

ROLLING TO THE 150TH: SESQUICENTENNIAL OF THE TRANSCONTINENTAL RAILROAD

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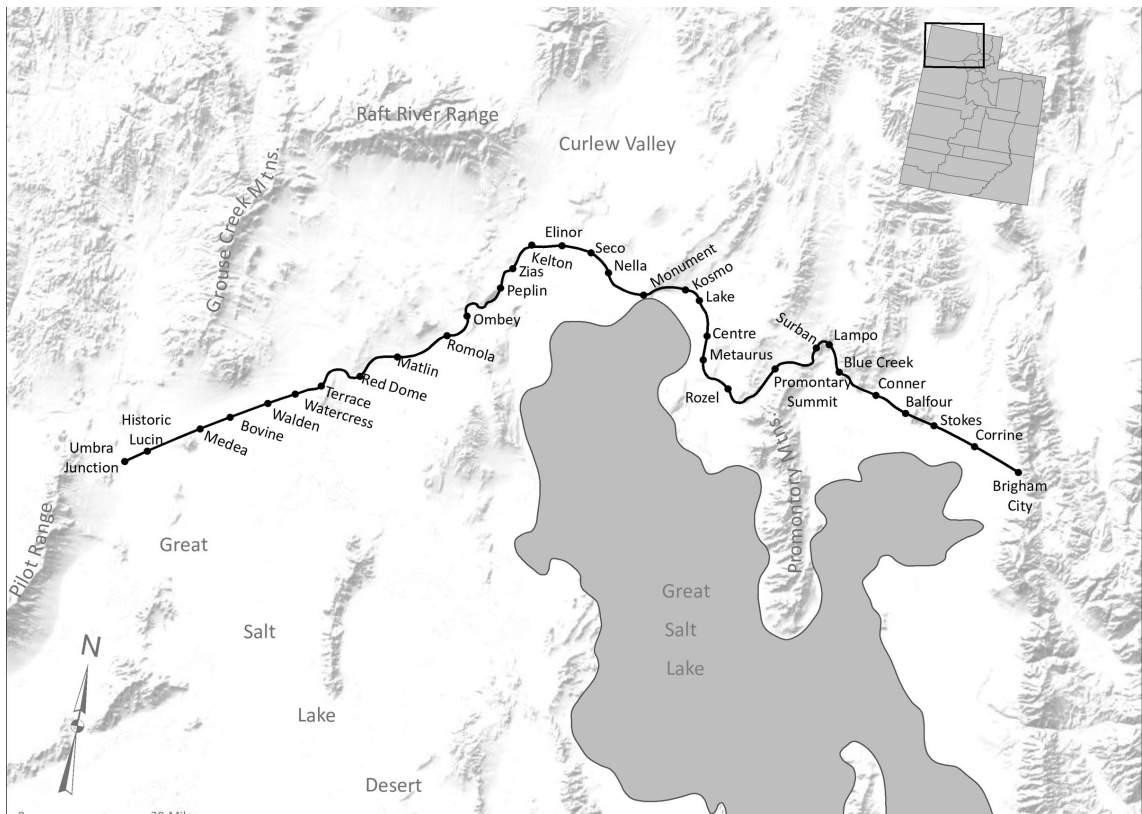
The celebration at Promontory Summit on May 10, 1869—when the eastern and western lines of the transcontinental railroad were connected by the driving of the Golden Spike—has received much public attention, but that event represents merely the conclusion of the first phase of an American corporate and social epic. The seven years of fit-and-start construction efforts that began in 1862 culminated in the well-known and well-orchestrated festivities that are now commemorated each year at Golden Spike National Historic Site.¹ Yet even before the construction workers could catch their breath or soothe their backs, the next chapter of the transcontinental story had begun.

In the days before the May 10, 1869, celebration, railroad work crews started the arduous task of making permanent the grades, fills, trestles, and culverts that had been quickly slapped together in the “Race to Promontory.” Chinese and Irish laborers, as well as a hodgepodge of people of other ethnic and national backgrounds, worked backward down the recently built grade from Promontory Summit to replace temporary features that would not be able to sustain the constant pounding of freight and passenger railroad travel.

The railroads established section stations at regular intervals of about ten or twelve miles along the entire length of the line between



A wooden trestle spanning a 450-foot-wide cut on the Union Pacific Railroad line east of Promontory.



A map of the original ninety-mile grade in Box Elder County known as the Promontory Branch. The 1904 construction of the Lucin Cutoff led to the abandonment of the Promontory Branch, which significantly affected the economy of northwestern Box Elder County.

