



Registrations:

Florida P.E. # 78491 (2014)

Education:

University of South Florida
M.S. Degree in Structural
Engineering (Honors)

Experience:

15 years with 9 years at SBC

Memberships:

FES, ACEC-FL, TeamFL,
ASCE, ASHE, and AISC

Design Specifications:

AASHTO, FDOT Structures
Design Guidelines, LRFD LTS,
AISC, ACI, AWS, and NDS

Professional Profile:

Mr. Spicer has 15 years of engineering experience in bridge design and miscellaneous structures within the state of Florida. He has worked on projects for FDOT, Florida's Turnpike Enterprise, contractors, cities, and counties. His work includes bridge design, miscellaneous structures, bridge load ratings, plans preparation, project management, shop drawing review, value engineering, and bridge development reports. Mr. Spicer was previously the technical lead for GAI Consultants in Orlando where his primary responsibilities were managing projects, checking designs and plans production. He started Spicer Bridge Consultants 9 years ago and is currently the head of structures for the firm.

Design Experience:

- 40+ Bridges (Prestressed Concrete, CIP Concrete, Steel, Timber, Pedestrian)
- Bridge Load Ratings (Leap Bridge, FDOT Software, DESCUS, Midas, MDX)
- Prestressed Concrete (Prestressed Beams, Piles, Strain Poles)
- Concrete Design (Slabs, Beams, Columns, Footings, Traffic Railings, Aesthetic Panels)
- Steel Design (Plate I-Girders, Rolled I-Girders, Tub Girders, Cross Frames)
- Timber Design (Bridges, Boardwalks, Observation Decks, Temporary Structures)
- Signal Design (Mast Arms, Trusses, Span Wire Assemblies, Hanging Box)
- Box Culvert Design (New Culverts, Extensions, Load Ratings, Customized Drainage Boxes)
- Sign Structures (Cantilever, Overhead, DMS, Ground, Solar, Customized Temporary Signs)
- Retaining Walls (Sheet Pile, Soldier Pile, Gravity, CIP Cantilever, MSE)
- Post Design (Temporary Bracing, Temporary Walls, EARs, Shop Drawings)

Project Experience:

Continuing Services Bridge Design in District 1, Florida (08/23 – Present)

The project involves the replacement of 3 off-system bridges over waterways throughout the District. Bridge types include Florida Slab Beams and Florida-I Beams. As Project Manager, Gary is responsible for coordination with FDOT and subconsultants, managing TWOs, checking designs, checking load ratings, plans production, and post design services.

I-395 / SR 836 / I-95 Design-Build in Miami-Dade County, Florida (06/20 – Present)

The project involves approach slab replacements for 5 bridges, railing retrofits for 3 bridges on I-95, MSE walls, anchored soldier pile wall, and soil nail wall. Several of the railing retrofits required custom guardrail transitions and a Technical Special Provision (TSP) was created for high-early strength concrete to reduce lane closure time along I-95. The anchored soldier pile wall had heights up to 30', CIP concrete with MSE facing, limited access for construction, and required anchoring through a failing existing MSE wall. As Engineer of Record, Gary was responsible for coordination, checking designs and plans production.

SR 46 from East of CR-15 / Upsala Rd to French Ave in Seminole County, Florida (11/21 – Present)

The project involves the analysis and load rating of 2 existing bridges over CSX RR to provide a barrier separated multi-use walkway. The existing bridges were 3-span, highly skewed, AASHTO beam bridges. Miscellaneous structures included an existing diagonal span and box span with concrete strain poles, 2 existing mast arms and 6 new mast arms. As Engineer of Record, Gary was responsible for coordination with FDOT and consultants, checking designs, and plans production.

S-169W-MS with Trash Rakes (Manatee Structure) for SFWMD (04/21 – Present)

The project involved a 76' long (2-span @ 36') precast flat slab pedestrian bridge over the S-169W canal that served as a walkway, manatee barrier, and vegetation removal system. The bridge was supported on 18" concrete piles and steel sheet pile walls anchored with concrete blocks. Two 12.8' wide trash rakes were mounted against the bridge deck to carry vegetation from the canal to a conveyor belt mounted on the bridge. Custom removable steel grates for manatee barriers were designed for the remainder of the canal using picket rods, channels, w-shapes, and plates which were supported by the bridge deck and sheet piling at the canal bottom. As Engineer of Record, Gary was responsible for coordination, developing concepts, constructability reviews, technical specifications, design development reports, checking designs and producing plans.

District-Wide Structural Support for FDOT District 1 & District 5 (07/19 to Present)

These projects involve the design and preparation of plans for transportation related structures throughout the Districts. As project manager for Spicer Bridge Consultants, Gary is responsible for coordination, assigning design tasks, and checking designs of bridge and miscellaneous structures to support the District's Structures Department.

