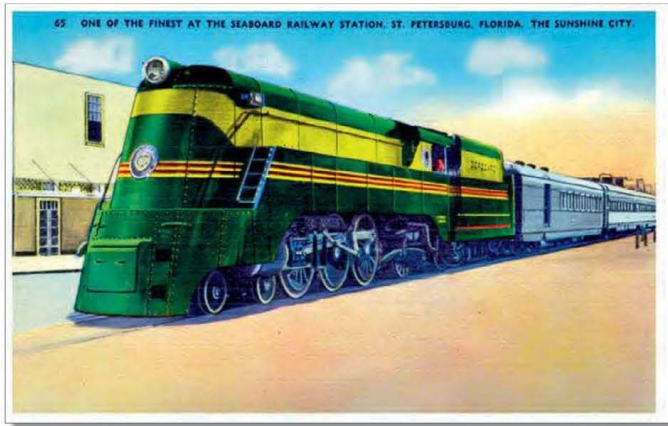
On July 1, 1967, the Seboard Air Line and the Atlantic Coast Line merged to form the Seboard Coast Line. In May 1968 the *Silver Meteor* began serving only Miami and became the SCL's flagship between that city and New York. The *Champion* became the new railroad's New York–St. Petersburg express. Both the *Silver Meteor* and the *Champion*

continued to operate through the 1960s and, in sharp contrast to the woes suffered by most American passenger trains of the time, continued to be profitable. Amtrak retained the operation of the *Silver Meteor*, and it remains today as one of the carrier's most popular trains.



A builder's shot of Seboard E4A, No. 3006. EMC photo, author collection

The new streamlined trains to Florida introduced in the late 1930s and early 1940s presented a rainbow of color schemes, as shown on these period postcards. *Author collection*



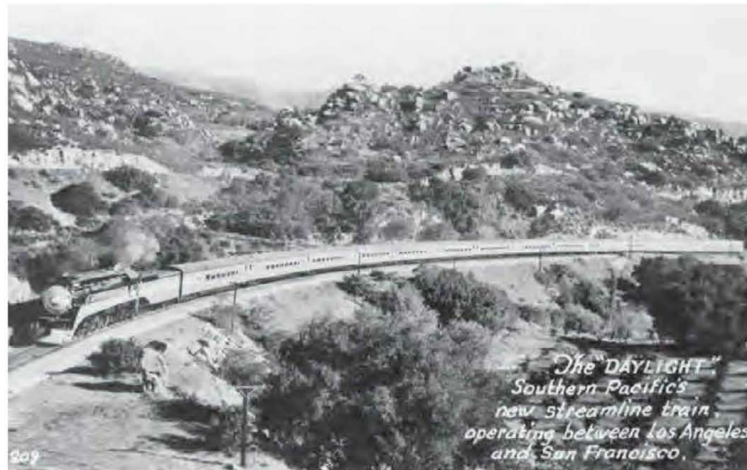
CHAPTER NINETEEN

THE DAYLIGHT

EARLY IN 1937 PULLMAN delivered 24 new lightweight passenger cars to the Southern Pacific. The cars were painted in a dazzlingly brilliant red, orange, and black paint scheme developed for a new passenger express train that the SP dubbed the *Daylight*. Two consists were built, each comprising 12 cars that weighed a total of 626 tons. The new train operated over Southern Pacific's scenic 471-mile Coast Line Route between Los Angeles and San Francisco on a 9 $\frac{3}{4}$ -hour schedule.

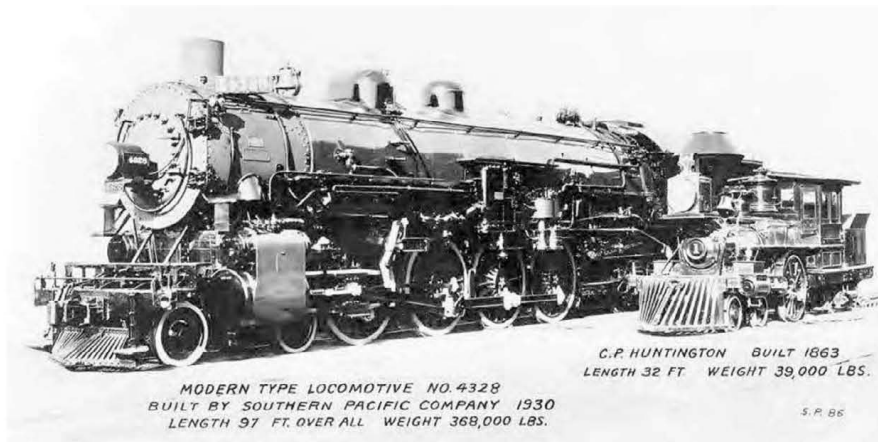
Six new streamlined GS-2 (GS standing for "Golden State") 4-8-4 locomotives were built by Lima and painted to match the livery worn by the passenger consist. Each GS-2, as well as the car sides, was adorned with an emblem consisting of a circle representing California's status as the "land of the sun," a wing symbolizing speed, and the train's name, spelled out in flowing script.

The *Daylight* began service on March 21, 1937. Passenger demand was so great that new equipment and locomotives were acquired for an additional pair of 14-car trains known as the *Noon Daylight*, which began operation on January 5, 1940. The original train was redesignated the *Morning Daylight*. Many consider the *Daylight* the most beautiful modern steam-powered train ever constructed.





Restored GS-4 locomotive No. 4449 at Portland, Oregon. *Mac Owen photo, ©1994 Corel Corp.*



A 1930-vintage Southern Pacific 4-8-4 dwarfs the line's
C. P. Huntington, built in 1863. *Author collection*



GS-2 No. 4411, in more utilitarian black and silver, with train
No. 39, the *Imperial*, at Corona, New Mexico, August 1948.
Gordon C. Bassett collection



The Southern Pacific's Class GS-2 4-8-4 steam locomotives Nos. 4410–4415 were among the most beautiful examples of modern steam motive power. Built by the Lima Locomotive Works in Lima, Ohio, the design was developed from the 14 earlier GS-1 Class 4-8-4s built in 1930 by Baldwin of Philadelphia. Built to power SP's new *Daylight* passenger express, the GS-2s were capable of hauling one of the two 626-ton trains over the 2.2 percent grade of Santa Margarita Hill north of San Luis Obispo, California, as well as sustained stretches of 1 percent ascending grades. The train covered the 471-mile route in 9 ¾ hours at an average speed of 48.3 miles per hour, the fastest schedule operated by the Southern Pacific at the time. Running speeds often reached 75 miles per hour on many sections of the route. The locomotives possessed a Worthington No. 5-SA feedwater heater along with a Franklin C-2 booster that increased tractive effort to 75,950 pounds.

The locomotives provided a safety innovation at the time known as electro-pneumatic braking, which furnished near-simultaneous braking over the entire length of the train, versus the traditional air-brake system that required a delay of several seconds to activate over the length of the train.

The GS-2 was highly successful and was further developed into GS-3 (1937: Nos. 4416–4429), GS-4 (1941–1942: Nos. 4430–4457, perhaps the most famous class of the type), GS-5 (1942: Nos. 4458–4459), and GS-6 (1943: Nos. 4460–4469). GS-6 No. 4460 is displayed at the Museum of Transport in St. Louis, Missouri, and Class GS-4 No. 4449 has been restored to operational status and used extensively on fan excursions. Specifications are for the Class GS-2 built in 1937.

Specifications

Built: 1937
 Tractive Effort: 75,950 lb.
 (with booster)
 Driving Wheels: 8 @ 73 1/2 in. ea.
 Heating Surface: 6,692 sq. ft.
 Boiler Pressure: 250 psi
 Grate Area: 90.2 sq. ft.
 Superheater: 1,184 sq. ft.
 Cylinders: 27 in. x 30 in.
 Total Weight: 448,400 lb.
 Fuel: 6,010 gal. oil
 Water: 21,600 gal.



PART THREE



1940s–1950s



CHAPTER TWENTY

THE TENNESSEAN AND THE SOUTHERNER

TRADITIONALLY, THE MAJOR southern railroads were conservative by nature and skeptical of the new lightweight streamliners introduced by the Burlington and Union Pacific. Subsequent streamlining efforts by a number of other roads did little to change their attitude toward the concept. The Louisville & Nashville, Atlantic Coast Line, and Southern Railway all stood steadfast in their resistance to new lightweight equipment.

The Southern went so far as to publicly state that, in their opinion, the smoothest and most comfortable ride could be found in conventional, heavyweight cars riding on six-wheel trucks.

The success of Seaboard's diesel-powered New York–Miami *Silver Meteor* streamliner announced in 1938 forced the Atlantic Coast Line and partner Florida East Coast to move quickly. Within a year after the launch of the *Silver Meteor*, the two roads introduced their highly similar *Champion* streamliner. The Louisville & Nashville also changed direction when it joined a consortium of eight other railroads in plans to introduce new lightweight streamlined coach–passenger service from Chicago to Miami.

The Southern stood stubbornly alone in its resistance to streamlining mania. The Southern eventually took notice of its competitor/neighbor's success, however, and initiated a study on the feasibility of introducing streamlined trains. The study concluded that it would be in the road's best interest to invest in streamliners, and the Southern had a sudden change of heart.

In October 1940, the Southern placed orders for 44 lightweight streamlined cars from Pullman-

Standard, as well as 5 E-6 diesel locomotives from Electro-Motive Division. The Budd Company held the patents for the all-stainless-steel fabrication processes and Pullman-Standard refused to pay the royalties to its competitor for the process. Instead, Pullman developed its own fabrication process, which utilized COR-TEN steel framing with stainless steel outer ribbing. The Southern's new equipment would comprise two new trains called the *Tennessean* and the *Southerner*.

The *Southerner* provided luxury coach service from New York to New Orleans over an all–Southern Railway route south of Washington, D.C., via Atlanta and Birmingham, Alabama. The *Tennessean* replaced the existing *Memphis Special*, providing service from Washington, D.C., to Memphis, Tennessee. The *Tennessean* also carried New York–Memphis, Chattanooga–Memphis, and Bristol, Tennessee–Nashville Pullman sleepers. The sleepers were of the conventional heavyweight type and were painted silver to match the stainless-steel appearance of the new equipment.

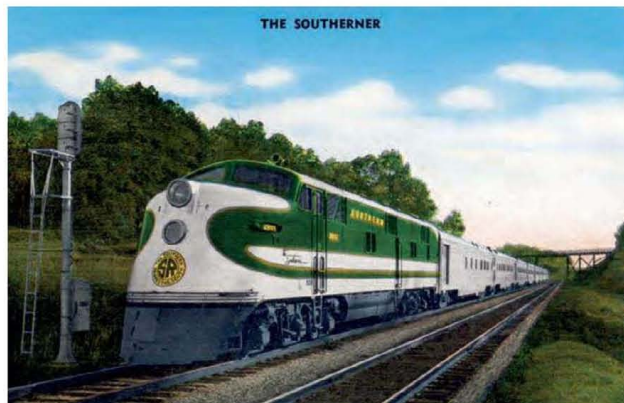
Three consists were built for the *Southerner*, and each included seven cars: a baggage-dormitory 22-seat coach; a divided two-vestibule, 52-seat coach; two single-vestibule 52-seat coaches; one Pennsylvania Railroad-owned single-vestibule 52-seat coach; a 48-seat dining

car; and a 55-seat round-end observation-tavern-lounge car.

In the South at this time, all trains were racially segregated, and “Jim Crow” cars were omnipresent. Sadly, the *Southerner* was no different—the 22-seat coach section in the baggage-dormitory-coach and the forward 26-seat coach section of the divided coach were designated “Colored,” while the rest of the train was designated “White.”

Each of the three consists was powered by a single EMD E6 south of Washington. Unit Nos. 2800–2802 were assigned to the *Southerner*.

Two consists were built for the *Tennessean*. Unlike the *Southerner*, the *Tennessean* carried mail, so baggage-RPO and baggage-mail storage cars were supplied, as well as conventional sleepers, which



were usually added to the end of the train. The consist was a baggage-RPO car; a baggage-mail storage car; a baggage-dormitory, 22-seat coach; a divided two-vestibule, 52-seat coach; four single-vestibule 52-seat coaches; a 48-seat dining car; and a 55-seat flat-end tavern-buffet-observation lounge car. The conventional sleepers included a 10-section, 4-double-bedroom sleeper and a 12-section, 1-drawing-room sleeper.

An interesting mix of steam and diesel motive power was used on the *Tennessean* from Washington, D.C., to Memphis. The Southern hired noted indus-

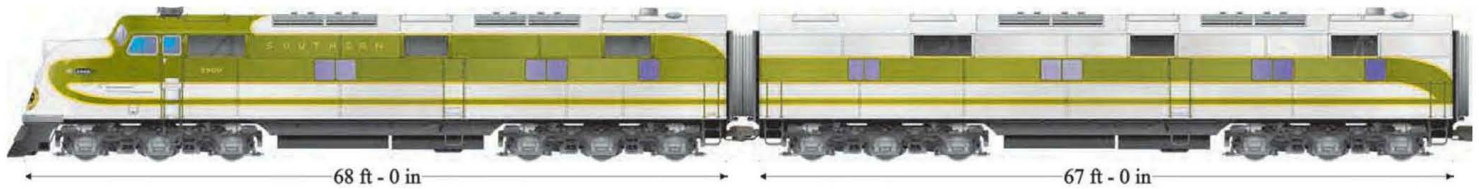
trial designer Otto Kuhler to streamline one of the line's Ps4 Pacific steam locomotives to be used over the Washington, D.C.-Lynchburg (Monroe), Virginia, portion of the route. It is said that Kuhler considered the bullet-nose design on locomotive No. 1380 to be among his finest efforts.

The *Tennessean* traveled over the Norfolk and Western from Lynchburg to Bristol, Tennessee, and over that portion of the route the train was headed by one of the Norfolk and Western's beautiful J Class 4-8-4 steam locomotives. The remainder

of the run from Bristol to Memphis was handled by new Southern E6 diesel locomotives. Two sets of A and B units were assigned to the train: No. 2900 A and B and No. 2901 A and B.

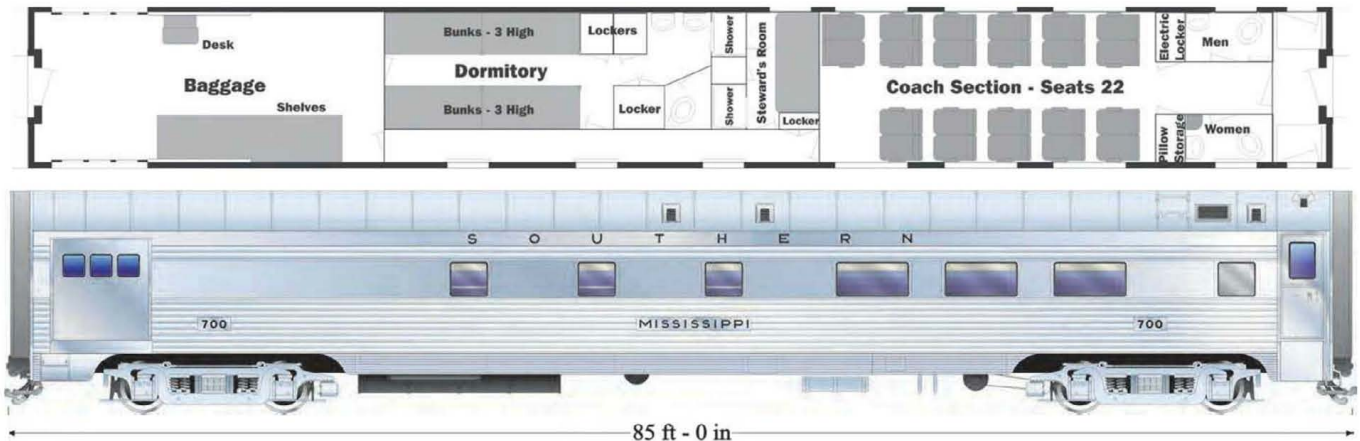
Both of the new streamliners began operation in spring 1941 and immediately proved successful. America's entry into World War II kept all of the Southern's trains full. In 1941 new EMD E6 passenger diesel locomotives were placed into service on the famous *Crescent* as well.





The Southern Railway purchased two sets of EMD E6A and B diesel locomotives (Nos. 2900 A and B and 2901 A and B) to power its *Tennessean* streamliner between Bristol and Memphis, Tennessee. Three Electro-Motive E6A units (Nos. 2800–2802) were purchased to power the *Southerner*. One 2,000-horsepower A unit was assigned to haul each of the three seven-car consists of the *Southerner*.

Pullman built six 22-seat baggage-dormitory coach cars for the *Tennessean* and the *Southerner*. Three (No. 700 *Mississippi*, No. 701 *District of Columbia*, and No. 702 *Delaware*) were put into service on the *Southerner*. The other three (No. 703 *Cleveland*, No. 704 *Johnson City*, and No. 705 *Bedford*) served as part of the *Tennessean*.



CHAPTER TWENTY-ONE

THE CITY OF MIAMI AND THE PANAMA LIMITED

IN THE EARLY 1940S the Illinois Central introduced one of the most dazzling streamliners built to date. The *City of Miami* was a seven-car, all-first-class coach offering that ran on an every-third-day departure from Chicago. The train operated in conjunction with eight other railways running three separate streamliners over three separate routes, thus ensuring a daily arrival or departure from the Sunshine State or Chicago.

