

# A BRIEF HISTORY

## *Foreword*

Building the Union Pacific Railroad through the wild and woolly west proved to be one of the amazing developments which history records man has accomplished. In compiling material to briefly outline the story of this activity we have used only what we believe to be reliable.

If this is your introduction to Union Pacific history and you want to know more, let us refer you to the bibliography at the back of this booklet or to any public library.



Should you desire additional copies of this little history for yourself or friends, we will be happy to supply them. Just mail a post card to Advertising Department, Union Pacific Railroad, Omaha, Nebraska 68102.

## *A Brief History*

**I**T WASN'T LONG AFTER DAWN and a group of railroad workers, dressed in their Sunday best, stood around a 56-foot gap in the single track line.

Nearby, on a siding, was a construction train which had brought them to the scene, and a mile away from the opposite direction a similar train was approaching.

Its engine whistle was blowing but the sound was nearly drowned by shouts of workers who all but covered the train from the pilot (cowcatcher) of the engine to the rear platform of the caboose.

Smoke poured from its diamond stack and two firemen tossed logs into the firebox as the train raced up to the gap in the track and stopped. Its occupants poured off the train shouting greetings to those already there.

May 10, 1869, was becoming one of United States history's most important dates as these workers of the Union Pacific and Central Pacific Railroads gathered at Promontory, Utah, to await the arrival of officials of the two railroads, the completion of track over the 50-odd foot gap and the driving of the Golden Spike.

When the spike had been driven, the nation's first transcontinental railroad would be completed, the Union would be linked with the Pacific, California and Oregon would be bound to the Union, travel time from the Atlantic to the Pacific and from England to Australia and the Far East would be shortened.

And most important of all, the nation would be opened to the development which was to make it the most powerful, the richest, the best in the world in which to live.

In addition to the railroaders, other residents of the railway camp were converging to witness the completion of the building of the railroad.

Soon after the work trains had delivered their passengers a Central Pacific special bringing excursionists from Sacramento pulled in.

This was followed shortly by the arrival of two trains from the east via Union Pacific and the fourth passenger train of the day, a special bearing Governor Leland Stanford of California, president of the Central Pacific, arrived from the west at 11:15 a.m.

Union Pacific officials now on the scene included Thomas C. Durant, colorful vice-president of the company; Sidney Dillon, chairman of the board of directors; John Duff, another director



and later a president of the line; General Grenville M. Dodge, chief engineer; General John C. "Jack" Casement and his brother, Dan, track laying contractors, and others.

When their train arrived, Governor Stanford and his group marched over to Durant's car, one of the most elegant walnut masterpieces of the day and the two parties shook hands all around, accompanied by the shouts of those assembled.

## 1,500 IN CROWD

The air was electric with excitement and tension mounted as the men — and the few women present — realized the hopes and struggles of thousands over a period of years were nearing completion.

The crowd had grown to about 1,500, including four companies of the Twenty-first Infantry, commanded by Major Milton Cogswell.

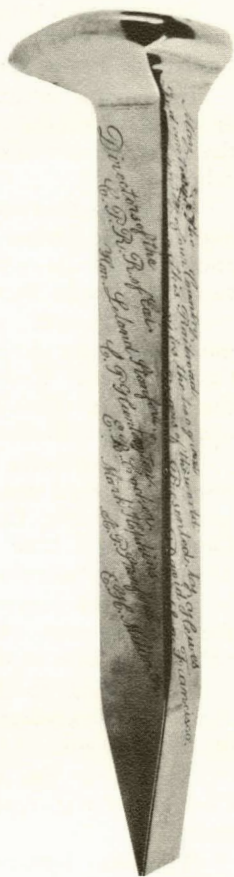
With the military came the headquarters band from Camp (now Fort) Douglas, at Salt Lake City. And accompanying the Union Pacific group were a large number of Utahans who also brought a band.

Resplendent in the gayest of uniforms, the Utah band was that of Salt Lake's Tenth Ward, equipped with \$1,200 worth of brand new instruments from London.

The two locomotives which had brought up the official parties' trains, Union Pacific's not named but identified by its number, 119, and Central Pacific's "Jupiter", both polished within an inch of their lives, stood near their respective ends of the gap, a full head of steam up, ready for action.

The guests included bankers and railroad builders from both coasts, workers from all parts of the railroad, civic leaders, newspaper correspondents, camp followers of every description and settlers who had trudged across the nearby countryside for their first look at a locomotive and train.

Brought to the scene in Governor Stanford's private car were the world-famous Golden Spike, the last spike to be driven in



The Golden Spike



the building of the railroad, and the "last tie," into which this spike and several others of precious metal were driven.

Presented by David Hewes, of San Francisco, the last spike was fashioned from about \$400 worth of gold by Schultz, Fischer & Mohrig, San Francisco jewelers, whose bill was \$25.24, including the engraving of 381 letters on the spike at four cents a letter.

## AMES' RING IN MUSEUM

At the tip of the spike was a gold nugget roughly the size of the last spike itself. This was broken off and later made into souvenirs of the ceremony, tiny golden spike watchfobs and rings which were presented to Oliver Ames, Union Pacific president; Governor Stanford; President U. S. Grant; and Secretary of State William H. Seward.

Ames' ring and watchfob today repose in the Union Pacific's Historical Museum in Omaha, along with a second ring whose original ownership is unknown, the engraving inside it having worn away.

On the head of the last spike was inscribed the legend "The Last Spike"; on one side, "The Pacific Railroad; Ground Broken January 8, 1863; completed May 10, 1869"; on another side, "May God continue the unity of our Country as this Railroad unites the two great Oceans of the world"; on the third side, "Presented by David Hewes, San Francisco"; and on the fourth, the names of the company officers.

The last tie, which was eight feet long, eight inches wide and six inches thick, was of highly polished California laurel. It was bound with silver and bore a silver plate seven inches long and six inches wide, inscribed with the date of completion of the railroad and the names of the Central Pacific directors.

It was presented to Stanford by West Evans, tie contractor for the Central Pacific.

When Stanford's special had pulled up to the scene, Chinese laborers from the Central's construction outfits had begun leveling the ground in the gap, preparing it for the last tie and the joining of the iron.

On orders from W. B. Hibbard, Western Union superintendent, wires from the nearest telegraph pole (on top of which a nine-year-old boy had perched himself for a bird's eye view of the proceedings) had been run down to a special operator's kit on a little four-legged "deal" table beside the gap.

W. N. Shilling, of the telegraph company's Ogden office, sat

there ready to dispatch a blow-by-blow description of the ceremony to the waiting nation.

## **FIRST NATIONWIDE "HOOKUP"**

A silver-headed spike maul which was to be used in driving the final spikes had been wired so its blows would activate a telegraph key and they would be tapped across the nation, providing what was probably the United States' first nationwide "hookup."

As the Chinese working on this special occasion in clean frock coats, carried the last rail into the gap and prepared to lay it, an event took place which epitomized the life the construction crews had led.

Photographers for both railroad companies and other photographers were present. When the Chinese moved into place with their last rail, someone in the crowd shouted: "Now's the time, take a shot!" The Mongolians knew very little English, but were thoroughly acquainted with "Shoot".

They heard the word and saw the camera pointing toward them, dropped the rail like it was red hot and scrambled for cover to the delight of the crowd and the consternation of the officials; but after a few minutes of animated conversation in combination Chinese-pidgin English they were coaxed back and the ceremony proceeded.

The last tie was carried into place by Superintendents J. H. Strowbridge, of the Central, and S. B. Reed, of the Union Pacific, to the accompaniment of more cheers.

The telegrapher had been tapping out messages east and west to impatient inquirers from throughout the country; "To everybody: Keep quiet. When the last spike is driven at Promontory, we will say, 'Done.' Don't break the circuit but watch for the signals of the blows of the hammer."

