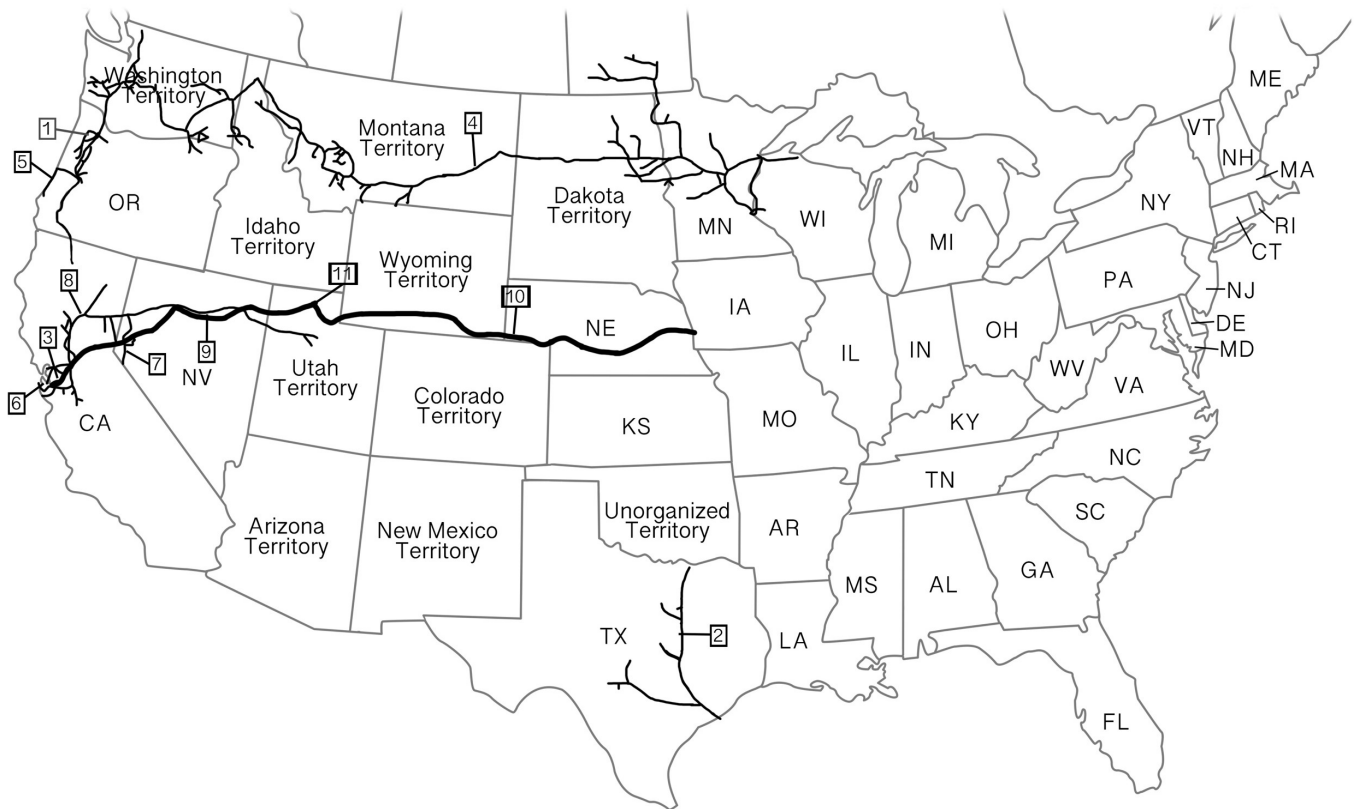


Chinese Building Railroads across America, 1870

A Coloring Book



Michelle Yuan (SFSU 2018)

APIA Biography Project
San Francisco State University
and
The Association of Chinese Teachers
(TACT)
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CHINESE BUILDING RAILROADS ACROSS AMERICA, 1870

A Coloring Book

Table of Contents

| | |
|---|----|
| Working on the Railroad | 1 |
| Early Notable Chinese Workers | 15 |
| Railroads Built by the Chinese up to 1870 | 19 |

Design and Layout: Triya Marco

APIA BIOGRAPHY PROJECT San Francisco State University

The APIA (Asian Pacific Islander American) Biography Project began in 2012 under Asian American Studies Professors Lorraine Dong and Jeannie Woo. The project's primary mission is to provide free and accessible APIA resources for children and adults through events, curricular activities, and an upcoming website. It is a Community Service Learning project based mainly on the works done by the students of AAS 512 (Asian American Children's/Adolescent Literature) at San Francisco State University. The project is funded by donations and the University's Instructionally Related Activities grant.

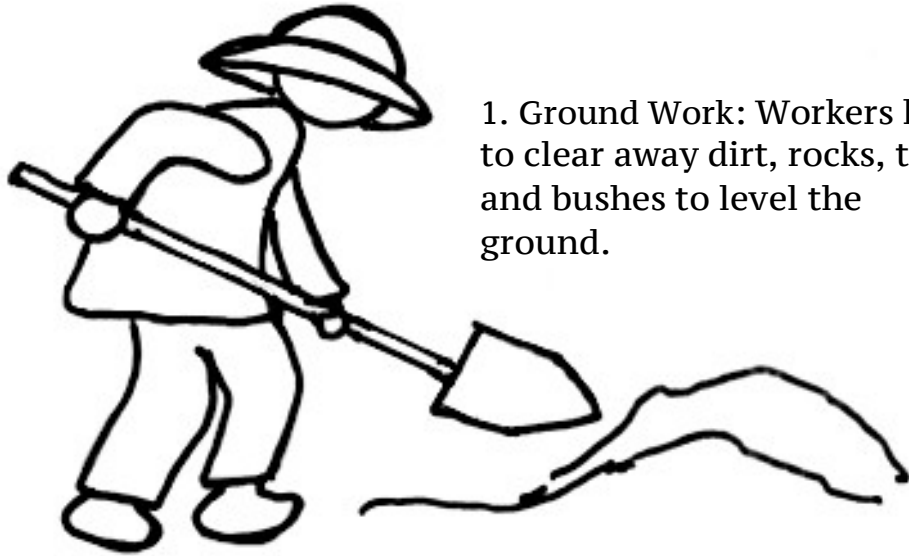
Please contact apiabiography@gmail.com for more information.

The Association of Chinese Teachers (TACT)

Founded in 1969, The Association of Chinese Teachers (TACT) is a nonprofit organization in San Francisco. Over the years it has been involved in issues such as affirmative action, bilingual education, curriculum, and teachers' working conditions. TACT has awarded scholarships to high school seniors and has held yearly professional development events. Beginning in 2013, TACT cosponsored the annual Asian Pacific Islander American (APIA) Heritage Month celebration with the San Francisco Public Library and the Asian American Studies Department at San Francisco State University.

Please go to <http://www.tactsf.org> for additional information about TACT.

Working on the Railroad



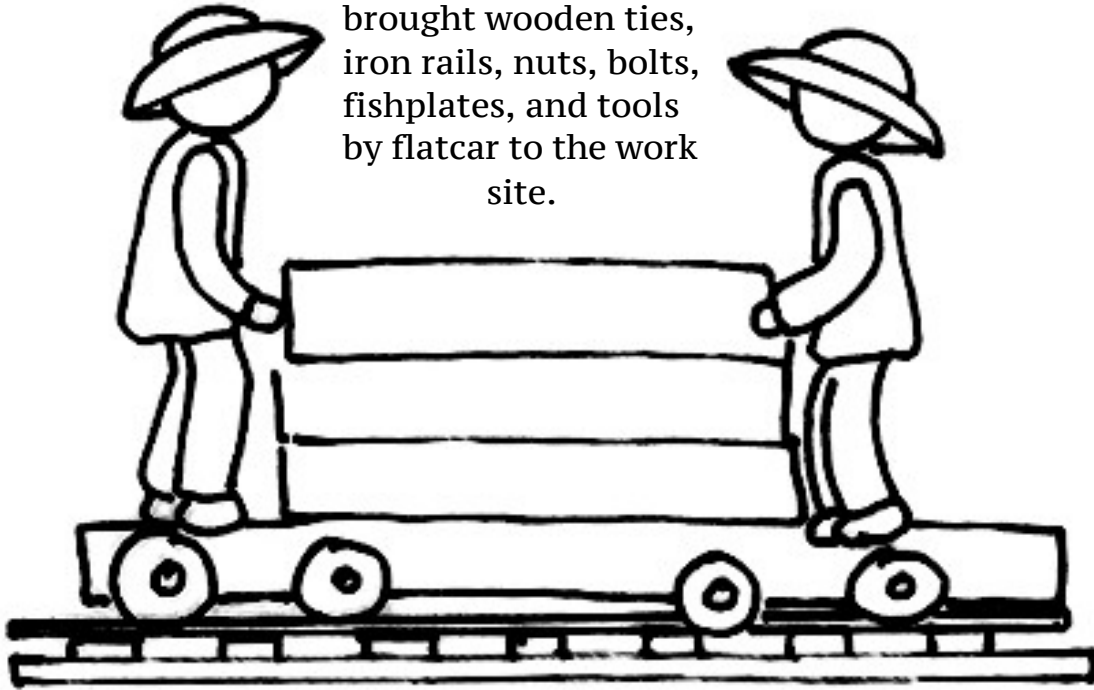
1. Ground Work: Workers had to clear away dirt, rocks, trees, and bushes to level the ground.



