

INTERURBAN ELECTRIC RAILWAY TWENTY-SIXTH STREET
JUNCTION BRIDGE
Foot of Twenty-Sixth Street, crossing Southern Pacific Railroad Main
Line Tracks
Oakland
Alameda County
California

HAER CA-2266
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC WEST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
1111 Jackson Street, Suite 700
Oakland, CA 94607

HISTORIC AMERICAN ENGINEERING RECORD

INTERURBAN ELECTRIC RAILWAY
TWENTY-SIXTH STREET JUNCTION BRIDGE
HAER NO. CA-2266

Location: Crossing southern Pacific Railroad main line tracks at the foot of
Twenty-sixth Street, Oakland, Alameda County, California

USGS 7.5 minute series – Oakland West, Calif.
UTM Coordinates: 10 . 562340 . 4186170

Date of Construction: 1938

Engineer: Department of Public Works, State of California

Present Owner: State of California
c/o Department of Transportation
111 Grand Avenue
Oakland, California 94623

Present Use: The south leg of the bridge was demolished in 1994. The north
leg remains, with a single track providing access from the West
Oakland mainline tracks to the Oakland Terminal Railway's
Baldwin Yard.

Significance: The Interurban Electric Railway Twenty-sixth Street Junction
Bridge is a rare surviving example – one of only two known in
California – of a railroad wye carried by a bridge structure. The
bridge was determined eligible for inclusion in the National
Register of Historic Places in 1990, under criteria A and C.

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I. DESCRIPTION

The Interurban Electric Railway Twenty-sixth Street Junction Bridge has approaches comprised of twenty-stringer timber deck spans, carried on eight-pile timber trestle bents, with two-rail timber railings. The main spans above the main line and switching tracks of the Southern Pacific Railroad are deck girder spans of riveted steel girders, carried on two, three, and four-column reinforced concrete piers; these spans have cantilevered walkways and pipe railings. The bridge is in the form of a wye and, as built, each leg carried double tracks, catenary supports, and catenary wire of the Interurban Electric Railway from its main lines, crossing over the Southern Pacific, and leading to the Bridge Yard and thence to the lower deck of the San Francisco – Oakland Bay Bridge. The south leg of the bridge was converted to vehicular use by the Army, circa 1944, and was demolished in 1994. The north leg of the bridge continues in rail use, with a single track giving access from the West Oakland mainline tracks to the Oakland Terminal Railway's Baldwin Yard. All catenary supports and catenary wire were removed following abandonment of the Interurban Electric Railway in 1940.

II. HISTORICAL INFORMATION

The Southern Pacific electric lines, which ultimately became the Interurban Electric Railway, date to June 1, 1911, when they replaced steam-powered suburban service which in turn dated back to August 2, 1863. These suburban lines had been the brainchild of C. P. Huntington, who had sought to develop a total transportation system, operating mainline railroad, short lines, ferries, river steamers, steamships, and street railway systems. (That he and his partners were successful was evident in the political and economic control which Southern Pacific exerted on California for decades.)

The pattern of acquisition and control as espoused by Huntington was followed in the East Bay, and the Central Pacific (later Southern Pacific) came to own all the local steam lines in the county. Under Central Pacific control, these local lines came to use the Alameda Mole which Central Pacific had acquired from the narrow gauge South Pacific Coast Railway. At the Alameda Mole, a terminal at the end of a long pier extending into

San Francisco Bay, passengers switched from trains to ferries for the trip to San Francisco.

Following Huntington's death in 1900, E. H. Harriman acquired control of Southern Pacific, and he began rapid improvements and modernization of all the railroads he controlled, standardizing virtually everything from track spikes to locomotives. Harriman laid the plans to electrify the steam-powered suburban lines in Alameda County to allow greater competition with Francis M. "Borax" Smith's electrified Key System.