The crowd had been cleared from the south side of the gap and asked to stand back so all might see.

## **"ALMOST READY, HATS OFF"**

Just before noon General Dodge, who had been conferring with Edgar Mills, Sacramento banker interested in the building of the railroad and who was to act as master of ceremonies, lifted his hand for silence and introduced the Rev. Dr. John Todd of Pittsfield, Mass., who led the prayer which formally opened the ceremony.





Champagne hoisting ceremony after Golden Spike had been driven, completing first trans-continental railroad. Locomotive at left that of Central Pacific (now Southern Pacific), locomotive at right No. 119 of Union Pacific.

The telegrapher now tapped out: "Almost ready. Hats off; prayer is being offered." This was bulletined at 2:27 eastern time, in Washington, which would have been within 10 to 20 minutes of 12:30 Promontory time, standard time not yet having been adopted.

All Western Union wires had been cleared for Promontory news and now as each event took place crowds at telegraph offices in all parts of the country were apprised of the fact.

At 2:40, eastern time, the telegrapher bulletined: "We have got done praying, the spike is about to be presented."

The spikes had been brought forward and F. A. Tritle of Nevada, a commissioner of inspection, presented a spike of silver from the Comestock lodes to Dr. Durant.

Governor Anson P. K. Safford, of Arizona, added a spike of gold, silver and iron alloy.

Idaho and Montana furnished spikes of silver and gold and Hewes' Golden Spike and Evans' laurel tie were presented as California's contribution.





Speeches were made by Governor Stanford, General Dodge and others and the crowd cheered each sentence, then cheered for the Star Spangled Banner, the Pacific Railway, the officers, the men who raised the money, the laborers, and the engineers who found the routes.

The telegrapher clicked off: "All ready now; the last spike will soon be driven. The signal will be three dots for the commencement of the blows."

The silver and alloy spikes had been set into holes prepared to receive them and driven by guests. Dr. Durant then was invited to drive Nevada's silver spike and he did so.

The last spike remained untouched. Governor Stanford was to have the privilege of signaling the waiting world that the great moment had come.

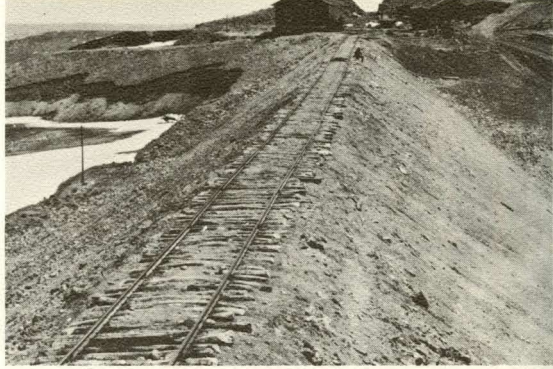
## STANFORD, NERVOUS, MISSES SPIKE

He stepped forward and, plainly nervous, took the silverheaded maul, inconvenienced by the dangling wires. A hush fell over the crowd and the President of the Central Pacific swung his maul.

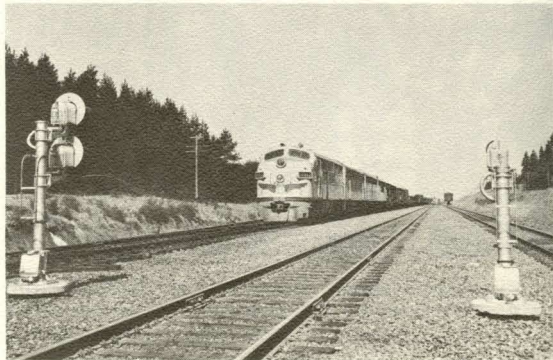
He missed!

The maul struck the rail but the telegrapher signaled, "Dot! Dot! Dot! — Done!"

In San Francisco the wires were connected with the fire alarm in the Tower, in Washington with the bell of the Capitol, so that the message echoed from coast to coast and announced the wed-



Stretch of original track.



Stretch of present day track.



Union Pacific Headquarters, Omaha, Nebr.



ding of the Atlantic and the Pacific.

After striking his blow Governor Stanford politely stood aside and handed the maul to Dr. Durant, who, also polite, imitated the first blow and struck the rail.

After that, various guests were invited to tap the spike and it dropped into the hole which had been bored.

Flashed to the Associated Press and to President Grant was the official announcement:

"PROMONTORY SUMMIT, UTAH  
MAY 10TH

"THE LAST RAIL IS LAID! THE LAST SPIKE IS DRIVEN! THE PACIFIC RAILROAD IS COMPLETED! THE POINT OF JUNCTION IS 1,086 MILES WEST OF THE MISSOURI RIVER, AND 690 EAST OF SACRAMENTO CITY.

LELAND STANFORD  
CENTRAL PACIFIC RAILROAD  
T. C. DURANT  
SIDNEY DILLON  
JOHN DUFF  
UNION PACIFIC RAILROAD

The two engines, Jupiter and 119, were unhooked from the trains and, covered with cheering celebrants, advanced until their pilots touched. Bottles of champagne were broken on the engines and the bubbling wine flowed down over the Golden Spike and the last tie.

The engines backed up to their trains, hooked on and took turns crossing the rails which had joined the gap. The crowd, in the words of one who was there, "Was yelling fit to bust!" The nation's first transcontinental rail line was in existence!



Crews from both the Union and Central Pacific now rushed in, removed the precious spikes and the tie, replacing them with regular materials, but the new tie soon was reduced to splinters by souvenir hunters, as were half a dozen more — and two rails — in the next six months.

## **SPIKE IN VAULT: TIE BURNED**

The Golden Spike was returned to California and today rests in the Stanford University Museum at Palo Alto.

The last tie also was returned to California but was destroyed in the fire and earthquake which devastated San Francisco in April, 1906.

On the day following the driving of the last spike, the first train in transcontinental service passed Promontory, having left the Missouri River several days previously.

Another train had started from the west coast a few days before and soon would pass Promontory going east.

The little tent and shack towns which had sprung up near the point of the meeting of the rails had become "Queen for a Day," but today the railroad no longer passes this point, having been rerouted when the Lucin Cut-off was built across Great Salt Lake. The rails at Promontory were taken up in 1942 to provide scrap for the nation's war effort and today the place of the meeting of the rails is marked only by a monument. Several of the original iron spikes put in the rail in 1869 are on exhibit in the Union Pacific museum in Omaha.

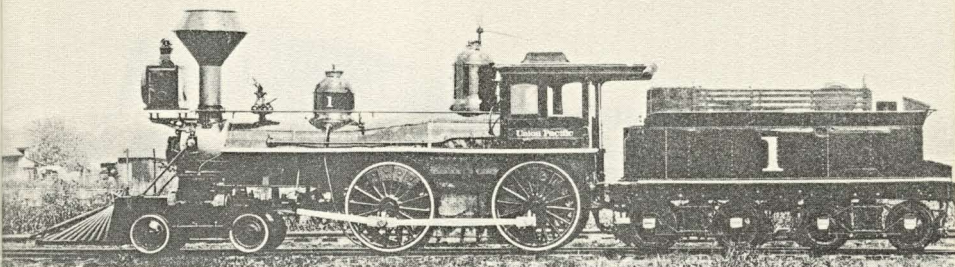


**I**NTEREST IN THE TERRITORY which was opened to development by the completion of the railroad had begun even before the turn of the nineteenth century, while the nation still was a youngster, and had resulted in the Louisiana Purchase in 1803.

Under encouragement from President Thomas Jefferson and on authority from Congress, funds for the famous Lewis & Clark Expedition were appropriated and the expedition prepared to leave in the spring of 1804.

Their reports, made when they returned from the territory two years later, prompted civic leaders, writers and adventurers to further exploration and exploitation of the territory.





The "General Sherman", Union Pacific's first locomotive, brought to Omaha by steamboat from St. Joseph, Mo., in 1865.

