

Golden Spike

Golden Spike
National Historical Park
Utah
National Park Service
U.S. Department of the Interior



"Last Spike" Ceremony at Promontory Summit
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Union Pacific No. 119 on the temporary Big Trestle near Promontory
OAKLAND MUSEUM

Spanning a Continent

No sooner were America's first railroads operating in the 1830s than people of vision foresaw transcontinental travel by rail. The idea gained support as a national railroad system took shape. By the beginning of the Civil War, America's eastern states were linked by 31,000 miles of rail, more than in all of Europe. Virtually none of this network, though, served the area beyond the Missouri River. Until the Great American Desert and the Rockies were bridged, the vast western territories would be a part of the nation in name only. A continent-spanning railroad would also bring more tangible benefits: It would boost trade, shorten emigrants' journeys, and help the US Army control Native Americans resisting white settlement. Anticipating great financial and political rewards, northern, midwestern, and southern senators made their cases for locating the eastern terminus in their regions.

In California, Theodore Judah had his own plan for a transcontinental railroad. By 1862 the young engineer had surveyed a route over the Sierra Nevada and persuaded wealthy Sacramento

merchants to form the Central Pacific Railroad. That year Congress authorized Central Pacific to build a railroad eastward from Sacramento and in the same act chartered the Union Pacific Railroad in New York. After the Civil War had removed the southern senators from the debate over the eastern terminus location, the central route near the Mormon Trail was chosen, with Omaha as the terminus. Each railroad received loan subsidies of \$16,000 to \$48,000 per mile, depending on the difficulty of the terrain, and 10 land sections for each mile of track laid.

Central Pacific broke ground in January 1863 and Union Pacific that December, but neither made much headway while the country's attention was diverted by the Civil War. Investors could reap greater profits from the war, and the US Army had first priority on labor and materials. So Central Pacific's Collis Huntington and Union Pacific's Thomas Durant, exemplars of the no-holds-barred business ethics of the period, visited Washington with enough cash to help members of Congress understand their problems. A second railroad act in 1864 doubled the land

subsidies, but little track was laid until labor and supplies were freed at war's end.

Central Pacific crews faced the rugged Sierra Nevada almost immediately. While Union Pacific started on easier terrain, its work parties were raided by Sioux and Cheyenne. With eight flatcars of material needed for each mile of track, supplies were a logistical nightmare for both railroads, especially Central Pacific, which had to ship every rail, spike, and locomotive 15,000 miles around Cape Horn. Both pushed ahead faster than anyone had expected. The work teams, often headed by ex-army officers, were drilled until they could lay two to five miles of track a day on flat land.

Union Pacific drew on the vast pool of America's unemployed: Irish, German, and Italian immigrants, Civil War veterans from both sides, formerly enslaved people, and even Native Americans—8,000 to 10,000 workers in all. It was a volatile mixture, and drunken bloodshed was common in the "hell-on-wheels"

towns thrown up near the base camps. Because California's labor pool had been drained by the rush for gold, followed by the silver boom, Central Pacific hired over 10,000 Chinese, the backbone of the railroad's work force.

By mid-1868 Central Pacific crews had crossed the Sierra and laid 200 miles of track; Union Pacific had laid 700 miles over the plains. As the two work forces neared each other in Utah, they raced to grade more miles and claim more land subsidies. Both pushed so far beyond their railheads that they passed each other, and for over 200 miles competing graders advanced in opposite directions on parallel grades. Congress finally declared the meeting place to be Promontory Summit. On May 10, 1869, two locomotives—Central Pacific's Jupiter and Union Pacific's No. 119—pulled up to the one-rail gap left in the track (above left). After a golden spike was symbolically tapped, a final iron spike was driven to connect the railroads. Central Pacific had laid 690 miles of track; Union Pacific, 1,086. They had crossed 1,776 miles of desert, rivers, and mountains to bind together east and west.

Surveying



Surveyors, working hundreds of miles ahead, set no grade steeper than 116 feet-of-rise per mile.

Grading



Using picks and shovels, carts, one-horse scrapers, and black powder, graders prepared about 20

miles of bed at a time, cutting ledges, blasting hills, and filling huge ravines.

Tunnels and Trestles



Workers five to 20 miles ahead of track-laying gangs dug tunnels and built high wooden trestles. Central

Pacific blasted 15 tunnels through Sierra granite, sometimes resorting to dangerous nitroglycerine.

Track Laying



On 2,500 ties per mile, one gang could lay two pairs of 30-foot, 560-pound rails a minute. Spikers drove 10

spikes per rail, three blows per spike. Here, railbenders form curves with sledge-hammers.

Telegraph



The nation's second transcontinental telegraph was strung beside the track as the railroad advanced.

Snow Sheds



Drifts and avalanches so hindered trains in the Sierra Nevada that Central Pacific had to

build 37 miles of peaked snow sheds and sloped galleries to keep snow off the tracks.



End of the Frontier

Planning Your Visit
The visitor center has exhibits, information services, and audiovisual programs. About 1.7 miles of track have been relaid on the original roadbed where the rails were joined. Working

replicas of Jupiter and No. 119 operate during summer. Service animals are welcome.

Safety Stand well back from steam locomotives during operation to

avoid scalding. Beware of hot and greasy parts. • Do not place coins or other objects on rails. • Observe speed limits and drive carefully, especially along the railroad

grade. • Federal laws protect all natural and cultural features in the park. • Metal detectors, digging, and fires are prohibited. • For fire-arms regulations check the park website.