Under the name San Francisco, Oakland & San Jose Railway, the Key System was formed in 1902 by Smith's consolidation of East Bay streetcar operations. Smith had begun his acquisitions of streetcar lines in 1893, as direct competition with Southern Pacific's steam-powered local trains. Smith constructed a 3-1/4 mile pier from the Oakland shoreline nearly to Yerba Buena Island to serve his ferries. This gave his operation a decided advantage, since his pierhead was much nearer to San Francisco than that of the Southern Pacific. A shorter ferry run and better train schedules offered his patrons a reduced commute time. By the early teens, however, Smith had overextended his investments on all fronts and was forced into bankruptcy. Reorganized, the Key System replaced the original timber pile pier with a solid fill pier completed in 1916 (though portions of the original pier remained until 1932). The system took its name from the shape of the pier, and formally became the Key System Transit Company after another reorganization in 1923. By 1924 the Key Pier was handling 800 trains per day.

The Harriman line was known as the Oakland, Alameda & Berkeley. Development of the Oakland, Alameda & Berkeley by Harriman was part of his general improvement of lines in the Bay Area, including his intent to electrify the San Francisco Peninsula lines (today's Caltrain). During the 1906 upgrade, these lines were built to clearances required for the never-completed electrification. Harriman built the Dumbarton Cutoff between Newark and Redwood City as part of this proposed electrification on both sides of San Francisco Bay, and he intended the Oakland, Alameda & Berkeley to connect to San Jose. Harriman accomplished electrification of the East Bay suburban lines between 1905 and 1912. The effort was delayed by the 1906 San Francisco

earthquake, and was completed after Harriman's death in 1909. Originally estimated at \$4 million, the actual cost of the effort was \$10.6 million. Southern Pacific completely rebuilt the existing suburban lines and added 21 miles of new lines.

To maintain self-sufficiency, Southern Pacific built its own generating station instead of buying power. The Oakland, Alameda & Berkeley represented the first railroad use of the high voltage overhead system developed by General Electric in 1907, and the American Institute of Electrical Engineers recognized the Fruitvale Powerhouse (no longer extant) as an outstanding achievement at the time of its construction. Substations at West Oakland and North Berkeley converted Fruitvale's 13,200-volt power to 1,200 volts for system use; only the former is extant. Substation No. 2 at West Oakland served all lines between Webster Street in Oakland and Shellmound in Emeryville, including West Alameda, Alameda Pier, and Oakland Pier. It also provided power for the Southern Pacific Shipyard, the West Oakland main line shops, and the then-new Sixteenth Street Station, as well as powering arc lights at West Oakland Yards, Oakland Pier, and along Eighteenth, Franklin, and Webster streets.

Cars were ordered in 1911, and electrified service began late that year, though the system was not finished until early the following year. Ironically, while competing successfully with the Key System, the Oakland, Alameda & Berkeley was doomed to failure by the dawn of the auto age, as well as by union rules which required the use of full train crews on cars which could have been operated by one man or, at most, two men. Revenues failed to equal expenditures, and the line ran at a loss almost from its inception.

Southern Pacific reorganized the Oakland, Alameda & Berkeley into the Interurban Electric Railway on November 14, 1934, in anticipation of the construction of the San Francisco – Oakland Bay Bridge. During the early planning for the bridge, a number of alternatives for rail service across the lower deck were considered. The State's first proposal called for shuttle trains of State-owned, streamlined articulated cars connecting the East Bay Terminal (today's Transbay Transit Terminal) in San Francisco with a union terminal adjacent to the Key System Shops in Emeryville, where passengers would connect with the trains of the Key System, the Interurban Electric Railway, and the Sacramento Northern Railway. When the decision was ultimately

made to have the three railways operate their own cars across the bridge, plans were prepared for a new rail yard and shops adjacent to the East Bay approach to the bridge, on the south side of the Key System Mole. This led to the problem of connecting the new yard with the Interurban Electric Railway main line, itself located on the east side of, and parallel to, the Southern Pacific main line. A number of alternatives were considered for that connection.