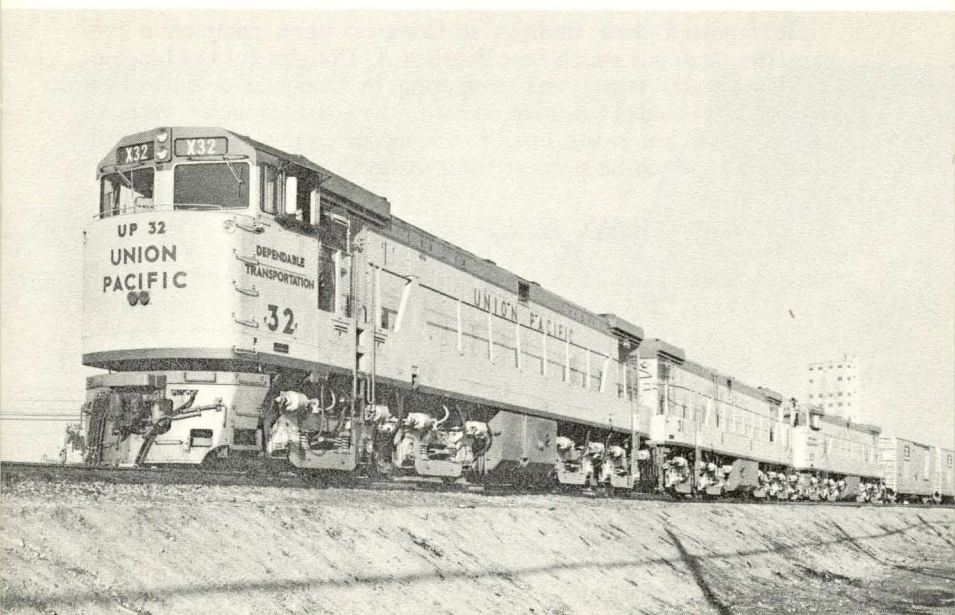
Business men, too, were interested in the development of this vast and potentially rich territory and in July, 1810, John Jacob Astor, Wilson Price Hunt and Donald McKenzie left Montreal to move into the Louisiana Territory and launch the Pacific Fur Company.

Many others also probed the area and as early as 1819 one Robert Mills of Virginia made to Congress the first suggestion of a "rail way" linking the Atlantic and Pacific Coasts.

Mills' suggestion, incidentally, was made eight years before steam had even been successfully applied to motive power in this country.

In 1842, with the exploration of the territory continuing and knowledge of it growing, one of America's most observing pathfinders, John C. Fremont, traversed the vast region, bringing back a store of important information about the country and the route through the middle of it to the west.

The newest in railroad motive power, Union Pacific's 15,000 horsepower diesel-electric locomotive. Total length is 260 feet. Three-unit locomotive weighs 834 tons.



## INTEREST HITS HIGH PITCH

Still more suggestions had been made to Congress to act on promoting a railroad to the Pacific Coast, private citizens were endeavoring to arouse public sentiment for such an undertaking, the Mormon people moved into Utah, the Oregon Boundary question was settled with Great Britain in 1846, California was acquired from Mexico in 1848, and gold was discovered on the west coast. Arguments for and interest in a railroad to the west coast reached a high pitch.

In 1853 Senator Salmon P. Chase, of Ohio, long a supporter of the Pacific Railroad idea, introduced to Congress and had passed there, a bill providing for a survey of four routes to the Pacific Coast:

(1) — A line from the Upper Mississippi to Puget Sound.

(2) — A line along the thirty-sixth parallel, through Walker's Pass in the Rocky Mountains, to strike the coast at San Diego, Los Angeles or San Pedro.

(3) — A line through the Rockies near the headwaters of the Rio del Norte and Heuferno Rivers, emerging at Great Salt Lake Basin.

(4) — A line along the thirty-second parallel, via El Paso and the Colorado River, to strike the Pacific somewhere in lower California.

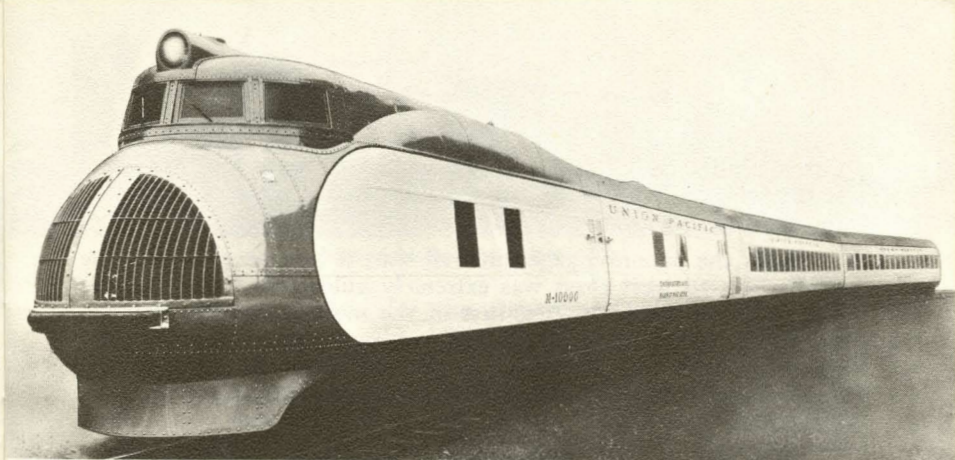
At the same time, Jefferson Davis, then Secretary of War, sent five other engineering corps into this field, their reconnaissance to cover five routes extending from the forty-ninth parallel in the north to the thirty-second parallel in the south.

He reported their findings to Congress upon completion two years later, at about which time Stephen A. Douglas (of the Lincoln-Douglas debates fame) was promoting in Congress a bill which would have provided for three routes to the coast. Douglas' proposal was defeated, but trunk lines following the routes, North, South and Central, which he proposed, subsequently were built.

## CIVIL WAR SHOWS NEED

With interest thus aroused and most of the nation convinced its future was dependent upon pushing trade routes through to the Pacific (a reason which soon was to become secondary in the arguments for the building of the Pacific rail line) there naturally was a great deal of local and sectional interest in the proposals.





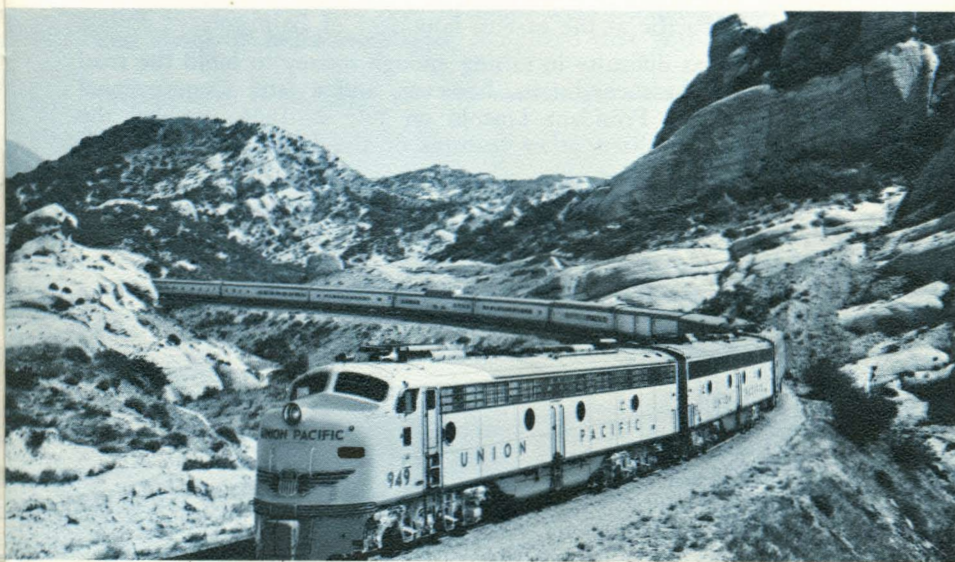
Union Pacific's, and America's, first streamlined train, the "City of Salina"

The North — including such men as Asa Whitney, a wealthy New York merchant who, from 1840 until the road was completed, spent most of his time and money conducting a vigorous campaign for the construction of the railroad — wanted the line to serve that part of the country; the South, of course, wanted the line to have its primary connections in their area.