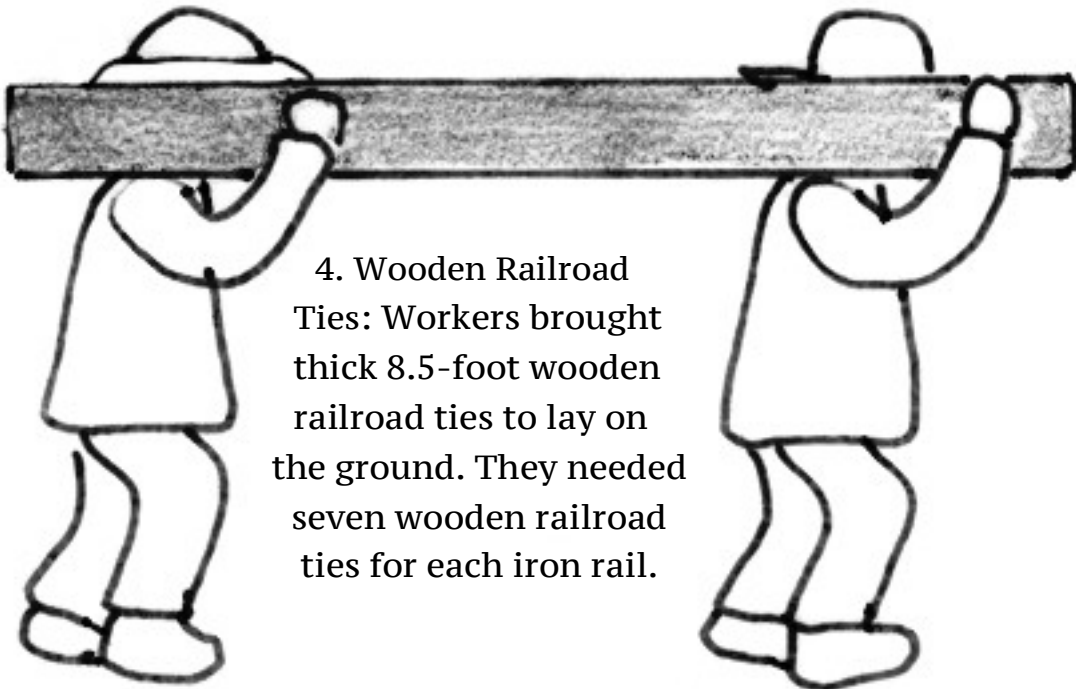
2. Wheelbarrows: Workers removed the dirt and rocks in wheelbarrows.

Working on the Railroad

3. Flatcar: Workers brought wooden ties, iron rails, nuts, bolts, fishplates, and tools by flatcar to the work site.



4. Wooden Railroad Ties: Workers brought thick 8.5-foot wooden railroad ties to lay on the ground. They needed seven wooden railroad ties for each iron rail.



Working on the Railroad

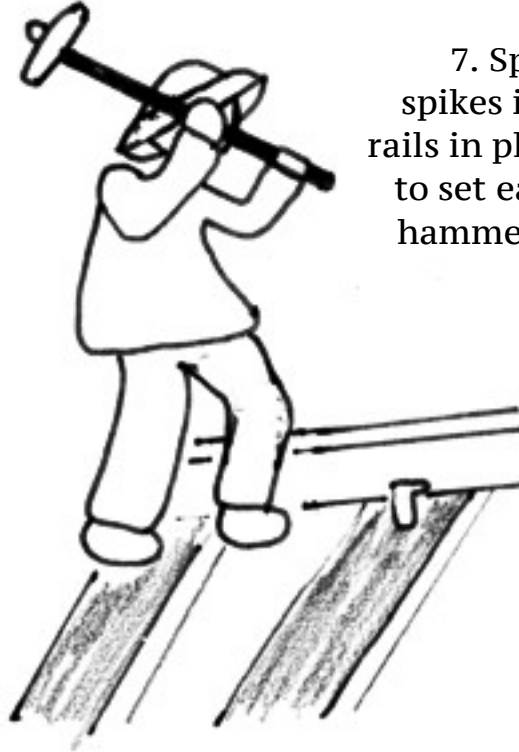


5. Iron Rails: Workers had to carry iron rails to place on top of the railroad ties. Each rail weighed between 600 to 700 pounds and needed ten workers to move them to the roadbed. Each mile of railroad track needed 400 rails.



6. Fishplates: Fishplates were metal pieces to link the iron rails. Workers used nuts and bolts to connect the iron rails with fishplates.

Working on the Railroad



7. Spikes: Workers had to pound spikes into the ties to keep the iron rails in place. They needed two blows to set each spike in place, and three hammer blows to pound down each spike into the wooden ties.



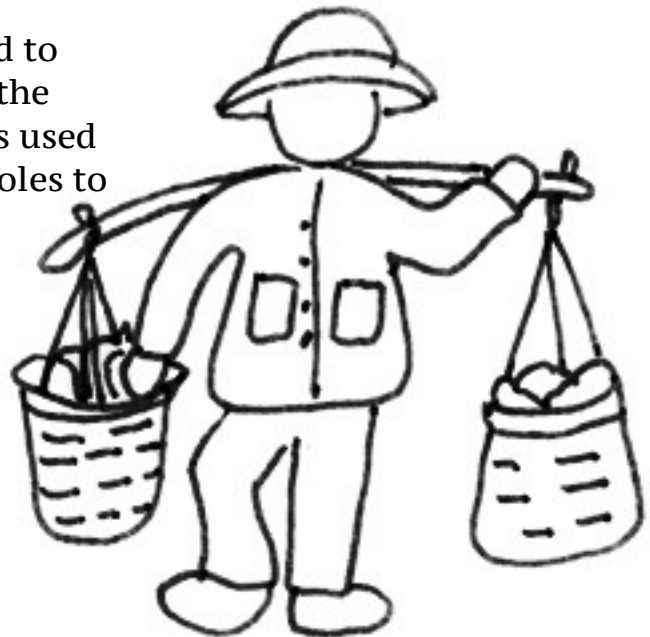
8. Ballast: Iron rails had to be exactly 4 feet, 8.5 inches apart. Workers used hammers and crowbars to bend and curve the rails and ties to the correct position. They had to shovel gravel under the iron rails and ties to make them level.

Working on the Railroad



9. Tunnels: Workers had to blast tunnels through granite rock. They only used hand tools like picks and shovels. Sometimes they could only remove eight inches per day. Workers had to drill holes in the rock, insert and light the explosives, and run. Railroad owners also wanted the workers to use nitroglycerin but this caused many deaths.

10. Rocks: Workers had to haul away rocks from the tunnels. Some workers used baskets balanced on poles to carry away rocks.



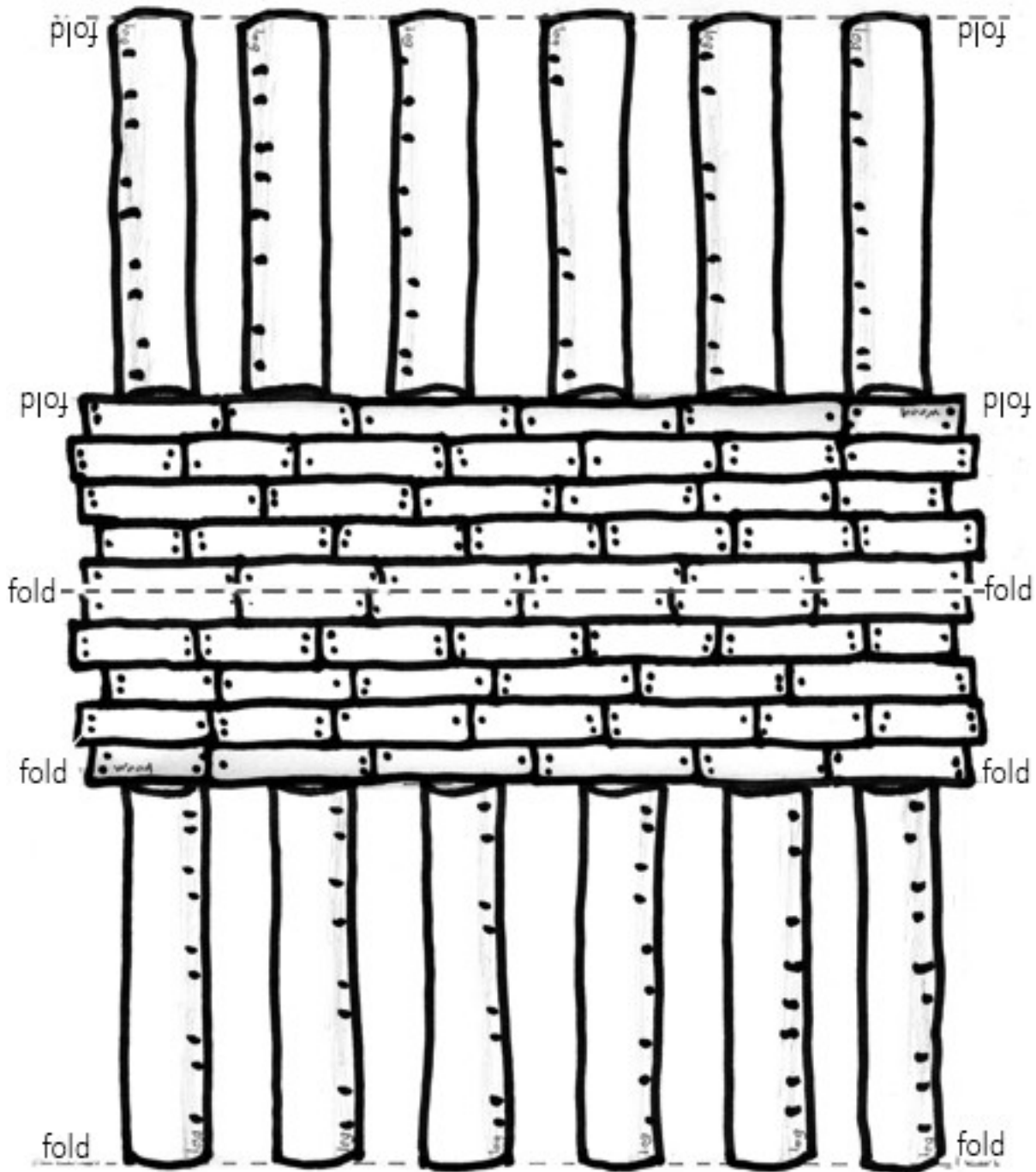
Working on the Railroad



11. The years 1865-1867 saw some of the coldest winters. Avalanches and the bitter cold killed many workers who had to work in freezing weather. This photo is from a railroad in the Cascade Mountains and shows similar conditions.

