THOMPSON ENGINEERING GROUP, INC

Michael Thompson, MSc, P.E.

FLA License No. 47509 (1994)
BSCE from City College of New York (CCNY) 1988 (Honors)
MSCE from Columbia University in 1991(Honors)
Years of Experience 32

Mr. Thompson has thirty-two years of structural engineering experience in the design of bridge structures. His work includes bridge inspection, bridge design, bridge load rating, miscellaneous transportation structures, plans preparation and specifications, economic analysis and reports (BDR). Mr. Thompson presently heads up the Structural Department in our Orlando Office and has actively worked on the following bridge projects.

EXPERIENCE

Category –4.1.1, 4.1.2, 4.2.1 & 5.4

US 192 at Hollywood Blvd. at both Wickham Rd & Evan Road– FDOT
Senior Structural Engineer responsible for custom design and details for mast arm types other than the FDOT standard configurations. Calculations or details for any attachments to the mast arm pole (i.e., pedestrian head bracket detail, luminaries, etc.). Plans for Mast Arm Special Details Plan Sheet and mast arm design, including post design services.

SR 3 North Courtney Parkway at Mustang Way – FDOT
Senior Structural Engineer responsible for custom design and details for mast arm types other than the FDOT standard configurations. Calculations or details for any attachments to the mast arm pole (i.e., pedestrian head bracket detail, luminaries, etc.). Plans for Mast Arm Special Details Plan Sheet and mast arm design, including post design services.

I-4 Ultimate-SGL Constructors – Orange & Seminole County – FDOT
Senior Structural Engineer responsible for the design of multiple overhead sign structures, critical helical anchor sheet pile, bridge mounted sign structures and structural engineering inspection report over the 26 miles of project (Areas 1 thru 4). Plans development to include general notes, standard table, typical section, wall control drawings and wall elevation view.

CR 484 at SR 93 (I-75) and CR 475A – Marion County – FDOT
Senior Structural Engineer responsible for bridge abutment retaining wall, overhead sign structure design, strain pole design, critical sheet pile design, bridge mounted sign structures and mast arm design, including post design services. Plans development to include general notes, standard table, typical section, wall control drawings and wall elevation view.

OIA South Access Road Bridge over Boggy Creek – OOCEA
Senior Structural Engineer for the new northbound bridge to be constructed separate, parallel and adjacent existing northbound bridge with a 2'-5 1/2" gap separating the existing and new bridge coping. The new bridge structure is a two span bridge structures over Boggy Creek providing a vertical clearance of 26'-5 ¾" over the railroad and 22'-10 ¼" over Boggy Creek roadway. The bridge superstructure is continuous over the two spans (136'-6" and 154'-3"); with AASHTO

Type VI beams supported on multi-column pier cap and footing located on steel 18" pretressed precast concrete piles. Mr. Thompson's responsibilities includes the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LRFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, placement of end bent piles to avoid conflict with existing MSE wall straps, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, MSE wall elevation calculations and control wall design, ground mounted sign structures, overhead cantilever aluminum truss sign structures, cantilever sign structure, high mast poles, lighting poles, single and double mastarms and performed bridge load rating.

Good Homes Road over SR 408 – OOCEA

Senior Structural Engineer for the outside widening of the existing Good Homes Road complex geometrical two span bridge structures over SR 408 to adequately accommodate future traffic demands induced by the construction of the proposed new SR 408 westbound on ramp and eastbound off ramp at Good Homes Road and realignment of the existing eastbound on ramp. The bridge superstructure is continuous over the two 100 foot spans, with AASHTO Type IV beams supported on hammerhead pier cap and footing located on steel H-piles. Mr. Thompson's responsibilities includes the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LRFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, placement of end bent piles to avoid conflict with existing MSE wall straps, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, MSE wall elevation calculations and control wall design, ground mounted sign structures, overhead cantilever aluminum truss sign structures, cantilever sign structure, high mast poles, lighting poles, single and double mastarms, architectural coordination, performed bridge load rating, checked toll plaza design and structural plans to accommodate a minimum wind velocity of 110 MPH using the current Florida Building Code, including wind pressures associated with building corners, roof, door and window openings.

SR 414 Maitland Extension over CR 437A– OOCEA
This project involved a new alignment and the design of two new bridge structures over CR 437A. Both structures are single span bridge structure with AASHTO FUB beams superstructure, hammerhead pier substructure and MSE walls at end bents. The bridge geometry was a complex geometry which involves super-elevation transitions, skew bents and spiral curve. Mr. Thompson was responsible for bridge design, bridge load rating, plans preparation, computation book and quality control.