From Cannon et al, 2016

Sacramento and Omaha. These would service the maintenance needs of the railroad grade. Larger communities such as Winnemucca, Carlin, Elko, Terrace, Kelton, Corinne, Ogden, Evanston, and Laramie served the greater needs of passengers and the more significant repairs of the steam and, later, diesel engines.² In Utah, the most remote of these stations wrapped along the north shore of the Great Salt Lake, from Lucin to Ogden.

In the salt barrens and dunes northwest of the lake, groups of exclusively Chinese workers, led largely by Irish foremen, toiled in the oppressive heat and biting cold of Box Elder County into the 1890s. The Chinese lived in groups of eight to seventeen individuals, in barebones towns with such names as Ombey, Bovine, Watercress, Blue Creek, and Monument, usually overseen by two Irish foremen. Railroads required constant maintenance,

which included replacing cross-ties, fixing and replacing rails, stabilizing and re-ballasting the grade, and cleaning out and repairing culverts. There was also a need to service the locomotives and rolling stock of trains operating on the line. While most of those tasks were undertaken at larger facilities, the vagaries of early railroad operations sometimes required personnel at the smaller facilities to assist with the work.

The Federal Chinese Exclusion Act of 1882, a broad-reaching anti-immigration act focused on the Chinese workers of the American West, led to the successive employment of Japanese, Italian, and Greek laborers in the West. The isolated camps of Box Elder County quickly shifted toward housing these groups, but the heavy labor and unforgiving conditions did not change. While the Chinese concentrated in growing, urban Chinatowns throughout the

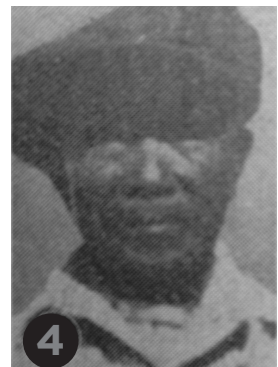


A view of the short-lived town that sprang up at Promontory, Utah, during the completion of the transcontinental railroad, circa 1869–1880.

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USHS

Chinese Railroad Workers on the Central Pacific Railroad

Name	Railroad Division	Work Start Date	Work End Date	Time in Service	Occupation at Retirement
Ah Hop	Salt Lake (Montello)	1871	1920	49 years, 6 months	Laborer
Toy Gee	Salt Lake (Carlin)	(1873) 1879	1923	43 years, 8 months	Laborer
Charlie Dan	Salt Lake (Sparks)	1882	1930	47 years, 7 months	Machinist helper
Gee Wo	Salt Lake	1902	1930	27 years, 8 months	Laborer
Ah Chin	Salt Lake	1880s?	Unknown	27 years	Boiler shop worker
Chin Seuy	Salt Lake	Ca. 1870	1915	30+ years	Engine wiper
Ah Nan	Salt Lake	1866	After 1915	49+ years	Engine wiper



Portraits of (1) Ah Hop, (2) Toy Gee, (3) Charlie Dan, and (4) Gee Wo, known Chinese railroad workers, taken from the *Southern Pacific Bulletin*.

West, the tangible legacy of their achievements remains in the railroads of the western United States.

In 1904, the newly constructed, 102-mile-long Lucin Cutoff altered the fortunes of northwestern Box Elder County and its small railroad towns and stations. The Lucin Cutoff cut directly across the Great Salt Lake, removed the need for the longer, original route around the north side of the lake, and avoided the steep climb through the Promontory Mountains. With the majority of travel along the Union

Pacific and Central Pacific now bypassing the towns of Terrace and Kelton, most of their residents moved elsewhere. Even the railroad moved its maintenance shops to more convenient locations. By the early 1910s, only limited railroad travel occurred on the old grade, which now primarily served wheat and sugar beet growers, ranchers, sheepherders, and some freighters to the rural communities of southern Idaho. Section stations and towns such as Terrace disappeared as the railroad destroyed or picked up entire buildings and moved them to more appropriate locations in Nevada or



Two children play in the construction town of Terrace, Utah. The railroad moved its shops to Nevada in 1900, and the town was deserted by the 1940s. — USHS



Downtown Terrace in 2017, photographed from same perspective. *Courtesy of Kristina Stelter.*

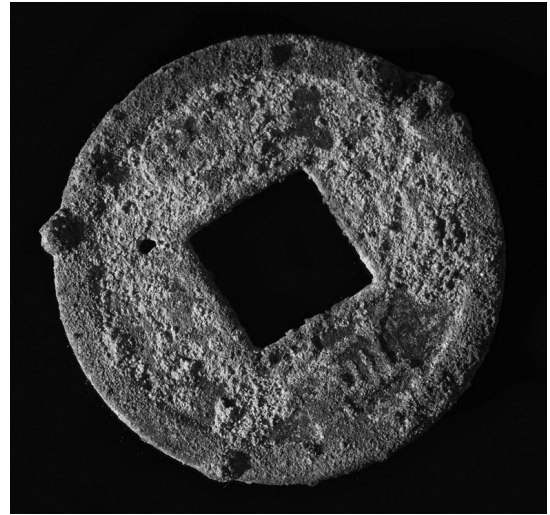
beyond. Some of these buildings were also acquired by nearby ranchers and homesteaders.

