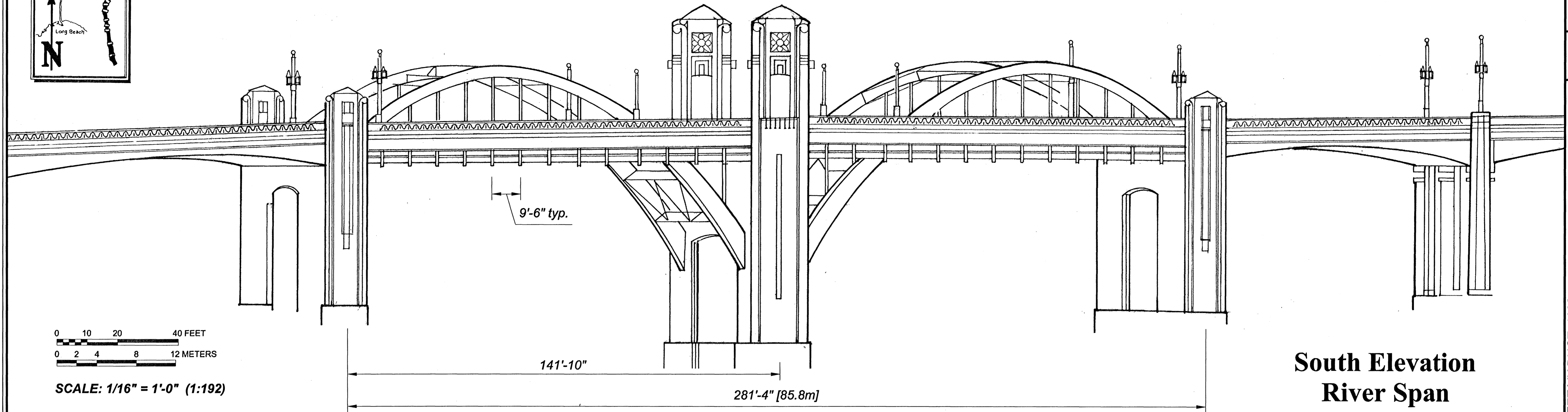
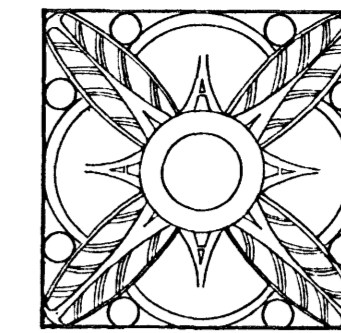