So, between 1850 and 1860, while there were thorough inspections of all proposed routes and much research for the building of a railroad, the railway measures failed to pass Congress.

On December 20, 1860, the next major move which resulted in the forwarding of the Pacific Railroad idea was made as South

Union Pacific's Modern Diesel-electric Domeliner, "City of Los Angeles"





Carolina adopted its ordinance of secession. Several of her sister states followed suit, the Civil War began, and a new argument for the building of the railroad emerged.

With the nation engaged in civil war, it became clear that the nearly-isolated west coast was extremely vulnerable to any hostile force and the Enabling Act, first of the measures which provided for the actual building of the railroad, was pushed through Congress and signed by President Abraham Lincoln on July 1, 1862, with national defense, rather than trade, the prime influence in getting the job done.

This was the act that created the "Union Pacific Railroad Company," authorized it to "lay out, construct, furnish, maintain and enjoy a continuous railroad and telegraph line, with the appurtenances, from a point on the 100th meridian of longitude west from Greenwich between the south margin of the valley of the the Republican river and the north margin of the valley of the Platte in the Territory of Nebraska (near where the present day city of Kearney, Nebr., is located) to the western boundary of Nevada Territory."

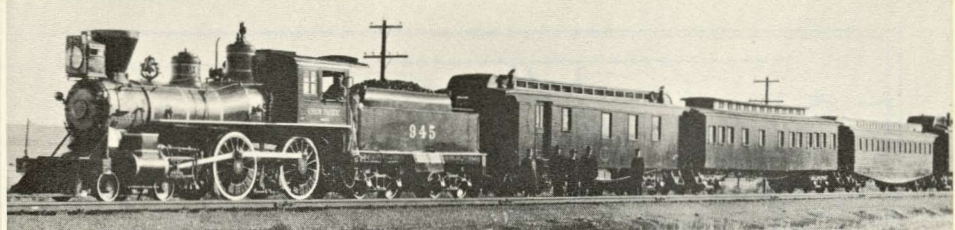
The act also provided that a connection between a point on the western boundary of the state of Iowa — later fixed by President Lincoln at Council Bluffs — and the one hundreth meridian point be established and it provided for land grants and bond issues which would aid in financing construction of the road.

## **GOVERNMENT REPAID MANY TIMES**

These provisions also were extended to the Leavenworth, Pawnee and Western (now part of the Union Pacific's Kansas division, and to the Central Pacific (now part of the Southern Pacific) which was to build from the west coast to a junction with the Union Pacific at the eastern boundary of California.

There was difficulty in raising enough money to build the road even under these conditions, however, and a later Congressional Act, signed by President Lincoln on July 2, 1864, doubled the grants and liberalized other features of the financing.

Incidentally, unlike the land grants made to many railroads, these were not made with the provision that the railroad must carry government freight and passengers at a special reduced rate. The railroad did, however, do this rather than lose the government business and over a period of years repaid the government in reduced rates and fares many times the value of the land which aided in its construction.



Union Pacific train of the 1870's

Ground was broken for the construction of the railroad on December 2, 1863, in the Missouri River bottoms, with much ceremony, but it was July 10, 1865, before the first rail was laid (at the same spot) because of the difficulties in financing. However, under the leadership of a new group of financiers headed by Oakes Ames and his brother, Oliver (third Union Pacific president), the railroad reached west with amazing rapidity, advancing civilization and the development of the country.

General Grenville M. Dodge, chief engineer for Union Pacific during most of its construction, pointed out: "Every mile had to be run within the range of a rifle," because of the Indians, nor were these the chief problems. (Actually, the Indian problem was confined mostly to the plains).

Ties, about six and a quarter million of them, were needed and most of them had to be shipped in as the soft cottonwood available required special treatment. And it was not plentiful.

Fifty thousand tons of iron rails and their fittings and all bridge and structural supplies also had to be brought in from the east and there was no railroad built west past central Iowa, necessitating the use of bull team shipments from that point or the routing of supplies up the Missouri River by boat, a slow process shut off periodically by the weather.

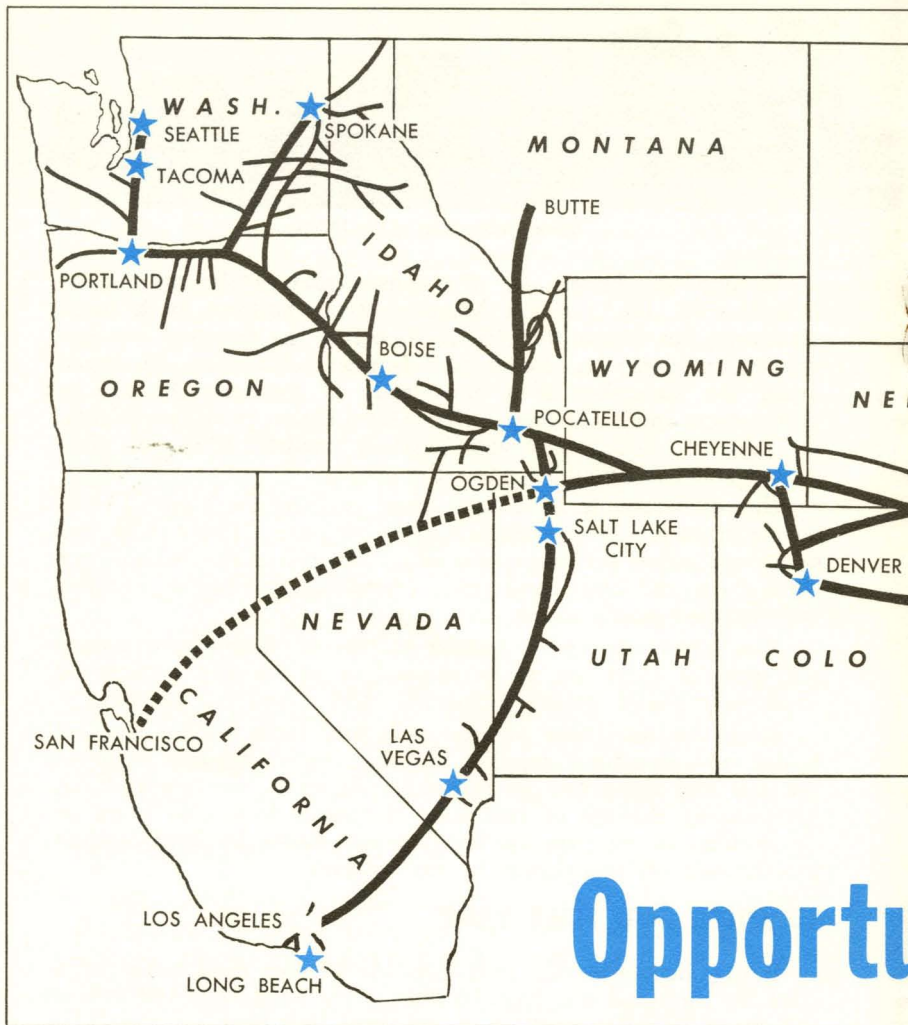
### 30 MILES LAID FIRST YEAR

But by September 22, 1865, just a little more than two months after the first rail was laid, 10 miles were completed and in use and about 20 miles more were completed that year.

Modern Union Pacific freight train with turbo-charged diesel-electric locomotives.