Photo: "Chinese Workers Clearing Snow from Railroad Tracks, 1886," University of Washington, Special Collections.

Working on the Railroad



12. Snow Sheds: Chinese workers had to build sheds for the trains to carry supplies through the snow. The sheds were made of huge logs and wooden boards. (Cut paper strips to glue across the logs to represent boards.)

Working on the Railroad

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Working on the Railroad

13. Trestles: Workers had to build trestles across rivers and deep canyons.



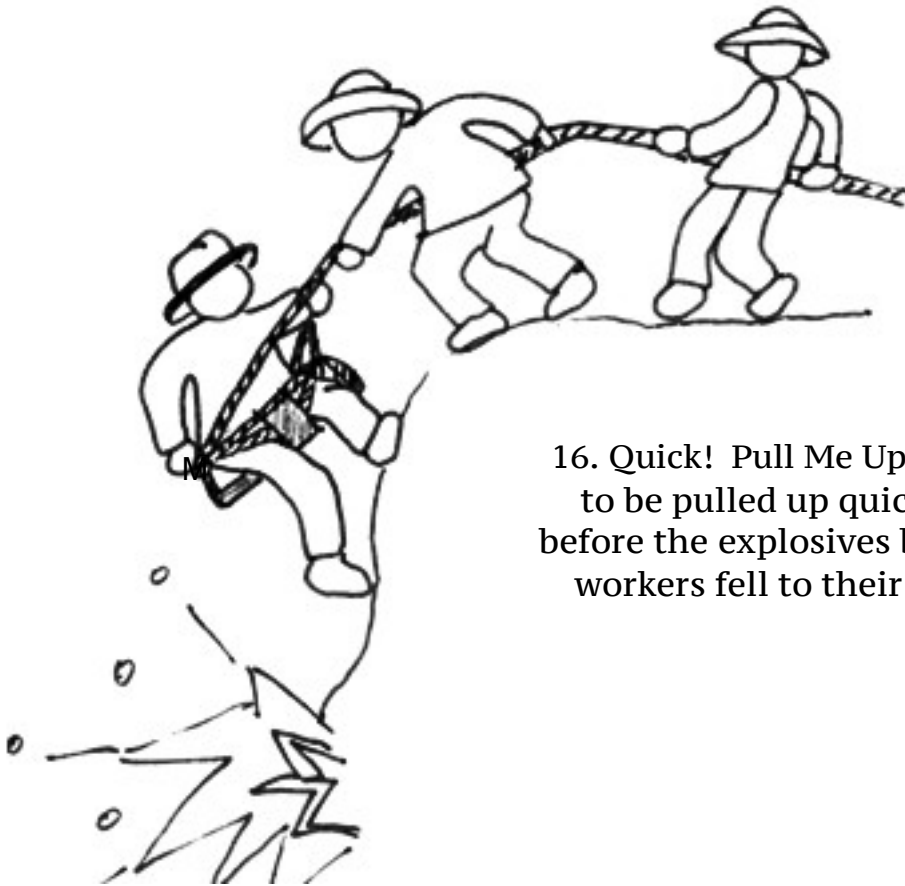
14. This photo was taken near Colfax, California. Workers had to haul dirt and rocks to fill the valley. Then they built a trestle for the trains to cross the valley.

Photo: "Secret Town Trestle," California State Library, California History Room.

Working on the Railroad

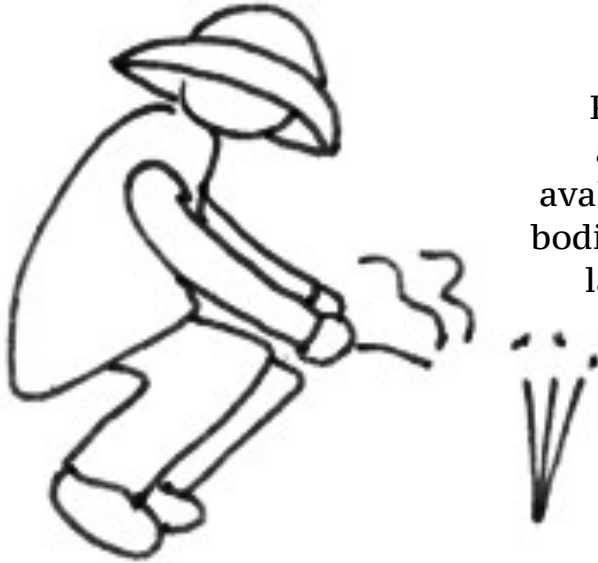


15. Mountains: Railroad tracks could only have a 2% gradient in the mountains. For every one hundred feet, railroad tracks could rise only two feet or the heavy train would slide back down the mountain. Workers had to chip away the sides of the mountains to make a road for the tracks. They were lowered with ropes to drill holes. Then they had to insert explosives and light them.



16. Quick! Pull Me Up: Workers had to be pulled up quickly with ropes before the explosives blew up. Some workers fell to their deaths below.

Working on the Railroad



17. Respect for the Dead:
Approximately 12,000 Chinese worked on the Central Pacific Railroad. About 1,000 died from accidents, explosions, cave-ins, avalanches, falls, and illness. Their bodies were buried temporarily and later sent back to China for final burial.

18. Wash: After working twelve hours each day, workers washed their faces, hands, bodies, and feet with warm water. This kept them healthier. There were between 12 and 20 Chinese workers in each camp. Men were required to wear their hair in a queue by China's Qing/Manchu government.



Working on the Railroad

19. Dinner: After washing, workers received their dinner of hot rice and dried meat with dried vegetables. Each group had a cook who was a respected member of the camp.



20. Tea: The tea carrier had to make boiled tea, walk around the work site all day with his baskets full of tea, and stop to pour tea for workers. Boiling the water killed harmful germs. Chinese workers had fewer diseases from drinking unclean water.

Working on the Railroad



21. Resting after Dinner: Many workers lived in tents. Some slept in rectangular holes dug into the ground to protect them from the wind and cold instead of paying to sleep in a tent.

22. Pay: Chinese workers were paid \$1 a day, but had to spend money to pay for food, tents, and tools. In addition, they had to pay a manager who kept records of their work hours. A white foreman supervised each camp.



Working on the Railroad

23. Strike: Workers went on strike for equal pay. White workers were paid \$10 more per month and did not pay extra for their food, tents, or tools. Chinese workers wanted a limit of eight hours each day inside tunnels and ten hours outside tunnels. They did not like being whipped and wanted to be able to leave the railroad camp to find other less dangerous jobs. Food and water were withheld to starve the workers. The strike was not successful in changing working conditions.

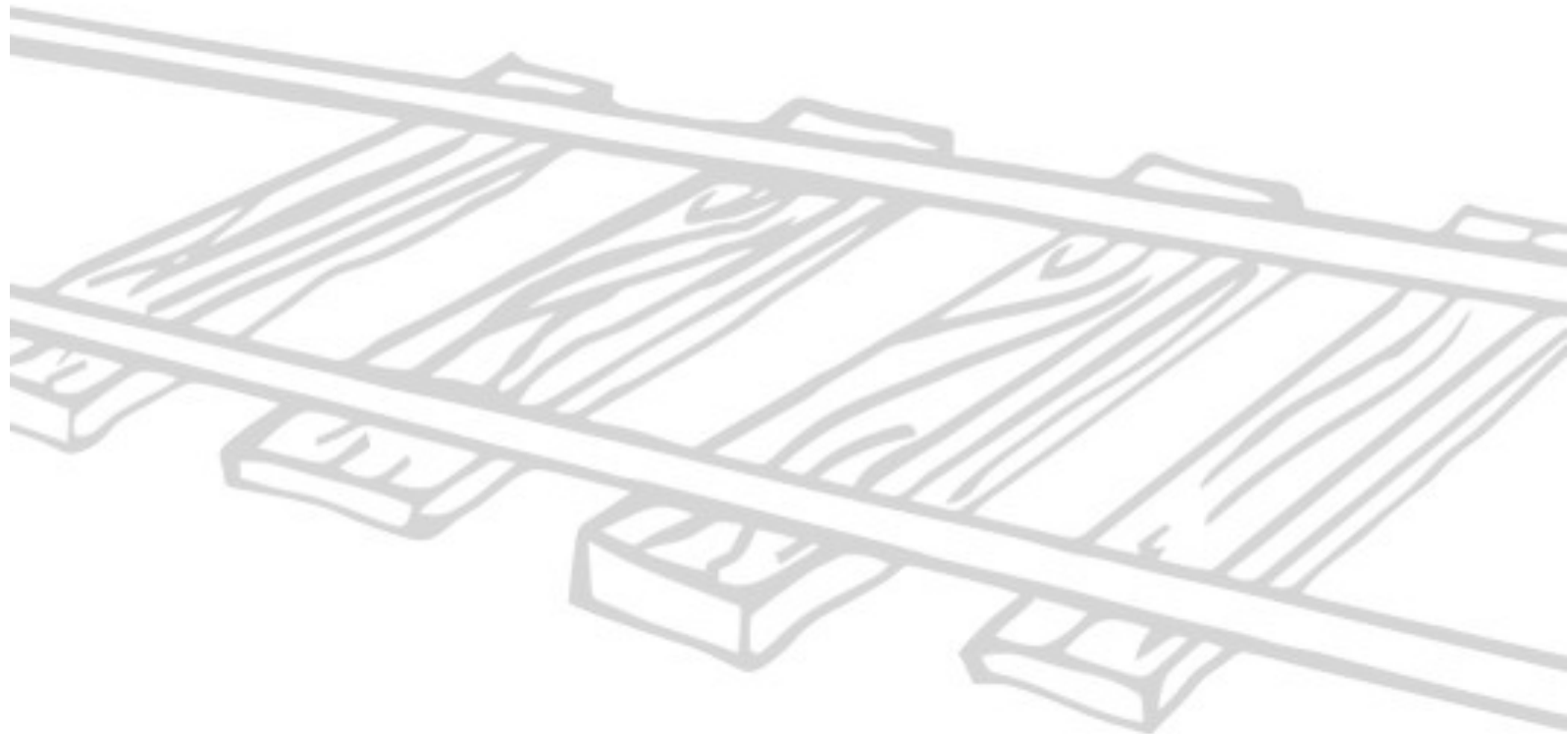


“Working on the Railroad”