SIXTH STREET VIADUCT

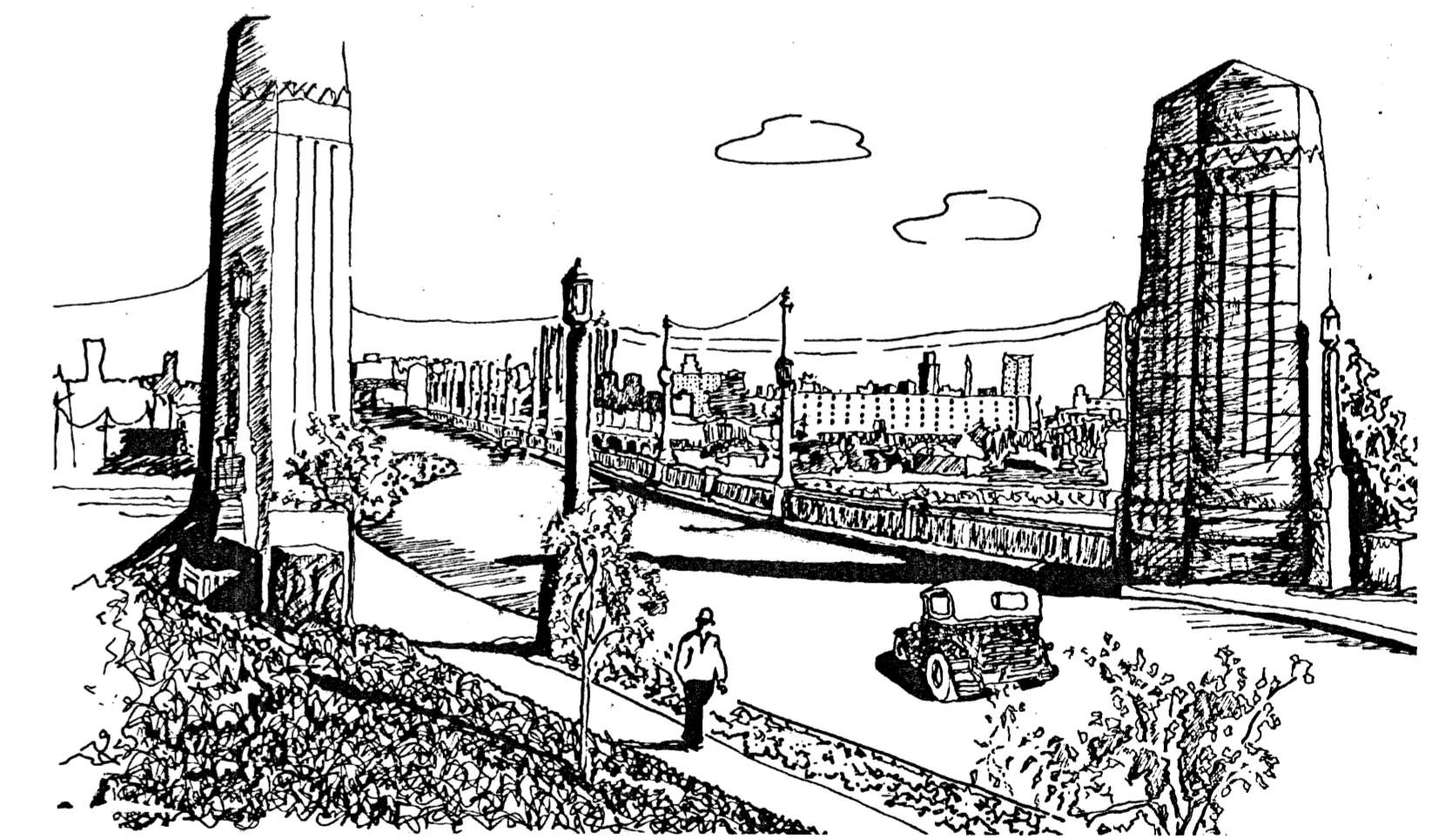


**South Elevation
River Span**

Completed in 1932, Sixth Street Viaduct was the last and longest of the bridges built by the city to span the Los Angeles River. With a total length of 3,546 feet, the viaduct carries Sixth Street over three railroad lines, five city streets and the river. Merrill Butler--a major figure in Los Angeles's bridge construction during the 1920s and 1930s--designed the viaduct on a 4.5% grade in order to gain an 85-foot clearance for the railroads on either side of the river. He spanned the railroads and streets with forty-two concrete girders ranging in length from 54 to 123 feet. His unusual river span consists of two skewed steel arches, each spanning 141 feet. Fixed at a center pier, the arches are continuously tied at road-level.