The *City of Miami* operated over IC rails from Chicago to Birmingham, Alabama, where the Central of Georgia took charge to Albany, Georgia. From Albany, the Atlantic Coast Line handled the glittering streamliner to Jacksonville, Florida, where the Florida East Coast picked it up for the final run to Miami.

The other two trains operating on the coordinated schedules out of Chicago were the *South Wind*, via the Pennsylvania Railroad, and the *Dixie Flagler*, via the Chicago & Eastern Illinois. All were seven-car, all-coach streamliners and represented the state-of-the-art in railway travel. The IC's train was perhaps the most eye-catching, resplendent in bright orange (what other color could represent Florida so aptly!) with green roofs and scarlet separation lines and lettering. The new E6 locomotive sported a massive green "bow wave" that featured the train's name. A large scarlet diamond dominated the front of the engine, bracketed by the Illinois Central name.

The next streamlined train introduced by the Illinois Central was a new edition of the deluxe Chicago–New Orleans all-Pullman *Panama Limited*. On February 4, 1911, IC had renamed its premium

Chicago and New Orleans Limited to capitalize on the national pride being felt upon the completion of the Panama Canal, to which New Orleans was a major gateway.

The new streamlined edition of the *Panama Limited* was the next to last of the prewar streamliners placed in service (the last was the Missouri Pacific's *Colorado Eagle*). Shiny new EMD E6A diesel locomotives (usually operated in pairs) hauled the consist of lightweight cars built by Pullman-Standard and decorated in a raiment of chocolate brown in-

terrupted by a large orange stripe and smaller soft yellow stripes and lettering. The new livery developed for the *Panama Limited* became the standard passenger scheme for the road for years to come; only slight differences in lettering were made over time. The car interiors were among the most beautiful of the era and featured a New Orleans theme.

A feature of the *Panama Limited* that became world-renowned was the "Kings Dinner," which would challenge even the most ravished appetites. For a price of \$9.85 one could enjoy a multicourse feast



EMD E6A No. 4001 remained in service until the coming of Amtrak in 1971. The unit is seen here in 1971 in the late, simplified passenger scheme sporting the IC's "split rail" logo. Mac Owen photo, ©1994, Corel Corporation

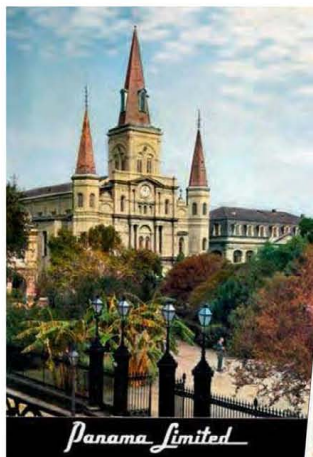
Interior view of the observation-lounge *Gulfport*, one of two cars built by Pullman (the other was named *Memphis*) for service on the Illinois Central's all-Pullman *Panama Limited*. The cars contained two compartments, one drawing room, and two double bedrooms, along with the observation lounge. The interiors were decorated to evoke a New Orleans atmosphere. Unique lighted neon signs were affixed to the lower car sides with *Panama Limited* spelled out in flowing script. *Smithsonian Institution, Pullman Collection, Neg. 46040*



that began with a Manhattan or martini cocktail and a sampling of appetizers. This was followed by a cocktail of fresh gulf shrimp or crab fingers served with the line's own "special sauce." Wine was then served with a seasonal fish course that was followed by a charcoal-broiled sirloin steak served with a vegetable, salad, bread, and potato. After enjoying the sumptuous fare, one could finish off the meal by enjoying coffee and an after-dinner liqueur such as creme de cacao, creme de menthe, or blackberry liqueur. For those still not quite satisfied, cheese with apple wedges or a dessert course from the menu were served.

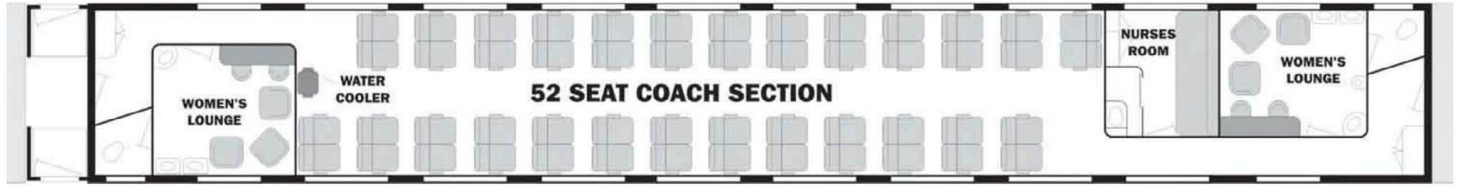
After such a feast, passengers on the *Panama Limited* could bask in the luxury of a lounge truly fit for a king as the Illinois countryside rolled past, often at speeds that exceeded 100 miles per hour. The Illinois Central maintained the highest standards on its premium flagship even as patronage of the country's passenger trains began to fall and the IC experienced operating losses on the train. (The *Panama Limited* became one of two remaining all-Pullman trains operating in the United States in the 1960s—the other was the *Broadway Limited*.)

In 1967 an all-coach train called the *Magnolia Star* was consolidated with the *Panama Limited*. Separate train names were maintained, however, at least until 1970 when the *Magnolia Star* name was dropped. Around the same time, the connecting St. Louis-to-Carbondale, Illinois, train was eliminated and replaced by bus service. The *Panama Limited*, in name anyway, remained in operation after Amtrak took over most of the nation's passenger trains on May 1, 1971, and continued in operation until 1974 when the name was changed to the *City of New Orleans*, which had been the Illinois Central's premier day train between Chicago and New Orleans. The name change was no doubt aided by the popularity of the song "The City of New Orleans" by singer Arlo Guthrie, which had been a hit in 1972.



This *Panama Limited* menu features an illustration of St. Louis Cathedral in Jackson Square, New Orleans, one of Louisiana's oldest churches. *Author collection*

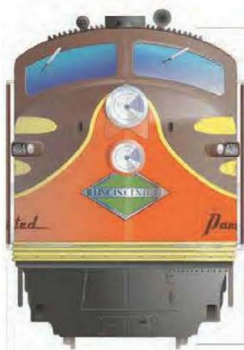




Illinois Central No. 2600, *Camellia*, was a 52-seat coach built by Pullman and contained two women's lounges and a nurse's room. The car was built for the original *City of Miami* and intended for use by women with children. The lower side view shows the car painted in the original bright orange and green scheme with red striping and lettering. The upper opposite side view shows the car in its postwar chocolate brown and orange scheme with deluxe gold lettering and striping adopted as the railroad's standard passenger scheme.



68 ft - 0 in



13 ft - 11 in

10 ft - 7 in

ABOVE: Electro-Motive Division E6 diesel passenger road locomotives continued the concept of a standardized "off-the-shelf" diesel unit initiated by the company's successful E3 (E4 and E5 designations were assigned to locomotives built for the Seaboard and the Burlington, respectively, which contained slight modifications). The Illinois Central acquired four of the 2,000-horsepower E6A units (Nos. 4001 A and B and 4002 A and B) in 1941 for the new streamlined edition of the *Panama Limited*. The "Panama Colors" of chocolate brown and medium orange with soft yellow stripes and lettering remained the standard passenger livery of the Illinois Central until the birth of Amtrak.

BELOW: Electro-Motive Division delivered Illinois Central E6A No. 4000 in 1940 to power the line's brand-new *City of Miami* all-coach streamliner. The unit was resplendent in this one-of-a-kind light-orange, green, and scarlet livery that matched the new Pullman-built cars that followed.



CHAPTER TWENTY-TWO

THE BANNER BLUE AND THE BLUE BIRD

America's entry into World War II resulted in restrictions on the purchase and acquisition of new motive power intended primarily for passenger service. Many American railroads that had not acquired new locomotives prior to the war found a solution in modifying or rebuilding existing equipment. The Wabash was one such railroad, and it rebuilt five K5 three-cylinder 2-8-2 Mikado-type locomotives built by Alco in 1925.



Five Wabash Mikados (Nos. 2600–2604) were rebuilt into 4-6-4 Hudson types at the line's Decatur, Illinois, shops in 1943 and 1944. The rebuilt locomotives were redesignated Class P1, renumbered (700–704), and painted in the Wabash's distinctive blue with a broad, white stripe extending across the side of the locomotive and tender. In 1946 and 1947, two of the line's two-cylinder K4 Mikados (Nos. 2743 and 2744) were also rebuilt into P1 engines and renumbered 706 and 705, respectively.

Specifications

Rebuilt: 1943–1947
Tractive Effort: 44,244 lbs.
Driving Wheels: 6 @ 80 in. ea.
Boiler Pressure: 220 psi
Grate Area: 70.9 sq. ft.
Cylinders: 26 in. x 28 in.
Locomotive Weight: 374,680 lb.
Total Weight: 582,680 lb.
Fuel: 32,000 lb. coal
Water: 12,000 gal.

CHAPTER TWENTY-THREE

THE EMPIRE BUILDER

DURING WORLD WAR II, the Great Northern was the first transcontinental railroad to order new passenger equipment with an eye toward postwar service. The railroad placed an order with Pullman-Standard on November 4, 1943, for five new streamlined consists for the premium *Empire Builder*. The Great Northern owned four of the consists (the fifth was owned by operating partner Burlington).

The new streamlined *Empire Builder* began service on February 23, 1947, and immediately put the Great Northern's competitors into action attempting to equal it. The *Empire Builder* reduced the best previous schedule to a 45-hour timing between Chicago and the Pacific Northwest. The GN was forced to reequip the train several times as both the Northern Pacific and the Milwaukee Road did the same in an ongoing effort to challenge the *Empire Builder's* dominant position.

Radiant in green and orange that were separated by gold striping, the new trains were powered by EMD E7A passenger diesel units, 10 of which were acquired in 1945. The new streamliner was a big success with the traveling public, and the *Empire Builder* maintained its reputation as the standard by which all other Chicago–Seattle trains were compared.

The Great Northern made a concerted effort to ensure that its flagship *Empire Builder* was second to none in terms of service and equipment. An almost-continuous process of reequipping the train with the newest and finest equipment was in effect from the train's inception. When rival Milwaukee Road pulled off a minor coup by introducing its Super Domes in 1952, the Great Northern turned to the Budd Company to counter the competition. In 1955, Budd delivered six cars with full-length dome sections for the *Empire Builder*. Budd also supplied a number of "short" dome-coaches to

ensure that the *Empire Builder* offered more dome cars than any of the competing trains.

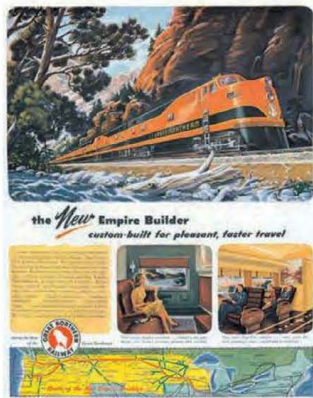
The Great Northern received six somewhat unique "Ranch Cars" from American Car & Foundry in 1950 and 1951. Each contained a 14-seat lunch counter and a 30-seat lounge, all decorated in Western decor and named after lakes located along the Great Northern's route. The Great Northern's own "G Bar N" cattle brand was prominently displayed; the Great Northern even had the brand officially registered with the Montana Livestock Association. The railroad also received six new observation lounge cars from ACF at this time. Each was named after a mountain and contained two

roomettes along with a 38-seat lounge that featured beverage service. The observation area had extra-high windows to enhance the view.

The Great Northern, like many American railroads in the 1950s, attempted to develop and incorporate new features into their passenger trains in an effort to compete with improved highways and more affordable airline competition that were cutting into their traditional customer base. Unlike many great passenger trains, the *Empire Builder* survived until Amtrak took over most of the nation's passenger train operations in 1971 and survives to this day as one of Amtrak's key transcontinental trains.



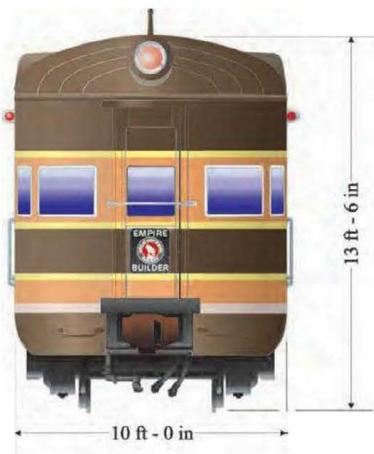
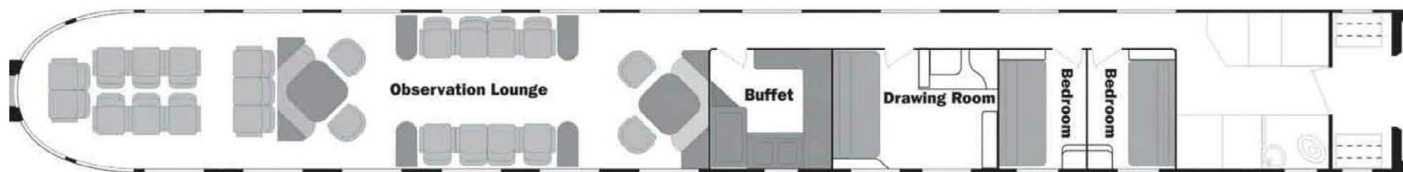
The 1957 edition of Great Northern's famous *Empire Builder* descends from Marias Pass at Bison, Montana. A Great Dome can be seen fourth from the rear. *Great Northern photo, Great Northern files, S. Holmquist collection*



1947

Electro-Motive continued the successful lineage of its E Series passenger cab units when toward the end of World War II it resumed production with a new model: the E7. Internally, the E7s were similar to the predecessor E6 units and were likewise rated at 2,000 horsepower, but featured improved 567A diesel engines and an improved electrical system. The E7A cab units shed the slanted nose of the previous E Series diesels in favor of the more blunted "bulldog" nose of the company's F Series freight units. The Great Northern acquired 10 E7A units in 1945 (Nos. 500–509), followed by three more in 1947 (Nos. 510–512). The units were assigned to power the line's *International* and *Red River* streamliners, as well as the *Empire Builder*. They were the first passenger diesel units on the Great Northern.





Missouri River was one of five sleeper-lounge-observation cars built by Pullman-Standard for the 1947 streamlined *Empire Builder*. Cars contained two bedrooms, a drawing room, and a buffet-lounge in the observation section. Cars were named and numbered GN 1190 *Mississippi River*; GN 1191 *Missouri River*; GN 1192 *Flathead River*; GN 1193 *Kootenai River*; and CB&Q 1194 *Marais River*.





Great Northern's full-dome cars were Budd's answer to the Milwaukee Road's Pullman-standard-built standard Super Domes. The Great Northern also ordered a large group of "short" domes to ensure that the *Empire Builder* featured more dome cars than any competing train. *Great Northern files, S. Holmquist collection*

THE BUDD COMPANY Manufacturers of automobile bodies, frames, wheel assemblies and truck bodies of various and make and engine systems, also related engineering and research. A United States Defense contractor.

GREAT DOMES ON THE GREAT NORTHERN

The Great Northern Railway is an engineering masterpiece known to most of the great wonderful scenery in America. . . .
 Its Empire Builder glides and tumbles along the Rocky Mountains in Glacier National Park . . . along lake rivers and white-watered Paper River . . . through the forested Canadian . . . on the spectacular trail between Chicago, St. Paul-Montreal, Spokane, Seattle and Portland.

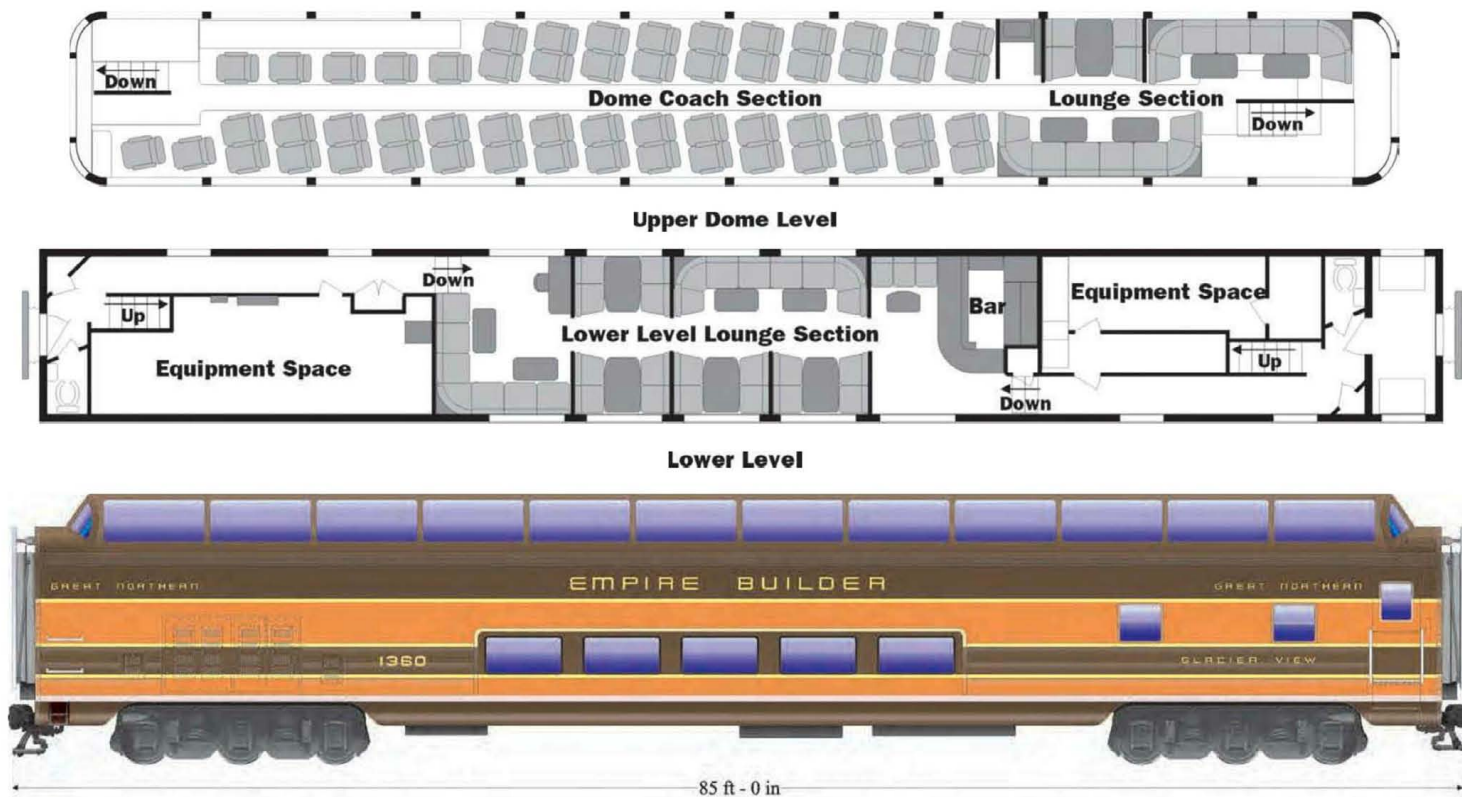
Here are sights to thrill you, watching through the massive curved windows of the new stainless steel dome cars, built by Budd, which alone throughout the Great Northern's Empire Builder.