In 1933, the Southern Pacific applied for a certificate of abandonment of its line from Kelton to Lucin, a distance of about fifty-five miles.³ Subsequently, the railroad filed to abandon the rest of its holdings between Kelton and Corinne, another 120 miles.⁴ The Interstate Commerce Commission ultimately approved the request in 1942, and the rails were repurposed at newly constructed military installations in Utah and Nevada for the World War II war effort.⁵ From that time forward, no trains have passed over the grades, trestles, and culverts of the Promontory Route, so painfully erected and maintained by thousands of hands.

After their abandonment, the railroad grade and what remained of its facilities deteriorated and were used for other purposes by local ranchers until the Southern Pacific Transportation Company transferred portions of the line to the National Park Service's (NPS) Golden Spike National Historic Site (GSNHS) and the Bureau of Land Management's (BLM) Salt Lake Field Office.⁶ While the grade no longer sees freight and passenger trains, the BLM and Box Elder County promote this stretch as a Scenic Backcountry Byway through brochures and online driving tour maps or is included in Golden

Spike National Historic Site. Now, the legacy of the nation's first transcontinental railroad is largely an archaeological landscape, rich with history, artifacts, and ambience but lacking in the people and standing architecture that made this area so important to American history.

Much of the existing historical literature of the transcontinental railroad tends to focus on the meta-narratives of western expansion and skimps on place-based and personal narratives. Archaeologists, on the other hand,



A Chinese coin, or "wen." *Photo by Chris Dunker.*



Two fragments of "Bamboo" style Chinese porcelain bowls. *Photo by Tessie Burningham.*



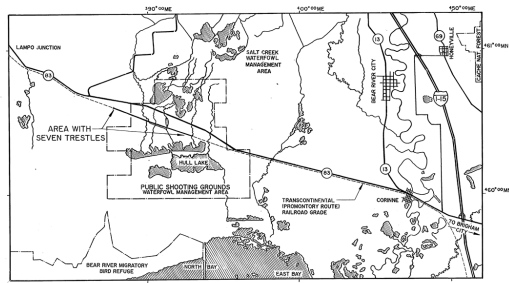
Chinese gaming, or "wei-chi," pieces found along the railroad, a small reminder of the workforce that built and maintained the road for thirty years. *Photo by Chris Dunker.*

PROMONTORY ROUTE RAILROAD TRESTLE COMPLEX

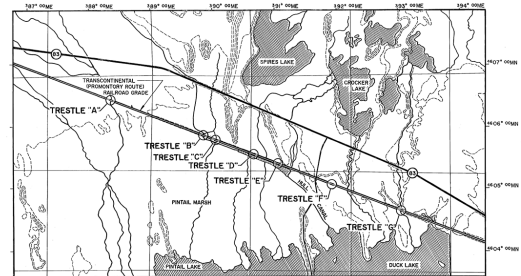
THE ORIGINAL TRANSCONTINENTAL RAILROAD ACROSS THE UNITED STATES WAS CONSTRUCTED BY TWO RAILROAD COMPANIES BETWEEN 1863 AND 1869. THE UNION PACIFIC RAILROAD (UPRR) BUILT WESTWARD FROM OMAHA, NEBRASKA AND THE CENTRAL PACIFIC RAILROAD (CPRR) BUILT EAST FROM SACRAMENTO, CALIFORNIA. THE LINES WERE JOINED AT PROMONTORY SUMMIT, UTAH, AS PART OF THE ORIGINAL CONSTRUCTION OF THE UPRR GRADE THROUGH THE SLOUGHS OF THE NORTH EDGE OF THE GREAT SALT LAKE JUST EAST OF PROMONTORY, UTAH. IT WAS NECESSARY TO CONSTRUCT A SERIES OF SHORT LOW WOODEN TRESTLES TO ALLOW SMALL DRAINAGE CHANNELS TO PASS UNDER THE RAILROAD GRADE. THE TRESTLES WERE FIRST CONSTRUCTED BY THE UPRR IN 1869. AFTER THE CRRR GAINED OWNERSHIP OF THE ROUTE FROM PROMONTORY TO OGDEN IN LATE 1869, MANY TRESTLES WERE ELIMINATED OR REPLACED WITH MORE SUBSTANTIAL STRUCTURES WHICH COULD CARRY HEAVIER LOADS. SEVEN OF THESE REPLACEMENT TRESTLES WERE RECORDED AS PART OF THIS PROJECT. FIVE OF THESE STRUCTURES WERE CONSTRUCTED IN 1872 AND TWO OTHERS IN 1862. THE PROMONTORY ROUTE, INCLUDING TRESTLES, WAS ABANDONED AND THE RAILS TORN UP IN 1942. THE SEVEN TRESTLES REPRESENT IMPORTANT REMNANTS OF THE TRANSCONTINENTAL RAILROAD WHICH WAS INSTRUMENTAL IN JOINING THE NATION TOGETHER. THEY ARE ALSO GOOD EXAMPLES OF A CLASS OF SMALL UTILITARIAN WOODEN TRESTLES CONSTRUCTED THROUGHOUT THE COUNTRY DURING THE LATTER HALF OF THE 19TH CENTURY.