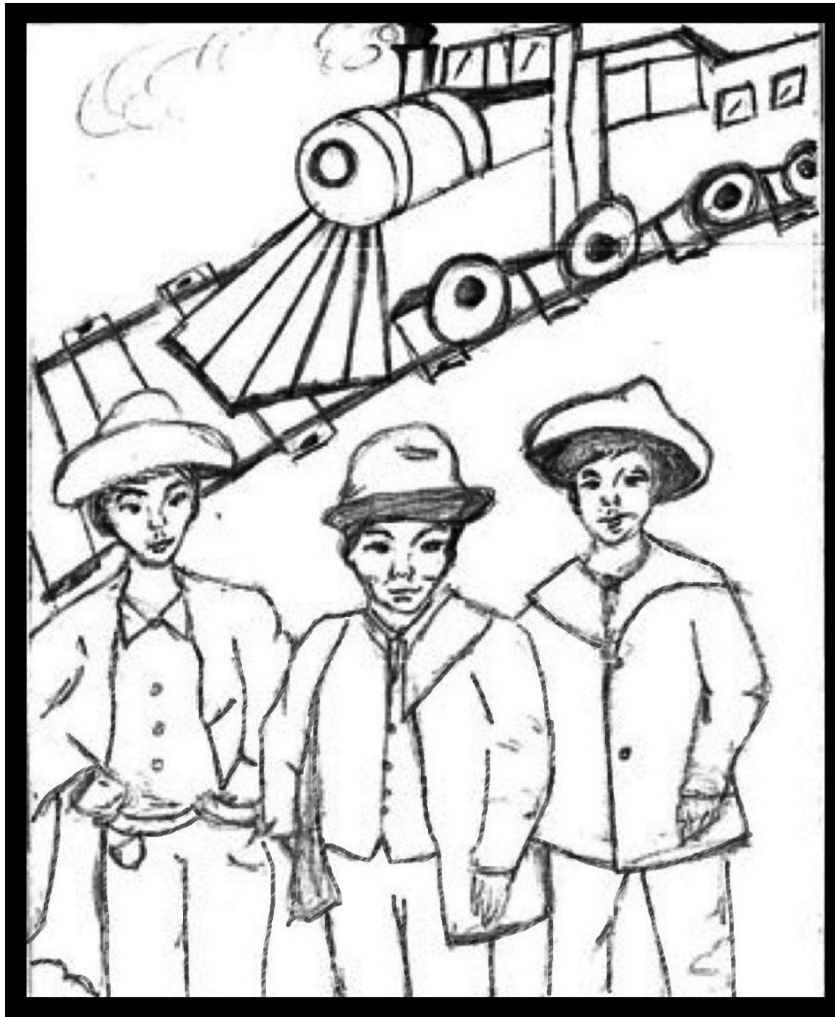
Developed by Irene Dea Collier
and TACT Curriculum Committee

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Early Notable Chinese Railroad Workers



Early Notable Chinese Railroad Workers



Karen Munoz (SFSU 2017)

GING Cui, WONG Fook, and LEE Shao Railway Workers

Ging Cui, Wong Fook, and Lee Shao were identified as three of the eight Chinese railroad workers who laid the final track connecting the Central Pacific and Union Pacific at Promontory Summit, Utah. Fifty years later, on May 10, 1919, they were invited to participate on the "Golden Spike 50th Anniversary Celebration" float to commemorate the 1869 completion of America's First Transcontinental Railroad.

Early Notable Chinese Railroad Workers



Joyce Bantugan (SFSU 2018)

LIM Lip Hong (1843-1920)

Crew Leader

Lim Lip Hong was born in Guangdong, China. He was only 12 years old when he traveled six months to San Francisco on a boat to work in America. He ended up being a crew leader working on the Central Pacific Railroad, the Union Pacific Railroad, and the Virginia and Truckee Railroad. After the railroads were completed, he homesteaded in Potrero Hill in San Francisco, married, and had seven children.

<https://youtu.be/pLfibMHqBDk>

Early Notable Chinese Railroad Workers



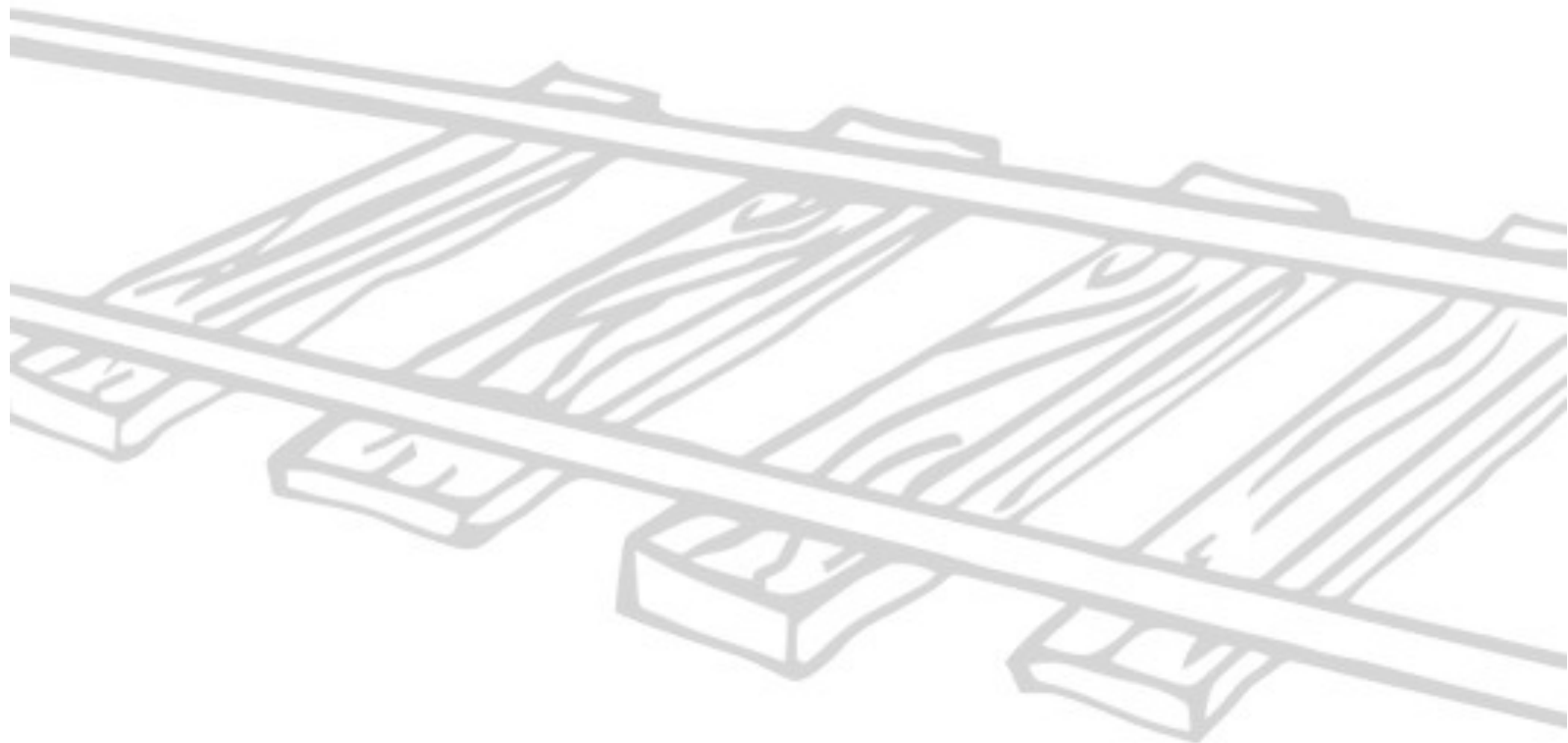
Jamie Lomax (SFSU 2017)

CHIN Gee Hee (1844-1929)