The Great Northern, in company with many other railroads, has made every imaginative provision to make your trip by train the most restful, the most stimulating way to travel . . . the safest and most certain way to reach your destination . . . equipped all over with equipment.

To provide this finest of travel perfection, nationwide call on Budd.

Budd
 PHILADELPHIA DETROIT CHICAGO

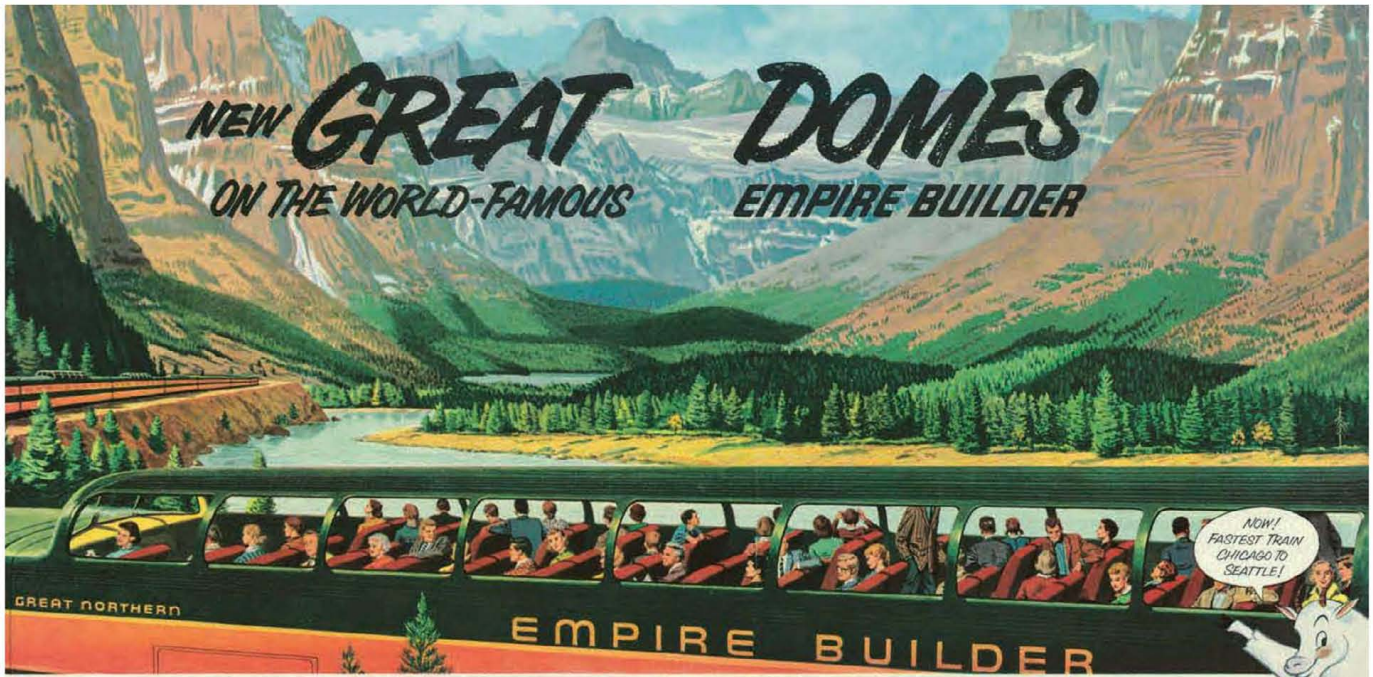
1955



The Great Northern turned to Budd to respond to the success of competitor Milwaukee Road's Super Domes. In 1955 the Great Northern acquired 16 dome-coaches and 6 full-dome lounge cars from the Budd Company. The full-dome cars seated 75 Pullman passengers upstairs in a combination of 57 forward-facing seats and 18 lounge seats at one end. The central part of the lower level was devoted to a 34-seat lounge. The full-length dome cars became known as "Great Domes," even though, officially, this was a designation given to all dome cars on the railroad, including the dome-coaches with "short" domes. The term "great" was fitting for the cars' full-length domes, but was in fact intended to refer to the name of the railroad.

Each *Empire Builder* consist was equipped with three dome-coaches and one Great Dome. The lounge areas in the Great Domes cars replaced the Pullman lounges in the round-end observation cars; the Great Domes were usually operated behind the dining car. Later in the train's career they had their lower lounges opened to coach passengers, with the upper-level dome reserved for sleeping car passengers. One Great Dome was owned by and marked for operating partner Burlington.

Unlike the dome coaches, the full-length domes were both named and numbered: GN 1390 *Glacier View*, GN 1393 *Lake View*, GN 1391 *Ocean View*, GN 1394 *Prairie View*, GN 1392 *Mountain View*, and CB&Q 1395 *River View*.



MORE LUXURY DOME SEATS FOR THE MOST SCENIC MILES ON ANY TRAIN

BETWEEN CHICAGO-TWIN CITIES-SPOKANE-SEATTLE-PORTLAND

GO GREAT... GO

GREAT NORTHERN



4 GREAT DOMES ON THE EMPIRE BUILDER

Long a pacemaker for train travel at its finest, Great Northern's distinguished Empire Builder now provides 147 topside seats in new Great Dome cars—the most dome seats on any streamliner between Chicago and Pacific Northwest cities.

There now are three luxurious Great Domes in the coach section of the Empire Builder... plus an exciting, colorful full-length Great Dome in the Pullman section, with America's smartest lounge on rails on the lower deck.

For a vacation trip of a lifetime... for business travel, step aboard the Empire Builder. There's no extra fare for helping yourself to a grandstand seat in the Great Domes for the extra wonderful sightseeing through Great Northern country.

For information: Write P. G. Holmes, Pass. Traff. Mgr., G. N. Ry., St. Paul 1, Minn.



CHAPTER TWENTY-FOUR

THE NORTH COAST LIMITED

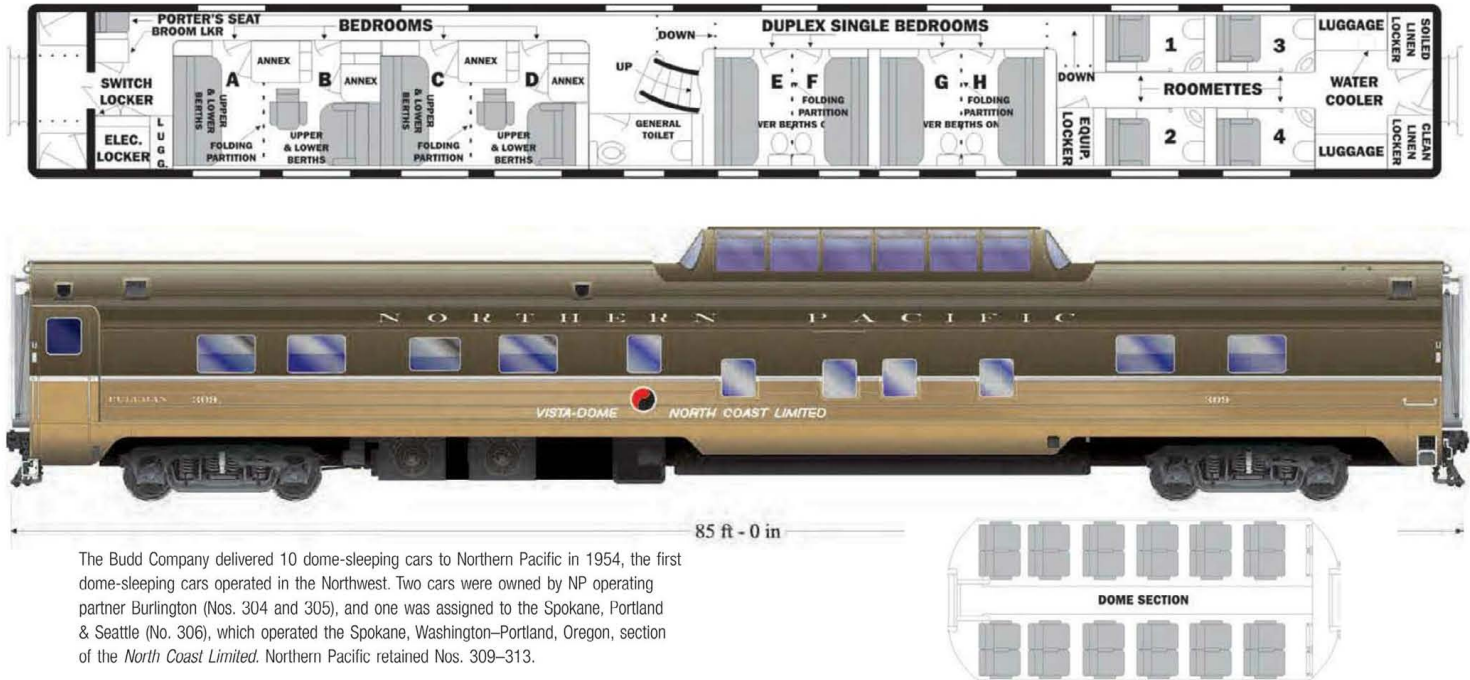
IN NOVEMBER 1946 the Northern Pacific ordered 78 lightweight streamlined passenger cars from Pullman-Standard, along with seven A-B-B sets of Electro-Motive Division F3 diesel units to equip the *North Coast Limited*.

The new equipment provided competition to Great Northern's new streamlined version of the *Empire Builder*.

Both railroads—Great Northern and Northern Pacific—initiated a program of almost continuous improvements to remain competitive over the Chicago–Puget Sound route.

The Northern Pacific made a considerable effort to upgrade and improve its premium *North Coast Limited* beginning in 1946. The decision paid off

when NP's passenger revenues increased throughout the 1950s in sharp contrast to many other railroads that experienced exactly the opposite results. In the early 1950s, the railroad brought in noted industrial designer Raymond Loewy to create a new passenger livery. Introduced in 1952, the livery is recognized as one of the most beautiful of the streamline era.

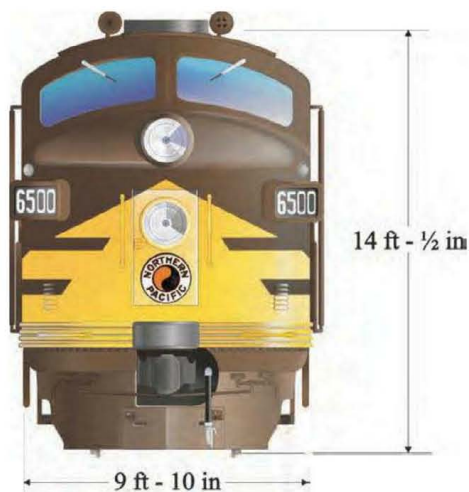


The Budd Company delivered 10 dome-sleeping cars to Northern Pacific in 1954, the first dome-sleeping cars operated in the Northwest. Two cars were owned by NP operating partner Burlington (Nos. 304 and 305), and one was assigned to the Spokane, Portland & Seattle (No. 306), which operated the Spokane, Washington–Portland, Oregon, section of the *North Coast Limited*. Northern Pacific retained Nos. 309–313.

The schedule of the *North Coast Limited* was speeded up, also in 1952, to a two-night-out timing. In 1955 the NP introduced stewardess-nurses to the *North Coast Limited*, a feature that was only available on the NP in the Northwest. In 1955 the line

launched its “Lewis and Clark Traveler’s Rest” buffet-lounge cars to serve economically priced meals and beverages. In 1958 six new dining cars were added, and in 1959 the NP introduced the popular “Slumbercoach” cars to the *North Coast Limited* consist.

The venerable streamliner maintained a reputation for excellence throughout its career, which lasted into Burlington Northern. Its life ended when Amtrak took over most of the nation’s passenger trains on May 1, 1971.



Originally intended for freight service, the Electro-Motive F Series cab unit was perhaps the most successful diesel design ever produced. It certainly was the most revolutionary and, more than any other diesel locomotive model, is largely responsible for the transition from steam to diesel motive power on most American railroads. Electro-Motive introduced the Model FT cab unit diesel in 1939, and it was the only diesel road unit allowed to be produced in quantity throughout the duration of World War II.

The Northern Pacific acquired a number of FT units in 1944 and 1945, delivered in the A-B configuration that provided 2,700 horsepower in that pairing. After the war, EMD offered the updated 1,350-horsepower F2, which was built in small quantities. Next came the highly successful 1,500-horsepower F3 that the NP acquired initially for freight service. The line also acquired seven A-B-B sets of F3s to equip the line’s premier passenger trains such as the *North Coast Limited*.

These passenger units were delivered in a two-tone green scheme with no large lettering on the A

and final B units and large block “Northern Pacific” lettering only on the second B unit. A light-green “butter knife” stripe ended just in front of the second porthole on the A units. Problems with the air filters on the A units required that side vent panels be installed on the sides of the units, resulting in the elimination of the middle porthole. The cabless B units retained the original three-portholes-per-side arrangement. The lighter green stripe was brought forward to end just in front of the forward porthole as shown in the diagram above. Large script lettering was also added to the A units, spelling out the line’s slogan “Main Street of the Northwest.”

Nos. 6500 A and B are illustrated above after modification. The NP’s passenger F units were repainted in 1953 when the road adopted the famous scheme designed by renowned industrial designer Raymond Loewy. The original passenger F3 units were numbered 6500A to 6506A for the A units and 6500 B and C to 6506 B and C for the B units.

CHAPTER TWENTY-FIVE

THE 20TH CENTURY LIMITED AND THE BROADWAY LIMITED

WORLD WAR II pushed American railroads hard, and wartime requirements put such things as luxury limiteds and vacation specials on hold for the duration. While continuing in operation to provide important transport during the war, the *20th Century Limited* and *Broadway Limited* were transformed from luxury express trains to vital wartime transports. Observation lounge cars and items such as boutonnières were eliminated. With the end of the war came a great surge by American railroads to refurbish and replace equipment that was aging and had been pushed hard during the war.

The New York Central introduced a new dual-purpose steam locomotive, the Niagara-class 4-8-4 steam locomotive. The Pennsylvania, in turn, developed its 4-4-4-4 type T1 class. The T1 was basically a 4-8-4 type possessing a duplex drive on a rigid frame. The duplex drive utilized four instead of two cylinders, which provided more efficient and smoother operation. Both steam locomotive types proved successful and were examples of what modern steam-powered equipment was capable of. Even though the

Niagaras and the T1s gave the new diesel locomotives—which had been built in small numbers before the war and proven their cost-effectiveness against steam—a run for their money, it became increasingly clear that diesels were the wave of the future.

Following the war, both the New York Central and the Pennsy began purchasing diesel locomotives and placing them in service on premium trains. Many lamented the passing of the great Hudson and K4s that powered some of America's most famous trains through the night to early morning arrivals.

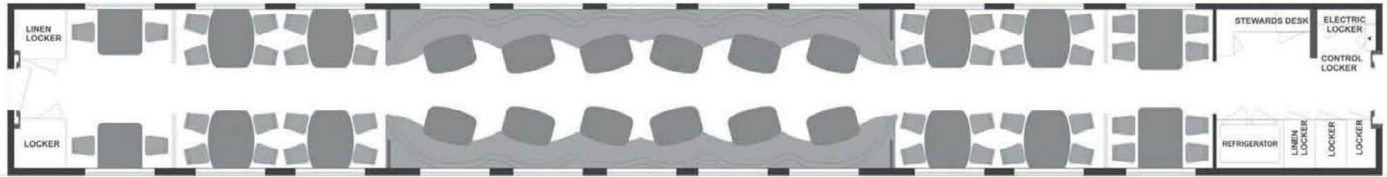
Like many other U.S. railroads after the war, the New York Central and Pennsy placed large orders for new lightweight passenger cars to replace their aging and worn fleets. This new equipment incorporated all of the latest improvements in passenger equipment, including fluorescent lighting, pneumatically operated doors between cars, and onboard telephone service.