THIS PROJECT WAS UNDERTAKEN BY SAGEBRUSH ARCHAEOLOGICAL CONSULTANTS OF OGDEN, UTAH, ON BEHALF OF CHEVRON PIPELINE COMPANY OF SALT LAKE CITY, UTAH DURING 1991. THE PROJECT WAS COMPLETED BY MICHAEL R. POLK, PRINCIPAL INVESTIGATOR, ALAN O. ROBERTS, HISTORICAL ARCHITECT WITH COOPER/ROBERTS ARCHITECTS, AIA OF SALT LAKE CITY, UTAH AND GLENN W. STEIGMEYER, ILLUSTRATOR WITH JONES & ASSOCIATES CONSULTING ENGINEERS OF OGDEN, UTAH.

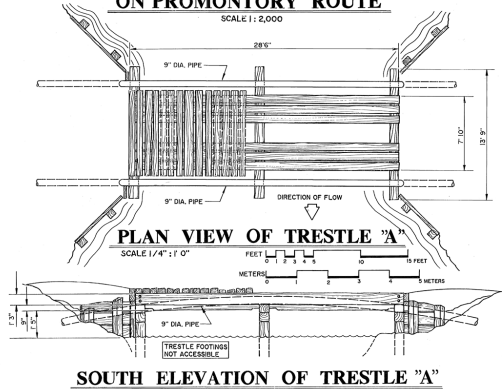
THE PLAN AND ELEVATION SHOWN ON THIS SHEET ARE DRAWINGS OF TRESTLE "A" (UT-64-A)



LOCATION MAP OF PROMONTORY ROUTE RAILROAD TRESTLE COMPLEX



RAILROAD ROUTE & TRESTLE LOCATIONS ON PROMONTORY ROUTE



Promontory Route Railroad Trestle Complex drawings from documentation carried out as part of Historic American Engineering Record (HAER) UT-64 project. The seven trestles, recorded in 1992, are located on the original grade of the transcontinental railroad route west of Corinne, Utah, in Box Elder County. Document prepared by Sagebrush Consultants, Ogden. Collections held at Library of Congress.

while strongly suited to the deep engagement with place and lived human experience, have mostly ignored the tangible legacy of the Lucin to Corinne stretch. Richard Fike and Anan Raymond's 1981 publication, "Rails East to Promontory," was the first comprehensive, on-the-ground assessment of the railroad's archaeological heritage in Box Elder County. In a second, 1994 printing, Raymond and Fike visited each of the sidings, section stations, and towns along the abandoned grade and mixed archaeological descriptions with historical documents and remembrances.⁷

Limited professional archaeological work bridged the gap between Raymond and Fike and literature produced in the early 2000s. The most prominent work done during this period was a five-year archaeological survey of the entire NPS GSNHS carried out by Sagebrush Consultants.⁸ Around the same time, Mike Polk of Sagebrush completed the first

Historic American Engineering Record survey and documentation of railroad trestles in Utah (consisting of seven trestles along the Promontory Route), and with funding from the NPS Sagebrush personnel undertook a controlled excavation of Promontory's 1872-1913 roundhouse (now filled in and no longer visible to the public).⁹ More recently, Mike and Ann Polk have continued archaeological and historical work on section stations along the Promontory Route to better understand the railroad experience beyond the irregular and incomplete historical documents, particularly in reference to Chinese railroad workers.¹⁰

