

United States Department of the Interior
National Park Service

JUN 12 1989

National Register of Historic Places Registration Form

NATIONAL
REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Pacific Electric Railroad Bridge
other names/site number Gill, Irving Bridge

2. Location

street & number Torrance Boulevard and Bow Street Not for publication

city, town Torrance vicinity

state California code CA county Los Angeles code 037 zip code 90503

3. Classification

Ownership of Property

- private
- public-local
- public-State
- public-Federal

Category of Property

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

Name of related multiple property listing:

N/A

Number of contributing resources previously
listed in the National Register 0**4. State/Federal Agency Certification**

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this
 nomination request for determination of eligibility meets the documentation standards for registering properties in the
 National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.
 In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of certifying official

6/7/89

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of commenting or other official

Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

- entered in the National Register.
- See continuation sheet.
- determined eligible for the National Register. See continuation sheet.
- determined not eligible for the National Register.

- removed from the National Register.
- other, (explain): _____

Patricia Bryant

7/13/89

Signature of the Keeper

Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

TRANSPORTATION/rail-related
road-related
pedestrian-related

Current Functions (enter categories from instructions)

TRANSPORTATION/rail-related
road-related
pedestrian-related

7. Description

Architectural Classification
(enter categories from instructions)

Modern Movement
Other: Deck-arch bridge

Materials (enter categories from instructions)

foundation Concrete
walls Concrete
roof Concrete
other

Describe present and historic physical appearance.

The Irving Gill Bridge still serves as both the literal and symbolic gateway to the City of Torrance, as it was originally intended when designed and built as one of the first structures in 1913 during the founding of the City of Torrance. This deck-arch reinforced concrete railroad bridge spanning Torrance Boulevard was built to allow three modes of transportation to operate simultaneously. The striking structure represents the original urban design for the City of Torrance and was designed by Architect Irving Gill who has since gained broad recognition for pioneering California's early modern movement in architectural styles (Handbook for Local Communities, COHP). The Irving Gill Bridge has retained historical integrity by sustaining only minor alterations unlike other Irving Gill structures in Torrance.

The bridge was designed 76 years ago to allow transportation of materials and goods to and from factories without blocking traffic. The structure is aptly described in The City Observed Los Angeles:

"The best introduction to Gill's original part of Torrance is through one of the six arches in his railroad bridge...This delicately proportioned, poured-concrete structure serves as a kind of latter-day city gate, accommodating every means of transportation into town as well as the Southern Pacific Railroad tracks across the top. A pair of tall, half-circle arches in the center served Pacific Electric streetcars; on each side of them is a big segmental arch, wide enough for two lanes of automobiles; and then, at each end, is another arch, like the middle ones but lower, for pedestrians. This bridge is typical of Gill's best work, straightforward and bold, with flat surfaces ornamented only by form marks; but with its little arches and big, it seems at once grand and almost fragile. There is, too, a sort of off-center energy in the rhythm of the openings, set against the varying levels of the several roadways, the vines that crawl all around and the groves of eucalyptus at each end. You wouldn't guess, at first glance, that the whole wall is unerringly symmetrical."

In addition to the six arches spanning Torrance Boulevard, there are five perpendicular arches underneath the bridge. The specific dimensions of the

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Engineering
Architecture
Community Planning and Development

Period of Significance

1912

Significant Dates

1912

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

Gill, Irving/Pacific Electric Ry.

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Irving Gill Bridge is historically significant under criterion C. It embodies the distinctive characteristics of a type, period, method of construction, and represents the work of a master. The bridge is significant in three areas: community planning, architecture, and engineering. First, it played a prominent role in community planning and is the only remaining unaltered structure representing the original Torrance General Plan. Secondly, the architecture is important because the structure was designed by the master Irving Gill and reflects his direction toward greater simplicity which significantly contributed to the modern movement in architecture. Thirdly, the bridge is significant from an engineering standpoint for its highly unusual use of non-load-bearing walls to create the appearance of an arched bridge. Finally, the bridge has recently been selected as logo for the City's 75th Anniversary, therefore gaining further symbolic value as the gateway to Torrance.

Community Planning and Development

In January of 1912, Dominguez Land Company, headed by Jared Sidney Torrance, hired John C. and Frederick Law Olmsted. These well-respected landscape architects were commissioned to prepare the first general plan for a model industrial townsite which later became the City of Torrance.

Irving Gill was appointed Chief Architect of Torrance in June of 1912. Throughout the following year, Gill implemented the Olmsted Brothers' plan and designed several buildings; most of which were built, including the railroad bridge.