On September 15, 1948, General Dwight D. Eisenhower, actress Beatrice Lillie, and New York Mayor William O'Dwyer broke a bottle of water symbolizing the famous "Water Level Route" over the

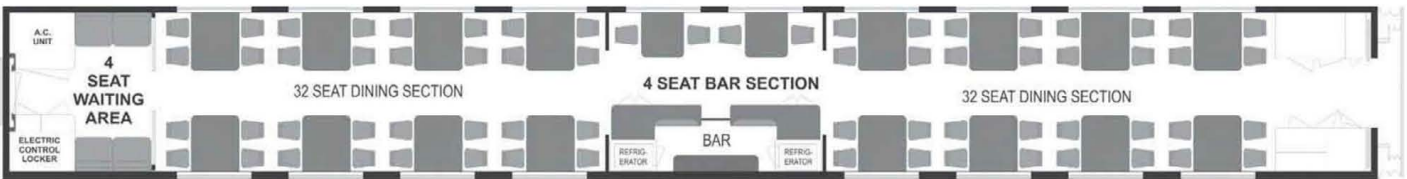
observation car of the new *20th Century Limited*, sending it off on its first run.

On April 27, 1958, the New York Central took a step that was once thought impossible but, alas, probably inevitable: the grand and famous *20th Century Limited* had coaches added to the train's consist. The all-Pullman *Century* was gone, leaving the *Broadway Limited* as the only all-Pullman conveyance between Gotham and the Windy City. As railways attempted to boost passenger revenues, which were being ravaged by improved highways and long-distance airline travel, many trains were consolidated and had their services cut back.

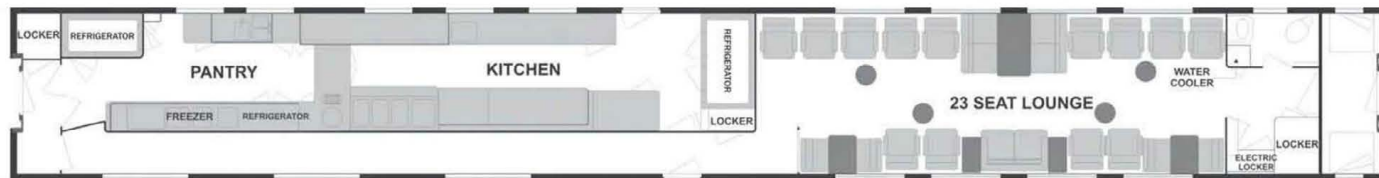
While many railway experts consider 1958 the true end of the *20th Century Limited*, on December 2, 1967, the last *20th Century Limited* left New York City half full. Overhead a jet could be heard as if to mock it in victory. The *Broadway Limited* name continued into the Amtrak era, and in 1995 Amtrak discontinued the train.



New York Central's 68-seat dining cars 400–403 were built by Pullman-Standard in 1948. Nos. 400 and 401 were regularly assigned to *20th Century Limited* service.



Pennsylvania's Broadway Limited featured five 68-seat dining cars (Nos. 4600, 4602, 4604, 4606, and 4608), each with a four-seat waiting lounge. They were built by American Car & Foundry and delivered in 1949.



New York Central's kitchen-lounge cars 476 and 477 were built by Pullman-Standard in 1948. Pennsy kitchen-dormitory cars 4601, 4603, 4605, 4607, and 4609 were built by American Car & Foundry and delivered in 1949.



Henry Dreyfus continued the modern but conservative motif for the 1948 edition of the *20th Century Limited*. Muted grays and blues, along with stripes, prevailed. The full-length diner seated 64 and contained a center section that seated 24 at tables for 2 that were positioned between serpentine sofas. The walls of this section were mirrored to give an illusion of greater width. Patrons were attended to by 12 waiters and 2 stewards who strove to ensure a dining experience second to none. *International News Photo, author collection*



1948



1949

CHAPTER TWENTY-SIX

THE METEOR, FIREFLY, AND TEXAS SPECIAL

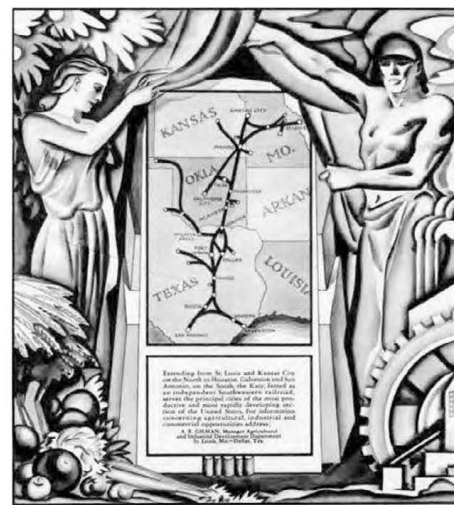
TWO RAILROADS INEXTRICABLY associated with both the city of St. Louis and the American Southwest were the Missouri-Kansas-Texas Railroad, known as the Katy, and the Saint Louis–San Francisco Railway, better known as the Frisco. The Katy introduced its premier St. Louis–Texas flyer, the *Texas Special*, in 1915. In 1917 both roads reached an agreement to jointly operate the train. The *Texas Special* operated over Frisco rails from St. Louis to Vinita, Oklahoma, where it switched to Katy iron for the journey on to Texas.

The Frisco became an early entrant into the streamline age when it introduced its vest-pocket steam-powered streamliner the *Firefly*, between Kansas City, Tulsa, and Oklahoma City in 1939. The Frisco streamlined several of its Pacific-type locomotives and rebuilt a number of conventional passenger cars in its own shops in Springfield, Missouri. The original consist was made up of a streamlined Pacific, baggage-mail-coach, full coach, and a diner-lounge, all adorned in a blue and silver livery. The handsome “steamliner” cruised the 379-mile route at an average speed of 52 miles per hour.

After World War II the two roads shared the optimism in passenger business held by most American railroads at the time. In 1945 the Frisco and Katy placed orders with Pullman-Standard for new light-weight streamline cars to equip the new *Texas Special*. Each road ordered one full consist for the train and, likewise, each ordered a pair of Electro-Motive Division E7 diesel units to power it.

The new *Texas Special* was resplendent in a radiant livery of scarlet red and stainless steel. The cars were completely red except for corrugated stainless-steel panels installed above and below the pier panels. Stainless-steel panels were installed on the diesel units, as well, to carry the corrugated lower panels the full length of the train. The train’s name was carried on each car and locomotive in stylized script.

The gleaming new *Texas Special* began service on May 16, 1948. As the 1950s progressed, the train experienced a downturn in passenger loads, and in 1959 the Frisco dropped operation of its portion of the route. The Katy then switched the train to a Kansas City–San Antonio, Texas, operation. In 1964 the southern terminus was switched to Dallas, Texas, but the train was discontinued on June 30, 1965.



A striking art deco-styled map shows the Katy system in the 1930s. *Author collection*



Resembling a model train in this aerial view, the Frisco's *Firefly* glides across the southern plains in the early 1940s. Frisco photo by Delmer L. Curtis, Aerial Photo Service, Tulsa, Oklahoma



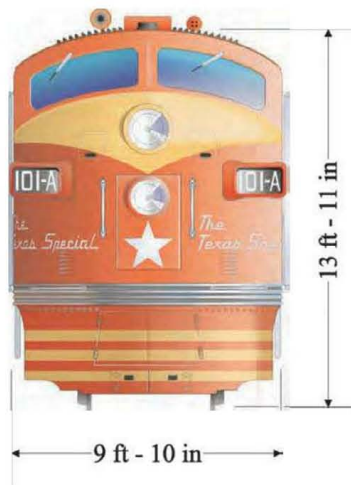
A company promotional shot of the Frisco's *Firefly* streamliner. Philip L. Moseley collection



The *Meteor* was another member of the Frisco's premium fleet of trains. It ran between St. Louis, Tulsa, and Oklahoma City on an overnight schedule. Here, Frisco's No. 1518, a Mountain type, prepares to depart Oklahoma City Union Station with the *Meteor* in the 1940s. *Frisco photo, author collection*



The streamlined *Texas Special* at Muskogee, Oklahoma, while on a publicity tour just prior to entering service. *Author collection*



In October 1945 the Katy ordered two 2,000-horsepower E7A diesel locomotives specially marked for service on the line's *Texas Special*. The units were numbered 101 A and 101 B and were the first passenger diesel units on the Katy. The Frisco also ordered six E7A units, two identically marked for service on the *Texas Special* and four for use on the line's *Meteor* streamliner. The Frisco units built for *Texas Special* service were numbered 2000 and 2003; units for the *Meteor* were numbered 2001, 2002, 2004, and 2005.

All of the E7A units were delivered in 1947 sporting a striking red and yellow scheme with fluted stainless-steel panels installed along the sides to blend in with the trailing consist. The E7 units marked for the *Texas Special* displayed the heralds of both the Katy and the Frisco. Ownership of the *Texas Special* E7As could be determined by the placement of the railroad heralds on the side of the units—the owning road's herald was placed in the most forward position of the two.

CHAPTER TWENTY-SEVEN

THE SUNSHINE SPECIAL, EAGLE, AND TEXAS EAGLE

ON DECEMBER 5, 1915, the Missouri Pacific, or MoPac, and the Texas & Pacific launched a new premier train between St. Louis and Mexico. The *Sunshine Special*, as it was called, was quickly recognized as one of the outstanding trains in North America. It became the top train on the St. Louis–Texas–Mexico route and remained so until the coming of the *Texas Eagles* in 1948. The *Sunshine Special* provided first-class service between St. Louis and Memphis through Little Rock, Arkansas, on to Texas, Louisiana, and Mexico via a connection with the National Railways of Mexico (Ferrocarriles Nacionales de Mexico, or N de M) at Laredo, Texas. Through service was provided to Los Angeles via the Southern Pacific.

All sections of the *Sunshine* featured lounge cars with showers, a radio, and the famous soda fountains that were introduced during Prohibition to replace bars. In 1934 MoPac and the T&P converted six dining cars into diner-lounge cars and upgraded eight solarium-lounge cars. The refurbished cars featured floors of Spanish ceramic tile, ornamental ironwork, leather chairs, and beamed ceilings to give the cars the ambience of old Mexico.

In June 1937, MoPac Lines and N de M introduced a once-a-week deluxe train called the *City of Mexico* that departed St. Louis on Sunday evening and arrived in Mexico City on Tuesday evening on a 47 ½-hour schedule. Northbound, the train departed Mexico City on Thursday afternoon and arrived in St. Louis on Saturday morning. The dining cars featured both American and Mexican dishes, and attendants were required to speak Spanish as well as English. The service was discontinued in December 1940.



Baggage sticker from the *City of Mexico*. Author collection

On March 10, 1940, MoPac entered the streamliner era when it introduced the *Eagle* between St. Louis, Kansas City, and Omaha and Lincoln, Nebraska. It had become apparent at this point in streamliner evolution that articulated trainsets were not ideal, as one bad-order car made the entire consist inoperable. MoPac decided that the new *Eagle* would comprise nonarticulated cars powered by a self-contained, independent Electro-Motive E3.

Two consists were ordered from American Car & Foundry, and each contained a mail-storage car; a mail-baggage car; a 76-seat coach; a 61-seat “deluxe” coach; a diner-bar-lounge car; and a parlor-observation car. Noted industrial designer Raymond Loewy was called upon to stylize the train. Many considered his design to be one of the most handsome and understated passenger liveries of the streamliner era. The new train was decorated with a medium shade of blue (eventually named “Eagle Blue”) with light gray covering the pier panels, the roofs, and the bottom halves of the car sides. Polished aluminum strips above and below the pier panels separated the gray from the blue. Cream-colored stripes separated the blue and grey. The paint scheme became the standard Missouri Pacific livery until the arrival of the simplified solid-blue “Jenks” scheme introduced in the early 1960s.

The early 1940s saw the Missouri Pacific introduce a pair of new streamliners into service. The *Delta Eagle* ran between Tallulah, Louisiana, and Memphis, Tennessee, and began service on May 11, 1941. The new train was powered by a one-of-a-kind 1,000-horsepower AA6 diesel locomotive that was basically an EMD E6A carbody with a single prime mover unit and a 19 ½-foot baggage compartment.

The next streamliner was the *Colorado Eagle*, which replaced MoPac’s *Scenic Limited* and adopted that train’s Nos. 11 and 12. To eliminate confusion, the original St. Louis–Omaha train was renamed the *Missouri River Eagle*.


The onset of World War II put the introduction of any new *Eagles* on hold for the duration. With the end of the war, the Missouri Pacific planned for a

modernization of its prime St. Louis–Dallas–Fort Worth–El Paso and St. Louis–San Antonio–Houston–Mexico City passenger routes. Originally planned as the *Sunshine Eagles*, the new trains were to offer through Pullman service from New York (via the New York Central and Pennsy) to Mexico City via the connection with N de M at Laredo. When the Mexican road failed to acquire new streamlined Pullman equipment for the service, the name was hastily changed to the *Texas Eagle*.


A *Texas Eagle* train operated in each direction daily between St. Louis–Dallas–Fort Worth–El Paso and included a section from Memphis that connected at Little Rock. A separate *Texas Eagle* also operated each way between St. Louis and San Antonio with a Houston section splitting off at Palestine, Texas.

The new *Texas Eagles* were placed in service on August 15, 1948, at which time through sleeping-car service from St. Louis to Mexico City was ceased; passengers journeying on to Mexico City had to change from the *Texas Eagles* streamlined sleepers at San Antonio to conventional heavyweight sleepers.

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OF THE
Lounge Car**



CIGARS • CIGARETTES

Cigars
Assorted Brands, 2 for 25c, 2 for 25c, 10 and 10 Smoking Tobacco..... 1.15

Cigarettes
Assorted Brands, 10 for 25c, 2 for 25c, 10 and 10 20's..... 1.15

Playing Cards
De Luxe Playing Cards..... 1.45
De Luxe Bridge Decks..... 1.50
Card Playing Concoction, Chips (100)..... .80

LADIES' LOUNGE

This suite is equipped in modern styling facilities and Valet service for ladies and gentlemen. Shown both..... \$1.50

Miscellaneous Toilet Articles, Etc.
Razor Blades (50c)..... 1.00 and 1.15
Tooth Paste..... 25c and 50c
Toilet Powder..... 25c
Shampoo Cream..... 25c
Tooth Brushes..... 25c
Handkerchiefs..... 25c and 50c
Shave Lotion..... 25c
Collar Buttons..... 25c

April in miniature


*** RADIO ***

There is a radio in the Lounge car for the convenience and amusement of the passengers. The attendant will be glad to tune in any particular station or program on request.

VALET SERVICE

CLOTHING RINGED AND PRESSED

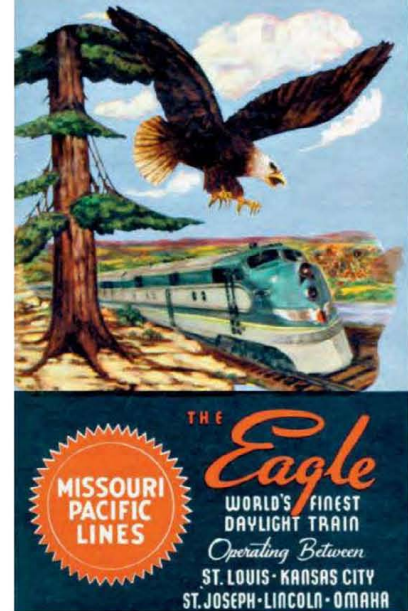
Suit (3-piece).....	\$4.00
Suit (2-piece).....	3.00
Overcoat.....	1.00
Coat.....	.50
Trousers.....	.30
Vest.....	.25
Ladies' Coat.....	1.00
Ladies' Skirt (1-piece).....	.75
Ladies' Skirt (2-piece).....	1.25



ABOVE: Lounge-car menu from the *Sunshine Special*.
Author collection

Passengers leave the comfortable confines of the Missouri Pacific's *Eagle* streamliner at Union Station in St. Louis in the early 1940s. Author collection





1940

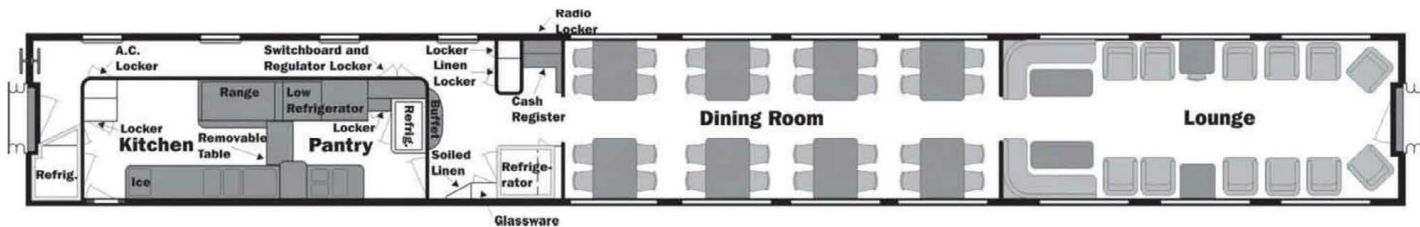


ABOVE: Muted tones of blue and tan grace the 24-seat dining-room section of one of two diner-bar-lounge cars built by American Car and Foundry and delivered in February 1940 for the *Eagle*. The cars were numbered 740 and 741. *John W. Barriger III National Railroad Library, at the University of Missouri—St. Louis*

LEFT: A colorful MoPac dining-car menu from 1958 illustrates the flower of each state served by the railroad. *Author collection*



RIGHT: Electro-Motive E3A units 7000 and 7001 shimmer in the sun in this builder shot. Missouri Pacific opted for round portholes in its early E units instead of the rectangular windows chosen by most other railroads. *EMD photo, author collection*



85 ft - 0 in

Car No. 841 was part of an order for eight dining-lounge cars delivered by American Car & Foundry in June and July 1948. Nos. 841–843 went to the Missouri Pacific, Nos. 844–845 to subsidiary International Great Northern, and Nos. 825–827 to the Texas Pacific. Trains 21 and 22, the *Texas Eagles*, were assigned two cars each for operation between St. Louis and Houston, as well as between St. Louis and San Antonio. Car No. 841 illustrated above was converted to a diner-coach in 1963 (renumbered 580) and retired in 1971.