In December 1932, Southern Pacific proposed to route the Interurban Electric Railway trains from the Bridge Yards directly to the Southern Pacific Sixteenth Street Station, whose second story was served by the Interurban Electric Railway. Here, the track would have risen on a viaduct and diverged while crossing over the Southern Pacific main line tracks. Seventh Street and Alameda trains would have swung south and joined the existing elevated structure at Fourteenth Street, while Berkeley District trains would have swung north to join the elevated structure near Eighteenth Street. Other alternatives considered by the railroad would have placed the wye just north of the station, between Nineteenth and Twentieth streets, or south of the station, angled to the northwest, or would have led the Oakland lines off just north of the station, while the Berkeley lines would have angled out through Emeryville.

In addition to the railroad's alternatives, the State of California proposed a plan which, it was asserted, was the least complicated and which ultimately was adopted. This plan caused a minimal rerouting of Key System trains. The Interurban Electric Railway trains used a double-tracked lead from the Bridge Yards to a Y-shaped viaduct near the foot of Twenty-sixth Street. In an eastward direction, the tracks diverged while passing over the Southern Pacific main line; the point of divergence was named the Twenty-sixth Street Junction. One pair of tracks, used by the Seventh Street and Alameda trains, curved southward and descended to ground level, where they joined the Berkeley main line at Twenty-second Street. The other pair of tracks, used by Berkeley district trains, curved northward and joined the Berkeley main line at Thirty-second Street.

The state's plan, though ultimately adopted, was not without some opposition. Southern Pacific objected to the state's proposal on operating grounds: apparently the original proposal for carrying the Interurban Electric Railway tracks across the Southern Pacific main line tracks did not provide for grade separation. Further, Southern Pacific

did not like the notion of placing the wye just where the Interurban Electric Railway cars were descending a four percent grade from the elevated tracks at the Oakland station. Placement of the wye there necessitated a “backhaul” for all Berkeley patrons, which would not have been the case had Southern Pacific’s preferred alternative been adopted.

After five years of planning, the Twenty-sixth Street Junction Bridge was built in 1937-38 to plans prepared by the California Department of Public Works. Following completion of the Bay Bridge, the cars of the Interurban Electric Railway, the Key System, and the Sacramento Northern Railway were routed across the bridge into the East Bay Terminal (now the Transbay Transit Terminal) in San Francisco. Still, ridership never reached projected levels, and the Interurban Electric Railway lasted but a short while longer. Citing economic loss due to auto competition, Southern Pacific filed for permission to abandon Interurban Electric Railway service on February 26, 1940, and the last Interurban Electric Railway train rolled on July 4 of that year. While portions of the track remained in use during the war, the Interurban Electric Railway formally ceased to exist on January 18, 1941.

Following abandonment of the Interurban Electric Railway in mid-1940, the line’s tracks were handled in a number of ways. Some were dismantled and removed, while some were turned over to the Key System. Apparently the Santa Fe Railway obtained ownership of the Twenty-sixth Street Junction Bridge, using it for access to the Oakland Army Terminal, for in 1944 they granted the south leg of the bridge to the Army for conversion to vehicular use. The south leg of the bridge was demolished in 1994, while the northern leg remains.

The Interurban Electric Railway Twenty-sixth Street Junction Bridge is a rare use of a railroad wye on a bridge structure. Only one other is known to exist in California, the former Western Pacific (now Union Pacific) wye bridge at Keddie, in the Spanish Creek Canyon in Plumas County. The Twenty-sixth Street Junction Bridge is also a rare surviving element of the Southern Pacific’s once-sprawling interurban railway system which at one time served and helped to develop the East Bay. Born under the drive of E. H. Harriman in 1911 as the Oakland, Alameda & Berkeley Railway, and reorganized in 1934 as the Interurban Electric Railway, the system passed into oblivion on the eve of

World War II. In the ensuing years, most of the physical plant has ceased to exist, and today on the West Oakland Substation No. 2 and the West Alameda Car Shop (converted to a winery) remain from the Oakland, Alameda & Berkeley period, while only this bridge and the Bridge Yard Shop (now the Caltrans Bay Bridge Paint Shop) remain of the Interurban Electric Railway. Both of the latter two structures have clear associations with the Bay Bridge as well, since both were built to serve the trains directly linking the East Bay with San Francisco.