Choice industrial sites are available for sale or lease in a number of industrial properties owned by the Union Pacific and at other points served by its rails, among which are the following, as indicated on the map:

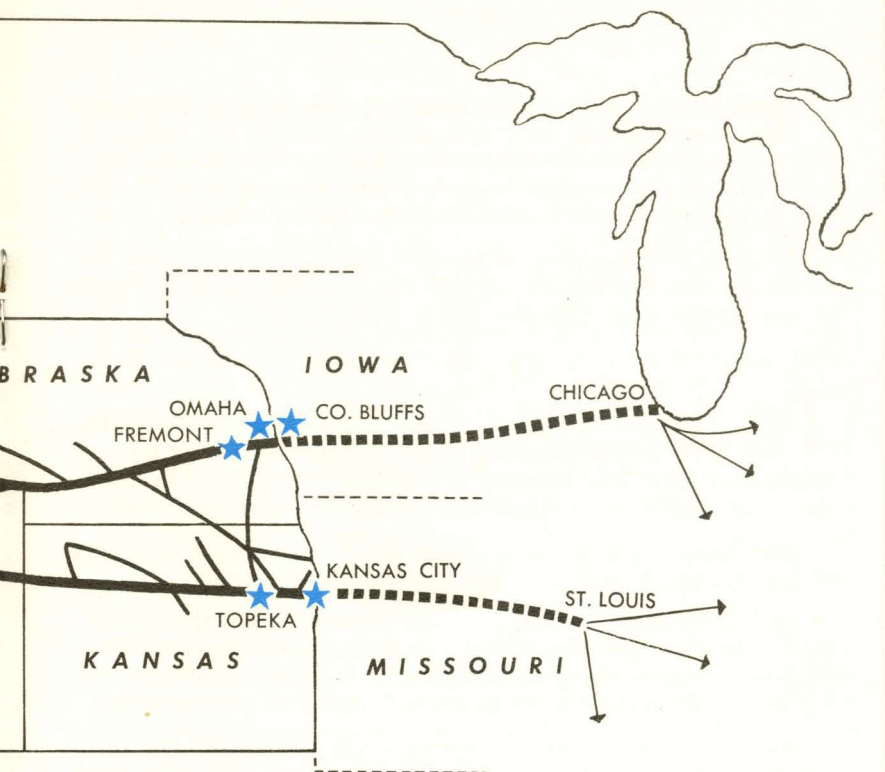
Omaha, Neb.  
Council Bluffs, Ia.  
Fremont, Nebr.  
Kansas City, Kan.  
Muncie, Kan.  
Topeka, Kan.

Denver, Colo.  
Cheyenne, Wyo.  
Salt Lake City, Utah  
Ogden, Utah  
Boise, Ida.  
Pocatello, Ida.

Spokane, Wash.  
Portland, Ore.  
Seattle, Wash.  
Las Vegas, Nev.  
Long Beach, Cal.  
Los Angeles, Cal.

★Stars indicate principal cities where industrial sites are available.





# unity for Industry

The industrial properties held at Omaha, Kansas City, Kans., Denver, Salt Lake City, Portland and Los Angeles are fully developed properties, having paved streets, utilities and trackage immediately available to meet the usual requirements of industries seeking attractive locations.

By locating on the Union Pacific, industries are assured of prompt and efficient rail transportation for all shipping requirements over one of the finest transportation systems in America.

During 1866, two hundred sixty miles more were added and in 1867 a two hundred forty mile advance brought the railroad to the summit of the Rocky Mountains, Sherman Hill, altitude 8,247 feet. (Sherman's elevation since has been reduced to 8,013 feet, but it still is the highest point on Union Pacific's lines.)

In 1868, four hundred twenty-five miles more were added and during the first four months of 1869 one hundred twenty-five miles of new construction took the line to Promontory.



**T**HE ACTUAL LAYING of the rail on the Union Pacific was done by hard-working gangs, largely Irishmen, many of whom were Civil War veterans, and their work and life, less storied than their clashes with the Indians, often were as interesting.

The track-laying gangs working across the prairie were out of bed and had breakfast by the time it became daylight.

So had the graders who'd preceded them laying out the roadbed, the surveyors, who'd preceded the graders, and the bridge-building gangs who were working far enough ahead to insure that track laying work did not have to pause when it came to a river or gully.

Rails were brought up to the end of the line on an open truck car drawn by a couple of horses. As the horses pulled the truck up to the end of the last pair of rails laid, it was stopped, the wheels blocked and the horses unhitched.

A single horse then was hitched to the truck, to be used until the rails had been unloaded by crews of five men on either side of the truck. At a word from the foreman each crew seized a rail, pulled it out over the front of the car to its full length, placed it on the ties at the shout, "Down!"

As the rails hit the ties, a man at the far end applied a measure and adjusted the width; the horse moved forward, pulling the truck-load of rails over the newly laid rail until he had reached the end of it, where he stopped, more rail was taken off and the process continued until the thirty rails a truck carried were gone.

Close behind the truck of rails came the crews who spiked them down for permanent use.

As the tracks crept across the vast wilderness west of the Missouri River at about two miles a day they took with them a town and a gang known as "Hell on Wheels."



## WHOLE VILLAGES UNLOADED

This name was popularly associated with the construction crews and their hanger-on friends who arrived on the first train into the new "end of track" towns which sprang up every few miles to take care of various of the workers' needs as the road grew.

When these gangs piled off the train at a new "end of track," they often unloaded whole villages.

Shacks, tents, furniture and personal belongings and even complete weekly newspaper plants were brought in by the gangs, sometimes leaving the town which had been "end of track" nothing but deserted prairie sites with street lines and piles of debris.

Gamblers, saloon keepers and other gun-toters joined the "Hell on Wheels" group all along the line, taking advantage of the golden opportunity to help workers spend their hard-earned cash.

Finally, their robbing of trainmen and their other depredations at Cheyenne forced General Dodge to call on General J. E. Stevenson, commandant at nearby Fort D. A. Russell, (now Frances E. Warren Air Force Base) for help in the summer of 1867.

General Stevenson and his soldiers ran the entire population out of town to a point about a mile south of there, had a parley with them and permitted them to return to town only after having made arrangements which would insure a more orderly city.

## INDIANS PLAGUE CREWS

Indian trouble still plagued the work gangs near Cheyenne.

In fact, the Indians were responsible for the beginning of the Cheyenne graveyard, according to General Dodge, who related, in his book, "How We Built the Union Pacific," that an Indian band attacked a Mormon grading train and outfit near Cheyenne and killed two men, the first occupants of the city's cemetery.

A few years earlier, Indians attacking a scouting party which included General Dodge, forced the men to retreat over a ridge of the mountains which he named Sherman in honor of his old commander, General W. T. Sherman. Further exploration by General Dodge proved that to be the best way for a railroad over the mountains at that point.

A multitude of raids similar to these over a period of time cost many lives and necessitated constant vigilance.

On occasion, the Indians would marshall a band of several hundred and sweep out of a ravine to attack; murdering, mutilating, or kidnapping and torturing workers, tearing up track, burning buildings, killing stock and tearing down the telegraph wires.

Not as subtle as the fifth columnists of World War II, the Indians nevertheless made "friendly" visits to the white men's camps to look over the place as an aid in plans for a future attack.

While work on the road was being done near Grand Island, Nebr., Chief Spotted Tail of the Sioux and 17 warriors rode up and announced they would like to see how the men laid track.

The workers were civil to the Indians, though suspicious of them, and when after watching track laying for a while the Indians asked to be conducted through the outfit cars, they were led through four in which one thousand rifles were stored.

As the Indians prepared to leave, they asked to be permitted to carry off a large amount of supplies and when their request was refused, Spotted Tail threatened to come over that night with three thousand braves and enforce his demands.