Railway Contractor

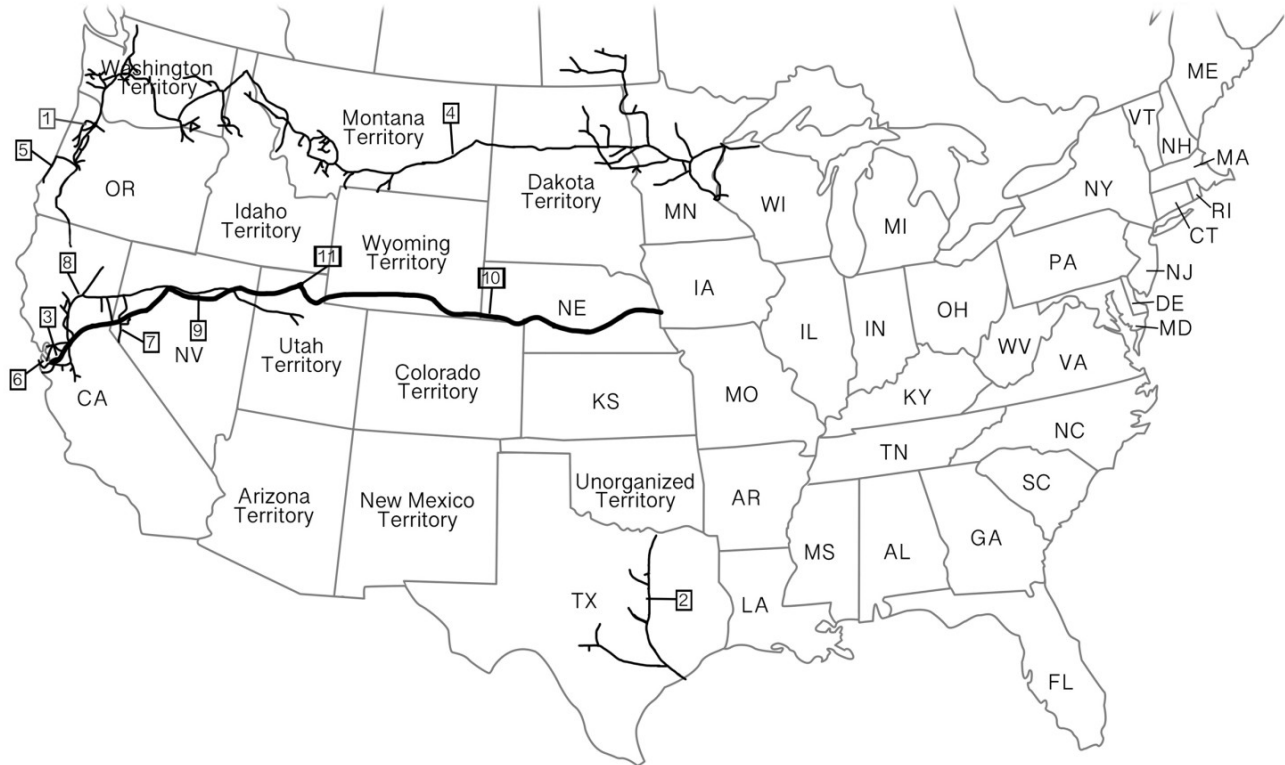
Born in Taishan, Guangdong Province, China, Chin Gee Hee came to the United States to work in the mines and lumber mills. In Seattle 1873, he became a junior partner in the Wa Chong Company where he shifted from import-export to labor contracting. In 1888, Chin set up Quong Tuck Company, his own independent labor contracting company that eventually supplied workers to the Great Northern Railway, and the Seattle and Walla Walla Railroad and Transportation. He returned to China in 1904 and developed South China's first railway named the Xinning Railway Company.

Railroads Built by the Chinese up to 1870



Railroads Built by the Chinese up to 1870

American Railroads Built by Chinese (1870 USA Map)



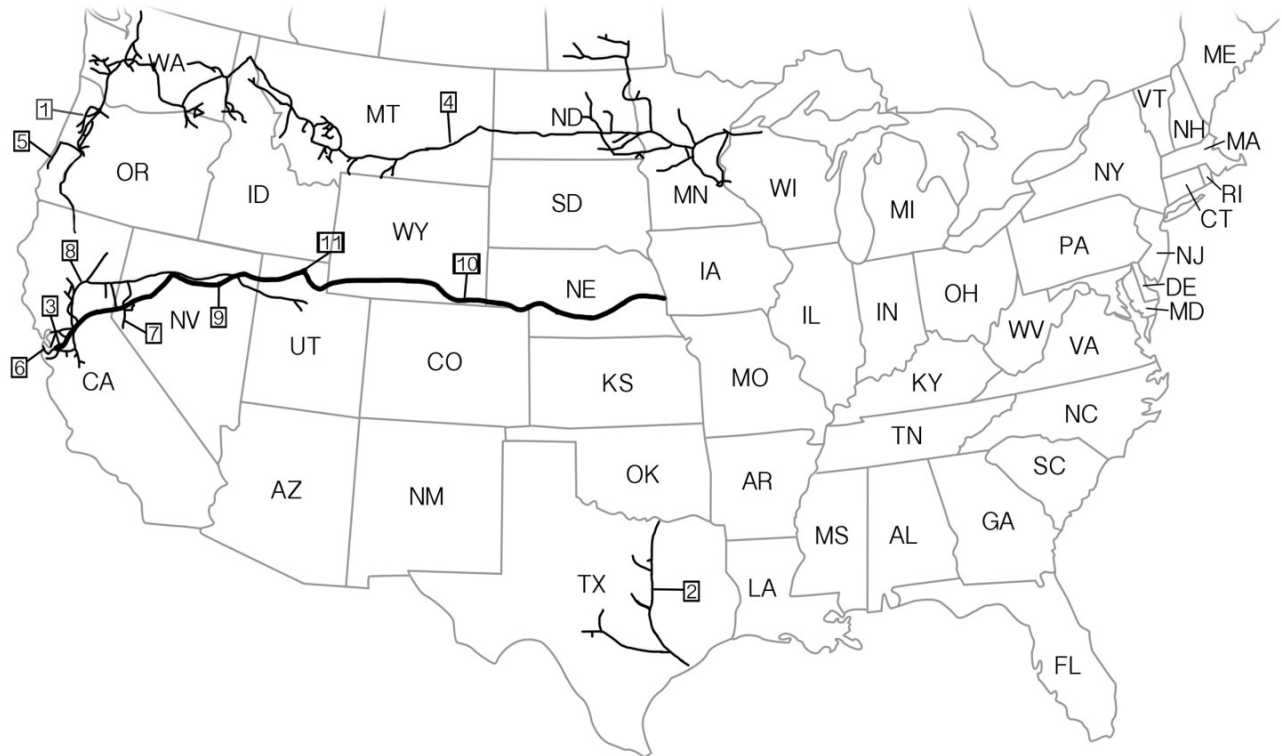
Michelle Yuan (SFSU 2018)

Legend

- | | |
|--------------------------------------|---------------------------------------|
| 1 California and Oregon Railroad | 5 Oregon Central Railroad |
| 2 Houston and Texas Central Railroad | 6 San Francisco and San Jose Railroad |
| 3 Niles Canyon Railway | 7 Virginia and Truckee Railroad |
| 4 Northern Pacific Railroad | 8 Western Pacific Railroad |
| | 11 First Transcontinental Railroad |
| 9 Central Pacific Railroad | 10 Union Pacific Railroad |

Railroads Built by the Chinese up to 1870

American Railroads Built by Chinese (2018 USA Map)

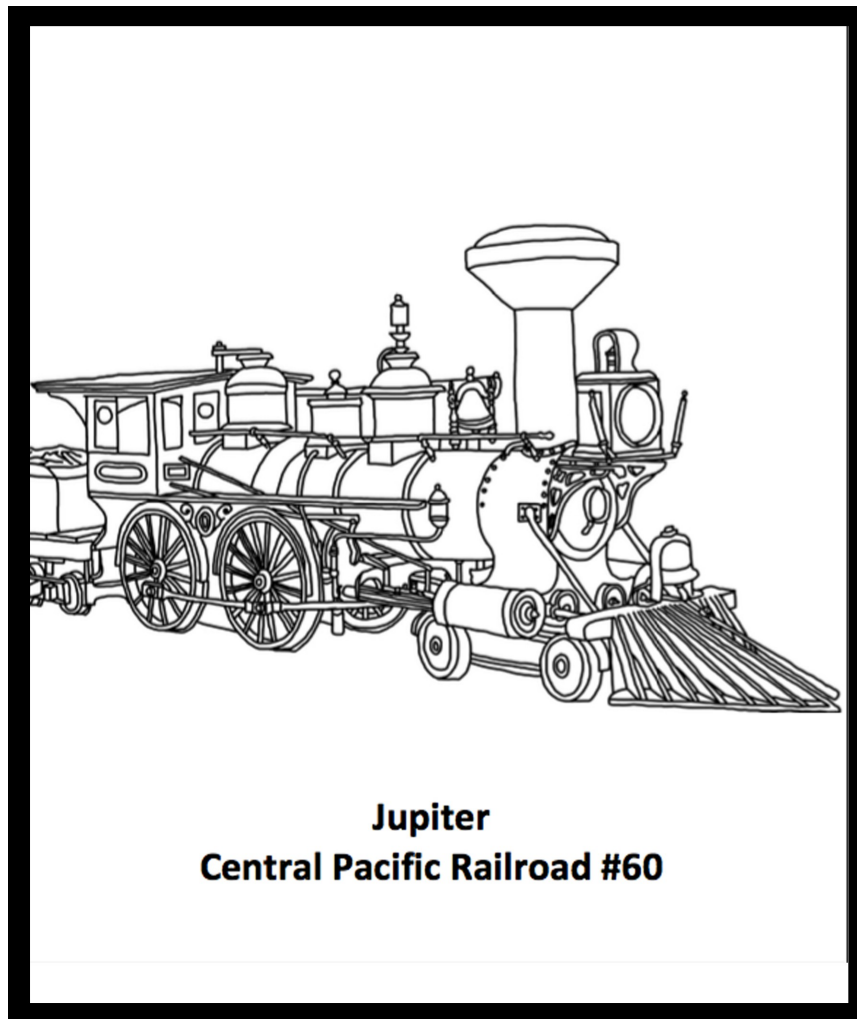


Michelle Yuan (SFSU 2018)

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Railroads Built by the Chinese up to 1870