SR 408 over Oxalis Drive Bridge Widening– OOCEA
This project involved the widening of the existing SR 408 bridge structures over Oxalis Drive to adequately accommodate future traffic demands; resulting in five lanes in each direction. This structure is a three span bridge structure with AASHTO beams superstructure and hammerhead pier substructure. For aesthetical treatment, wall claddings were used to enclose the end spans. Mr. Thompson was responsible for bridge design, bridge load rating, plans preparation, computation book and quality control.

SR 417 over Moss Park Bridge Widening – OOCEA
Senior Structural Engineer for the outside widening of the existing SR single span 417 bridge structures over Moss Park Road to adequately accommodate future traffic demands induced by the construction of the proposed interchange at Moss Park Road. The bridge superstructure is a single span bridge structure of 121 feet, with AASHTO Type V beams supported on end bent pile caps supported on steel H-piles. Mr. Thompson was responsible for the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LRFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, performed bridge load rating, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, MSE wall elevation calculations and control wall design, ground mounted sign structures, overhead cantilever aluminum truss sign structures, cantilever sign structure, high mast poles, lighting poles, design of single and double mastarms.

SR 436/SR 528 Interchange Improvements
This project is a design-build project which involved major improvement to the existing interchange. Mr. Thompson was responsible to provide box culvert design, several walls design, cantilever sign structures, mono tubes sign structures and wall mounted sign structures.

SR 408 Bridge Widening- Orange County, Florida. Senior Structural Engineer for this project that involved the widening of **seven** four span bridge structures on SR408 to adequately accommodate future traffic demands. The bridge superstructure is continuous, with varying AASHTO combination of Type III or IV beams supported on hammerhead or multi-column pier cap and footings located on steel H-piles. Mr. Thompson's responsibilities on this project included the preparation of bridge design criteria, preparation of all bridge construction plan

sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LRFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, performed bridge load rating, MSE wall elevation calculations and control wall design, ground mounted sign structures, overhead cantilever aluminum truss sign structures, cantilever sign structure and mastarms.

Western Beltway- Part C - Orange County, Florida. Senior Structural Engineer providing bridge design computations, plans preparation, specifications, estimates and quality control for this project which involved a new alignment from Reaves Road to Schoefield Road with **ten** new bridge structures primarily single span or two spans AASHTO FUB, Type IV and VI beams. The bridge superstructure supported multi-column pier cap and footings located on prestressed piles. Mr. Thompson's responsibilities included the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LRFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, performed bridge load rating , MSE wall elevation calculations and control wall design, ground mounted sign structures, overhead cantilever aluminum truss sign structures, cantilever sign structure, high mast poles, mastarms, architectural wall design coordination at bridge abutment.

S.R. 417 Bridge Widening over E-4 Canal- Orange County, Florida. Senior Structural Engineer providing the bridge design computations, plans preparation, specifications, estimates and quality control for this project which involved the bridge structure, which consisted of four spans supported on supported AASHTO Type IV beams for an overall bridge length of 332 feet (83'-0" per span). The new pile bent caps were designed to dowel into the existing bent caps. Mr. Thompson's responsibilities included the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, beams design, elastomeric bearing pads, computation

of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, intermediate bent design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, performed bridge load rating, development of loads such as braking force, centrifugal force, temperature force, wind on structure, beam dead load, beam live load with appropriate distribution factors based on each live load position, wind on live load all which are inputted into the STAAD model to design intermediate bents.

S.R. 60A Bridge Replacement over CSX & Polk Street- Polk County, Florida. Senior Structural Engineer, I was responsible for bridge design computations, plans preparation, specifications, estimates and quality control for this project that involved the widening of SR 60A over CSX and Polk Street from two lanes to four lanes to adequately accommodate traffic demands. The new bridge structure was designed to be constructed in two phases. Phase I involved the construction of the new bridge parallel to the existing bridge structure and demolishing of the existing bridge for phase II construction. This superstructure consists of simple supported AASHTO Type VI & IV beams respectively. The bridge over CSX is a two span structure of 286'-0", supported on multi-column pier with crash wall protection supported on 18" square prestressed concrete piles. The bridge over Polk Street is a single structure of 86 feet. Both bridge structures are designed with MSE walls at their abutments. Mr. Thompson was responsible for the preparation of bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, beams design, elastomeric bearing pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, analysis of existing beams and pier cap, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, performed bridge load rating ,MSE wall elevation calculations, control wall design and crash wall design.