Torrance was designed as a balanced City by combining industry, commercial, and residential land use. Location of the bridge is directly linked to the original general plan which was based upon the shape of a 'Y' figure. Industry was located on the outside of the area bounded by the figure, while commercial and residential structures were located within the open area formed by the 'Y' (Roger Hathaway, 1979). The bridge was carefully placed near the base of the 'Y', serving as the original gateway to the City.

9. Major Bibliographical References

- Gill, Irving. "Home of the Future." The Craftsman. May 1916.
- Hatheway, Roger. "Irving Gill, Torrance and the Industrial Dream." L.A. Architect, July 1979.
- Hatheway, Roger, and Chase, John. "Torrance Historical Resources Survey." May 1979.
- McCoy, Ester. Five California Masterbuilders. Reinhold 1959.
- Moore, Charles, Becker, Peter, and Campbell, Regula. The City Observed: Los Angeles. Vintage Books 1984.

(Continued)

See continuation sheet

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67)
has been requested
 previously listed in the National Register
 previously determined eligible by the National Register
 designated a National Historic Landmark
 recorded by Historic American Buildings
Survey # _____
 recorded by Historic American Engineering
Record # _____

Primary location of additional data:

- State historic preservation office
 Other State agency
 Federal agency
 Local government
 University
 Other

Specify repository:

Southern Pacific Transportation Company

10. Geographical Data

Acreage of property .11

UTM References

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3	7	4	4	7	2	0
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Zone Easting Northing

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Zone Easting Northing

C

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See continuation sheet

Verbal Boundary Description

The boundary of the Irving Gill Bridge is shown on the accompanying tract map entitled "Southern Pacific Transportation Company (Torrance Properties)". The scale of the map is 1" = 100' (Attachment #4).

See continuation sheet

Boundary Justification

The boundary chosen is the boundary of the property donated to the City of Torrance, by indenture agreement, from Southern Pacific Transportation Company (Attachment #4).

See continuation sheet

11. Form Prepared By Michael G. Bihn/Principal Planner

name/title Kim Payne/Planning Assistant

organization City of Torrance Planning Dept./Redevelop. date 4/19/89

street & number 3031 Torrance Boulevard telephone (213) 618-5990

city or town Torrance state CA zip code 90503

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bridge are shown on enclosed copies of the original plans, titled "El Prado Bridge" (Attachment #2).

Alterations and Deterioration

Alterations to the bridge are minor and are estimated to be made in the early 1950s. They consist of the removal of one telephone pole attached to each side of the parapet, (photograph #1) and the addition of a wooden guardrail on each side of the deck.

There is a small height sign posted on each side of the bridge facing the vehicular traffic (photograph #3).

The Irving Gill Bridge is gradually suffering from deterioration. Several cracks span the bridge as a result of age and weather. However, most signs of deterioration are camouflaged by vines (photographs #9 and #10).

(See bridge photographs #1-10.)

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Narrative from Historic Torrance: A Pictorial History of Torrance, California describes the intent and purpose of the bridge:

"The layout of the town, with its view of Mount Baldy and factories to the east of houses and stores, so prevailing winds would carry factory smoke away from them, also called for a graceful concrete bridge over Torrance Boulevard, a bridge designed by Gill. The bridge kept trains from blocking major streets as they travelled to and from the depot and kept their noise and vibrations away from the new residential areas."

In summary, the bridge symbolizes the Olmsted-Gill original intent to thoughtfully plan a progressive industrial city for the early 20th century. Other structures representing the original Torrance General Plan have been destroyed or altered significantly. Existing Gill structures include the Pacific Electric Depot, the El Roi Tan Hotel, several manufacturing buildings, and a few homes. All of these buildings have been structurally altered as described in the 1979 Torrance Historic Resources Survey.

Architecture

Irving Gill pioneered the modern architecture movement by daring to simplify design and demonstrate heightened sensitivity of form, despite the predominance of imitation of historical decoration during this era. Gill is best known for his work in San Diego where he gained recognition for developing "one of the few wholly original styles of architecture in the United States." (McCoy) Gill's role in Torrance (1912-1913) was during a critical development point for his career as demonstrated in his use of a range of construction techniques on his buildings (wood, brick, slab, concrete and cement). During his stay in Torrance, Gill was developing a cohesive design philosophy and experimenting with technological innovation.