A resurgence of interest in the archaeology of the transcontinental grade began in 2014, when the NPS's Underrepresented Communities program awarded a grant to the Utah Division of State History, in partnership with the BLM's Salt Lake Field Office. One component of this grant was to acquire a private consultant

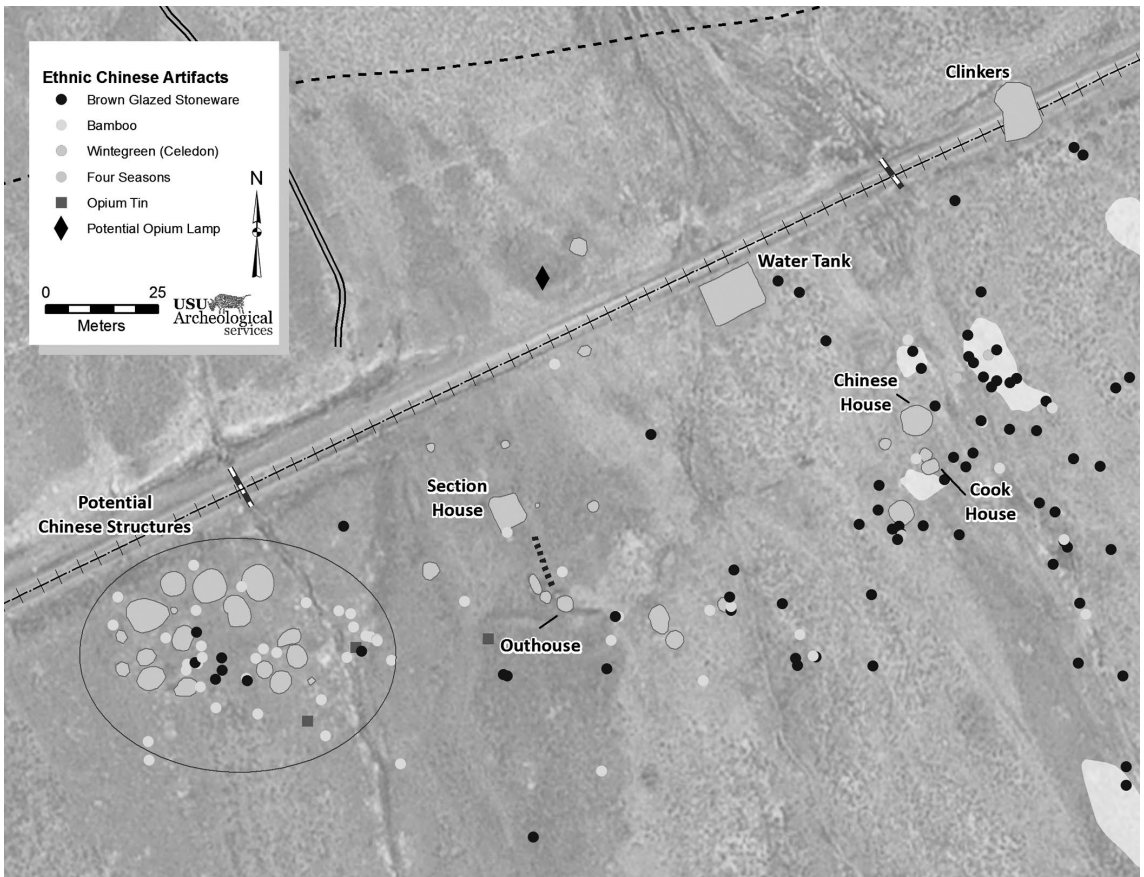


One of the seven trestles recorded as part of the HAER UT-64 documentation. This is a large format photograph of a small trestle spanning a wetland west of Corinne. This trestle was reconstructed in 1872 with large vertical and horizontal milled timbers to provide better support for heavier trains. This reconstruction replaced the juniper timber supports (seen as stumps in front of the much larger milled pilings) used in the original 1869 construction of the railroad. The late 1940s-era concrete covered metal pipe resting on the trestle is a pipeline that still carries petroleum products north from Salt Lake City refineries to Spokane, Washington. *Photo by Mike Bradshaw. Library of Congress.*

to conduct a targeted archaeological inventory in the locations of two known railroad section stations. These inventories, made under the direction of Kenneth Cannon of Cannon Heritage Consultants, resulted in the identification of section station building locations and thousands of nineteenth-century artifacts and the clear spatial patterning of Chinese and non-Chinese artifacts, illustrating the segregation of workers by ethnicity. While larger communities along the grade have suffered the bottle hunter's probe and the looter's shovel, many of the smaller stations remain intact, and future archaeological endeavors could shed light on the lived experiences of workers, foremen, business owners, and others who called this area both work and home.¹¹