FDOT Approved Specialty Engineer (02/16 to Present)

Gary is actively working with 30+ contractors throughout Florida solving construction issues, value engineering, and designing temporary structures. This work includes designing temporary signals with concrete strain poles and guy wires, temporary beam bracing, overhang formwork, temporary walls, load rating of bridges for crane loading, girder erection plans, ITS foundation design, Engineering Analysis Reports (EAR) for bridge and sign structure construction issues, and redesign of various structures including bridge substructures for out-of-tolerance piles, bridge substructures for precast bent caps, sign structures, drainage structures, permanent walls, and wall anchors.

Orange County Continuing Engineering Services Contract (04/21 to Present)

This project involves the design and preparation of plans for structures throughout Orange County. Tasks included designing and detailing bridge rehabilitations for L.B. McLeod Rd over Shingle Creek and the West Orange Trail over US 441. The L.B. McLeod bridge was 5 spans consisting of steel rolled beams and hollow core slab units separated by a longitudinal joint. The rehabilitation involved designing and detailing girder corrosion repairs, strengthening of existing girders, load rating of the steel girders and hollow core units, and the replacement of bearing pads, sole plates, and anchor bolts. The West Orange Trail bridge was 24 spans consisting of switch back ramps with double tee beams, precast flab slab switch backs, CIP pan joist slabs, and a main steel truss. The rehabilitation involved strengthening existing columns, repairing beam ledges with corbels, expansion joint replacement, crack repair with methacrylate, slope protection repair, and recoating of the steel. Gary performed field reviews, coordination, and quality control.

City of Tallahassee Continuing Stormwater Engineering Services Contract (06/16 to 07/20)

This project involved the design and preparation of plans for drainage related structures throughout the City of Tallahassee. Tasks included designing and detailing a 3-span flat slab bridge for Weems Road over Weems Pond Outfall and a 23'x31'x20.5' custom junction box for Madison St / Gaines St Supplemental Stormwater. The Weems Road bridge had 2 lanes, a raised sidewalk, and a water main mounted to the back side of the traffic railing. Steel piles with large spacing were used to span over two large existing utility pipes running parallel under the bridge. The custom junction box included a flex rake for trash removal, overflow weir, and openings for box culverts. As Engineer of Record, Gary was responsible for coordination, checking designs, producing plans and post design.

SR 600 / US 92 Pedestrian Improvements in Volusia County, Florida (07/14 – 06/15)

The project is currently open to the public of International Speedway which includes a pedestrian bridge consisting of a 182' steel truss supported with 8 levels of switchback ramps. The pedestrian bridge needed to meet ADA requirements, have attachments for lighting and speakers, drainage conduit, and 50' aesthetic wings on either side of the main span. Extensive coordination was required to manage the International Speedway, FDOT, truss fabricators, a future extension into a shopping plaza, lighting and speaker conduits, and the utilities in this highly developed area. Spread footers to avoid utility conflicts were also required for custom light poles. As technical lead, Gary's responsibilities included developing proposal concepts, proposal design calculations, proposal quantities, producing or checking all the design calculations, producing plans, post design services, attending meetings with FDOT and contractors, and coordinating with utilities, drainage, lighting, and geotechnical engineers.

I-95 Widening from North of SR 44 to North of US 92 in Volusia County, Florida (09/14 – 12/16)

The project included 20 Florida I-Beam bridges with wrap around MSE Wall. 6 of the bridges required complex geometry with large skews (> 40 deg), horizontal curves, and variable beam lengths. Miscellaneous structures included 13 box culverts, 17 cantilever signs, 12 overhead signs, 5 dynamic messaging signs, and 4 bridge mounted signs. Gary was responsible for proposal concepts, proposal quantities, plans production and checking calculations for 9 bridges, 5 retaining walls, and miscellaneous structures.

SR 589 (Veterans Expressway) Widening from Sugarwood Toll to Van Dyke Rd in Hillsborough, Florida (10/14 – 12/16)

The design-build project for the Florida Turnpike Enterprise included 8 bridge widenings with Florida I-Beams, AASHTO beams and roadway MSE walls. 4 of the bridges had complex geometry using large skews, horizontal curves, and proposed bridge deck over existing bridge. Miscellaneous structures include 6 cantilever signs, 11 span signs, DMS walkway, 4 mast arms, and 1 CIP retaining wall. Gary was responsible for proposal concept plans, design, and quantities along with quality control for final design and plans.

CR 210 Bridge over US 1 and FEC Railroad in St. Johns County (11/12 – 08/14)

This project received the 2015 FDOT Best in Construction award. The project involved a two span (201' and 169') continuous steel plate girder bridge. As design lead, Gary was responsible for QC of designs and plans, and post design services.