CHAPTER TWENTY-EIGHT

THE CALIFORNIA ZEPHYR

ON MARCH 20, 1949, a gleaming new streamliner was placed in service between Chicago and San Francisco. The train's name carried on the famed *Zephyr* theme introduced by one of the operating railroads: the Chicago, Burlington & Quincy, commonly known as the Burlington.

The Burlington, the Denver & Rio Grande Western, and the Western Pacific had met in August 1939 to discuss future upgrades to the *Exposition Flyer*, a train that had been introduced by the three roads earlier that year. World War II interrupted any immediate plans, but with the cessation of hostilities in 1945, the three railroads placed orders for six consists of stainless-steel passenger cars from the Budd Company. Of the new equipment, 27 cars were purchased by the Burlington, 24 by the Western Pacific, and 15 by the Rio Grande. The operating railroads also purchased new diesel-powered locomotives to provide motive power.

Finally on March 20, 1949, nearly ten years after it was first planned, the sparkling new *California Zephyr* was placed in service. Aware that the route over the three operating railroads did not allow the train to compete with other railroads in terms of speed, the three companies decided to tout the route's spectacular scenery instead. The 2,532-mile route was timed to provide magnificent views of the Colorado Rockies and California's Feather River Canyon in full daylight. A new concept known as the "cruise train" was born. The train proved so successful that 12 new cars were ordered from Budd in 1952.

The *California Zephyrs*—or *CZ*, as it was more commonly known—became one of the most famous and renowned trains to ever operate in the United States.

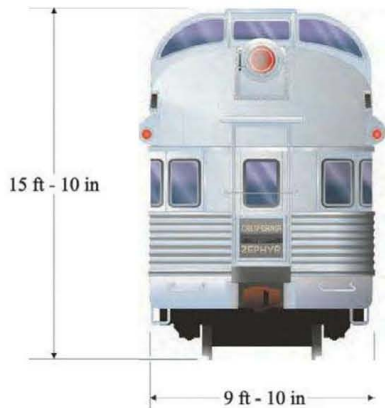
The *CZ* introduced many innovations over the transcontinental route. Each consist contained five Vista-Dome cars, the first operated on a transcontinental train. Female hostesses known as "Zephyrettes" complemented the regular crew. The Pennsylvania Railroad also provided sleeping cars painted to match the *CZ* letter-

ing, thus offering coast-to-coast sleeping-car service.

On March 22, 1970, a little more than a year before the launch of Amtrak, the *California Zephyr* made its last run. Amtrak revived the name, and today the *California Zephyr* continues to ply the rails between Chicago and San Francisco.

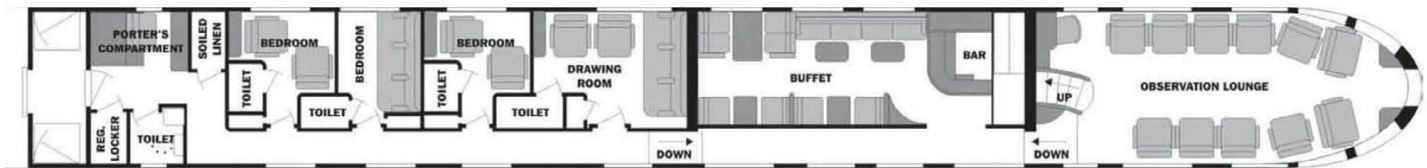
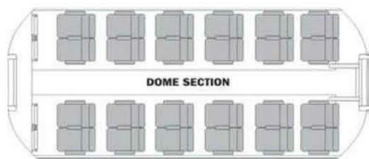


Western Pacific FP7 No. 804A heads the eastbound *California Zephyr* over Rock Creek Trestle in the early 1960s. No. 804A possessed 1500 horsepower and was built in 1950. *Robert Morris photo*



The *California Zephyr's* signature cars were the sleeper-dome-observation cars built by Budd. Each contained three bedrooms, one drawing room, a buffet section with bar, a dome section, and a 26-seat observation lounge. The cars remained in service throughout the life of the *CZ*.

The Burlington's cars (No. 375 *Silver Horizon*; No. 376 *Silver Penthouse*; and No. 377 *Silver Solarium*) went on to serve Amtrak, while the Rio Grande's sole car (No. 1145 *Silver Sky*) continued service after the *CZ's* demise, serving on that road's own Denver-Salt Lake City *Rio Grande Zephyr*. The Western Pacific's cars (No. 881 *Silver Crescent* and No. 882 *Silver Planet*) were retired and sold in 1970.



CHAPTER TWENTY-NINE

THE SHASTA DAYLIGHT

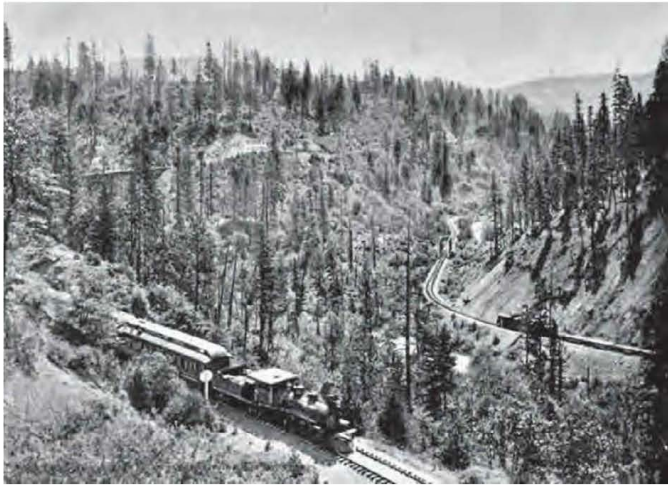
IN APRIL 1949, the Southern Pacific inaugurated a luxurious new streamliner over its 714-mile Portland–San Francisco Shasta Route. The new streamliner operated on a daytime schedule that afforded travelers views of some of the most spectacular scenery in the American West. All of the train's cars possessed oversized picture windows that allowed passengers to take in the fabulous views en route. Two consists were built, each of which included nine chair cars and a rebuilt parlor-observation car. The new train continued the *Daylight* theme of the SP's Los Angeles–San Francisco train and was named the *Shasta*

Daylight. All were adorned in the line's radiant red and orange "Daylight" color scheme.

A triple-unit dining–kitchen–coffee shop car served famous SP meals to hungry patrons. *Timberline Tavern* lounge cars were inspired by the famous lodge of the same name on Oregon's Mt. Hood, and the car interiors were fashioned to resemble that of the resort. Although initially hauled by E7 diesel locomotives, Alco PA diesel locomotives were soon found to be more suitable for the mountainous route. Many consider the PAs the most beautiful examples of diesel-powered locomotion ever built. In 1955 the

SP added one of its homebuilt full-dome cars to the consist, allowing even better views of the scenery.

The *Shasta Daylight's* overnight counterpart, *The Cascade*, was upgraded to offer the finest accommodations and appointments available on the rails anywhere. The overnight train offered an equally exquisite *Cascade Club* triple-unit diner and lounge car. These cars had no bulkheads at the points of articulation, which provided an effective car length of 130 feet.



A view of Horseshoe Bend on the original line of Southern Pacific's Shasta Route, taken shortly after construction. *Author collection*

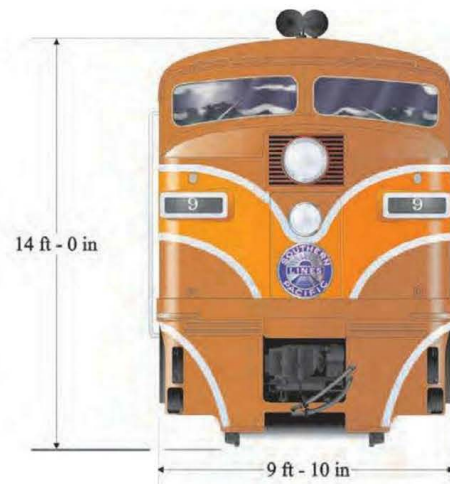


The 66-seat coffee-shop section of the triple-unit diner–kitchen–coffee shop car on the Shasta Daylight. *Union Pacific Railroad Museum*



65 ft - 8 in

Alco's PA series passenger cab-unit locomotives are considered by many to be the most beautiful examples of diesel locomotive power ever built. The PAs differed from the Electro-Motive E Series in that they utilized a single turbocharged 16-cylinder diesel engine instead of two diesel engines to achieve 2,250 horsepower (2,000 horsepower in the PA-1). Southern Pacific No. 6005 was a PA-2 unit acquired in 1948. It was Southern Pacific practice to display the train numbers instead of locomotive numbers in the lighted number boards of its diesel locomotives, thus this unit is designated for train No. 9, the Oakland-bound *Shasta Daylight*.



14 ft - 0 in

9 ft - 10 in

CHAPTER THIRTY

THE SUNSET LIMITED

THE SOUTHERN PACIFIC'S *Sunset Limited* is one of the oldest name trains operated in the United States. The train dates to 1894 when it was introduced as an all-Pullman luxury express operating once a week between New Orleans and San Francisco. The name survives today under the Amtrak banner.

With the end of World War II, the Southern Pacific, like many American railroads, made consider-

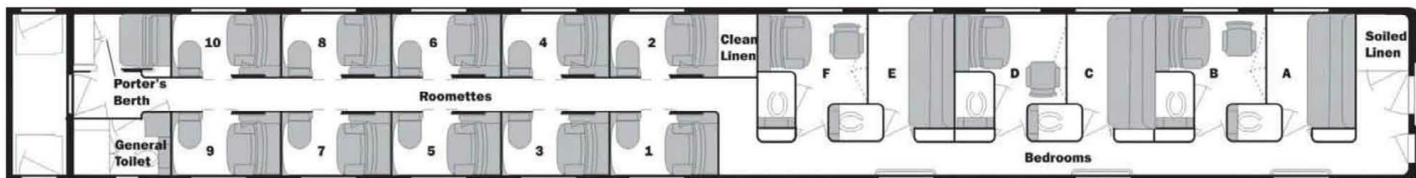
able expenditures to upgrade. In 1950 the SP ordered five entire consists from the Budd Company to equip an entirely new *Sunset Limited*. Included in the order were 30 10-roomette-6-double-bedroom (10-6) sleeping cars. Five of these cars were built with a round end similar to many observation lounge cars of the day.

SP planned each of the five consists with five 10-6 sleepers of conventional construction and one

of the round-end design as the rail car. The SP had conducted research that indicated bar-lounge facilities were more profitable when located midtrain next to the dining car. It was thus decided that those facilities would be located there and that the round-end sleeping cars would reside at the end of the train in place of the traditional observation lounge cars.



1951 Train No. 40, the *Imperial*, leaves Los Angeles Union Passenger Terminal for Chicago powered by three 2,000-horsepower E7 diesel units. *Shasta Daylight* markings adorn the front of the lead unit. *Thomas O. Acree photo, author collection*



85 ft - 0 in

Welcome Aboard The New Sunset Limited

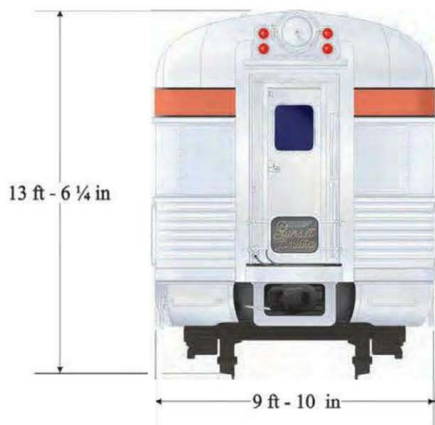
The Sunset Limited, Southern Pacific's famous passenger between New Orleans and Los Angeles, has just been completely equipped with new Budd off-steelless steel cars. There are five, aluminum train, sleepers to provide daily service from each terminal. And they are progress.

Amesbury stage is wide from the soft corner of the broadening horizon of Louisiana to the gold of desert sands. The hands of pioneer stretch along the route the main stream and bend right into the leather wall covering in the coffee shop-berth cars. The Sunset Limited provides the workmen.

Along with the solid, un-matched strength of their stainless steel structure, these trains provide the greater safety and riding ease of Budd railway disc brakes, straps, and air effortless as to cargo as being impossible.

The Sunset Limiteds are The Budd Company's most recent contribution to railway progress. They give you a new and compelling reason to experience the pleasure of modern travel by train. The Budd Company, Philadelphia, Detroit.

1951



Car No. 9027 was one of five round-end 10-6 sleeping cars built by Budd for the *Sunset Limited*. Cars of the rounded configuration were numbered 9025-9029, while sleepers of the same 10-6 configuration but with conventional ends were numbered 9000-9024. Budd Company featured the cars in an advertisement at the time. *Author collection*

CHAPTER THIRTY-ONE

THE POWHATAN ARROW

IN THE POSTWAR RUSH by American railways to convert motive-power fleets from steam to diesel, there was one stalwart holdout. Longer than any other major U.S. railway, the Norfolk and Western stubbornly held on to its conviction that steam power could successfully compete with diesel power. The railway's 676-mile main line extended from the seaport of Norfolk, Virginia, to Cincinnati and Columbus, Ohio, through the Appalachian Mountains and some of the richest coalfields in the world. The N&W had become a virtual conveyor belt for Appalachian coal, hauling the "black diamonds" from the coalfields to the Eastern Seaboard, in the process becoming quite profitable.

The company developed its Class J 4-8-4 stream-lined steam locomotives in the early 1940s. The original batch of four locomotives was delivered in 1941 and 1942. Additional units were constructed in 1943 and 1950, making a total of 14. The Class J's "torpedo tube" design developed by N&W designer F. C. Noel radiated both speed and power. Capable of handling a 15-car streamliner over the mountainous 2 percent grades at high speeds (90

miles per hour was not uncommon), the Class Js soon gained a reputation for mechanical excellence, as well as aesthetic beauty.

On April 28, 1946, the N&W introduced a brand-new daylight streamliner operating on a 16-hour schedule from Norfolk to Cincinnati. The new train's name, the *Powhatan Arrow*, was emblazoned on the sides of new cars in a stylized emblem. The N&W even ordered two dome-lounge-coach cars, but the order was cancelled shortly afterward. A steel strike and shortages brought on by the postwar demand for components caused equipment delays, but in November 1949 an all-new streamlined consist was completed.

The Class J 4-8-4s, along with Class K-2 and K-2a 4-8-2 streamlined steam locomotives, powered the N&W's premier trains until summer 1958 when E8 diesels leased from the Richmond, Fredericksburg & Potomac took over and relegated the elegant steam loco to freight service, ending an era of main-line premium trains pulled by steam power.

No. 611 was preserved and restored to excursion service in 1983 and 1984, and then retired to museum display in Roanoke, Virginia, in 1996.



1946



The Norfolk and Western Class J 4-8-4 Northern was among the most successful and aesthetically beautiful designs of the type ever developed. The first batch of four locomotives (Nos. 600–604) was delivered between October 1941 and January 1942 and introduced the “bullet-nose” streamline styling. Additional units (Nos. 605–610) were built in 1943, although they lacked the streamlining of their predecessors. More units were built in 1950 (Nos. 611–613) with streamlining; by this time, streamlining had been added to the 1943 units. The designers selected 70-inch-diameter driving wheels that enabled the locomotives to operate effectively in mountainous regions and over flat coastal areas. The effect of the relatively smaller drivers was to make the engines appear even larger than they were. The engines were capable of hauling a 15-car passenger train at speeds that sometimes exceeded 90 miles per hour over the 2 percent grades of the mountainous regions. An officially sanctioned test recorded a Class J traveling at 110 miles per hour with 15 cars over a straight and level section of roadway. The 1950 engines represent the last streamlined steam locomotives built in the United States.

Specifications
 Built: 1941–1950
 Tractive Effort: 80,000 lb.
 Driving Wheels: 8 @ 70 in. ea.
 Heating Surface: 5,271 sq. ft.
 Boiler Pressure: 300 psi
 Grate Area: 107.5 sq. ft.
 Superheater: 2,177 sq. ft.
 Cylinders: 27 in. x 32 in.
 Total Weight: 873,000 lb.
 Fuel: 70,000 lb. coal
 Water: 20,000 gal.



Bar-lounge-observation cars 581 and 582 were delivered to the Norfolk and Western in December 1949 for service on the line's *Powhatan Arrow*. The cars were devoid of electrical marker lamps, as the N&W preferred to use the traditional kerosene marker lanterns.





Norfolk and Western 4-8-4 No. 611 was restored to its original glory and widely used on fan excursions. *Mac Owen photo, ©1994 Corel Corporation*

CHAPTER THIRTY-TWO

THE OLYMPIAN HIAWATHA

POSTWAR OPTIMISM about the future of passenger trains held by most American railroads was perhaps most evident among the three major transcontinental railroads serving the Pacific Northwest. The Great Northern introduced its completely revamped *Empire Builder*, which experienced great success. Northern Pacific continuously improved its *North Coast Limited* in the competitive route. Likewise, the Milwaukee Road sought to upgrade its own premier transcontinental flyer, the *Olympian*. The Milwaukee purchased new Fairbanks-Morse “Eric-built” diesel passenger locomotives, radiant in “Harvest Orange,” “Royal Maroon,” and gray, and accented by bright chrome trim. New passenger cars were ordered from Pullman-Standard and also constructed in the company’s own shops.

