

**American Society of Civil Engineers, San Diego Section**  
**Historic Civil Engineering Landmark**  
**GEORGIA STREET BRIDGE**



*Story by Emil Rudolph and Phil Kern, Photos by Phil Kern*



Designed by engineer James R. Comly under the supervision of City Engineer William R. Rumsey, the open-spandrel arched concrete bridge, with its flanking blind-arcade reinforced concrete retaining walls and Mission Revival style graceful three-hinged ribbed arches anchored deep in the opposing embankments, also possesses historical significance for its design and engineering. Although the electric streetcars no longer pass under it, the Georgia Street

Bridge still serves as a monumental and artistic gateway between the modern communities of Uptown San Diego and the Greater North Park area.

Completed in 1914, the bridge and its flanking retaining walls represent a unique design solution to a difficult engineering problem. Besides supporting the roadway carrying Georgia Street across the University Avenue Grade Separation Cut, the bridge's thick reinforced concrete ribbed arches have the Herculean task of preventing the cut's reinforced concrete walls from collapsing on the roadway below. Rising some 30 feet above University Avenue, the open-spandrel arch bridge serves as a monumental and artistic gateway between the communities east and west of the historic University Avenue Grade Separation Cut. Now hidden under asphalt pavement, the eastbound and westbound tracks of the San Diego Electric Railway once passed under the bridge along University Avenue.



The bridge's most distinguishing design feature is a set of three parabolic reinforced concrete ribbed arches beneath the roadway deck. Hinged at either end and at mid-span and known as the "Thomas Three Hinge Arch" system, the thick concrete arches support a series of columns that are joined at the top by smaller semi-circular spandrel arches. The ribs and arches support the roadway's concrete deck above a

symmetrical parabolic curve to a point some 30 feet above the roadway at mid-span. Viewed from a distance, the bridge's thick ribbed arches, open-spandrel arched arcade, as well as the roadway's closed rail deck above, combine to give it its monumental appearance.

The Georgia Street Bridge also appears to be the only thing keeping the twin reinforced concrete retaining walls flanking either side of the University Avenue Grade Separation Cut from crashing down upon the roadway below. Each wall runs approximately 680 feet between Park Boulevard and Florida Street along the respective north and south perimeters of University Avenue's 80-foot wide asphalt covered roadway. The truncated parabolic walls range in height from approximately 1 foot at either



end to 34 feet where it reaches the Georgia Street Bridge. Adding stability is a series of engaged pilasters at 10-foot intervals along the wall's surface.

Except for three sections on either end, semi-circular arches connect the pilasters' crowns, forming a blind arcade. The pattern of the blind arcade's semi-circular arches mimics those of the bridge. Also, like the bridge, the retaining walls feature a closed panel railing along its upper edges. Again, like the bridge, these featured an open balustrade prior to being filled in around 1947.

Comly had joined the City of San Diego as Designing Engineer only two years prior to designing the bridge in 1912, after working for railroads, water companies and Mare Island Naval Yard. He was recognized as an innovative designer in the use of reinforced concrete, which was now replacing steel as the preferred material for

bridges. This particular assignment from Rumsey actually included design of three bridges for the growing City: the Georgia Street Bridge, the H Street (now Market Street) bridge over 28<sup>th</sup> Street, and the Woolman Avenue (now Ocean View Blvd.) Bridge over Chollas Creek. The Georgia Street and Market Street structures both provided for rail extensions, and all three bridges featured artistic Mission Revival design cues including arches and open balustrades. The Woolman Avenue Bridge was demolished to make way for the I-15 freeway but the Georgia and Market Street bridges remain to this day, although decay and "maintenance" changes have taken their toll. Following completion of the design effort Comly's position at the City was eliminated, he was discharged and found other employment until 1917, when he joined the U.S. Army Corps of Engineers. After the end of World War I he returned to his former position at the SD&AE Railroad, and then returned to City service from 1920 to 1925. Comly had an extremely productive career as an engineer right up until his untimely death in October 1931.