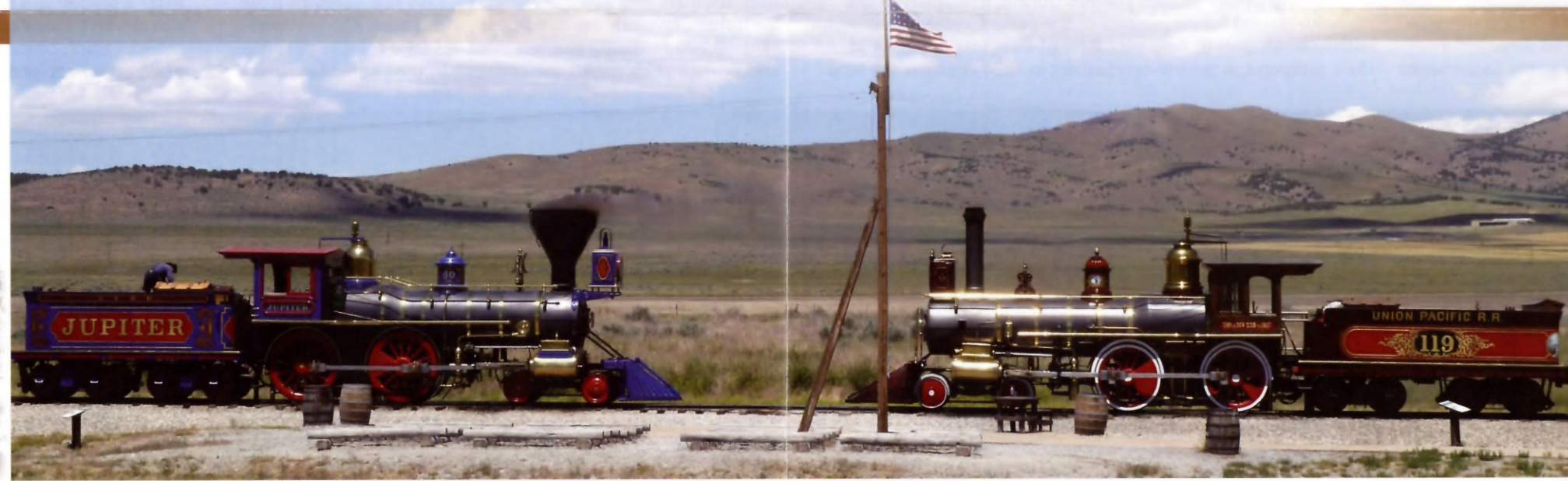
Emergencies call 911
Accessibility We strive to make our facilities, services, and programs accessible to all. For information go to the visitor center, ask a ranger, call, or check our website.

Above: *Held Up*, painting by Newbold Trotter
Right: Utes watch Union Pacific crews lay track through Utah.

SMITHSONIAN INSTITUTION

A black and white photograph showing a group of approximately 15 individuals, likely Native Americans, standing in a line on horseback in an open field. The group is diverse, with some individuals wearing traditional Native American clothing, including feathered headdresses and fringed garments, while others are dressed in military uniforms, including hats and jackets. The horses are of various breeds and colors. The background is a flat, open landscape with some distant structures or trees visible on the horizon.

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A composite image. On the right is a close-up portrait of John D. Rockefeller, showing him with a full white beard and mustache, wearing a dark suit and a white shirt with a high collar. On the left is a black and white photograph of three men in work clothes and hats standing on a railroad track, with a steam locomotive visible in the background.

This map illustrates the historic railroad routes through Promontory, Utah, highlighting the Central Pacific and Union Pacific grades. The auto tour route is marked with a dashed blue line, starting at the Visitor Center and following the Central Pacific grade through the Promontory Mountains. Key sites include the Last Spike Site, where the two railroads met, and the Big Fill Loop Trail. The map also shows the Golden Spike National Historical Park, the Promontory Mountains, and the Promontory Hollow. A scale bar indicates distances in kilometers and miles, and a legend identifies various features like unpaved roads, hiking trails, and self-guiding trail markers.

Begin West Grade Auto Tour
Closed December to May

Camp Victory Site (Rozel)
Central Pacific crews broke for lunch here in their race to lay the most track in one day.

Miles of track laid per day quickly became a contest between the two railroads. In early April the Union Pacific laid 8.5 miles of track in one day and then bet the Central Pacific \$10,000 that they could not better the record. On April 28, 1869, the Central Pacific won the bet.

A World Record
Central Pacific crews finished their 10-Mile Day here, having laid 10 miles and 56 feet of track.

Last Spike Site
Here at Promontory Summit the Union Pacific and Central Pacific rails were joined.

Engine House
(locomotive winter storage)

Visitor Center
Park Headquarters
4905 ft
1495 m

To reach the West Grade Auto Tour, drive 7 miles west from the visitor center.

Begin East Grade Auto Tour

Big Fill Loop Trail

Big Fill

Big Trestle Site

Big Fill/Big Trestle Viewpoint

Chinese Arch

Last Cut

East of the Promontory Mountains, the Central Pacific and Union Pacific railroad grades crossed each other several times. In some places, they used the same grade.

One of the Union Pacific's most difficult areas of construction was here, as they climbed the Promontory Mountains. In the space of just eight miles, the Union Pacific blasted five cuts through solid rock, building four trestles and four fills.

Legend:

- Golden Spike National Historical Park
- Auto tour route (unpaved)
- Unpaved road
- Hiking trail
- Self-guiding trail
- Picnic area

Scale:

- 0 to 1 Kilometer
- 0 to 1 Mile

Directions:

- To Locomotive Springs
- To (84) and Boise, Idaho
- To (15) and Brigham City
- To Promontory Point

Golden Spike National Historical Park is one of over 400 parks in the National Park System. Learn more at www.nps.gov.