Cannon's new findings—coupled with a growing sense of urgency regarding the condition of the transcontinental grade in anticipation

of the 150th anniversary of the Golden Spike—have reinvigorated the BLM's management of this resource. For instance, in the 1980s a rancher deconstructed an 1870s wooden trestle to refashion its components into a corral (which, itself, is no longer even in use). During a routine visit to the transcontinental grade, BLM archaeologist Michael Sheehan identified two trestles (dating to circa 1870) badly damaged by erosion. Major engineering features such as these trestles require constant maintenance, which has not occurred since the 1940s. One trestle in particular rested only on its central piers, with the ends free-floating away from the grade. Heavy rain had eroded the soil on a second trestle's piers down to its twelve-foot deep base. Sheehan, in consultation with the Utah State Historic Preservation Office and other BLM staff, developed stabilization plans for both trestles, giving them—with constant vigilance—perhaps another 100 years of life.



A map of the surface distribution of ethnic Chinese and Euro-American artifacts. Notice the distinct spatial segregation of artifacts by ethnicity, which likely illustrates social segregation of Chinese laborers and their Euro-American foremen. *From Cannon et al, 2016.*



The incised, interior base of a porcelain rice bowl. The incising identified the owner, who was likely a Chinese railroad worker. This artifact was found at the Matlin Section Station. *Photo by Michael Polk.*



A now-abandoned corral made from the remains of a transcontinental railroad trestle, photographed in 2017. The corral was built during the 1980s, an act that, while destructive in nature, showed the need for wood in this barren environment. *Photo by Glenn Stelter.*

Faced with two failing trestles, archaeologist Glenn Stelter of the BLM initiated the first comprehensive survey of the remaining railroad features between Lucin and Promontory. This section of the railroad had experienced seventy years of heavy use followed by nearly seventy years of abandonment, so it was unclear how many intact railroad features there would be until this assessment. Stelter identified ten stone, forty-four wood, and thirty-eight trestles that date to the railroad's early reconstruction period of the 1870s. With no more section crews to maintain the railroad, the BLM inher-

ited an unfunded burden to care for this part of American history; the agency is making efforts through education, financial partnerships, and funding requests to stop any further loss of the historic fabric. Building off this foundational work, Ray Kelsey, the BLM Salt Lake Field Office's Recreation Planner is spearheading the creation of a management plan that will promote and protect the transcontinental railroad for the next generation and create a holistic interpretive plan for the public's enjoyment and education.



A trestle near Lucin, Utah, that has been heavily undermined by seasonal flooding, exposing the bases of the piers. *Photo by Ray Kelsey.*



A view of what was once a cantilevered trestle, separated from the railroad grade on both ends and balanced on the central pier only. The BLM has now stabilized this trestle. *Photo by Ray Kelsey.*



A wooden culvert, likely constructed in the 1870s–1880s. *Photo by Glenn Stelter.*

The renewed emphasis on the entirety of the transcontinental railroad's history and archaeology is gathering toward the designation of the more than ninety-mile length from Lucin to Promontory as Utah's fifteenth National Historic Landmark (NHL). A NHL recognizes a property's significance to the entire United States and can open further marketing and funding doors. Alongside the likes of Temple Square, Desolation Canyon, Fort Douglas, Topaz Internment Camp, and the Mountain Meadows Massacre site, a Transcontinental Railroad NHL would be a key public history piece in an argument for Utah's significant role in American history.