III. SOURCES OF INFORMATION

Books

Beebe, Lucius. *The Central Pacific & The Southern Pacific Railroads*. Berkeley: Howell-North, 1963.

Capwell, H. C. "Oakland – A City That Controls Her Own Destiny," in *Davis' Commercial Encyclopedia of the Pacific Southwest*, Ellis A. Davis, ed. Berkeley: Ellis A. Davis, 1911.

Demoro, Harre W. *The Key Route: Transbay Commuting by Train and Ferry*. Glendale: Interurban Press, 1985.

Dunscomb, Guy L. *A Century of Southern Pacific Steam Locomotives*. Modesto: Guy L. Dunscomb, 1963.

Ford, Robert S. *Red Trains in the East Bay: The History of the Southern Pacific Transbay Train and Ferry System*. Glendale: Interurban Publications, 1977.

Ford, Robert S. *Red Trains Remembered*. Glendale: Interurban Publications, 1980.

Mott, Frank K. "Oakland's Industrial and Commercial Progress," in *Davis' Commercial Encyclopedia of the Pacific Southwest*, Ellis A. Davis, ed. Berkeley: Ellis A. Davis, 1911.

Trimble, Paul C. *Interurban Railways of the Bay Area*. Fresno: Valley Publishers, 1977.

Maps and Plans

“Southern Pacific Railroad, Proposed Track Connections, Oakland, 16th Street, Plan A, 1932.” Secretary of State Archives, Public Utilities Commission Collection, Sacramento.

“Southern Pacific Railroad, Proposed Track Connections, Oakland, 16th Street, Plan B, 1932.” Secretary of State Archives, Public Utilities Commission Collection, Sacramento.

“Southern Pacific Railroad, Proposed Track Connections, Oakland, 16th Street, Plan C, 1932.” Secretary of State Archives, Public Utilities Commission Collection, Sacramento.

“Southern Pacific Railroad, Proposed Track Connections, Oakland, 16th Street, Plan D, 1932.” Secretary of State Archives, Public Utilities Commission Collection, Sacramento.

“State of California, Department of Public Works, San Francisco Oakland Bay Bridge, Trackage Plan, East Bay Approach, Sheet 5, Contract R4.” Secretary of State Archives, Public Utilities Commission Collection, Sacramento.

Manuscripts

Kelly, Earl Lee. “State of California, Department of Public Works, San Francisco – Oakland Bay Bridge: Report on Interurban Electric Railroad for the San Francisco – Oakland Bay Bridge, November 1933.” California Department of Transportation History Center, Sacramento.

J. H. Dyer to A. D. McDonald, LS, 10/26/1935, California Department of Transportation History Center, Sacramento.

Photograph Collections

San Francisco – Oakland Bay Bridge Construction Photographs Collection, California
Department of Transportation, San Francisco – Oakland Bay Bridge Maintenance
Station, Oakland, California.

Interviews

Interview with the late railroad historian and author Vernon Sappers at his home in Oakland. Mr. Sappers' generous sharing of his extensive archives and his personal knowledge of the history, facilities, operations and activities of the Southern Pacific, Oakland, Alameda & Berkeley / Interurban Electric Railway, and Key System in the East Bay contributed greatly to this study. When his health began to fail, he donated his entire library and archives to the Western Railway Museum Library at Rio Vista Junction.

IV. PROJECT INFORMATION

The collapse, in 1989, of the Cypress Structure portion of Interstate 880 during the Loma Prieta earthquake has led the California Department of Transportation to replace the collapsed facility with a new freeway on new alignment. The new freeway will cross over the top of the Interurban Electric Railway Twenty-sixth Street Junction Bridge. While not impacting the bridge directly, the new freeway will constitute an adverse effect to the historic bridge due to its visual intrusion and alteration of the bridge's setting. In addition, in an unrelated project, the Department of the Army has demolished the deteriorated south leg of the bridge. This documentation is intended to comply with part of the mitigation requirements for the construction of the new freeway, in accordance with Section 106 of the National Historic Preservation Act.

V. LOCATION MAP