Gill has been recognized as a master due to his passion for simple form (the straight line, arch, and circle). He has stated "any deviation from simplicity results in a loss of dignity. Ornaments tend to cheapen rather than enrich." This philosophy is well represented in his first design built in Torrance, the monolithic concrete bridge with the graceful arches. Furthermore, the bridge has even aged in the Gill tradition by vines graciously breaking the severity of the architectural lines.

"We should build our house simple, plain, and substantial as a boulder, then leave the ornamentation of it to Nature, who will tone it with lichens, chisel it with storms, make it gracious and friendly with vines and flower shadows as she does the stone in the meadow."
(Gill, 1916)

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Upon conferring with Steve Mikesell, Architectural Historian for Caltrans, we have found that only a handful of bridges in the State of California have been designed by architects. Mikesell has participated in the recent Federal Highway Survey of every vehicular bridge in the State (2,000 observations).

Based on this research and his personal observation of non-vehicular bridges, Mikesell has made additional comments. First, there have been no other bridges designed by Gill in the Los Angeles area. Moreover, the Green and Green bridge in Pasadena is the only other bridge designed by an architect in the entire Los Angeles region.

Engineering

This bridge is significant from an engineering standpoint for its highly unusual use of non-load-bearing walls to create the appearance of an arched bridge. Structurally, the bridge is built around four concrete girders, which are carried on two-column bents and run the length of the bridge, and a concrete slab which comprises the deck. Stripped to its load-bearing elements, the structure would appear as a rather plain concrete girder and slab bridge on concrete columns. Similar to dozens of other bridges built in California in the period, 1900-1917, and not unlike the typical two-column concrete freeway overcrossing built in California in the 1960s and 1970s. The significance of the bridge from an engineering standpoint lies in the highly unusual use of decorative elements to disguise the structural system and to create a more pleasing aesthetic appearance.

As shown on the attached exhibits, the principal members in the bridge substructure are the heavily reinforced concrete columns (labeled 1 on Attachment A). These carry four concrete girders (2, Attachment A) and the concrete slab deck, which extend the length of the bridge. There are five sets of these paired columns, which serve as bents for the six spans.

The columns and girders are hidden behind three elements, which appear to be entirely decorative and not load-bearing. The first (4, Attachment A) is a wide wall, probably hollow, which brings the exterior walls to the vertical plane of the deck, creating a flush surface on the outside of the bridge. The second (3, Attachment A) is an arched form poured between the columns. This element is repeated in each bent, creating an arcade that runs the length of the bridge. The third element (5, Attachment A) is an arched form poured between the bents. This creates an arcade that runs the length of the bridge. Although the geometry of the arches differs with the different lengths of the spans, the pedestrian spans, at 15' each, and the railroad spans, at 18' each, feature round-headed arches, while the wider highway spans (29'4") feature elliptical arches.

The three decorative elements transform what would have been a very plain concrete bridge into a very elegant and interesting structure. It is a very

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complex composition because of the different shapes of arches and the double arcade, but also very simple and elegant because of the unbroken vertical plane and the absence of applied decorative features.

This design is highly unusual. The California Historic Bridge Inventory, which investigated more than 100 historic concrete girder bridges in California, revealed no other example of this particular technology. It is likely that the design is unique to this structure, developed for the purpose of improving the appearance of the prominently-sited structure.

Pacific Electric Railroad

The Pacific Electric Railroad constructed the single-track lines to Torrance Townsite from 1912-1914. During this period, the Torrance lines were placed in operation.

The tracks crossing over the Irving Gill Bridge led to the U.S. Steel Company. The set of tracks passing underneath, provided passenger service to Torrance at the nearby Pacific Electric Depot. Pacific Electric continued to own and operate these lines until November 13, 1965 when they merged with Southern Pacific Transportation Company.

Since then, the U.S. Steel factory has been demolished, and the tracks across the bridge have been abandoned. The trackage on each side of the bridge has been removed for new development but the tracks on the bridge remain.

Community Commitment

The City Council has passed a resolution expressing the City's commitment to the preservation of the historically and architecturally significant bridge (Attachment #5).

On November 16, 1986, following four years of pursuit, the City of Torrance successfully obtained ownership of the bridge by indenture with Southern Pacific for the specific purpose of preserving the bridge. Southern Pacific has reserved the right to maintain and operate the track structure. A copy of the indenture agreement is attached to this registration form (Attachment #4).

The Torrance Historical Society consistently displays the bridge on brochure covers. This organization has expressed concern over the future of the bridge through written endorsement (Attachment #6).

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9. MAJOR BIBLIOGRAPHICAL REFERENCES (Continued)

Shanahan, D. F. and Elliott Jr., Charles. Historic Torrance:
A Pictorial History of Torrance, California, Legend Press 1984.