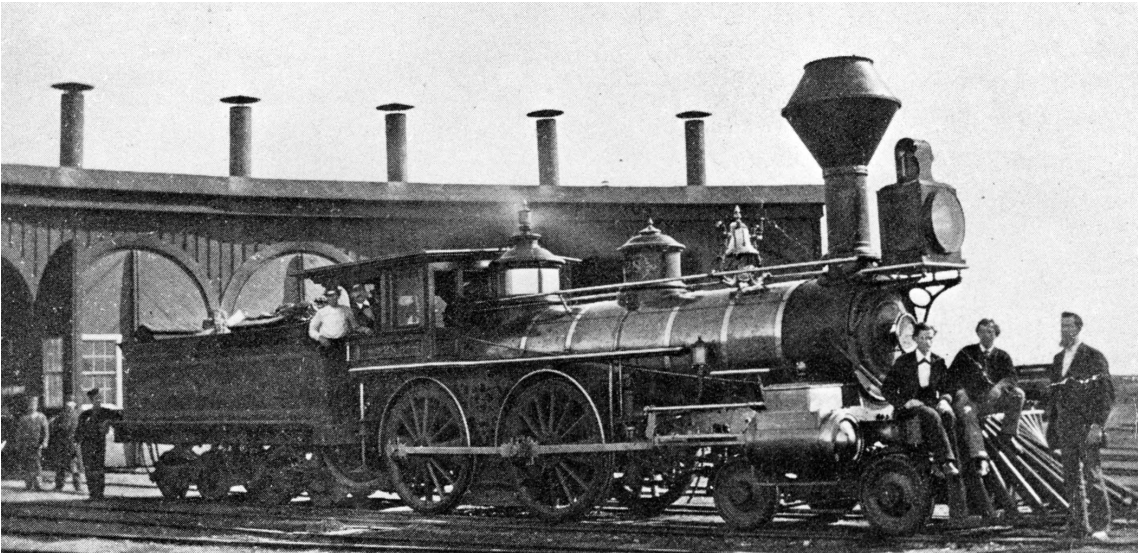
Looters and vandals continue to damage the transcontinental railroad grade in Box Elder County, as the area's remoteness has fostered an appearance of abandonment. Further, the new interpretive signs placed by the BLM have

become the target of vandalism. All Utahns, as well as visitors to the state, have a common responsibility to respect the contributions of those who came before them by refusing to take pieces of American history for their own personal enjoyment or profit.

The initial push for a transcontinental railroad was a pivotal event in American and Utah history that went from an unreal idea to the very real labor of tens of thousands of diverse people toiling through mountains, plains, and salt flats. Now, years after the sounds of steam engines and cosmopolitan voices have faded from the line in northwestern Utah, the BLM and its partners are trying to reawaken the American public to the material experience of the nation's first coast-to-coast railroad. The authors wish to challenge each reader to make the drive to Terrace, Kelton, or one of a dozen spots in northwestern Utah, take a deep breath, and



Part of the foundation of the 1873-1913 Promontory Roundhouse uncovered during excavations by the National Park Service and Sagebrush Consultants in 2002 (now covered once again by soil). Note the terra cotta drain pipe near the foundation, which helped drain water and oil from locomotive pits within the roundhouse (linear depressed areas between tracks that allowed maintenance of the underside of locomotives). *Michael Polk, Sagebrush Consultants, 2002.*



Roundhouse at Terrace, Utah, circa 1870 to 1880. Locomotive "Gold Run" is pictured, with master mechanic William McKenzie, J. A. Jacobs, an agent, and Charles Wright, engineer. USHS.



The remains of the Terrace roundhouse in 2017. *Photo by Ray Kelsey.*

imagine life in the 1870s in this austere landscape on the fringes of the rapidly industrializing United States. Archaeology is the past we can touch; history places our lived experiences into a broader context: both converge in Box Elder County to remind us of those who came before.

