

Zeitschrift: IABSE reports = Rapports AIPC = IVBH Berichte
Band: 82 (1999)

Artikel: Developments in concrete cable-stayed bridges in the United States
Autor: Loizias, Marcos P.
DOI: <https://doi.org/10.5169/seals-62111>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Siehe Rechtliche Hinweise.

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. Voir Informations légales.

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. See Legal notice.

Download PDF: 19.06.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>



Developments in Concrete Cable-Stayed Bridges in the United States

Marcos P. LOIZIAS

Director of BridgeEng

Sverdrup Civil, Inc.

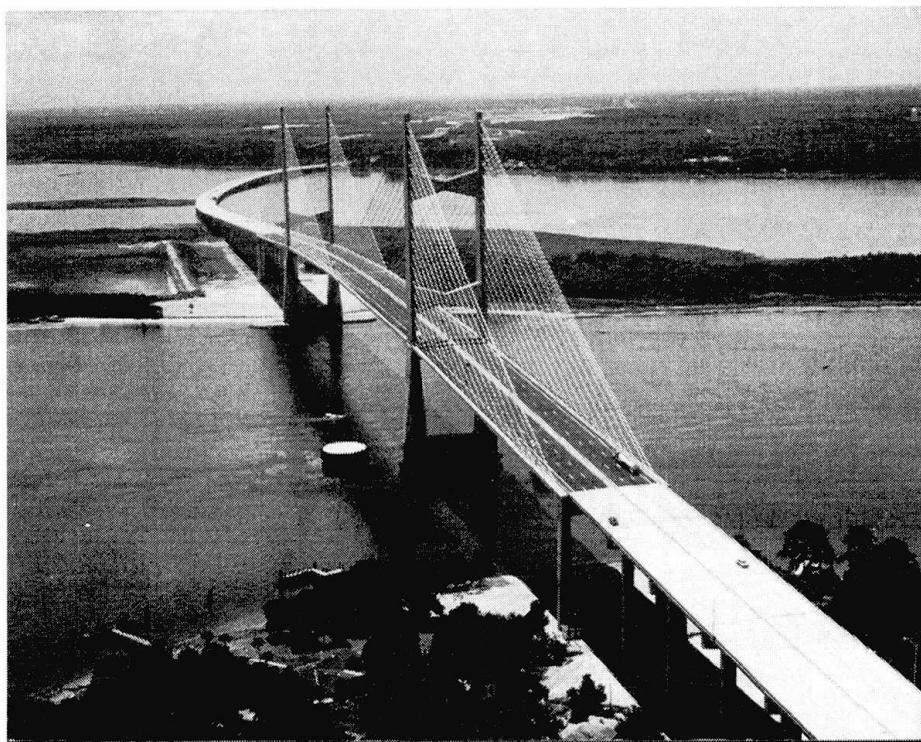
New York, NY, USA

Abstract

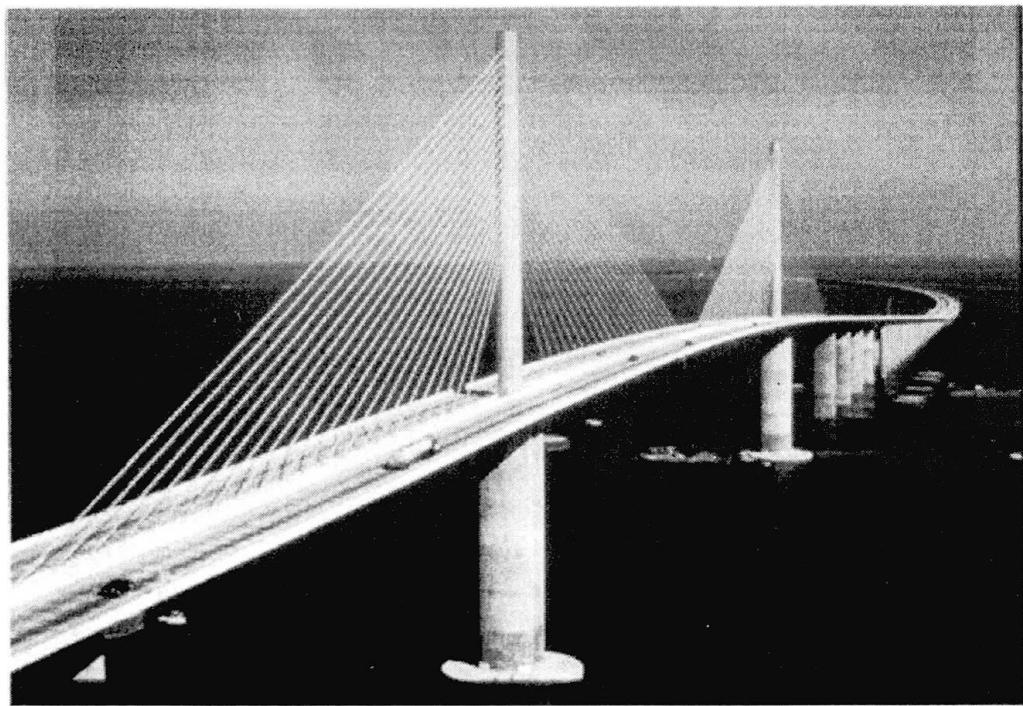
The competitive bidding process between steel and concrete alternatives, previously required by the Federal Highway Administration for bridges costing over \$10 million, stimulated creative developments in the design and construction of concrete cable-stayed bridges in the United States.

While many characteristics of the concrete cable-stayed bridges in the United States are similar to those in other parts of the world, several developments originated and were further refined in the United States. For cast-in-place construction, they include the use of flexible girder and open cross-section constructed by a cable-supported formtraveller. For precast construction, they include the use of delta frames to support separate box girders and provide for a single plane of suspension.

This paper reviews the developments in cast-in-place and precast concrete cable-stayed bridges in the United States. It describes characteristic structural details, aerodynamic considerations and presents the methods of construction of these bridges. Some significant bridges are discussed in detail along with their cost competitiveness with steel alternatives.



The Dame Point Bridge, Florida



The Sunshine Skyway Bridge, Florida