Torrance City Clerk, History of Torrance. 1988.

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PHOTOGRAPHS

Section number _____ Page ____ 1

There are ten photographs submitted with this registration form. All are of the Irving Gill Bridge in Torrance, California.

With the exception of photograph #1, all photos were taken by Julie Dombrowski on July 15, 1988.

PHOTOGRAPH: #1

1. Irving Gill Bridge
2. Torrance, California
3. Photographer Unknown
4. 1921
5. Torrance Historical Society
6. View from Torrance Boulevard-West side of bridge

PHOTOGRAPH: #2

- 1-2. Same as above.
3. Julie Dombrowski
4. July 15, 1988
5. City of Torrance Planning Department
6. View from South Wall of bridge

PHOTOGRAPH: #3

- 1-5. Same as above
6. View from Torrance Boulevard-West side of bridge

PHOTOGRAPH: #4

- 1-5. Same as above
6. Pedestrian arch-from East

PHOTOGRAPH: #5

- 1-5. Same as above
6. Center arches-from East

PHOTOGRAPH: #6

- 1-5. Same as above
6. Street arch with landscaping-from East

PHOTOGRAPH: #7

- 1-5. Same as above
6. Deck of bridge-from South

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PHOTOGRAPHS

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PHOTOGRAPH: #8

- 1-5. Same as above
- 6. Parapet-Northeast corner of bridge

PHOTOGRAPH: #9

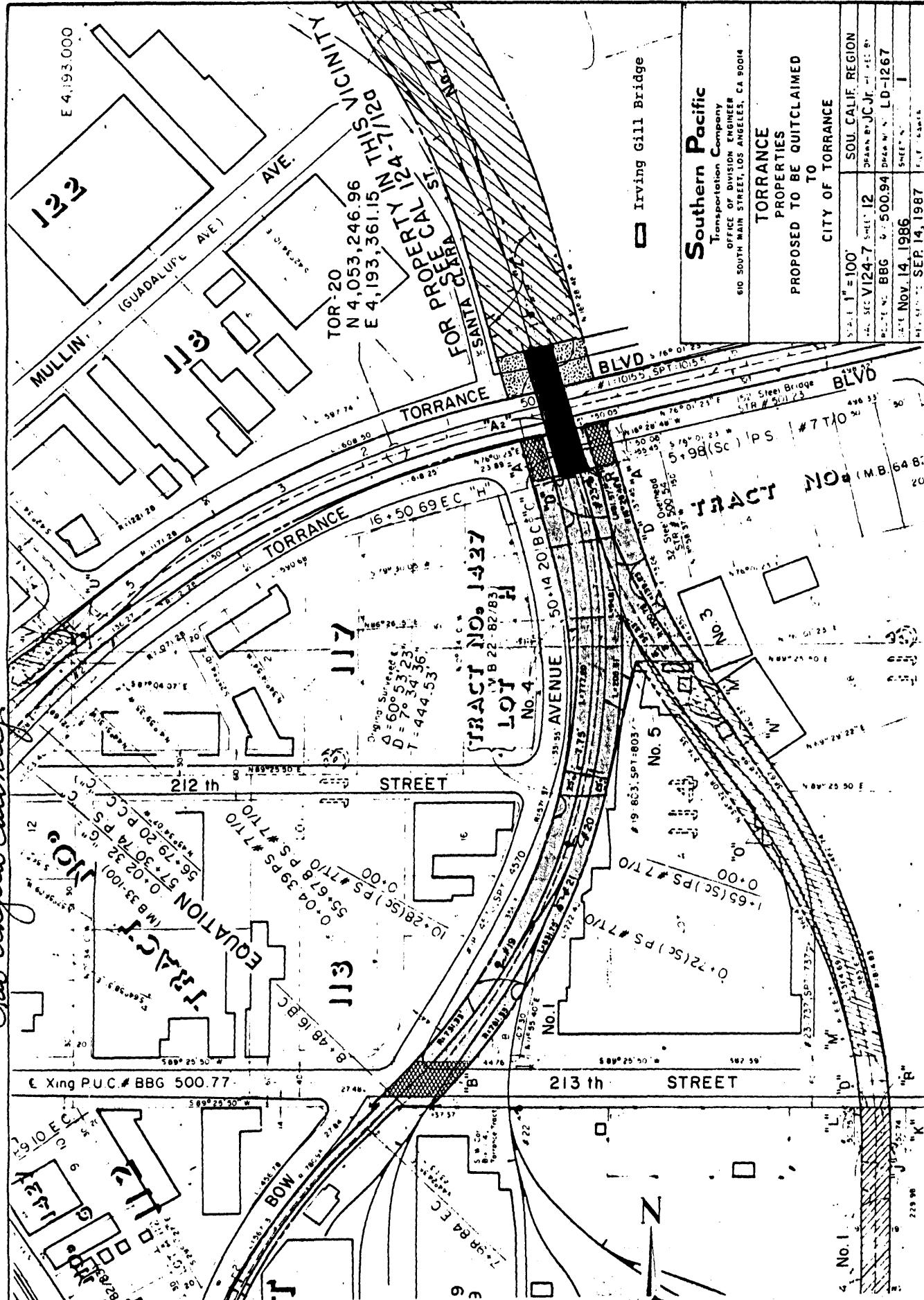
- 1-5. Same as above
- 6. Base of pier-Southeasterly