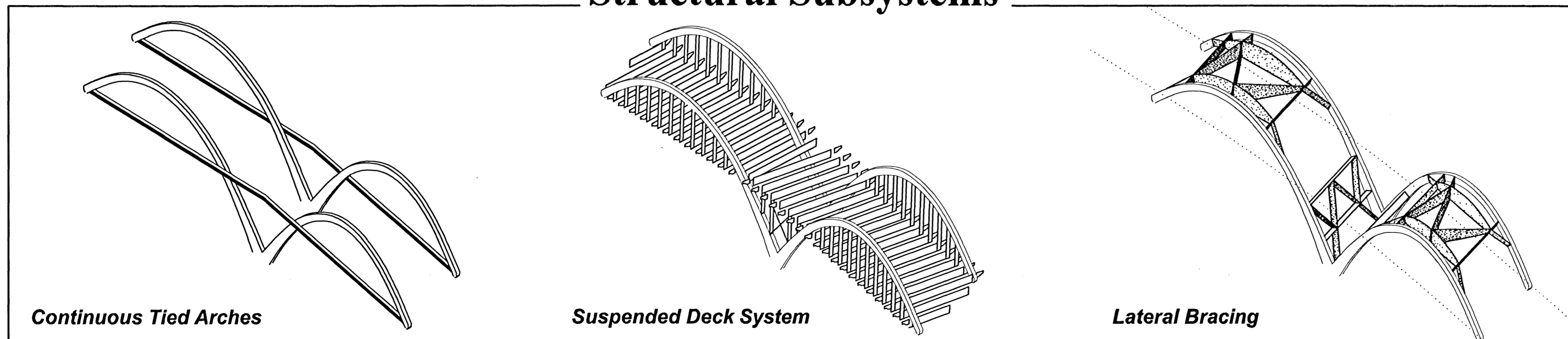
Construction began in 1930 with the proceeds of a \$500,000 city bond, though the bridge eventually cost more than \$2,500,000. Ornament is simple and sparse, reflecting the changing aesthetic of early 1930s Moderne; large pylons at the approaches frame and accent views of the city.

Following the 1989 Whittier Narrows Earthquake the bridge was repaired and enhanced to better endure future quakes. This seismic retrofit strengthened the bridge by adding shear walls at piers and bents, replacing rocker bearings with elastomeric bearing pads, enlarging footings, and installing restrainers. Future retrofits are planned for late 2002.



View from East Approach, ca. 1935

Structural Subsystems

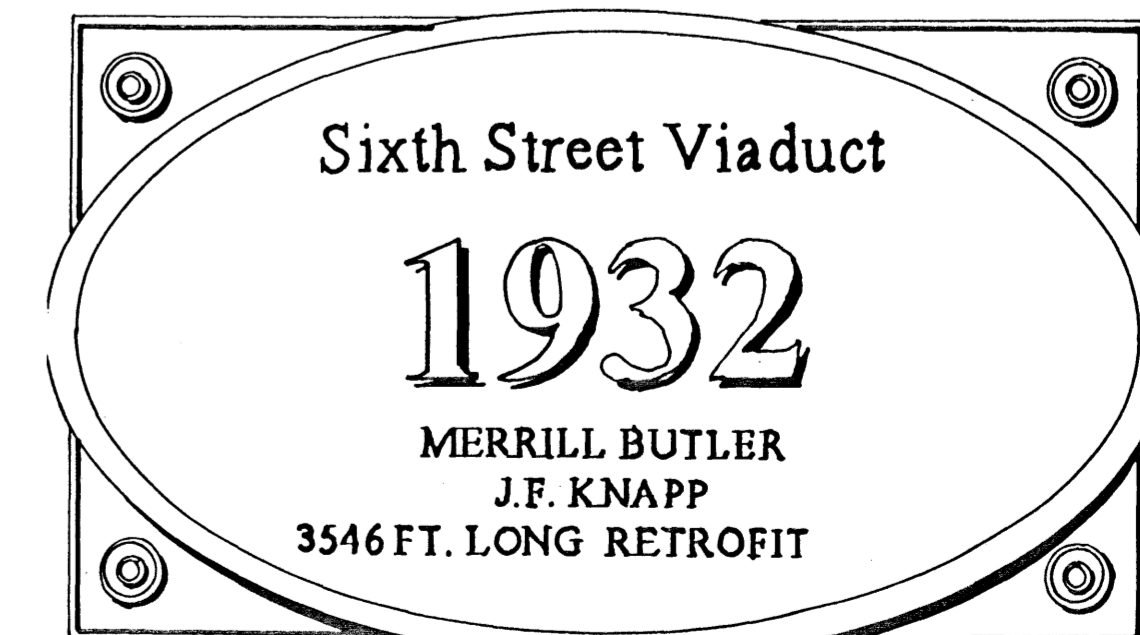


Continuous Tied Arches

Suspended Deck System

Lateral Bracing

Note: See Sheet 2 of 2 for bearing and connection detail.