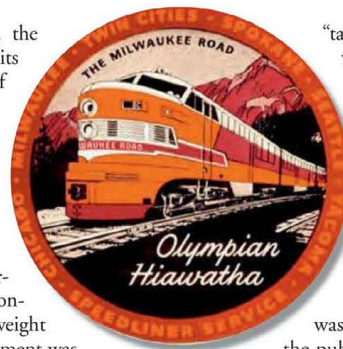
The venerable *Olympian* dated to May 28, 1911, when it was inaugurated shortly after the completion of the Milwaukee Road’s Pacific Coast Extension to Tacoma and Seattle, Washington. Because it was the last of the transcontinental Pacific Northwest railroads completed, newer technology allowed the line to be built with a minimum of grades and curves. Thus, the Milwaukee Road possessed the shortest route between the Midwest and the Pacific Northwest.

In an effort to preserve the renowned level of excellence associated with the *Olympian*, yet present a

train that was new in every aspect, the Milwaukee Road decided to integrate its *Hiawatha* trademark into the name of the reequipped train. The *Hiawathas* had been introduced in the mid-1930s between Chicago and the Twin Cities and quickly became renowned for their speed, comfort, and modern amenities. The *Olympian Hiawatha* was launched on June 29, 1947, and was hauled by the new Fairbanks-Morse diesels. The consist contained both streamlined and heavyweight equipment, as much of the new equipment was still being built.

In 1949 new cars arrived from Pullman-Standard, including six new Skytop lounge sleeping-observation cars. Each contained eight bedrooms and a Skytop lounge, which was almost completely enclosed by glass, allowing a superlative view of the fantastic mountain scenery.

The company’s own Milwaukee Shops built a number of “Touralux” sleeping cars. Several of the cars were used exclusively for women with children and contained 24 coach seats and 8 sections seats each. Also constructed in the Milwaukee Shops were six new “Tap-Lounge” cars that each contained 26



“tap” or bar-lounge seats, along with 18 seats in the lunch-café area. In 1952 the Milwaukee introduced its full-length dome cars, called “Super Domes.” Ten of the cars were delivered by Pullman-Standard and placed in service on the line’s *Olympian Hiawatha* and *Twin Cities Hiawatha*.

The *Olympian Hiawatha* was one of the earliest victims of the public’s turn away from passenger trains in the late 1950s and into the 1960s.

Ironically, one factor that led to the train’s demise was competition from the Union Pacific’s *City of Portland* “Domeliner” that operated through cars from Chicago to Seattle via Portland. The Milwaukee Road had become a partner in the operation of this train when it became the Union Pacific’s link to Chicago from Omaha in 1955, replacing longtime UP partner Chicago & North Western. Despite offering an excellent level of amenities and services, the *Olympian Hiawatha* became an unprofitable operation and on May 22–24, 1961, made its last run.



Coming . . . a new service to Vacationland

Olympian Hiawathas

CHICAGO -
PACIFIC
NORTHWEST

Passengers will enjoy a new transcontinental
superior service. You can pass on faster
schedules to Yellowstone . . . western state
ranches . . . Spokane's Lake and Grand
Coele Park . . . Mt. Rainier, Mt. Baker
and other Point Sound attractions center-
ing around Seattle and Tacoma.

All equipment for the new OLYMPIAN
HIWATHAS, except the all-time sleeping
cars, will be new. This includes the easy,
up-to-date dining car and the distinctive

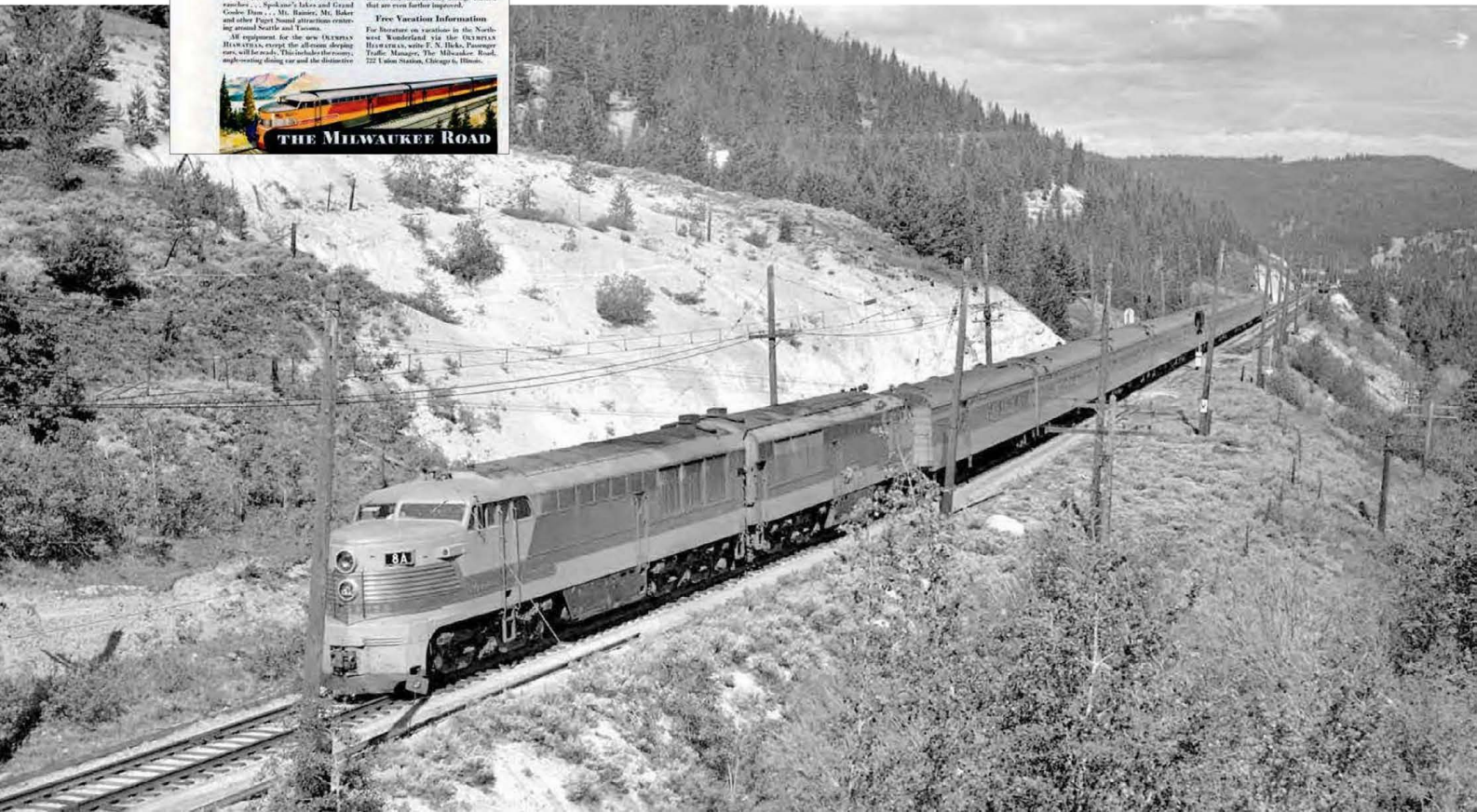
Top Floor . . . Tuesday sleeping cars
that bring new luxury with economy . . .
Olympian Hiawatha Luxury Lounge coaches
that are even further improved.

Free Vacation Information
For brochures on vacation in the North-
west, send for the OLYMPIAN
HIWATHAS, write E. N. Hink, Passenger
Traffic Manager, The Milwaukee Road,
221 Union Station, Chicago 6, Illinois.



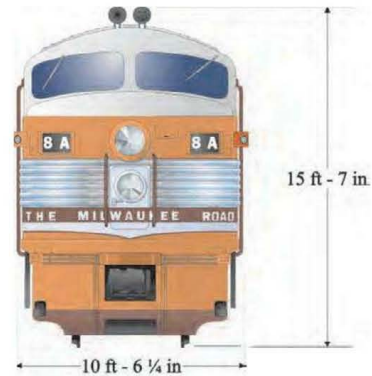
LEFT: 1947

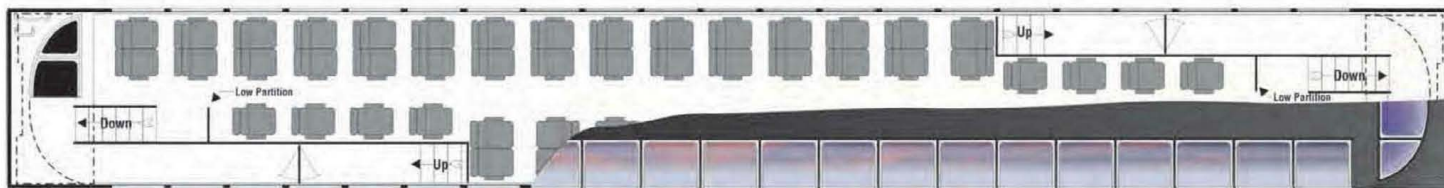
BELOW: Fairbanks-Morse "Erie-built" diesel locomotive No. 8A
heads a 10-car *Olympian Hiawatha* as it traverses Pipestone
Pass near Butte, Montana, on June 24, 1949. *Otto Perry*
Collection, *Denver Public Library, Western History Collection*,
Neg. OP-5223



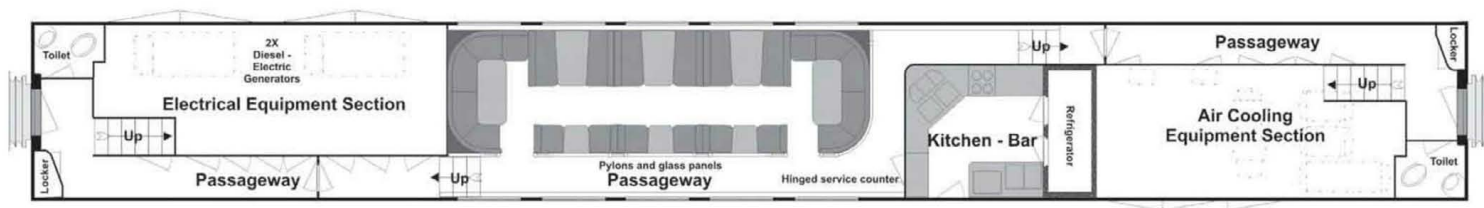
The 2,000-horsepower Fairbanks-Morse "Erie-built" diesel locomotives were designed as dual-service units (intended for both freight and passenger trains) and were the company's first attempt at a cab-unit road diesel. The locomotives rode on a pair of six-wheel A-1-A trucks, and their name was derived from the fact that their car bodies were built at the Erie, Pennsylvania, works of General Electric. The model emerged in 1945 and the Milwaukee Road acquired a number of A units as well as cabless B units in 1946 and 1947.

The units were initially operated on the new *Olympian Hiawatha*, usually in an A-B-A configuration. They were originally utilized to haul the *Olympian Hiawatha* over its complete route, but after a short period of time the engines proved unsuitable for long-distance transcontinental operation and were relegated to shorter runs. The A units were numbered 5A-9A, 10A, and B-12A; B units were numbered 5B-9B.

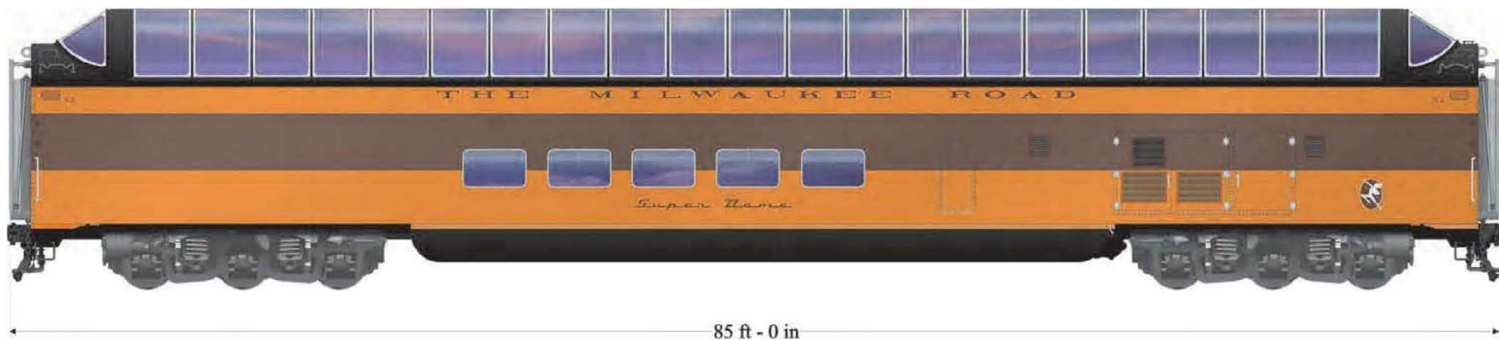




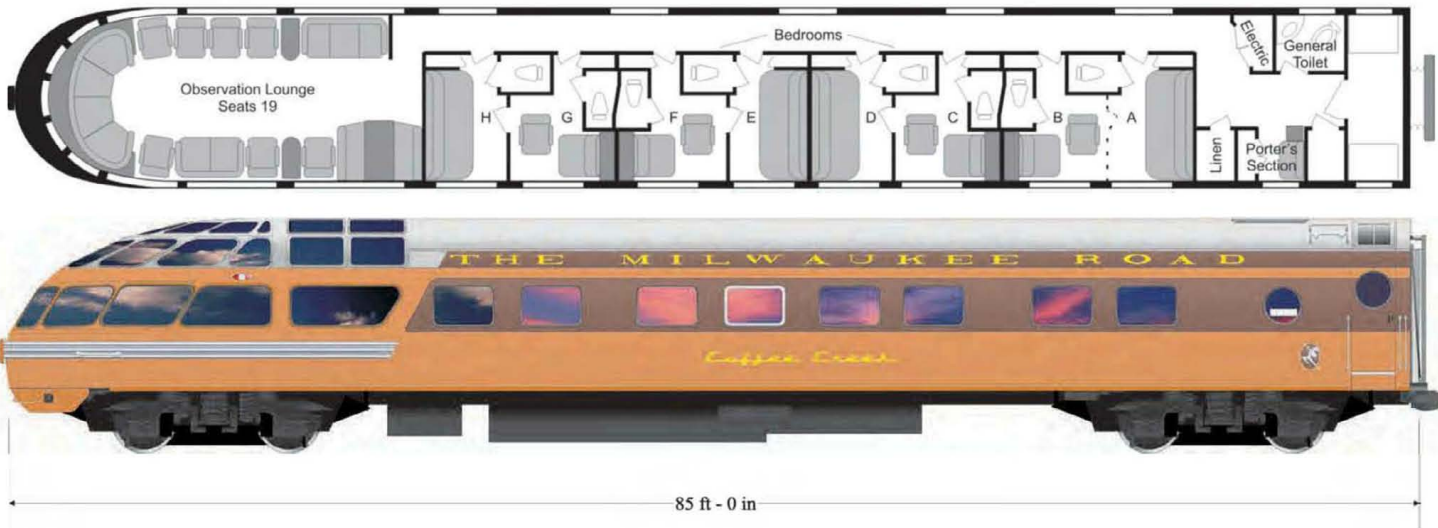
Upper Level



Lower Level



The Milwaukee Road's "Super Dome" cars introduced an innovative concept that was soon adopted by several other western railroads. By extending the dome area over almost the full length of the car, the number of dome seats could be greatly increased, especially in comparison to the "short" domes previously produced for other railroads. The upper-level dome section contained 68 seats under 325 square feet of glass. This required large air-conditioning equipment that was located in two equipment sections on the lower level. A 28-seat buffet-lounge was also located on the lower level in the center of the car, along with a kitchen-bar. Ten cars (Nos. 50–59) were acquired from Pullman-Standard in late 1952, six of which were assigned to the *Olympian Hiawatha*; two were assigned to the *Twin Cities Hiawatha* and two were held in reserve.



The Milwaukee Road ordered six double-bedroom observation-lounge cars from Pullman-Standard in 1946 for use in the *Olympian Hiawatha*. Each car contained eight double bedrooms and a "Skytop lounge" that seated 19. The lounges were almost completely enclosed by glass panels that extended above the pier panel to the roof. The lounges were designed by Brook Stevens and became a favorite meeting place for Pullman passengers. In an unusual move, beverage service was not provided in the lounge and Pullman passengers had to go to the train's "Tip Top Tap" for beverage service. These six cars, along with the similar *Rapids* series observation-lounge cars, were among the most unusual and innovative ever placed in service. Some are still in rail service today. The six Skytop cars built for the *Olympian Hiawatha* were No. 12 *Alder Creek*; No. 14 *Arrow Creek*; No. 15 *Coffee Creek*; No. 16 *Gold Creek*; No. 17 *Marble Creek*; and No. 18 *Spanish Creek*.