Notes

- 1 In 1862, the U.S. Congress voted to initiate construction on the long proposed “Pacific Railroad,” favoring a proposed central alignment from Council Bluffs, Iowa, through Nebraska, Wyoming, Utah, and Nevada, ending in Sacramento, California. Construction began in 1863, but the Civil War, combined with unanticipated difficulties by both railroads, resulted in little headway. It was not until contractual details were renegotiated and the Civil War ended that meaningful progress was made, beginning in 1866 and ending, three years later, at Promontory Summit, Utah. David Haward Bain, *Empire Express: Building the First Transcontinental Railroad* (New York: Penguin Books, 2000).
- 2 Michael R. Polk and Christopher W. Merritt, “Chinese Workers at Central Pacific Railroad Section Stations, 1870 to 1900” (paper presented at the Chinese Railroad Workers of North America Conference, Palo Alto, California, April 14–16, 2016); Michael R. Polk, “Chinese Railroad Workers at Central Pacific Stations Ca. 1870s–1880s” (paper presented at the Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Washington, D.C., January 6–10, 2016).
- 3 Don Strack, “SP’s Promontory Branch,” *Utah Rails*, accessed July 12, 2017, utahrails.net/ogden/ogden-sp.php#promontory; Richard Francaviglia, *Over the Range: A History of the Promontory Summit Route* (Logan: Utah State University Press, 2008), 115.
- 4 Docket Number 13655, March 1, 1942, ICC 252 ICC 805, Records of the Interstate Commerce Commission (ICC), Record Group 134.7, Records of the Bureau of Enforcement, National Archives and Records Administration, College Park, Maryland.
- 5 Facilities where the rails were used included the Defense Depot Ogden (which was in 1942 called the Utah Quartermaster Depot at Ogden), Hawthorne Naval Ammunition Depot in Hawthorne, Nevada (which became Hawthorne Army Depot in 1977), and the Naval Supply Depot Clearfield (Utah). David H. Mann, “The Undriving of the Golden Spike,” *Utah Historical Quarterly* 37, no. 1 (1969): 131; Michael R. Polk, Sheri Murray Ellis, Kevin C. O’Dell, and Donald D. Southworth, *Cultural Resources Overview and Preservation Recommendations, Promontory Route – Corinne to Promontory, Utah*, Sagebrush Consultants Cultural Resources Report No. 1034 (Ogden, Utah: 1998), 20–21; “Navy Gets Rail from 116 Miles of Historic Line,” *Railway Age*, February 20, 1943, 388–400.
- 6 Quitclaim Deed, April 7, 1992, “Southern Pacific Transportation Company to Bureau of Land Management,” Box Elder County Recorder, Book 519, pages 62–68.
- 7 Anan S. Raymond and Richard E. Fike, *Rails East to Promontory: The Utah Stations*, Bureau of Land Management, Cultural Resources Series No. 8, available at nps.gov/parkhistory/online_books/blm/ut/8/, accessed July 21, 2017.
- 8 Heather M. Weymouth, with contributions by Andrew M. Williamson, Sandy Chynoweth Pagano, and Angela L. Garrison, *Golden Spike National Historic Site Systemwide Archaeological Inventory Program Fiscal Year 2003 Interim Report*, Sagebrush Consultants Report No. 1303 (RMC Consultants and National Park Service, May 2004); Heather M. Weymouth, Sandy Chynoweth Pagano, and Angela L. Garrison, *Archaeological Inventory of Golden Spike National Historic Site and Adjacent Bureau of Land Management Railroad Rights-of-Way Fiscal Year 2002 Interim Report*, Sagebrush Consultants Report No. 1279 (RMC Consultants, May 2003); Heather M. Weymouth and Don D. Southworth, *Golden Spike National Historic Site Systemwide Archaeological Inventory Program Fiscal Year 2001 Interim Report*, Sagebrush Consultants Report No. 1225 (RMC Consultants and National Park Service, September 2002); Michael R. Polk and Wendy Simmons Johnson, *From Lampo Junction to Rozel: The Archaeological History of the Transcontinental Railroad across the Promontory Mountains, Utah*, Sagebrush Consultants Report No. 1614 (Ogden, Utah: 2012).
- 9 Promontory Route Railroad Trestles, Historic American Engineering Record, Library of Congress, accessed July 21, 2017, loc.gov/pictures/item/ut0700, loc.gov/pictures/item/ut0389, loc.gov/item/ut0394, loc.gov/pictures/item/ut0395; Michael R. Polk and Adrienne Anderson, “Central Pacific Railroad Operations and the Promontory Summit Roundhouse Excavation” (paper delivered at the Society for Historical Archaeology, St. Louis, Missouri, January 7–11, 2004).
- 10 Michael R. Polk, “Interpreting Chinese Worker Camps on the Transcontinental Railroad at Promontory Summit, Utah,” *The Archaeology of Chinese Railroad Workers in North America* thematic issue of *Historical Archaeology* 49, no. 1 (2015); Michael R. Polk, “Ethnic Chinese at Central Pacific Railroad Maintenance Camps” (paper presented at the Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Seattle, Washington, January 6–11, 2015); Michael R. Polk, “The History and Influence of Chinese Railroad Workers on the Transcontinental Railroad: A View from the End of the Line at Promontory Summit” (paper presented at the Archaeology Network of the Chinese Railroad Workers in North America Workshop, Stanford, California, October 10–12, 2013); Michael R. Polk, “Post-Construction Chinese Worker Housing on the Central Pacific Railroad: 1870–1900” (paper presented at the Conference on Historical and Underwater Archaeology, Fort Worth, Texas, January 4–8, 2017); Polk and Merritt, “Chinese Workers at Central Pacific Railroad Section Stations, 1870 to 1900.”
- 11 Kenneth P. Cannon, H. L. Martin, J. M. Peart, M. B. Cannon, J. Blong, P. Santarone, K. Selmon, and K. Price, *The Archaeology of Chinese Railroad Workers in Utah: Results of Surveys in Box Elder and Emery Counties*. USUAS Special Report No. 2 (2016). On file at the Utah Division of State History, Salt Lake City, Utah.