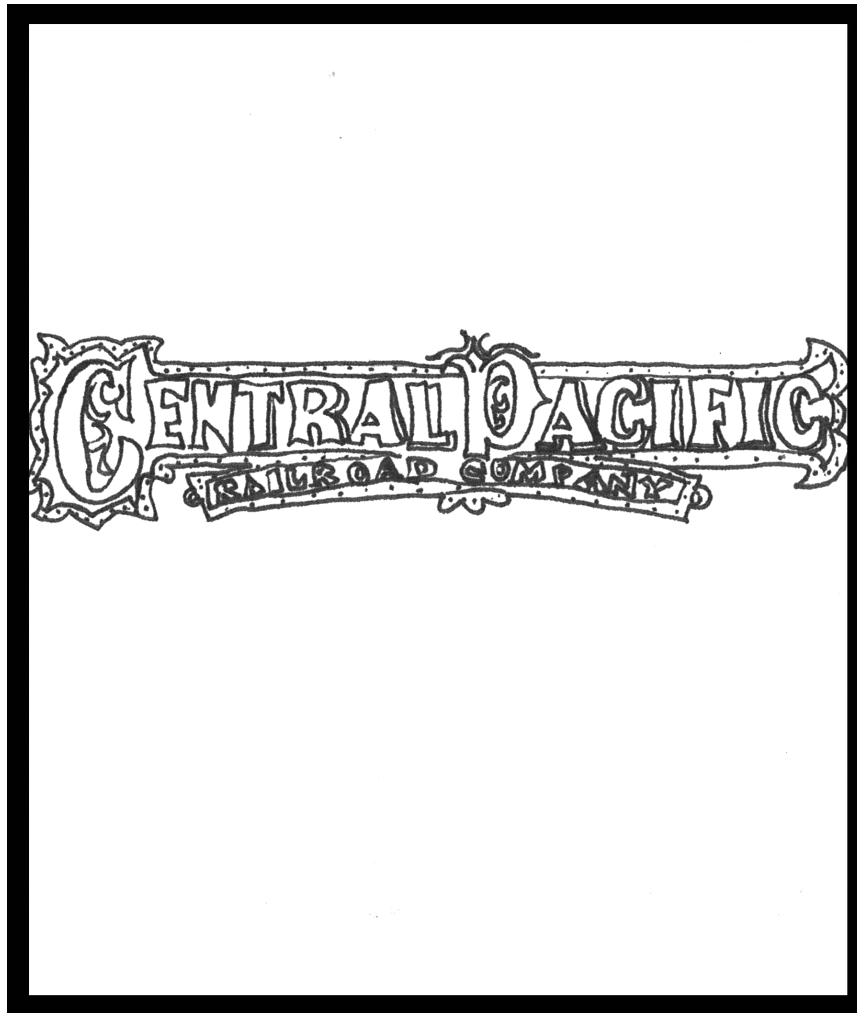


Michelle Yuan (SFSU 2018)

FIRST TRANSCONTINENTAL RAILROAD **(Completed May 10, 1869)**

The Pacific Railway Act of 1862 was signed by President Abraham Lincoln, authorizing the federal government to construct a transcontinental railroad linking America's east and west. The Central Pacific Railroad Company was commissioned to build eastward from Sacramento, California. The Union Pacific Railroad Company built westward from Omaha, Nebraska. On May 10, 1869, the two railroads joined at Promontory Summit, Utah. A total of 1,776 miles of track were laid.

Railroads Built by the Chinese up to 1870



Hannah Sinclair (SFSU 2017)

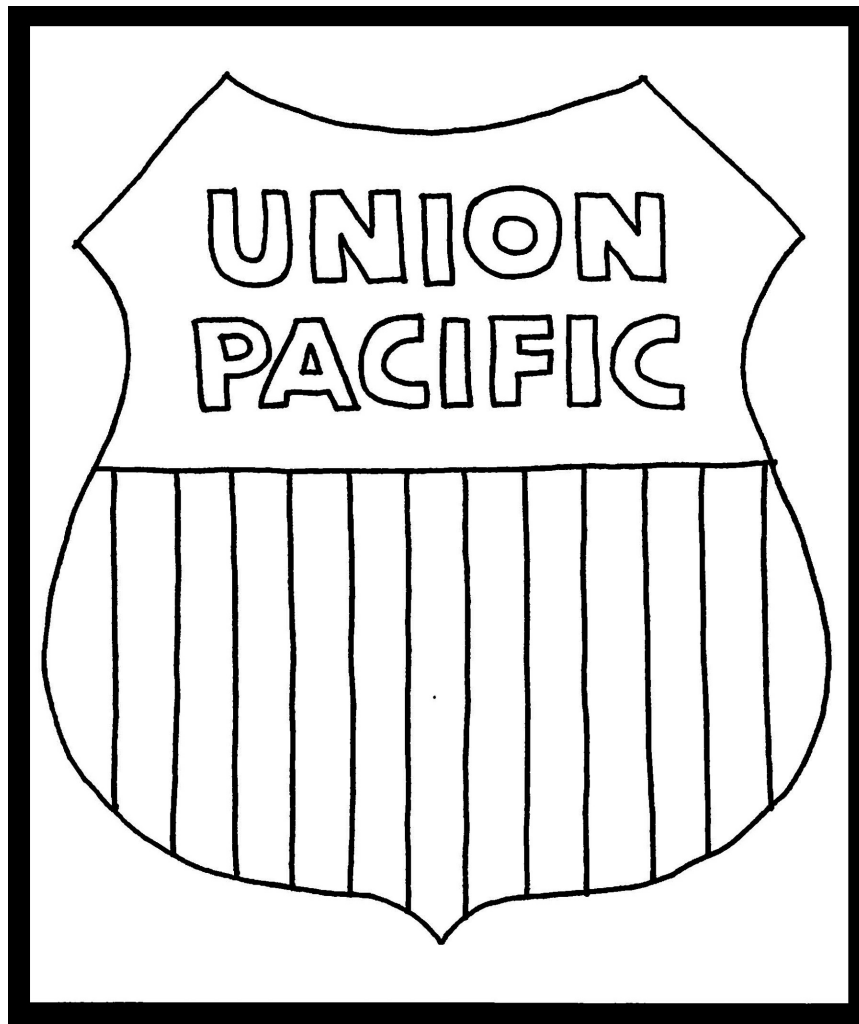
FIRST TRANSCONTINENTAL RAILROAD

(COMPLETED MAY 10, 1869)

Central Pacific Railroad Company

The Central Pacific Railroad Company built the western portion of America's First Transcontinental Railroad. They began work on October 26, 1863. The first group of 21 Chinese, under foreman Ah Toy and headman Hung Wah, arrived to work in January 1864. Over 12,000 Chinese (80% of Central Pacific workers) were hired to blast 15 tunnels through the Sierra Nevada Mountains and to build 690 miles of track from Sacramento, California to Promontory Summit, Utah.

Railroads Built by the Chinese up to 1870



Cathy Nguyen (SFSU 2017)

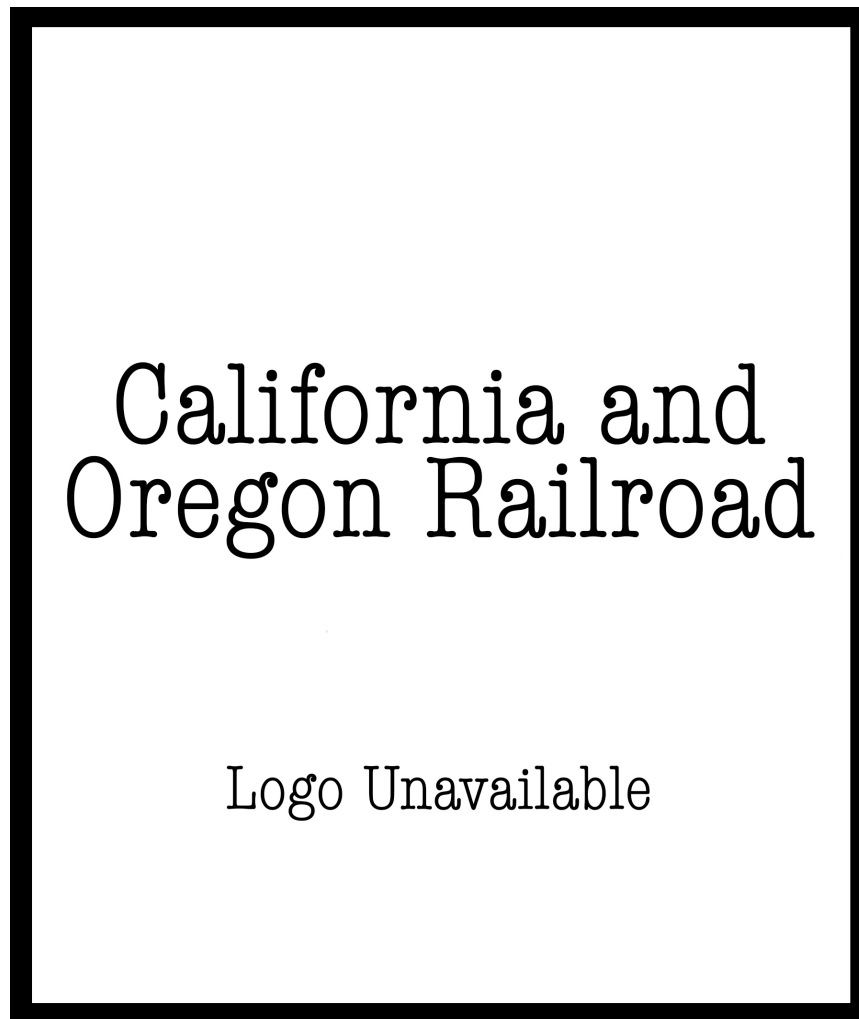
FIRST TRANSCONTINENTAL RAILROAD

(COMPLETED MAY 10, 1869)

Union Pacific Railroad Company

The Union Pacific Railroad Company built the eastern portion of America's First Transcontinental Railroad. They began work on July 10, 1865, and hired about 8,000 laborers who were German, Italian, and mostly Irish. Many were veterans of the Civil War. While building their 1,086 miles of track from Omaha, Nebraska to Promontory Summit, Utah, Union Pacific faced many confrontations with the First Nations on whose homes the railroad was encroaching.