PHOTOGRAPH: #10

- 1-5. Same as above
- 6. Top of pier-close-up

racine Avenue
Torrance Blvd. & Bow Street
Torrance, CA 90503

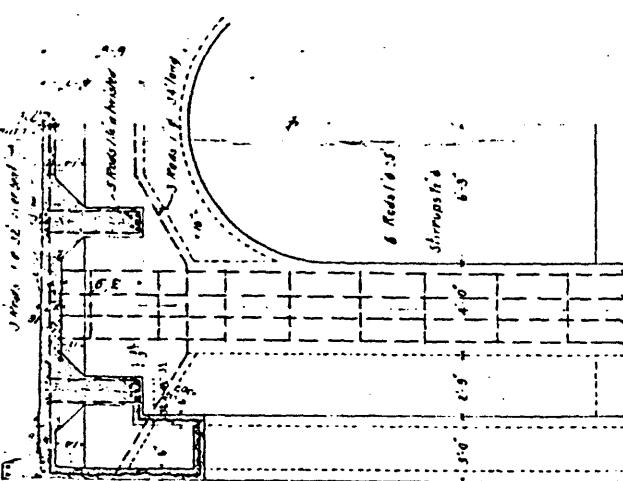
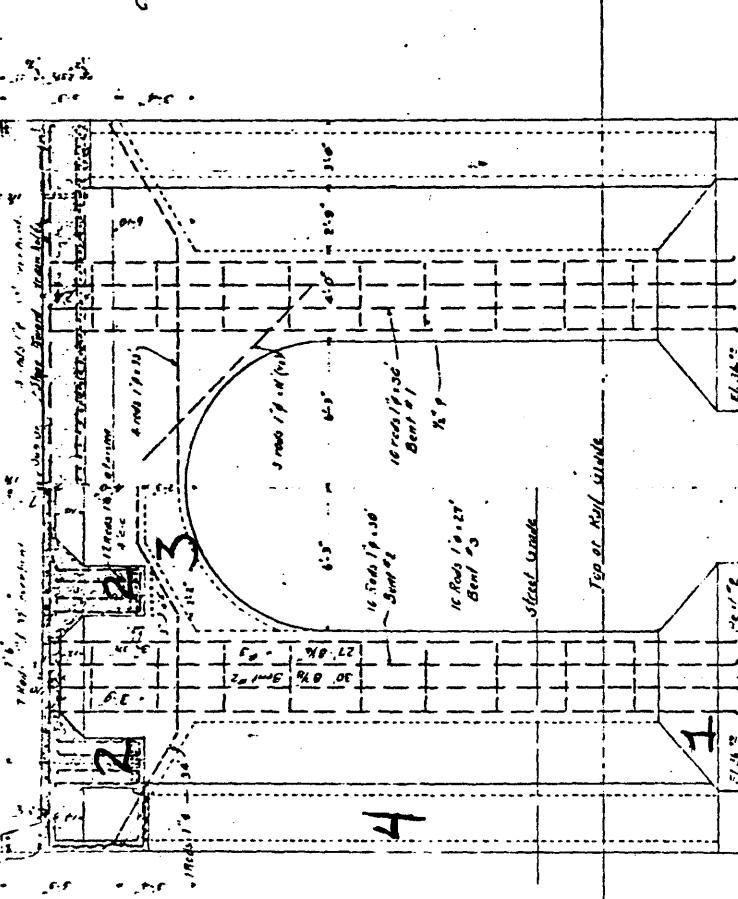
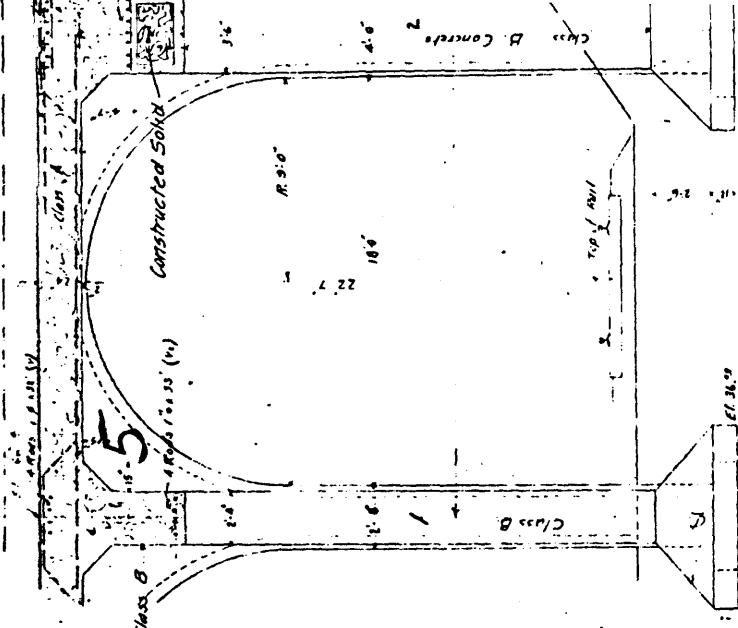
Los Angeles County