The section foreman simply placed his doubled fist gently against Spotted Tail's nose and gave him a good old-fashioned track worker's cussing out. The foreman's attitude and the Indian's recollection of the rifles apparently made temporary pacifists out of them, for the raid never materialized.

## INDIANS SOAR IN ALL DIRECTIONS

But a few miles away, down on what is now the railroad's Kansas division, a raid made to order for a two-reel movie comedy was coming off at about this time.

Steaming westward near Fort Wallace, the engineer discovered that the telegraph wires had been cut — usually a sign that there were Indians ahead, waiting to ambush the train. As the train neared their hiding place, they rose up one hundred strong — fifty on each side of the track — and pulled taut a rawhide rope they'd stretched across the track between them to stop the train.

When the locomotive hit the rope the air was full of Indians and they were thrown in all directions. More than a dozen were killed or seriously injured and it was several years before they even attempted to stop a train again in that part of the country.



**W**HEN THE GOLDEN SPIKE finally had been driven into its laurel tie after the years of building the Union Pacific across the prairies and mountains to its meeting with the Central Pacific, the U. P. consisted of a single line from Omaha westward just a little more than 1,000 miles.



But it began to grow rapidly, absorbing smaller lines, building more trackage, and by 1893 the system had expanded by the addition of main lines and branches to 7,682 miles.

That same year, as the result of its early financial maneuvers, severe competition, drouth, crop failures and the depression after-effects of the panic of 1893, the railroad was placed in the hands of receivers.

The property was sold at foreclosure November 1, 1897, to the present Union Pacific Railroad Company.

Soon after this new company was launched, Edward Henry Harriman, one of the syndicate which had charge of the railroad, emerged as the dominant figure in Union Pacific's management.

## **HARRIMAN REBUILDS RAILROAD**

The properties of the company were rehabilitated under his direction. Millions were spent for modern locomotives and freight and passenger cars; curves were eliminated and grades cut down; wooden bridges were replaced with steel or masonry; the water supply was improved; yards were enlarged; heavier rail was installed and double tracking was done by the hundreds of miles.

Mr. Harriman put the railroad on a solid foundation and started it on the road to becoming what is today; one of the outstanding railroads in the world which now boasts over 9,600 miles of road — 8,130 miles of single track main line and 1,560 miles of double track. In addition there are approximately 4,700 miles of yard tracks and sidings.

In addition to the original line from Omaha west, there is another main line from Kansas City to Denver, Colo., then to Borie, west of Cheyenne, Wyo., where it joins the main line from Omaha and continues west. At Granger, Wyo., one principal division heads northwest toward Portland, Ore., with tentacles of connecting track throughout the states of Idaho, Montana, Oregon and Washington, including the recently acquired Spokane International Railroad from Spokane to Canadian border. One of these branches at Shoshone, Idaho, serves famous Sun Valley. At Ogden, another division turns southward to Los Angeles, serving the southern Utah National Parks country (including the Grand Canyon area), southwestward through Nevada at Las Vegas serving mighty Hoover Dam, into the heart of southern California at Los Angeles.

The direct connection to San Francisco is over the Southern Pacific (the old Central Pacific). With other railroads, Union Pacific operates through service to Chicago and St. Louis.

## **FREIGHT IS THE BIG JOB**

Our nation's vast and complex network of railroads is the backbone of a transportation system unmatched anywhere in the world. Passenger service is the picture window of the industry, but the biggest and most important job is moving freight.

Union Pacific serves more of the west than any other railroad and is a vital link between the mines, forests, and agricultural areas in the west and the eastern markets. Every minute of the day, dozens of freight trains are moving over Union Pacific's 10,000 mile system. On them are the most modern types of equipment available — specially built cars for handling fragile or out-size shipments, for carrying loose bulk commodities, bi-level and tri-level cars for hauling new automobiles, and refrigerator cars offering maximum protection for fruit, vegetables and other perishable products — to keep America supplied with its everyday needs.

At the end of 1963 Union Pacific owned a total of 55,203 freight cars, and 1,356 diesel-electric freight locomotive units. Always a leader in the field of motive power, Union Pacific placed in service a 15,000 horsepower diesel-electric locomotive in late 1963. The hefty mover is a combination of three units of 5,000 horsepower each, twice that of any diesel-electric previously built in the United States. Additional units of this type are being added to the fleet together with diesel units of 5,500 horsepower each.

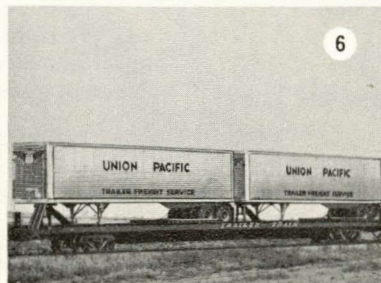
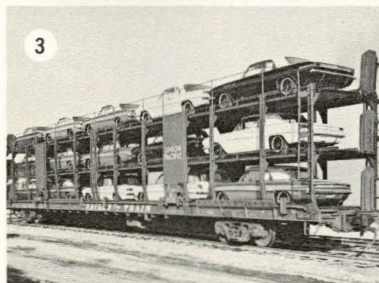
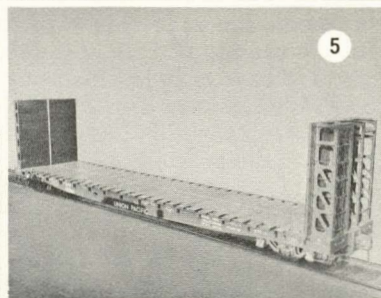
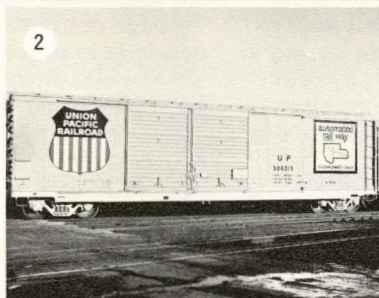
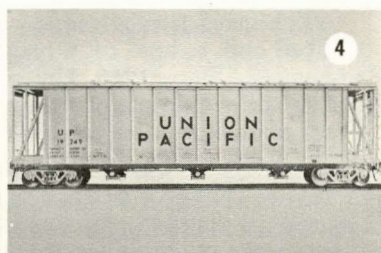
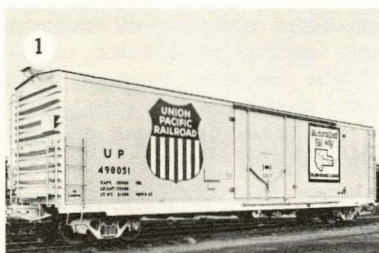
Union Pacific is the only railroad operating gas turbine-electric locomotives in regular service. Thirty-seven of these radically new engines are working with the diesels to move freight quickly and efficiently.

The power plant on the gas turbines is basically a jet engine with the hot gases harnessed to turn turbine wheels instead of exerting a thrust effect. The fleet consists of seven units of 4,500 horsepower and 30 units of 8,500 horse power. The turbines have a high fuel consumption rate, as compared with diesels, but burn a less expensive, low-grade residual fuel.

In addition, U.P. has developed a coal-fired gas turbine-electric locomotive, first of its kind in the world. Tests are being conducted to evaluate its performance.



## SOME OF UNION PACIFIC'S MODERN FREIGHT EQUIPMENT



1. Plug Door Box Car
2. Cushioned Load Box Car
3. Tri-Level Auto flat

4. 3500 cubic foot Covered Hopper
5. Bulkheaded Flat
6. Trailers on Flat Car
7. Modern Union Pacific Freight Station

## GOOD ROADBED AND FACILITIES VITAL

High-speed freight service demands a smooth, well-maintained roadbed and a host of supporting facilities in addition to train equipment. Since 1946, Union Pacific has spent over one billion dollars for new locomotives, cars and improvements to its facilities. Track maintenance averages about \$26,000,000 per year, with most of the work highly mechanized through use of special equipment.