Railroads Built by the Chinese up to 1870



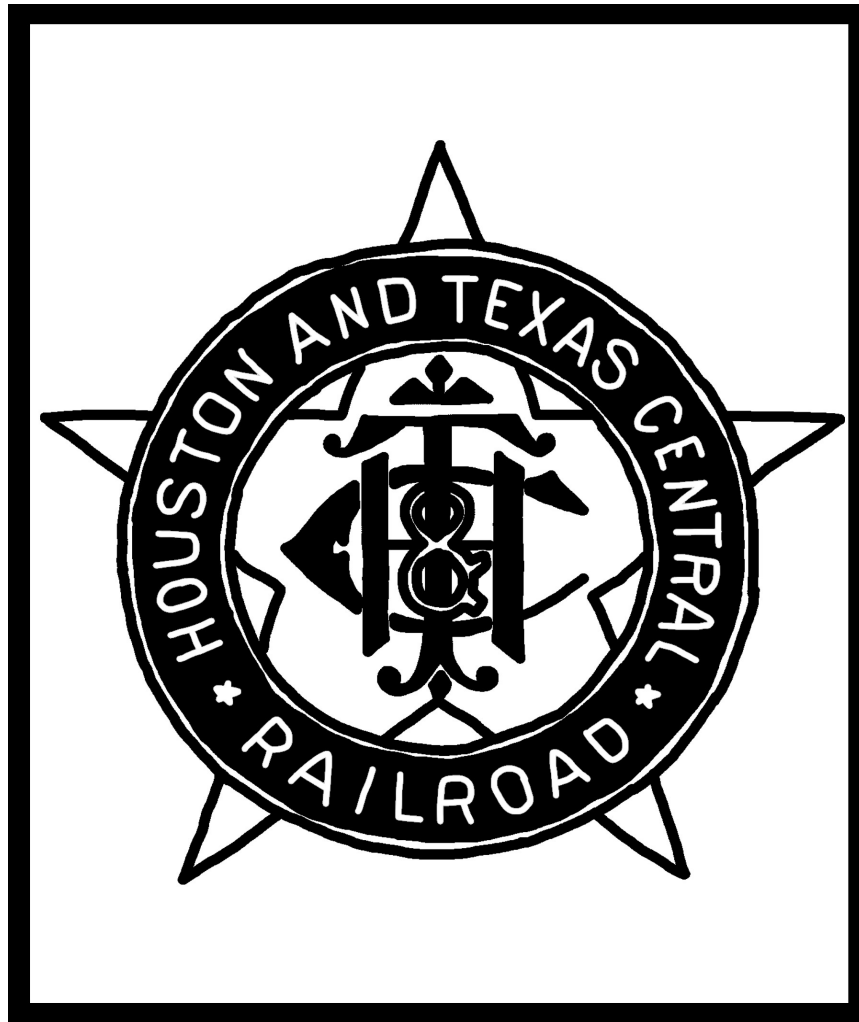
California and Oregon Railroad

In 1868, Congress passed an act to construct a railroad connecting California and Oregon. The California and Oregon Railroad Company was designated to build it from Marysville, California to Portland, Oregon.

Daily Alta California (January 24, 1870): Two to three hundred Chinese were employed in Marysville for the California and Oregon Railroad Company.

<https://cdnc.ucr.edu/cgi-bin/cdnc?a=d&d=DAC18681021.2.25>

Railroads Built by the Chinese up to 1870



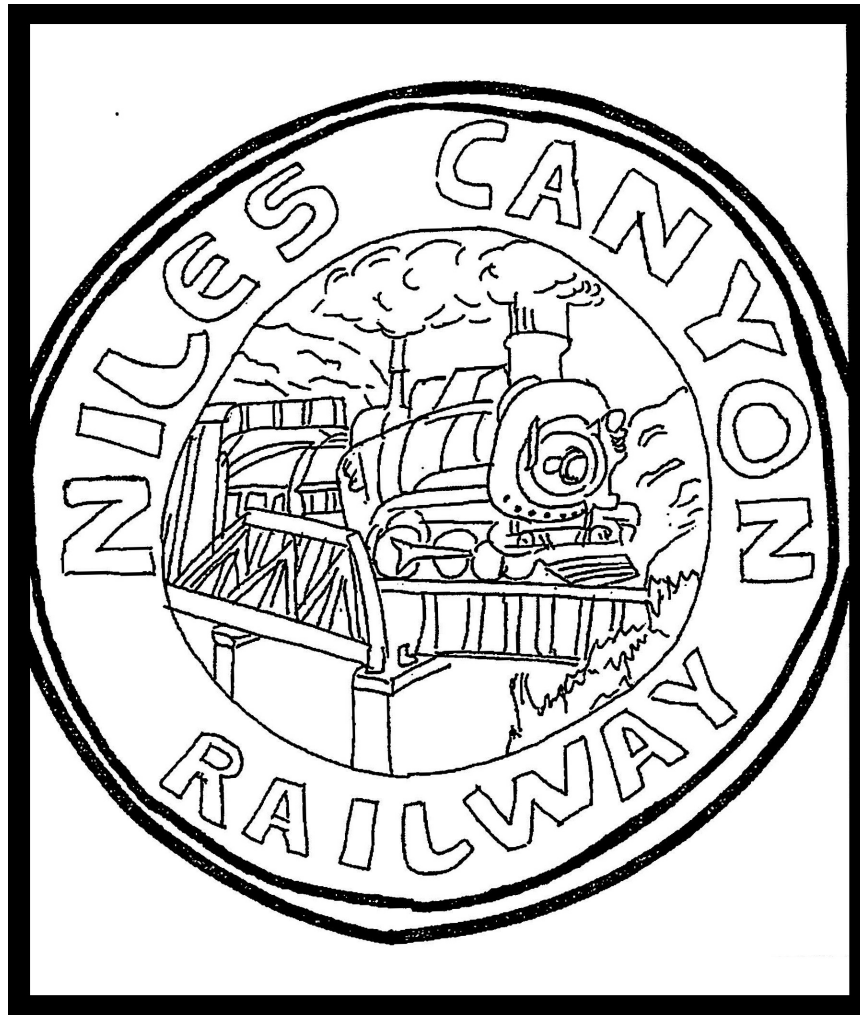
Michelle Yuan (SFSU 2018)

Houston and Texas Central Railroad

In 1869, the Houston and Texas Central Railroad Company signed a contract with San Francisco labor contractor Ah Heang for 300 Chinese workers. In Summer 1870, most of the Chinese workers were discharged because of hostility from fellow Irish workers and financial constraints.

web.stanford.edu/group/chineserailroad/cgi-bin/wordpress/

Railroads Built by the Chinese up to 1870



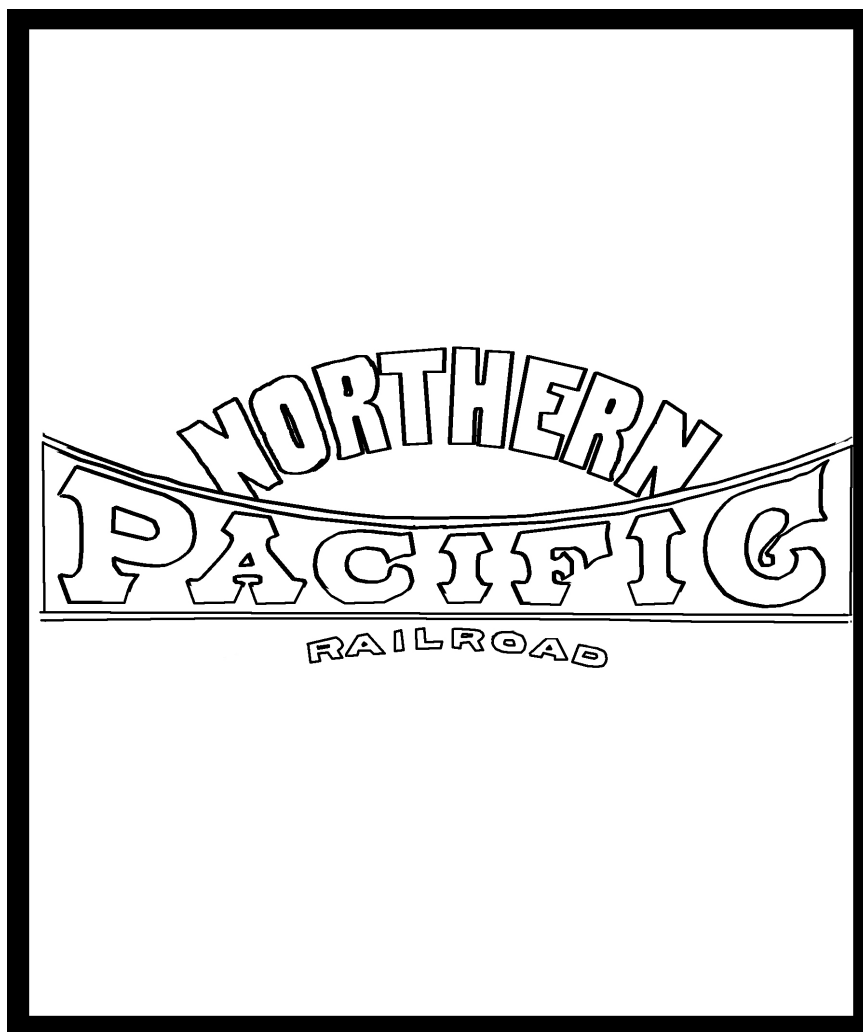
Susanna Lee (SFSU 2017)

Niles Canyon Railway

Niles Canyon Railway in California ran along the final segment of the First Transcontinental Railroad for eleven miles. They hired Chinese workers in the 1860s. It is now listed on the National Register of Historic Places as the Niles Canyon Transcontinental Railroad Historic District.

www.ncry.org/

Railroads Built by the Chinese up to 1870



Triya Marco (SFSU 2018)

Northern Pacific Railroad

Daily Alta California (May 5, 1869): 557 Chinese workers arrived to work at the Northern Pacific Railroad. Later, they comprised two-thirds of the men who laid track for the Western Division of the railroad. The Chinese also helped to build their Seattle to Newcastle, Washington line.