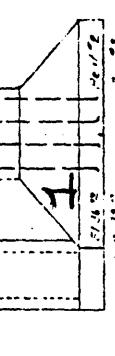
Attachment #4

Pacific Electric Bridge

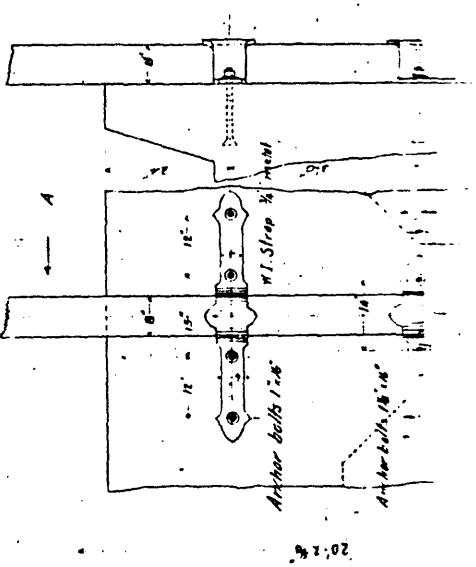
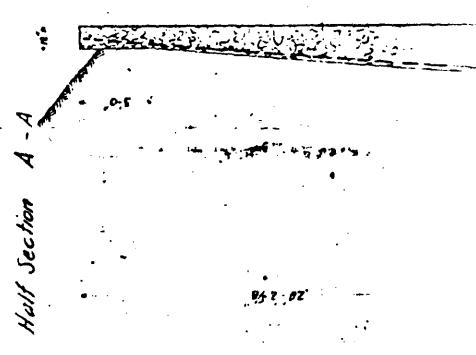
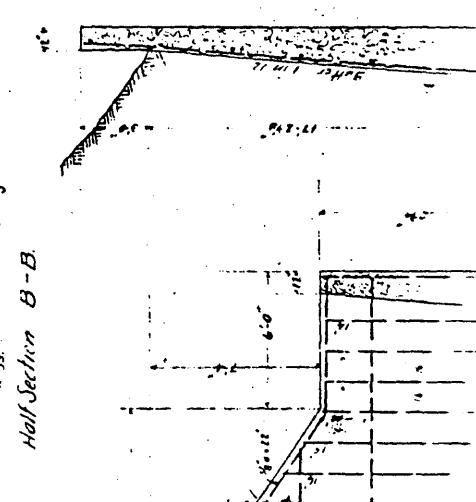
Interstate
Commerce
Bldg. & Bottling Co., Inc.
Los Angeles, Calif.
Los Angeles County
29th Street
Open road 1 mile below
comes under the jurisdiction
of the State of California
and the city of Los Angeles.