Observation-lounge car No. 187, *Coon Rapids*, finishes a Chicago-Twin Cities *Hiawatha* consist in the 1940s. Four Rapids series cars were built in the Milwaukee Road's own car shops in 1947 and delivered in 1948. Each contained a 12-seat Skytop lounge enclosed in glass panels along with 24 parlor seats and a 5-seat drawing room. The other three cars were numbered and named 186 *Cedar Rapids*; 188 *Dell Rapids*; and 189 *Priest Rapids*. *Milwaukee Road photo, author collection*



CHAPTER THIRTY-THREE

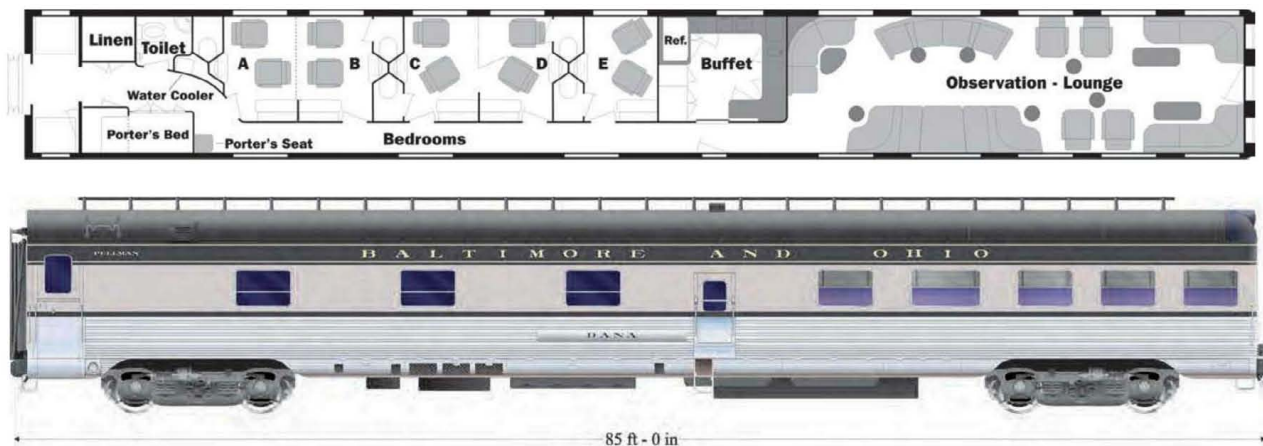
THE PHOEBE SNOW AND THE CAPITOL LIMITED

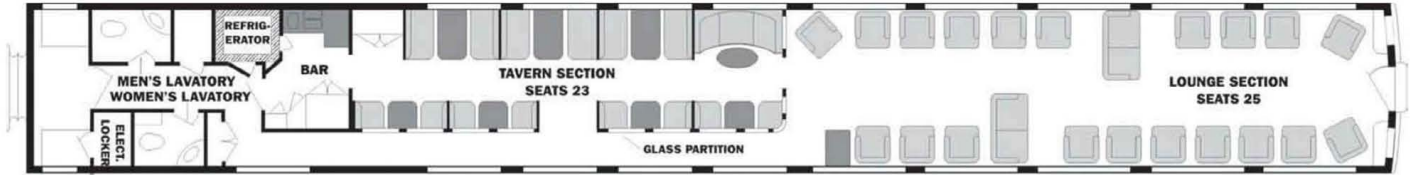
THE MYTHICAL CHARACTER of Phoebe Snow dates back to the early 1900s when she was created dressed in alabaster white clothing as a symbol of the soot-free, clean-burning anthracite coal burned by the Delaware, Lackawanna & Western Railroad's locomotives. When the Lackawanna decided to create its own modern daylight streamliner between New York City and Buffalo after World War II, it named the train after the well-known advertising figure. An oval-shaped portrait of "Miss Phoebe" hung on the walls of the two tavern-lounge-observation cars built for the train.

Robert R. Young, the head of the medium-sized but affluent Chesapeake & Ohio Railroad, was so optimistic about the future of that road's postwar passenger business that he directed the company to place huge orders with Pullman-Standard for brand-new passenger equipment. He also presided over his per project: the stillborn *Chessie* dome streamliner, the cars of which were built by Budd but never ran a day in revenue service on the train for which they were built.

When it became apparent that the equipment orders far exceeded the needs of the C&O, much of

the equipment was sold off to other railroads. One of the main customers was the Baltimore & Ohio. In 1950 the B&O purchased four of the seven double-bedroom-buffet-lounge-observation cars built by Pullman-Standard for the C&O and quickly placed them in service on the B&O's premier express trains, including the renowned *Columbian* and *Capitol Limited*. Several of the dome sleeping cars built for the *Chessie* also went into service on the *Capitol Limited*, becoming the only dome sleeping cars in the eastern United States.

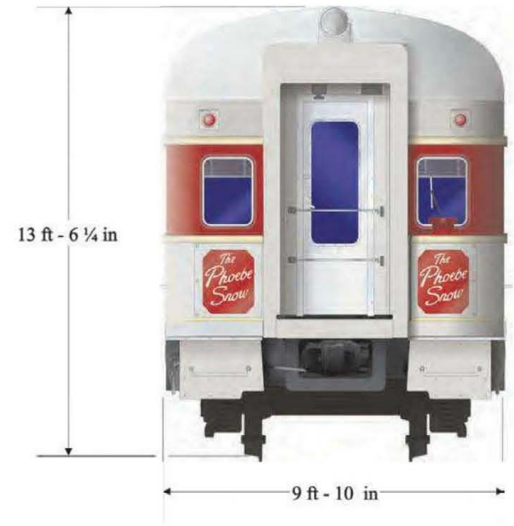




The *Phoebe Snow* began service on November 15, 1949, replacing the Lackawanna's well-known *Lackawanna Limited*. Its signature cars were two tavern-lounge-observations built by Budd and delivered in October 1949. The tavern section was enclosed by glass partitions and sat 23 in comfort. Patrons could select from a list that included Courvoisier cognac and New York State wines. Fine cigars, including the road's own "Lackawanna Specials," could be purchased from the attendant. The cars were numbered 789 and 790 and they remained in service beyond the Lackawanna's 1960 merger with the Erie Railroad.



The four double-bedroom-buffet-lounge-observation cars (No. 7500 *Nappanee*; No. 7501 *Wawasee*; No. 7502 *Dana*; and No. 7503 *Metcalf*) acquired by the Baltimore & Ohio from the Chesapeake & Ohio received lighted *Capitol Limited* signs on the rear along with B&O logos on each side of the rear door. The cars became signatures on the *Capitol Limited* and three of them went on to serve Amtrak's fleet.



CHAPTER THIRTY-FOUR

THE CITY STREAMLINERS

UNION PACIFIC WAS SYNONYMOUS with big steam locomotives. The most famous of these were the 4-8-8-4 “Big Boys” constructed by Alco in 1941 and 1944. These were among the longest and heaviest steam locomotives ever built.

UP was one of the first roads in the United States to adopt the articulation concept developed by French engineer Anatole Mallet. Between 1918 and 1924, UP acquired 70 2-8-8-0 compound locomotives that were powerful but limited in speed. With the need for faster freight trains, the road developed an unusual and somewhat unique three-cylinder 4-12-2 design of which some 88 units were built. These engines were limited to a speed of 45 miles per hour. A faster design was needed, so UP turned to its own Otto Jabelmann, who came up with an articulated design possessing a 4-6-6-4 wheel arrangement with 69-inch driving wheels.

The type was given the designation “Challenger,” and in 1936 and 1937 Alco delivered some 40 of the type to UP. The early 566,000-pound Challengers had 22 32-inch cylinders, 69-inch drivers, and 255 psi steam pressure. These early types possessed

12-wheel coal tenders, which were smaller than the later units. Although designed primarily for freight train service, the last six of this batch were built specifically for passenger service.

The superb performance of the 40 original Challengers prompted UP to acquire 65 more of the type, which were built from 1942 to 1944. These new locomotives were slightly heavier and possessed cast-steel frames, increased boiler pressure to coincide with a reduction in cylinder size, and an enlarged grate. Another change was the linkage of the front engine to the main frame, designed to eliminate rocking and nodding. An improvement in weight distribution between front and rear units was also accomplished, reducing the front drivers’ tendency to slip, previously a problem. This improved balance allowed the new Challengers to reach speeds of 70 miles per hour and more.

All of the Challengers were built as coal-burners, but a large number were converted to oil, then back to coal, and then back to oil again. Renumbering of the units during these conversions was quite involved. Thus, for most numbers a date is also required to determine the exact locomotive.

TABLE NO.	FORM 427 2-28-1947
NO. SERVED	303927
MEAL	UNION PACIFIC RAILROAD COMPANY DINING CAR SERVICE
WAITER'S NUMBER	CAR DATE
UT ILL MO NEV WY COL IA WYO KAN IDA ORE CAL NEB MONT	
PORTION PLEASE WRITE YOUR SELECTIONS HERE	
	WAITERS ARE NOT PERMITTED TO SERVE ORDERS UNTIL MEAL CHECK IS WRITTEN
CHEF'S RECORD DO NOT PAY ON THIS CHECK	
<i>We are glad to have you with us. Thank you for using Union Pacific.</i>	
UNION PACIFIC RAILROAD COMPANY J. HANZINK, Manager, Dining Car and Hotel Dept., Omaha, Nebraska	
<small>Patrons are limited to report any unsual service or attention from employees.</small>	

E7A diesel unit No. 999 leads train No. 104, the eastbound *City of Los Angeles*, over Sherman Hill in the late 1940s. *Union Pacific Railroad Museum*

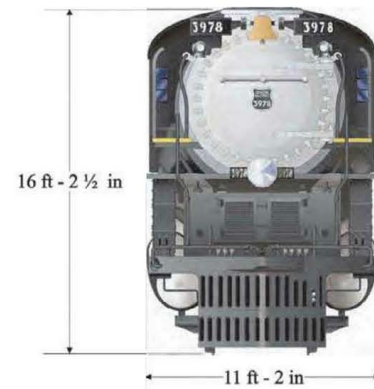


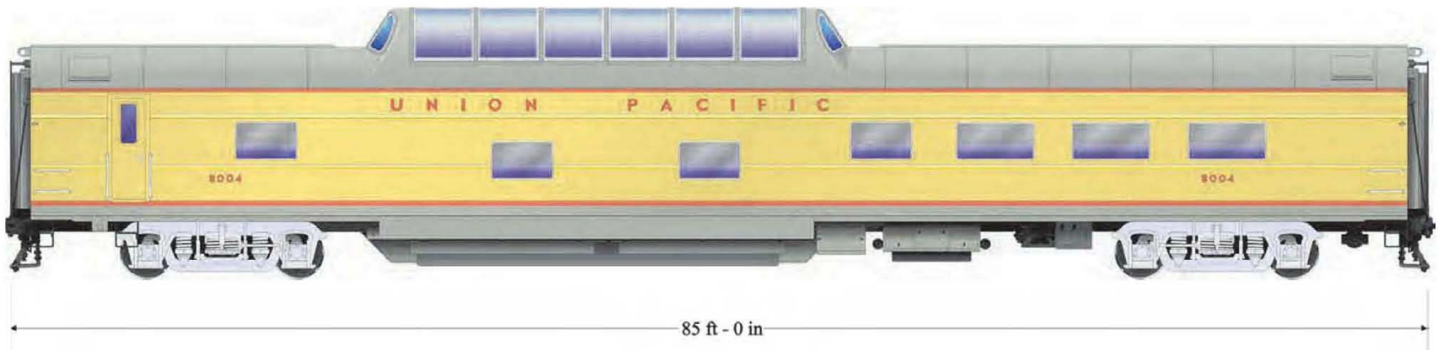
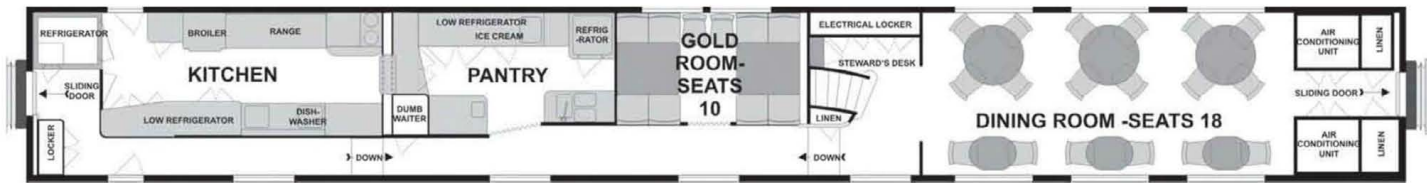
In early 1944 Challengers 3975 through 3980 were converted to burn oil and were assigned to passenger service on the line between Caliente, Nevada, and Los Angeles. In late 1946, the oil-burning Challengers were reassigned to the Northwest District between Huntington and Portland, Oregon. Challengers 3981 through 3984 were also converted to oil and sent to the Northwest District. Passenger Challengers were then operated between Seattle and Portland and along the Columbia River to Huntington.

In mid-1946 the passenger-hauling Challengers received a two-tone gray scheme designed to match the two-tone Pullman livery used on the line at the time. By 1949, yellow striping was changed to silver gray. The Challenger locomotives were operated into the mid-1950s, when diesel units gradually replaced them. Challenger No. 3985 was preserved and restored to working order. Specifications listed apply to the later, improved batch of oil-burning locomotives.

Specifications

Built: 1942–1944
 Tractive Effort: 97,350 lb.
 Driving Wheels: 12 @ 69 in. ea.
 Heating Surface: 4,817 sq. ft.
 Boiler Pressure: 280 psi
 Grate Area: 132 sq. ft.
 Superheater: 2,085 sq. ft.
 Cylinders: 4 @ 21 in. x 32 in. ea.
 Engine Weight: 627,000 lb.
 Fuel: 5,945 gal. oil
 Water: 25,000 gal.





Union Pacific took the dome-car concept one notch higher when it introduced its unique dome dining cars. Ten dome diners (Nos. 8000–8009) were built by American Car & Foundry in 1955. Each contained three distinct dining areas: a regular 18-seat dining section, an enclosed 10-seat “Gold Room” dining room under the dome, and an 18-seat dining section in the dome. The cars were primarily utilized for sleeping-car passengers and were mostly assigned to the *City of Los Angeles*, *City of Portland*, and *City of Denver*.



Diners could enjoy the panoramic view afforded by the unique dome dining rooms of Union Pacific's dome dining cars. *Union Pacific Railroad Museum*

For a full measure
of travel pleasure
Ride Union Pacific
Streamliners
DAILY BETWEEN CHICAGO
AND LOS ANGELES · PORTLAND
SAN FRANCISCO · DENVER

Coach or Pullman

UNION PACIFIC RAILROAD

CHAPTER THIRTY-FIVE

THE SUPER CHIEF

THE SANTA FE'S *Super Chief* was one of two train names that were almost universally recognized among the traveling public as representing the zenith of comfort, service, and overall excellence in train travel (the other was the New York Central's *20th Century Limited*). The Santa Fe expended great effort to ensure that its premium superdeluxe transcontinental express was always a step ahead of the competition. As such, the train was almost in a continual process of being reequipped with state-of-the-art locomotives and cars.

One of the most memorable versions of the train came about in 1950–1951 when the train was extensively reequipped. The Santa Fe was a solid believer in Electro-Motive Division's F Series cab-unit diesel locomotives, and purchased them in quantity for both freight and passenger motive power. Groups of F3s were acquired in 1946, 1948, and 1949. When

the F7 model became available in 1949, the Santa Fe ordered these in both A-B-B-A (Nos. 37–47) and A-B-B (Nos. 300–316) configurations, any of which could be seen powering the *Super Chief*. The line had many of its F3s rebuilt to F7 specifications at that time as well.

The introduction of new dome cars on several western trains prompted the Santa Fe to equip the *Super Chief* with that type as well. Designated "Pleasure Domes" by the railroad, six cars were built by Pullman-Standard in 1950 for service on the *Super*. The cars featured a dome section that seated 16 and included eight individual swivel chairs that could be turned at will to optimize viewing. Below the dome was a nine-seat cocktail lounge. This adjoined the "Turquoise Room," which could be used as an additional cocktail lounge seating 12, or could be closed off and utilized for private dinner parties. For this

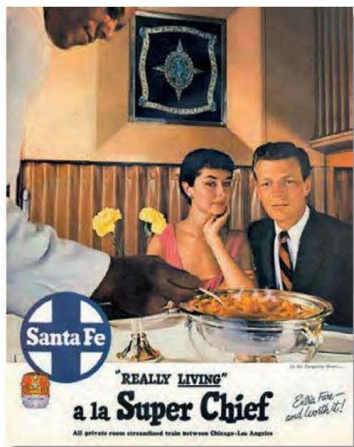
reason the dining car usually followed right behind the Pleasure Dome. The room was decorated with ornate Native American metalcraft and became a *Super Chief* trademark.

Santa Fe dining cars were renowned for their sumptuous Fred Harvey meals, a tradition that continued in six new 36-seat dining cars built by Pullman-Standard to equip the new version of the *Super*. New 10-6 (10 roomettes, 6 double bedrooms) and 4-4-2 (4 compartments, 4 double bedrooms, 2 drawing rooms) sleeping cars built by American Car & Foundry provided the latest in comfort.

A group of sleeper-lounge-observation cars finished the consist. Each offered a single bedroom, four drawing rooms, and an observation lounge that seated 16. The excellent service and equipment provided by the *Super Chief* prompted many discerning travelers to go "Santa Fe All the Way!"