HISTORIC AMERICAN ENGINEERING RECORD
 SHEET 1 of 2
 CALIFORNIA
 SIXTH STREET VIADUCT, 1932
 SIXTH STREET SPANNING LOS ANGELES RIVER
 LOS ANGELES COUNTY
 LOS ANGELES
 DELINEATED BY: Heather Larson, 2000
 LOS ANGELES RIVER BRIDGES RECORDING PROJECT
 UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE
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6TH STREET VIADUCT CUTAWAY

KEY

1. Steel Arch Span composed of: Top Stay Plate, 18" x $\frac{3}{8}$ "; Longitudinal Diaphragms (side plates), and Lower Stay Plates 18" x $\frac{3}{8}$ " x var. depth; Transverse Diaphragm, $\frac{3}{8}$ " Web Plate and Ls 3- $\frac{1}{2}$ " x 3- $\frac{1}{2}$ " x $\frac{3}{8}$ ".

2. Steel Hanger: 4 Ls 6" x 4" x $\frac{5}{8}$ "; Web $\frac{3}{8}$ " x 30"

3. All Gusset Plates: $\frac{9}{16}$ " (unless otherwise noted)

4. Decorative Concrete Rail

5. Concrete Sidewalk

6. Variable width Concrete Curb

7. Decorative Concrete Fascia Girder

8. Arch Rib Splice

9. Steel Stringers: 15" I Section

10. Continuous Steel Tie: 4 Ls, 2 Plates 10" x $\frac{9}{16}$ "

11. Steel Sidewalk Brackets

12. Steel Floor Beams: 72" x $\frac{3}{8}$ " web, 4 Ls 6" x 6" x $\frac{3}{4}$ "

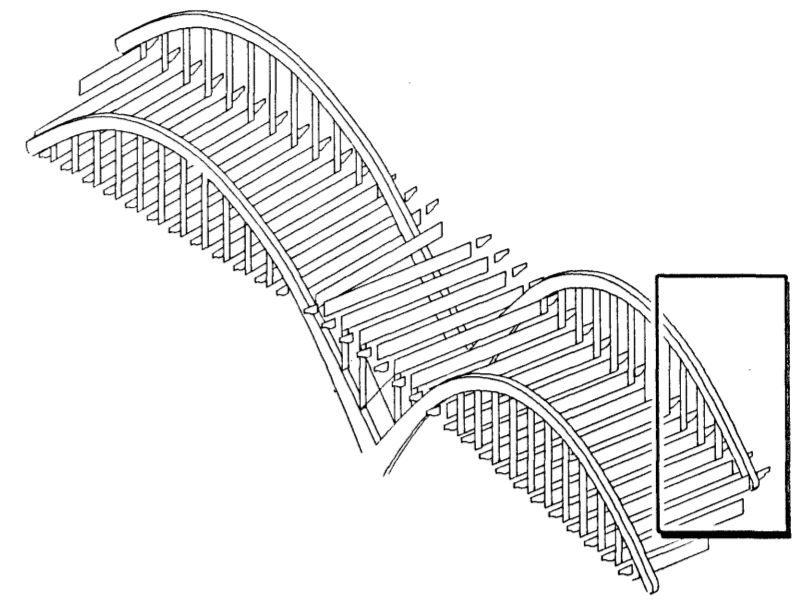
13. Lateral Bracing

14. 9" Diameter Pin

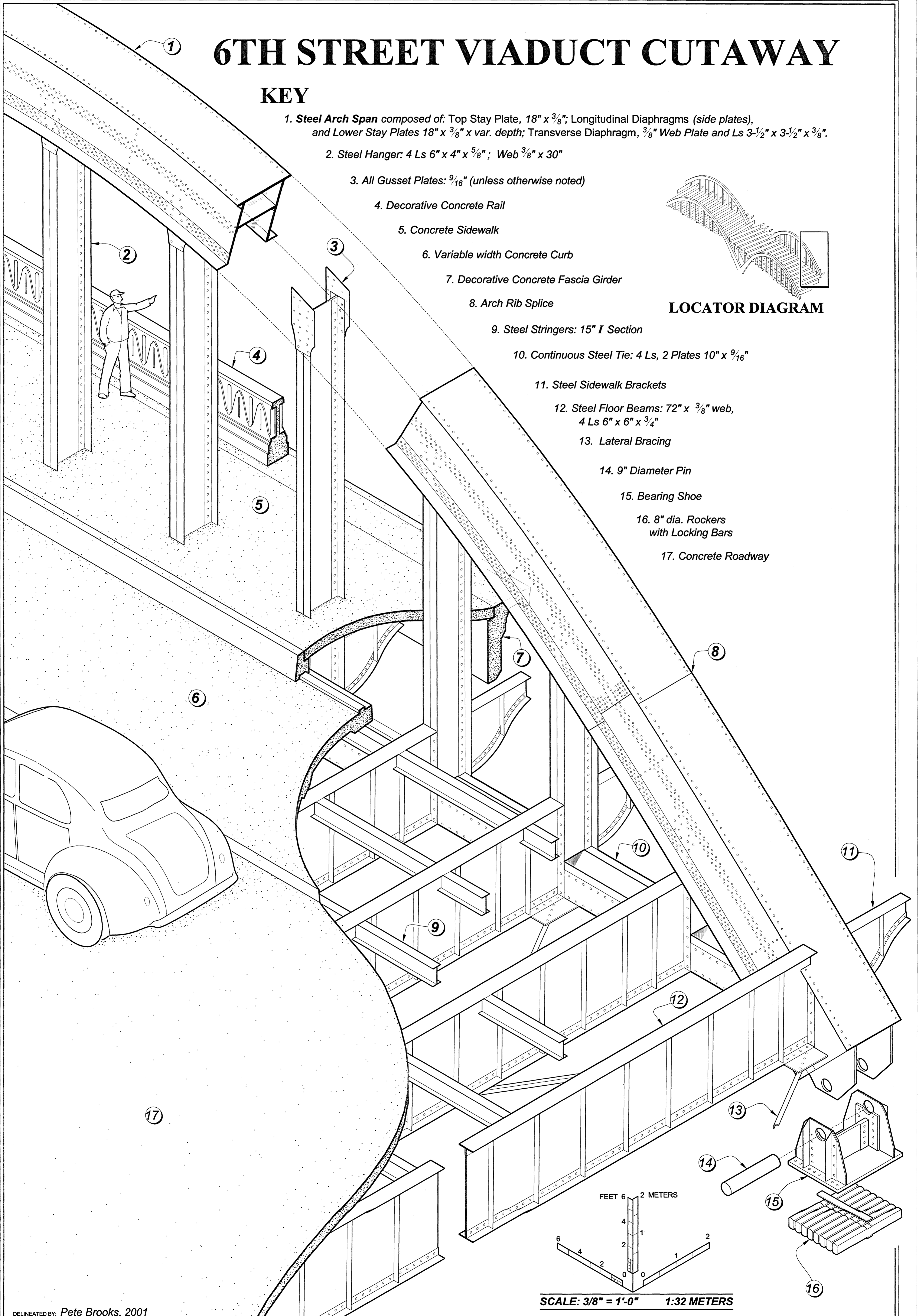
15. Bearing Shoe

16. 8" dia. Rockers with Locking Bars

17. Concrete Roadway



LOCATOR DIAGRAM



DELINEATED BY: Pete Brooks, 2001

LOS ANGELES RIVER BRIDGES
RECORDING PROJECT
NATIONAL PARK SERVICE
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LOS ANGELES

SIXTH STREET VIADUCT, 1932
SIXTH STREET SPANNING LOS ANGELES RIVER
LOS ANGELES COUNTY

CALIFORNIA

SHEET
2 OF 2

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