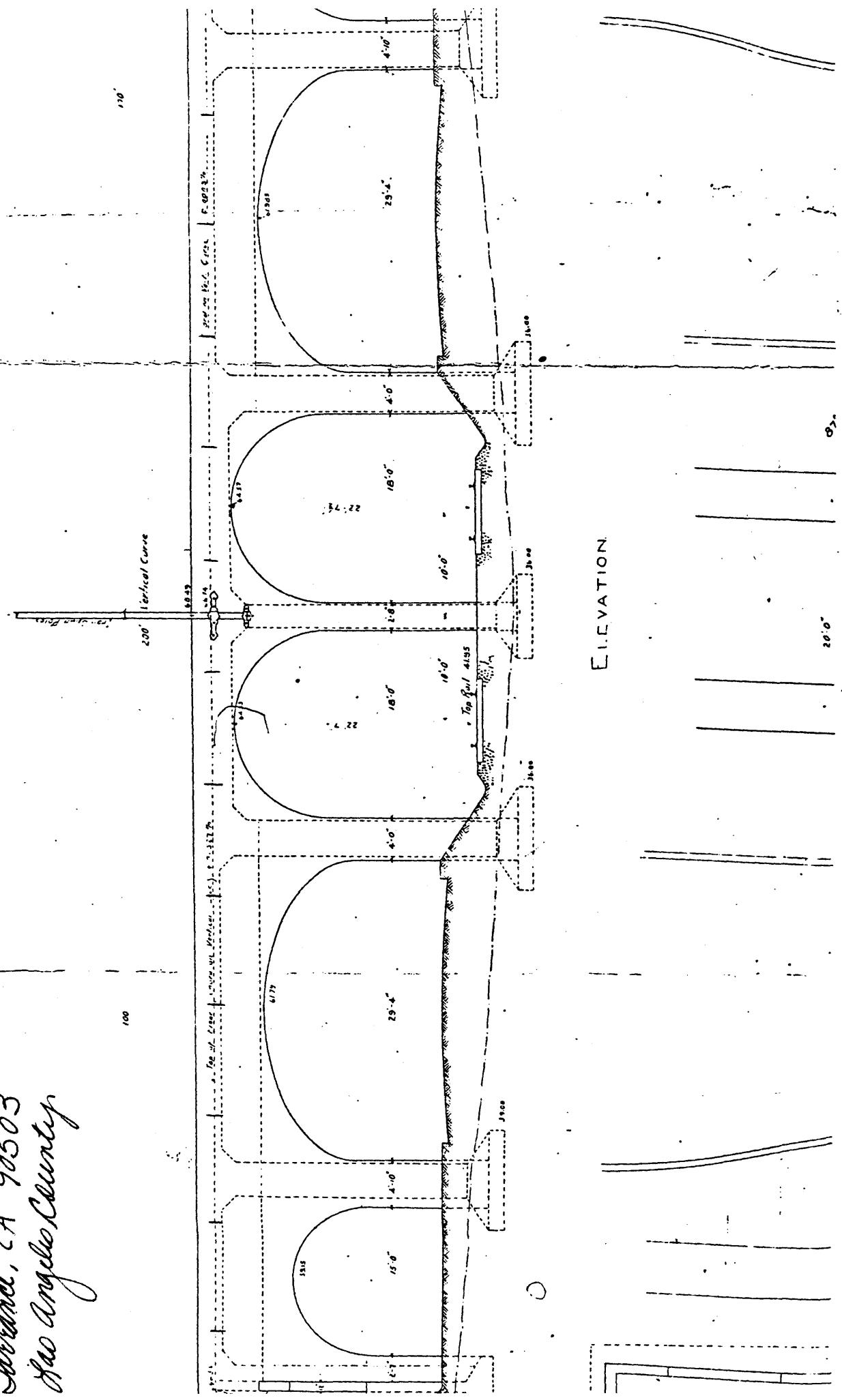
Half Section C-C

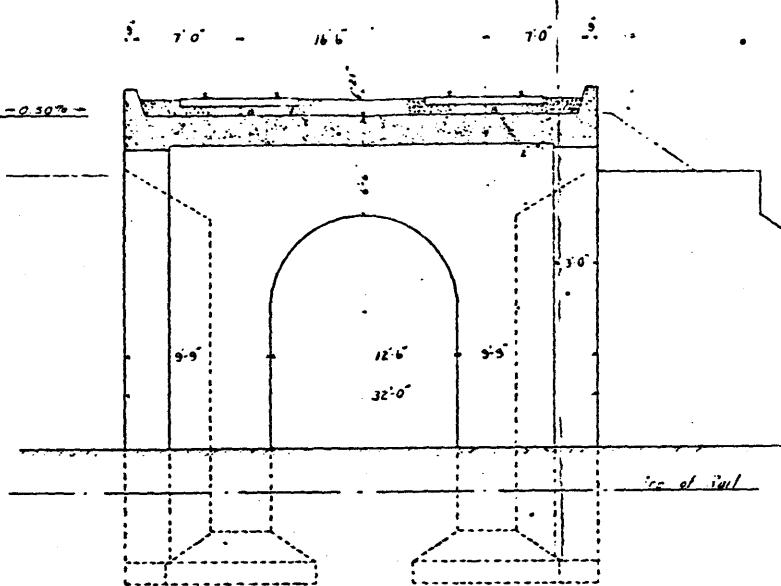
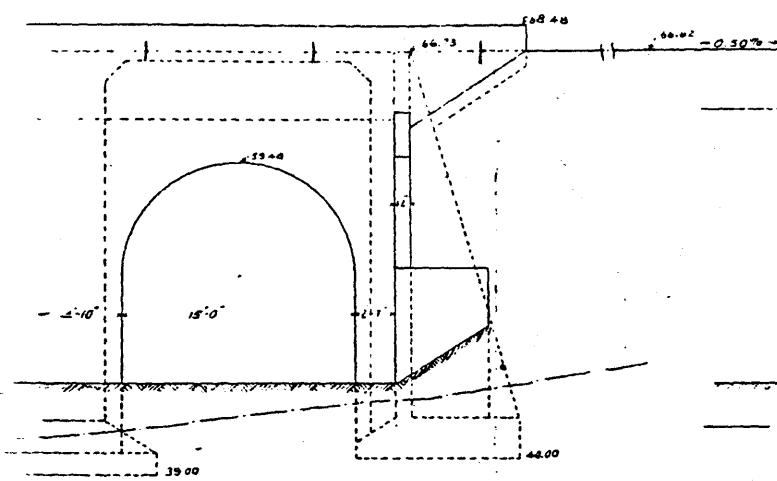


Half Section B-B



Pacific Electric Bridge
Commerce Blvd. & Bone St.
Commerce, CA 90503
Los Angeles County

