

## EDUCATION

BS - Civil Engineering, 1965, University of Florida  
MS – Civil Engineering (Structures), 1970, City College of New York

## REGISTRATIONS

FL/1970/PE11048

## SUMMARY OF EXPERIENCE

Mr. Garcia has over 50 years of structural engineering experience in both the private and public arena. This experience includes bridges (both of steel and concrete), retaining walls, cut & cover tunnels, port facilities, transit stations and maintenance facilities. Throughout his career, Mr. Garcia has been extensively involved in large, multi-disciplinary projects. While with the Florida Department of Transportation, Mr. Garcia served as District Special Projects Director overseeing the construction of the Sunshine Skyway Bridge, as State Structures Design Engineer (Chief Bridge Engineer), and during his tenure he was involved in the design decisions for most of Florida's major bridges such as the Acosta Bridge, Edison Bridge, Howard Frankland, and many others. On June 30, 2004, he formed his own firm, **Garcia Bridge Engineers, P.A.**, with his partner, Dr. Juan J. Goñi.

**SR 83 (US 331) over Choctawhatchee Bay (FL, District 3):** Peer Review of the substructure and superstructure for a 12,055 ft. long Design/Build bridge. The main span consists of a 200 ft long FIB-84 girders. Bridge completed.

**SR 10 (US 90) over Marquis Bayou (FL, District 3):** Evaluation of the existing 1937 bridge to accommodate a Link Belt 238 Crawler Crane (150 ton) on the deck to be used to drive the new bridge piles and to demolish the existing bridge. The project was completed in 2015.

**SR 30 (US 90) at Cody Ave. (FL, District 3):** Girder erection drawings and girder bracing design for FIB-96 girders with a 191 ft. span. The project is under construction.

**NB Capital Circle NW/SW (FL, District 3):** Prepared all details and calculations for the demolition of a three span beam bridge over the CSX Railroad. Details included locating the cranes, determining the size and weights of the members to be removed, and the design of shields to protect the railroad from possible debris.

**CR 127 (E2R21) (FL, District 2):** Design of a 5 span, cast in place, reinforced concrete slab bridge as part of a Design/Build project. The project was completed in 2014.

**Capital Cascade Trail Project (FL, City of Tallahassee):** Design of about 35 retaining walls, two signature pedestrian bridges, and 3500 linear feet of reinforced concrete box culverts. The project was completed and opened in 2014.

**Franklin Boulevard Drainage Improvement (FL, City of Tallahassee):** Develop design criteria for the improvements to the drainage along the boulevard. Construction was completed early 2013.

**Doctor's Inlet Widening (FL, District 2):** Provide Construction Engineering Services to the contractor, Archer Western, including analysis of existing girders, VECP, and foundation analysis.

**Hart Bridge over St. Johns River (FL, District 2):** Provided engineering services to the District on a District Wide Structure project on this steel through truss major bridge. Project completed 2012.

**District 4 D/W Structures Project (FL):** Provided engineering services as a subconsultant to H. W. Lochner. The project involved the review of the load rating for a steel girder bridge, Big John Monahan, over the St. Lucie Canal.

**Roslyn Viaduct (Long Island, NY).** Provide technical support to the contractor during the construction of a twin precast concrete segmental viaduct.

**Metrorrey Line 2 Extension (Monterrey, Mexico).** Mr. Garcia provided technical support for the re-design of the 6.6 km elevated extension of an existing passenger rail line. The re-design changed the original elevated girder viaduct design to a post-tensioned concrete segmental viaduct; the re-design of the foundations from piles to a drilled shaft system.

**I-95 Lake Worth Viaduct (FL, District 4):** Mr. Garcia provided Construction Engineering Services to the Contractor, Astaldi Construction Corporation, including design of erection equipment and foundation analysis, and foundation design.

**Red River Bridge Inspection (Boyce, LA):** Mr. Garcia was one of two team leaders responsible for the inspection of the interior portion of the cast-in-place concrete segmental spans of LA 8 over the Red River for the Louisiana DOTD. The work involved hands-on visual inspection of the interior surfaces, anchorage blocks, diaphragms as well as overseeing a subcontractor locating ducts, drilling into ducts, and endoscopy same to detect voids in the tendons.

**SR9A/I-295/I-95 Interchange (FL, District 2):** As office manager, Mr. Garcia oversaw the development of all shop drawings for all the precast segments. The project contains 3 curved precast segmental ramp structures constructed by the balanced cantilever method with cranes. The project is nearing completion and should be opened to traffic shortly.

**Tampa-Hillsborough Crosstown Expressway (FL, District 7):** The work involved the development and design of the erection equipment (both the undreslung girders and the pier bracket supports), the preparation of all the shop drawings, the development of the Geometry Control Plan, and generation of all the casting sets.

**Sunshine Skyway Bridge (FL, District 7):** Mr. Garcia served as District Director of Special Projects with the sole responsibility of overseeing the construction of the Skyway.

**Acosta Bridge Replacement, Jacksonville (FL, District 2):** As Florida's Chief Bridge Engineer, Mr. Garcia participated in the initial studies of the alternate concrete and steel structures. After the studies, Mr. Garcia participated in the review of the final designs and during the construction of the winning alternate.

**Texas SH 130 (TX):** Mr. Garcia was the principal structural engineer during the bidding process. After the project was awarded, Mr. Garcia continued as principal structural engineer laying out the criteria for the design of some 126 bridges for this \$1.4 billion Design/Build project.

**Carolina Bays Parkway (SC).** Mr. Garcia directly managed the design of 23 bridges on this \$240 million Design/Build project. The work involved actual design, on-site coordination of the design with the contractor, resolving on-site issues regarding the design, dealing with the South Carolina DOT, and other related issues.

**I-95 over the Piscataqua River, (Portsmouth, NH to Keenes, ME):** Senior Engineer for the design of major steel through truss bridge carrying Interstate 95 over the Piscataqua River from Portsmouth, NH to Keenes, ME.

Mr. Garcia has a number of publications to his credit. Also, he has made numerous presentations at a number of National Conferences related to bridges, their design and their construction. In addition, Mr. Garcia has participation in (and continues to participate in some) a number of committees such as those listed below:

PCI Bridge Committee (active)

PCI Girder Stability Committee (active)

Member of AREMA, Subcommittee 8, Bridge Structures

Chairman, NCHRP 12-37, "Transverse Cracking in Newly Constructed Bridge Decks"

Chairman, FDOT Corrosion Task Force

Vice Chairman, AASHTO Technical Committee, T-10, Prestressed Concrete; Member, AASHTO Technical Committee, T-8, Movable Bridges (1988 – 1993)

Member, Expert Task Group, SHRP C-104 Project, "Protection and Rehabilitation for Existing Reinforced Concrete Bridges"

Member, Research Council on Curved Bridges, FHWA

Member, FHWA Test and Evaluation of Bridge Railings, Pooled Study No. 2-(134)

Member, AASHTO Ad-Hoc Committee on Ship Impact Forces

Member, PTI Grouting Specifications Committee