www.historylink.org/File/1057

Railroads Built by the Chinese up to 1870



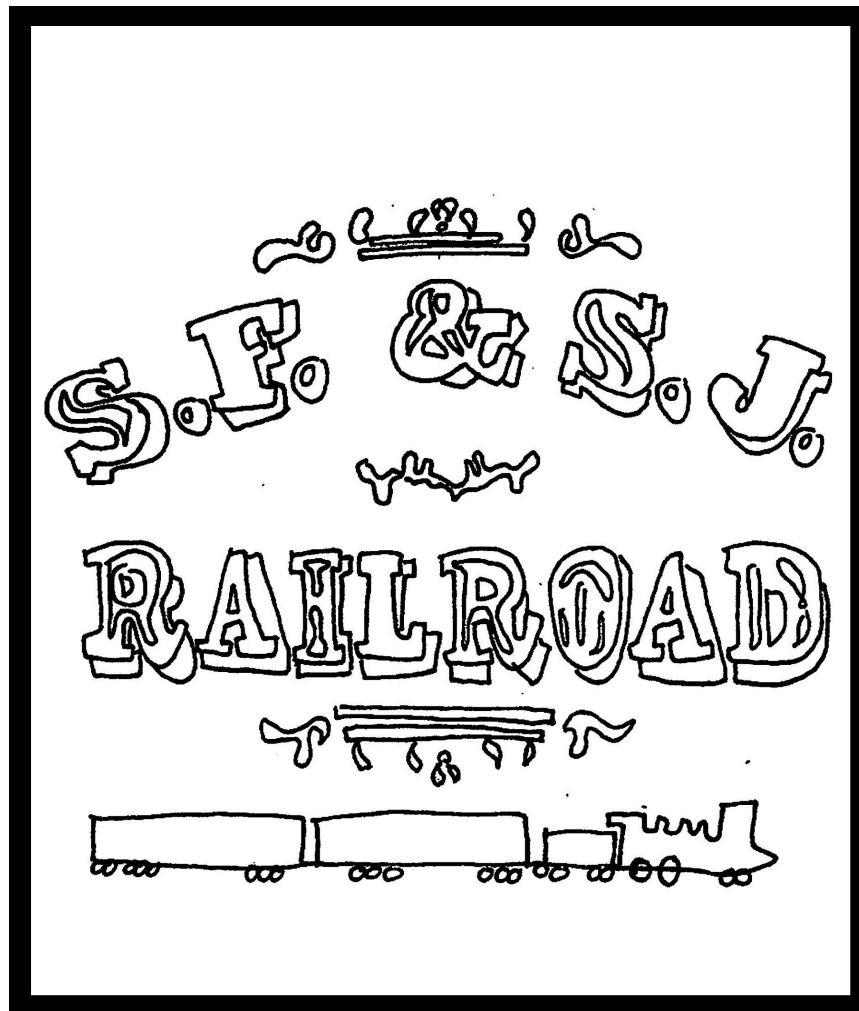
Michelle Yuan (SFSU 2018)

Oregon Central Railroad

In 1866, the Oregon Central Railroad (West Side Company) was designated to construct a line from Portland to California.

San Francisco Bulletin (May 1, 1868): According to the *Portland Oregonian*, 40 Chinese workers were employed by the Oregon Central Railroad and at least another 25 were expected to arrive in a day or two.

Railroads Built by the Chinese up to 1870

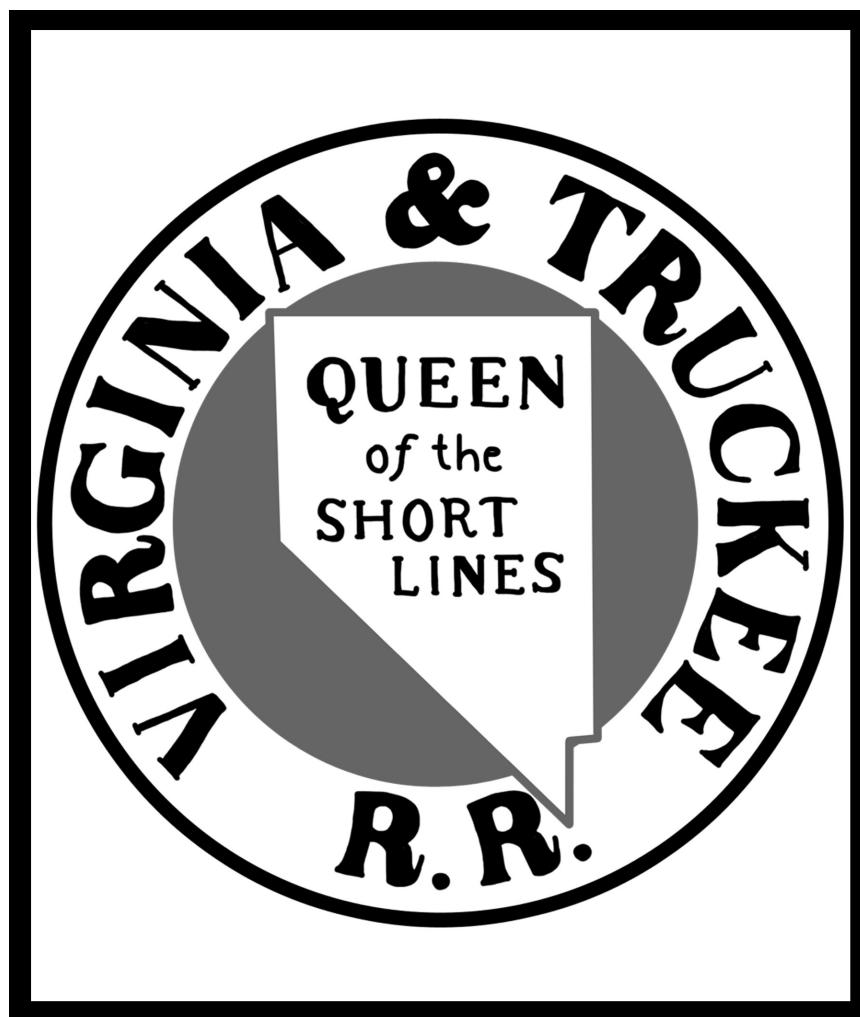


Linda Le (SFSU 2017)

San Francisco and San Jose Railroad

The San Francisco and San Jose Railroad was the first railroad to link the communities of San Francisco and San Jose in California. The *New York Tribune* (1860) mentioned Chinese working in the construction of the San Jose Railroad.

Railroads Built by the Chinese up to 1870

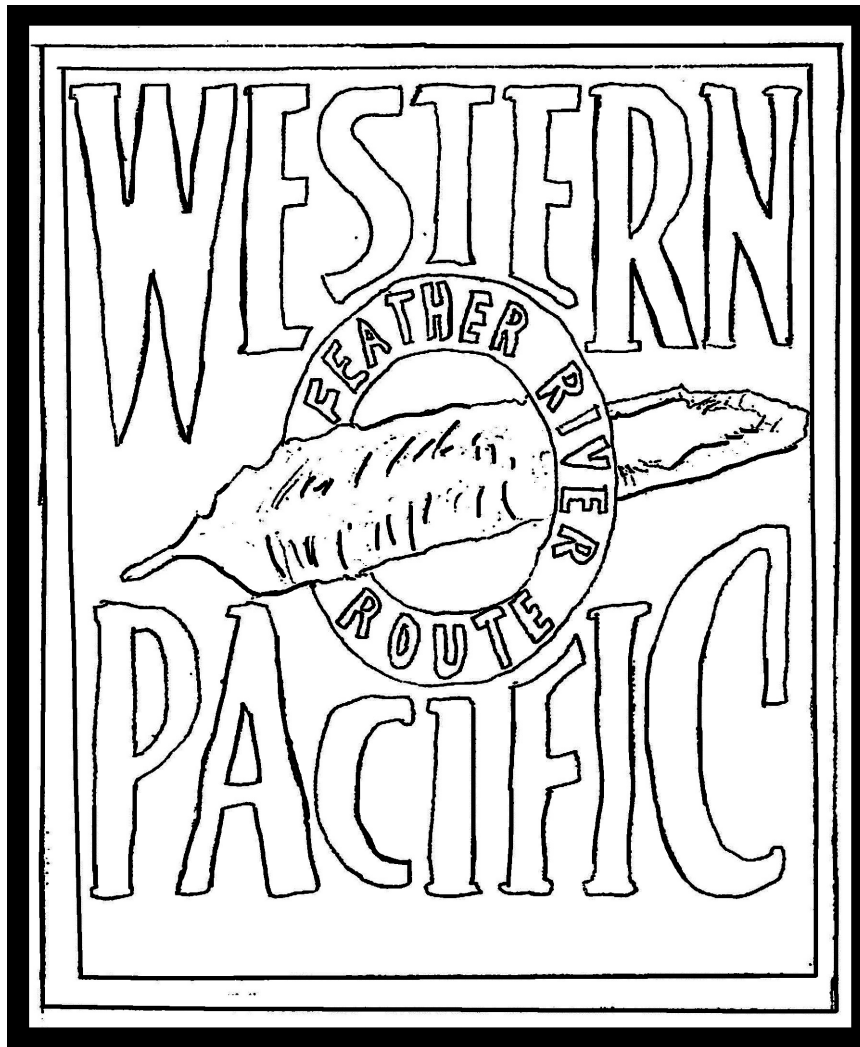


Michelle Yuan (SFSU 2018)

Virginia and Truckee Railroad

Daily Alta California (August 22, 1869): All the Chinese workers quit on the Virginia and Truckee Railroad. The company stated work was suspended due to financial reasons caused by the money market.

Railroads Built by the Chinese up to 1870



Daoud Tbeileh (SFSU 2017)

Western Pacific Railroad

The Western Pacific Railroad used 500 Chinese in 1866 to build tracks in Niles Canyon, California.

Sacramento Daily Union (May 1869): About 350 Chinese arrived, originally to work for Union and Central Pacific, and later to work for Western Pacific.

Sacramento Daily Union (August 7, 1869): Chinese workers went on strike because they were not paid on time. Work was delayed for 1-2 days.