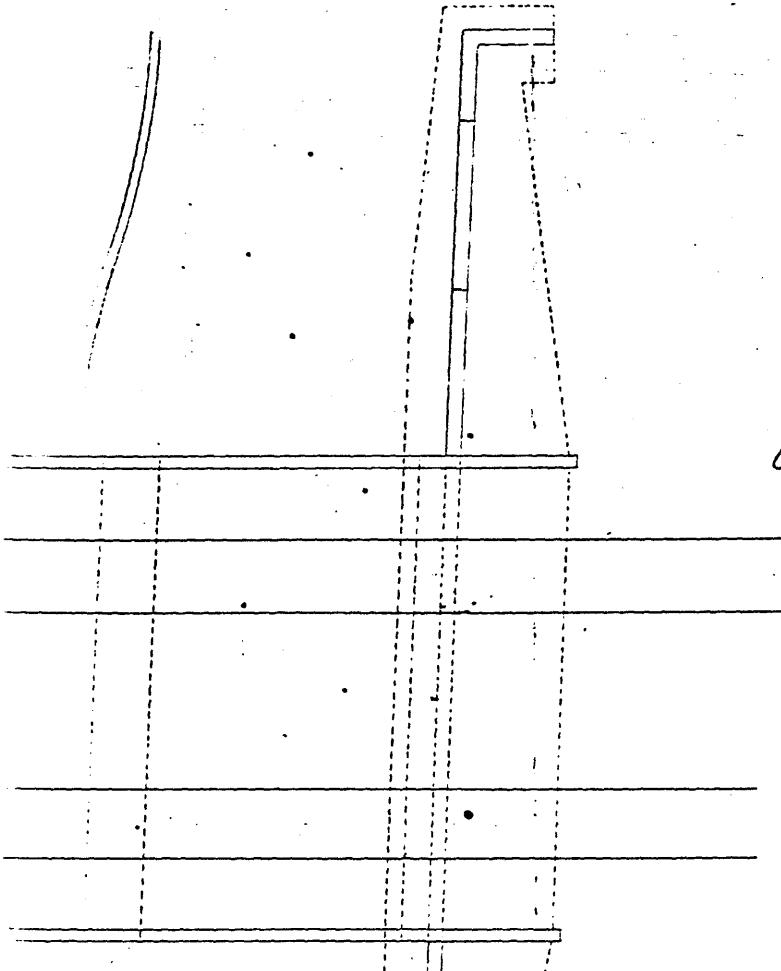




SECTION

Pacific Electric Bridge
Torrance Blvd. + Bow St.
Torrance, CA 90503
Los Angeles County

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TORRANCE LINES
F. De Anza BRIDGE - GENERAL P