Much of Union Pacific's main line is double track, permitting one track to be used for westbound trains and the other for eastbound. Use of the latest electronic controls permits single track line to handle almost as much traffic as double track. Through centralized traffic control (CTC), dispatchers located at strategic points along the line have complete control of all trains in their districts, extending several hundred miles. A control board before each dispatcher shows basically a line map of the area and small lights on the board indicate the positions and progress of trains in that area. He directs their movements by remote control, switching the trains into and out of passing tracks by flicking small switches on the board.

Always alert for safety innovations, U.P. recently installed four electronic hot box detectors after two years of intensive testing. The success of these pilot units in reducing freight train failures caused by overheated journals — freight car axles — prompted the company to start work on four additional units and schedule twenty more for installation as soon as the work can be done.

The units consist of "scanners" mounted next to the rail on each side of the track with a "read-out" unit located about eight miles down the line. As the train passes the scanners the temperature of each journal is read by an infrared beam and an impulse transmitted to the read-out unit which records the information on a graph. If an overheated journal is detected, the train is stopped and appropriate action taken to correct the situation.

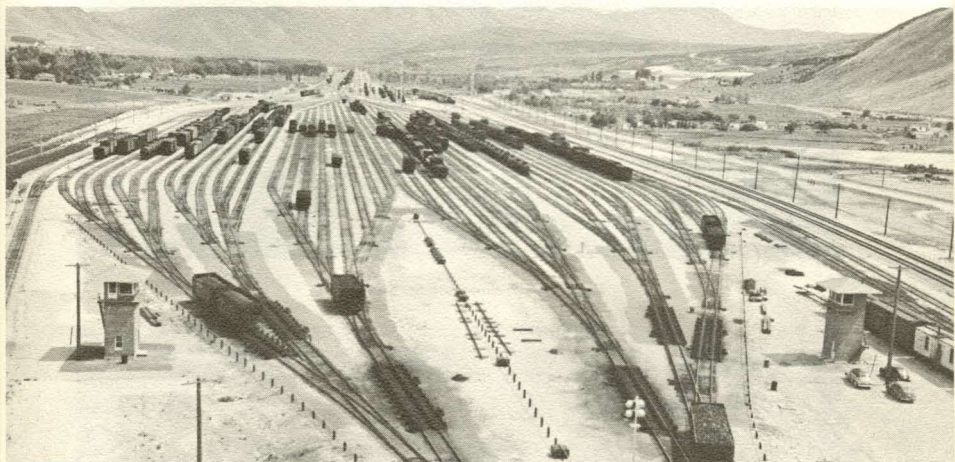
Various types of yards are necessary to enable a railroad to operate, with freight classification yards being among the most important. Here cars are made up into trains, switched into different trains at intermediate points on the trip and switched out of trains at the destination terminal of the railroad to be delivered to other railroads or the consignee.

Classification yards are either flat yards, where switching is done by engines pulling or pushing cars in and out of tracks, or "hump" or retarder yards in which cars pushed over a hill or "hump" move down into the yard by gravity. An operator in a yard tower observes



the car movements, throwing switches by remote control to put the car on the proper track, and operating retarders to reduce speeds for gentle coupling into other cars on the final track.

Recently Union Pacific has built yards at Pocatello, Idaho, North Platte, Neb., Ogden, Utah, Kansas City, Kan., Hinkle, Ore., and Spokane, Wash. Those at Pocatello and North Platte are the latest type retarder yards and the latter has been converted to automatic operation. Operations are performed by an automatic switching machine, with radar and electronic brains controlling retardation. Retarder yards have been instrumental in reducing damage to shipments caused by over-speed coupling impacts, with automatic operation increasing their effectiveness.



Classification yard at Pocatello, Idaho

Two-way radio is used in a number of yards to expedite the job of car inspection and repair, switching and yard inventory; and Union Pacific's major yards are equipped with extensive paging and communications systems to provide constant contact between yard towers and switching crews.

Huge freight houses have been constructed at Kansas City, Kan., East Los Angeles, Calif., and Portland, Ore., to speed the handling of less-than-carload shipments. Each of these is large enough to handle an entire freight train under its roof at one time and equipped with the latest in mechanized freight-handling equipment. A conveyor system moves freight to and from cars, portable talk-back speakers speed freight checking, and pneumatic tube systems carry written material between offices in the terminal.

## COMMUNICATIONS SYSTEM EXTENSIVE

Union Pacific operates an extensive communications system in conjunction with its rail operation. Its telegraph and telephone lines extend from Omaha and Kansas City on the east to Los Angeles, Portland and Seattle on the west. Direct distance dialing over the entire railroad permits fast, easy contact between all departments



Modern Communications Center



Union Pacific's EDP Center

for maximum efficiency in the varied operations. Teletype facilities flash daily reports to more than 70 traffic offices, on and off-line, so shippers all over the country can know where their shipments are as they speed over Union Pacific lines.



A microwave radio installation has been built to supplement the wire system, and is to be extended over the entire railroad. High-frequency radio will give greater communications capacity and dependability to meet the complex operating situations of the railroad.

An extensive Electronic Data Processing Center is in operation in Union Pacific's Omaha headquarters. This facility is used in timekeeping and payroll work for the entire system, freight and passenger revenue accounting, maintaining a record of car movements, freight traffic statistics, store department stock records as well as inventory control, stockholders accounting, investment and valuation accounting, and cost and economic research. Data from all over the railroad is transmitted into the EDP Center for maximum efficiency in handling the various projects.

## **ACTIVITIES ARE DIVERSIFIED**

In addition to its transportation operations, Union Pacific is engaged in other phases of industrial activity and offers its patrons a great variety of services. It is one of the largest oil producers in California, with fields in several areas in that region, and also operates oil developments in conjunction with other companies in Colorado, Wyoming and other regions.

The livestock and agricultural department cooperates with producers of agricultural commodities, dairy products, livestock and others to improve production and distribution techniques, develop new markets and in every way possible improve the agricultural industry. This department has a special theater car which tours the railroad as a farm forum center for farmers, vocational agricultural students and 4-H club members. The department also awards scholarships to worthy farm youth through the Union Pacific Railroad Scholarship program to encourage higher education in agriculture. Scholarships are awarded each year to one vocational agriculture student and one 4-H club member in each of the 198 counties served by Union Pacific Railroad.

Union Pacific for years has been noted for its intensive efforts to reduce freight loss and damage. Engineers and other experts in the field of loss and damage prevention work constantly with shippers to promote proper packaging, handling, loading and transportation of various commodities with the view of holding loss and damage to an absolute minimum. An employee education program for the railroad workers involved is carried on at the same time to attack the problem from that end.

One of the leaders in safety among railroads, Union Pacific's zealously in this respect stems from the insistence of the late E. H. Harriman. It consistently operates with the lowest employee casualty rate among all Class I railroads and in 1962 won the E. H. Harriman Memorial Medal of the American Museum of Safety for the sixteenth time.

## **UNION PACIFIC PROVIDES SITES FOR INDUSTRY**

The railroad also helps its patrons by providing sites for industries, which offer excellent opportunities for decentralization. Union Pacific installs trackage, paving, sewer, gas, water and other facilities on land it owns in various cities on its lines, then offers locations to industry on a purchase or long-term lease basis (see map on pages 16-17). Providing such sites for industry is just one way Union Pacific continues to serve and develop the territory it helped create from a wilderness.

## **PASSENGER SERVICE ATTRACTIVE**

Passenger service is the glamorous side of railroading — the side with which the public in general is best acquainted and often the only thing upon which their judgment of a railroad is based.

Since its early days, Union Pacific has been noted for the high quality of its passenger trains and service. It introduced the nation's first streamlined train in February, 1934, and followed it with other innovations such as the famous low-cost "Challenger" trains between Chicago and the west coast.