Santa Fe Pleasure Dome No. 500
at Trinidad, Colorado, in June 1972.
*T.R.R.A. Historical and Technical
Society of St. Louis collection*





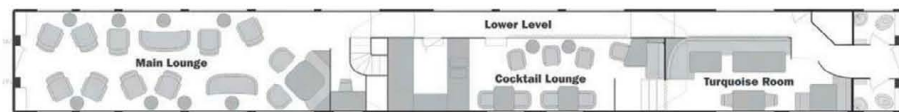
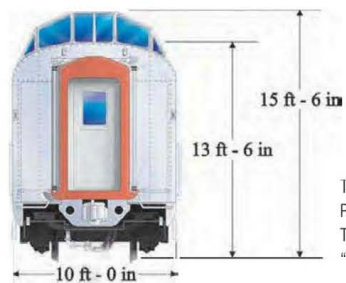
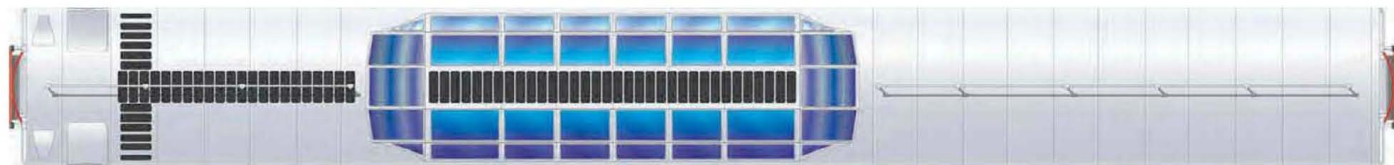
ABOVE: 1955

Electro-Motive F3A No. 30L heads the *Super Chief* at Joliet, Illinois, in the mid-1960s. The unit was delivered in 1948 and traded back to EMD in May 1970 for new motive power. *Author collection*



Typical Super Chief Consist, 1951–1956

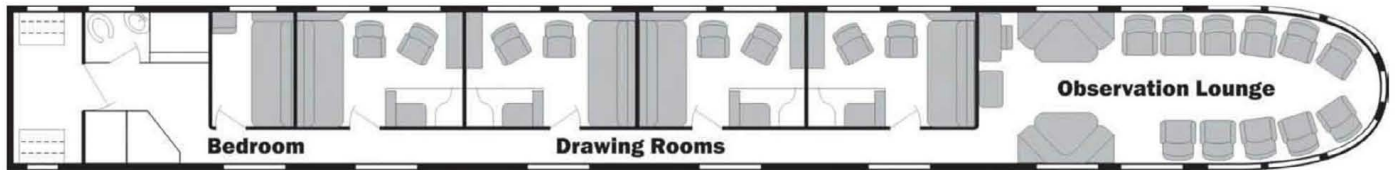
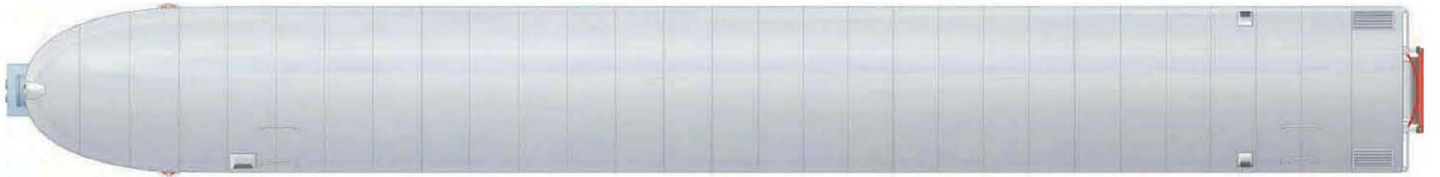
38L	EMD F7A locomotive	502	Turquoise Room-Pleasure Dome lounge car
38A	EMD F7B locomotive		
38B	EMD F7B locomotive	605	Fred Harvey dining car
38C	EMD F7A locomotive	1343	Dormitory-club-lounge car
3415	Baggage car	<i>Regal Hunt</i>	Sleeping car (4 compartments, 2 drawing rooms, 4 double bedrooms)
83	RPO (Railway Post Office)	<i>Regal Manor</i>	Sleeping car (4 compartments, 2 drawing rooms, 4 double bedrooms)
1385 <i>San Pascal</i>	Baggage-barbershop-buffet-lounge car	<i>Palm Lore</i>	Sleeping car (10 roomettes, 6 double bedrooms)
<i>Palm Top</i>	Sleeping car (10 roomettes, 6 double bedrooms)	<i>Vista Club</i>	Observation lounge car (4 drawing rooms, 1 double bedroom)
<i>Pine Arroyo</i>	Sleeping car (10 roomettes, 6 double bedrooms)		
<i>Regal Corps</i>	Sleeping car (4 compartments, 2 drawing rooms, 4 double bedrooms)		



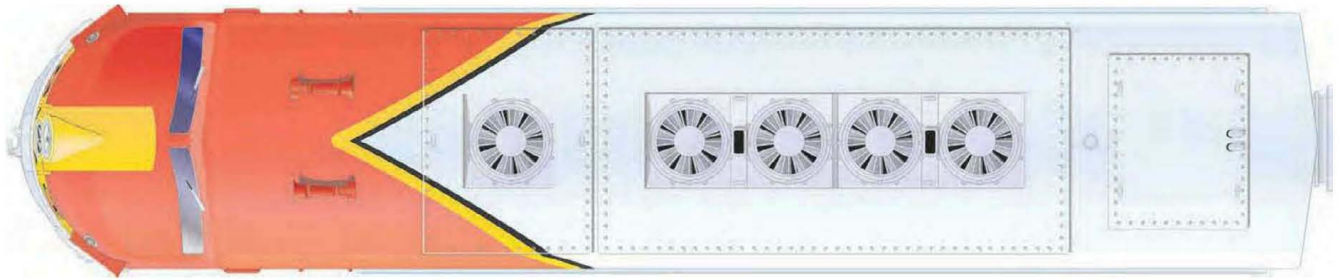
The Santa Fe acquired six "Pleasure Dome" cars from Pullman-Standard in 1950 for service on the *Super Chief*. The cars (Nos. 500–505) contained the famous "Turquoise Room" dining lounges.



Vista Valley was one of four sleeping-observation cars acquired from Pullman-Standard in 1947 for service on the *Super Chief*. The car contained four drawing rooms and one bedroom, as well as a 16-seat observation lounge. The other cars were named *Vista Canyon*, *Vista Cavern*, and *Vista Heights*.



85 ft - 0 in

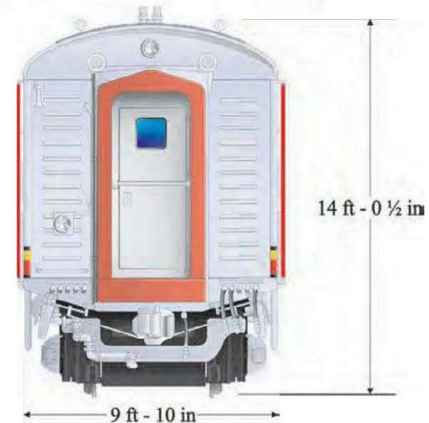


50 ft - 8 in



Electro-Motive's F7 cab-unit locomotives were the second bestselling diesel locomotives ever produced, second only to that company's own GP9. Each unit was rated at 1,500 horsepower and usually operated in A-B-B-A lash-ups in *Super Chief* service, providing a total of 6,000 horsepower. F7A cab unit No. 313L was acquired in 1951 and was resplendent in the famous "warbonnet" passenger scheme partly made famous by its reproduction on thousands of Lionel and American Flyer train sets sold in the 1950s. No. 313L can be distinguished from late-series F3 units by the presence of a dynamic brake fan just behind the air horns. Santa Fe F7A units did not possess steam generators—those were located in the cabs B units.

The F units served the *Super Chief* until they were replaced in the late 1960s by 3,600-horsepower EMD FP45 cowl-unit locomotives produced specifically at the request of the Santa Fe.



CHAPTER THIRTY-SIX

EL CAPITAN

ONE OF THE MOST SIGNIFICANT developments in passenger-car design occurred in the 1950s with the introduction of the bi-level car. The concept was originally developed to provide commuter cars that contained more capacity than traditional single-level commuter coaches. Passengers were carried on two levels within the car.

The first of these bi-level commuter cars were delivered by Budd to the Chicago, Burlington & Quincy in 1950 and put in place in suburban commuter service in Chicago. Eventually, several other railroads providing commuter service in the Chicago area purchased similar cars.

In the early 1950s the Santa Fe looked to update its premium Chicago–Los Angeles trains. During summer 1954 the Budd Company delivered a pair of experimental “Hi-Level” coaches to the Santa Fe to conduct tests on the viability of adopting the concept in future passenger car purchases. The two cars were coupled with an upper-level passage between cars at the center of the pair and lower-level doors on the ends to allow operation with conventional single-level equipment. Each of the coaches seated 68 passengers in comfortable reclining seats on the upper level; the entrances, mechanical equip-

ment, lavatories, and baggage storage were all located on the lower level.

The experimental cars were placed in service on the extra-fare, all-coach Chicago–Los Angeles *El Capitan*, which had been introduced on February 22, 1938, as a premium all-coach streamlined running mate to the railroad’s flagship *Super Chief*. It operated on the same 39 $\frac{3}{4}$ -hour schedule introduced by the *Super* and quickly became a member of the Santa Fe’s stable of premium high-speed passenger trains.

The experimental Hi-Level cars ran on the *El Capitan* for the better part of a year. A passenger survey indicated that the cars were a success. By riding higher above the roadbed, the cars offered a quieter, smoother ride with a superior view. The Santa Fe ordered 47 of the cars to completely reequip the *El Capitan*. The order included 35 Hi-Level coaches plus 6 Hi-Level dining cars and 6 Hi-Level lounge cars.

After three demonstration runs along the “Surf Line” from Los Angeles to San Diego to promote the Hi-Level equipment, the new *El Capitan* began east-bound and westbound service on July 8, 1956. On January 12, 1957, the *Super Chief* and the *El Capitan* were combined during the off-peak travel season (the separate train names were retained,

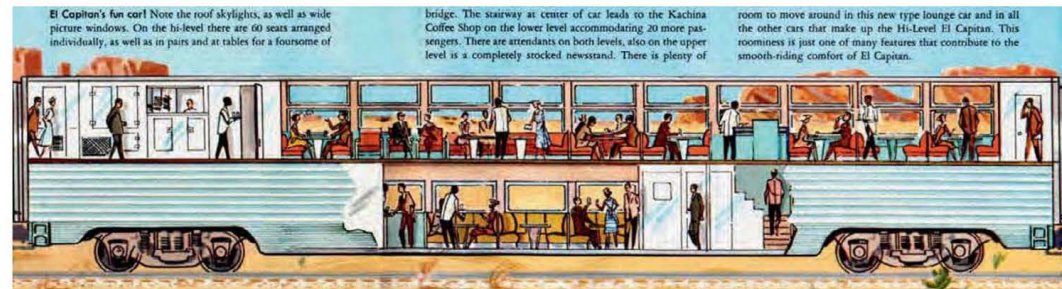
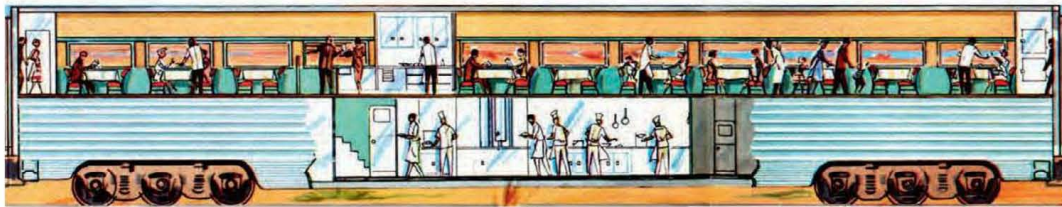
however). Six single-level baggage-dorm cars were rebuilt to act as “transition cars” between the *Super Chiefs* single-level consist and the *El Capitan*’s Hi-Level cars. A smooth, aerodynamic fairing was installed at the end of the baggage-dorms to couple to the Hi-Level cars and maintain a streamlined appearance on the combined trains.

The Hi-Level lounge cars were spectacular and had curved-glass roof panels to enhance an already superlative view. The upper-level lounge was called the “Top of the Cap” and sat 60 patrons in comfort. A lower-level coffee shop–lounge sat 26. The Hi-Level cars proved so successful that the Santa Fe had Budd prepare drawings for Hi-Level sleeping cars for the line’s *Super Chief*. The sleeping cars never got off the drawing board, but the Santa Fe did order 24 more Hi-Level coaches in 1963 and 1964. The additional cars allowed the line’s premium *San Francisco Chief* to become a Hi-Level train, as well.

When Amtrak took over operation of the Santa Fe’s passenger trains in 1971 they inherited the fleet of Hi-Level cars and were so pleased with their performance that they maintained the concept in the design of the “Superliner” equipment that equips many Amtrak trains today.



A builder's cutaway illustrates the two levels of the Hi-Level dining cars built for *El Capitan*.
Santa Fe drawing, author collection



El Capitan's fun car! Note the roof skylights, as well as wide picture windows. On the hi-level there are 60 seats arranged individually, as well as in pairs and at tables for a foursome of

bridge. The stairway at center of car leads to the Kachina Coffee Shop on the lower level accommodating 20 more passengers. There are attendants on both levels, also on the upper level is a completely stocked newsstand. There is plenty of

room to move around in this new type lounge car and in all the other cars that make up the Hi-Level *El Capitan*. This roominess is just one of many features that contribute to the smooth-riding comfort of *El Capitan*.

The Hi-Level cars of the Santa Fe's *El Capitan* traverse Raton Pass, south of Trinidad, Colorado. Closest to the camera is one of the "Top of the Cap" lounge cars. *Santa Fe photo, author collection*



Santa Fe No. 578 was one of six Hi-Level lounge cars built for service on *El Capitan*. The upper-level lounge, called the "Top of the Cap," had seating for 60, as well as a bar and newsstand. The lower level contained the "Kachina Coffee Shop," which offered a 26-seat bar-lounge. All six cars (Nos. 575–580) were transferred to Amtrak in 1971.



CHAPTER THIRTY-SEVEN

THE SILVER METEOR

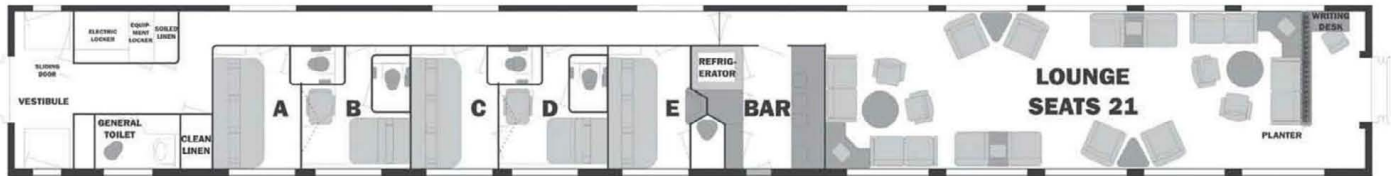
IN JANUARY 1955 the Seaboard Air Line Railroad ordered three double bedroom-buffet-lounge cars from Pullman-Standard. The cars were intended for the line's flagship New York City–Florida *Silver Meteor* and were among the most spectacular passenger railcars of the era. As many railroads were incorporating dome cars into their consists, the Seaboard desired to do the same but was limited by low clearances on the Pennsylvania Railroad, which hauled the train from Washington, D.C., to New York. A compromise solution was found in a “Sun Lounge” section, which offered the spacious, open feeling of a dome car all within the confines of the space of a regular passenger car.



Northbound and southbound *Silver Meteor*'s pass each other at Ridge, Florida, on May 8, 1942, marking 3 million miles of service. Lettering commemorating the train's 1 million-mile mark decorates the rear of Budd-built observation lounge No. 6402. The Budd observation lounges were signature cars on the *Silver Meteor* for many years.
Author collection



The lounge side windows of these *Silver Meteor* cars were the highest yet built and extended almost to the roof. Above them, curved glass window panels were built into the roof itself. The large glass area necessitated a separate air-conditioning system dedicated to cooling the lounge area. The Sun Lounge area sat 21 in comfort and was appointed in Danish Modern furniture, custom-crafted driftwood table lamps, and carpeting dotted with a seashell-and-starfish pattern. Cars were named *Hollywood Beach*, *Miami Beach*, and *Palm Beach*.



EPILOGUE



An *Empire Builder* tail sign adorns the rear of one of the Great Northern's sleeper-observation-lounge cars built by American Car & Foundry in 1951. The cars had extended-height windows in the observation-lounge end. *Great Northern photo, author collection*

AS THE 1950S PASSED and the 1960s progressed, it became apparent that the future of the American passenger train was questionable. Many railways attempted to shed themselves of passenger trains as fast as the Interstate Commerce Commission would allow it. Many major trains were consolidated in an attempt to maintain some semblance of service while reducing operating costs and thus, in many cases, at least minimize losses.

Even railways that possessed profitable passenger trains became increasingly aware that the network of improved interstate highways, coupled with more affordable and accessible airline transportation, put the future of passenger trains in doubt. By the 1970s, commercial airlines accounted for 75 percent of public intercity transport by commercial carriers, and by 1970, the automobile accounted for 87 percent of all intercity passenger transportation.

The formation of the National Railroad Passenger Corporation, better known as Amtrak, was signed into law on October 30, 1970. On May 1, 1971, the government-sponsored Amtrak took over the operation of the bulk of the nation's remaining passenger trains.

Some famous name trains such as the *Sunset Limited* and the *Empire Builder* live on, but the future of passenger rail transportation is still in doubt as government cutbacks continue to scale the system back. Perhaps giving some comfort to American passenger train enthusiasts is the knowledge that memories of the great trains will live on in the hearts and minds of many.

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