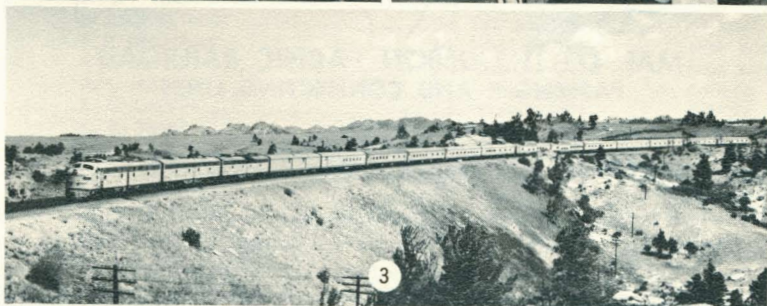
Today Union Pacific operates the most modern passenger equipment available, including dome coaches, dome lounges, the world's only dome dining cars, the latest leg-rest reclining seat coaches, and sleeping cars offering a complete range of accommodations.

Typical of the high standard of Union Pacific service is that of its dining cars. The railroad was recently awarded for the fifth time a certificate of merit by the United States Public Health Service for dining car sanitation and design.

In addition to its highly efficient passenger train service, Union Pacific operates hotel and transportation facilities in beautiful Zion, Bryce Canyon and Grand Canyon National Parks through the Utah Parks Company. It also owns and operates Sun Valley, the world famous summer and winter sports paradise in Idaho's Sawtooth mountains.



## ABOARD A UNION PACIFIC DOMELINER



1. Comfortable Leg Rest Coaches

2. Modern Pullman Bedroom

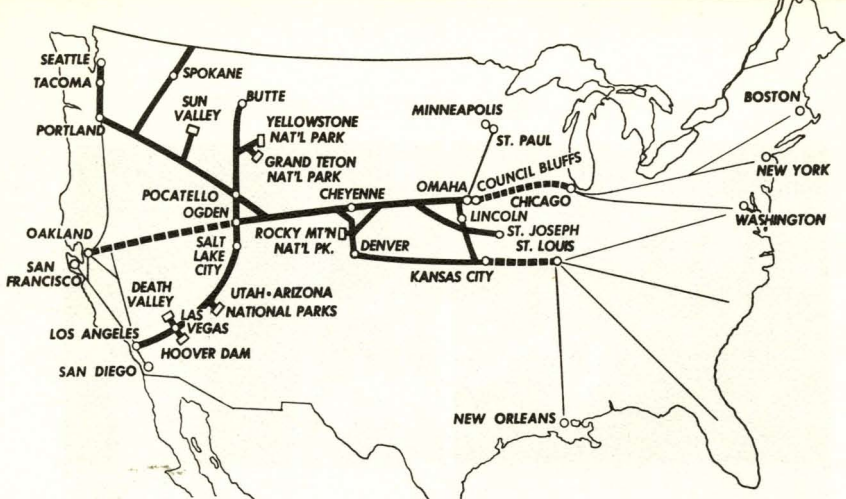
3. One of Union Pacific's Fine Domeliners

4. Dinner in the "Dome Diner"

5. Scenery superb — a camera fans delight

6. Main Lounge of Dome Lounge Car

7. The Coffee Shop Lounge Car



**MAP OF THE UNION PACIFIC RAILROAD  
PASSENGER AND CONNECTING LINES**

## **LONG RANGE PROGRAM COMPREHENSIVE**

The extreme traffic demands of World War II, the Korean conflict, and Cuban ransom operation amply demonstrated the nation's dependence on its railroads in time of emergency. In peacetime, however, the role of the railroads is acknowledged to be just as vital to the welfare of our country. Only the railroads have the capacity to handle the tremendous quantities of material needed every day everywhere across the United States.

Recognizing the certainty of the continued growth of the west, as well as an expanding national economy, Union Pacific's management continues to strengthen and rebuild the railroad. In recent years new freight yards have been built, troublesome grades and curves have been eliminated, new cars and motive power have been bought in quantity, and an intensive campaign has been conducted to induce more business to locate on the railroad.

Plans call for further improvements in both service and facilities to insure utmost dependability, efficiency, and economy of operation. Constant research is conducted to develop better types of motive power, new freight cars, improved fuels, and new ways of doing business to give the best possible service to our customers.

Acknowledging the historical importance of its contributions to the growth of the west through its years of existence, Union Pacific also is aware that the future depends not on what has been done but on what will be done. It will continue to serve and develop that territory, knowing that the railroad can only grow and prosper as the territory it serves grows and prospers.



## Presidents of Union Pacific

W. B. OGDEN .....	Sept. 1862-Oct. 1863	NEW YORK
J. A. DIX .....	Oct. 1863-Nov. 1866	NEW YORK
OLIVER AMES .....	Nov. 1866-Mar. 1871	NEW YORK
T. A. SCOTT .....	Apr. 1871-Mar. 1872	NEW YORK
HORACE CLARK .....	Mar. 1872-June 1873	NEW YORK
JOHN DUFF .....	June 1873-Mar. 1874	NEW YORK
SIDNEY DILLON .....	Mar. 1874-June 1884	NEW YORK
C. F. ADAMS, JR. ....	June 1884-Nov. 1890	NEW YORK
SIDNEY DILLON .....	Nov. 1890-Apr. 1892	NEW YORK
S. H. H. CLARK .....	Apr. 1892-Dec. 1897	NEW YORK
W. S. PIERCE .....	Dec. 1897-Dec. 1897 (Acting)	NEW YORK
HORACE G. BURT .....	Dec. 1897-Jan. 1904	OMAHA
E. H. HARRIMAN .....	Jan. 1904-Sept. 1909	NEW YORK
R. S. LOVETT .....	Oct. 1909-Oct. 1911	NEW YORK
A. L. MOHLER .....	Oct. 1911-July 1916	OMAHA
E. E. CALVIN .....	July 1916-July 1918	OMAHA
C. B. SEGER .....	July 1918-Jan. 1919	NEW YORK
R. S. LOVETT .....	Feb. 1, 1919-Dec. 31, 1919	NEW YORK
C. R. GRAY .....	Jan. 1, 1920-Oct. 1, 1937	OMAHA
W. M. JEFFERS .....	Oct. 1, 1937-Feb. 1, 1946	OMAHA
G. F. ASHBY .....	Feb. 1, 1946-Mar. 1, 1949	OMAHA
A. E. STODDARD .....	Mar. 1, 1949-To Date	OMAHA

## For Further Reference

ROBERT BRUCE Union Pacific and Pawnee Scouts	E. L. SABIN Building the Pacific Railway
GRENVILLE M. DODGE How We Built the Union Pacific Railway	HENRY KIRKE WHITE History of the Union Pacific Railway
WAYNE GARD Sam Bass	NELSON TROTTMAN History of Union Pacific
ZANE GREY The U. P. Trail	WILLIAM LEE PARK Pioneer Pathways to the Pacific
G. B. GRINNELL Two Great Scouts and Their Pawnee Battalion	MATTHEW JOSEPHSON The Robber Barons
G. R. HEBARD Washakie	GLENN CHESNEY QUIETT They Built the West
J. R. PERKINS Trails, Rails and Wars	ERNEST HAYCOX The Trouble Shooter
ROBERT WEST HOWARD The Great Iron Trail	WESLEY S. GRISWOLD A Work of Giants
SILAS SEYMOUR Incidents of a Trip through the Great Platte Valley to the Rocky Mountains and Laramie Plains in the Fall of 1866	

"UNION PACIFIC" . . . for shipping and traveling . . . the

**automated**  
**rail way**

To, from and throughout the West . . .  
for the finest in freight  
and passenger service,  
be specific . . .  
say "Union Pacific."



**UNION PACIFIC**

*Railroad*

OMAHA, NEBRASKA 68102