I-95/Malabar Road Improvement- Brevard County, Florida. The widening of existing Malabar Road to facilitate six lanes of traffic in each direction. This project required the demolition of the Interstate 95 bridge above Malabar Road. The new bridge design required construction in three phases to prevent any interruption to existing traffic. The 40 degree skew continuous superstructure bridge is located on two spans of 105 feet per span, with AASHTO IV beams supported on multi-column pier cap and footings located on 18" prestressed piles. Responsibilities included the preparation of BDR, bridge design criteria (metric system), preparation of all bridge construction plan sheets, identify all necessary pay items and

computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, beams design, elastomeric beading pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed GT-STRUDLE model to design end bents to determine flexural and shear reinforcement requirements, developed in-house spreadsheet template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the GT-STRUDLE software to design intermediate pier, MSE wall elevation calculations and control wall design.

I-75 Bridge Widening- Sumter County, Florida. Project Engineer for this project which involved the widening of **five** bridges on I-75 to adequately accommodate future traffic demands. The 180 feet long skew bridge of four equal spans superstructure is continuous, with AASHTO Type II beams supported on multi-column pier cap and footings located on steel H-piles. Mr. Thompson was responsible for the development of bridge design criteria; superstructure and substructure bridge design; and performed quality control on bridge plans. Mr. Thompson was responsible for the preparation of BDR, bridge design criteria (metric system), preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, beams design, elastomeric beading pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed GT-STRUDLE model to design end bents to determine flexural and shear reinforcement requirements, developed in-house spreadsheet template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure and wind on live load to be inputted into the GT-STRUDLE software to design intermediate pier.

World Drive Extension- Osceola County, Florida. This project involved the design of a new roadway alignment from Interstate 4 to US 192 to facilitate a projected 55,000 average daily traffic. Mr. Thompson was responsible for the design of **two** bridges associated with this project in accordance with AASHTO and FDOT Specifications. Bridge three and five span bridge structure had spans ranged from 200 to 400 feet respectively, and were designed to be supported by AASHTO Type III prestressed beams at 9'-0" maximum spacing. The substructure was design to be supported on multi-column pier configuration with footings supported on 18" prestressed concrete piles. I computed all quantities and construction costs associated with each alternative and selected the best alternative for final design; prepared final design calculations and coordinated all drawings from initial concept to final design. My responsible includes the preparation of BDR, bridge design criteria, preparation of all bridge construction plan sheets, identify all necessary pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of

deck, beams design, elastomeric beading pads, computation of finish grade elevations, calculation of bent cap elevations, pile cut off elevations, pedestal elevations, vertical clearance calculations, build-up calculation from beam's 120 days camber values, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, pier column design, footing design, determination of piles lateral loads and longitudinal loads, developed GT-STRUDLE model to design end bents to determine flexural and shear reinforcement requirements, developed in-house spreadsheet template to bent cap design, backwall design, end diaphragm design for jacking load to accommodate bearing replacement, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure and wind on live load to be inputted into the GT-STRUDLE software to design intermediate pier.

Austell Bridge over Sweet Water- Georgia. Senior Structural Engineer providing bridge design computations/checking and plans preparation/checking for this project. The new bridge is two span continuous concrete box girders approximately 60 feet. The superstructure is 32'-0" wide, consisting of six 64" x 33" deep box girders supporting 1'-6" thick of ballast. The superstructure box girders are deigned to provide support to dual train tracks dead and copper E-80 train live loads with longitudinal post-tensioning. The substructure consists of multi-column pier caps supported on 72" diameter drilled shafts. Mr. Thompson was responsible for the preparation of bridge design criteria pursuant to AREA, checking of all bridge construction plan sheets, checking pay items and computation of quantities for all pay items for the preparation of the computation book, LFD bridge design of deck, box girder design, check bearing design, calculation of pier cap elevations, calculate shaft cut off elevations, check pedestal elevations, perform vertical clearance calculations, bridge expansion joint design, determination of required number of shaft and required shaft loads at end bents and pier shafts, multi-column pier design, determination of piles lateral loads and longitudinal loads, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, development of loads such as braking force, centrifugal force, temperature force, wind on structure and wind on live load to be inputted into the STAAD model.

Category – 4.2.1- Concrete

LJB Express-IH 635 Managed Lanes Projects- Dallas, TXDOT- Several bridges over 1,500 feet long with span consists of longitudinally post-tensioned 54" I-beams continuous over 3 spans supported on post-tensioned substructure inverted T-pier cap. Mr. Thompson performed quality assurance check of both superstructure and substructure design.

S.R. 776 Over Myakka River- Charlotte County, Florida. Project Engineer for this 17 span bridge structure which is approximately 1380 feet long with 25 feet of vertical clearance and deck area in excess of 100,000 sf. The bridge superstructure is continuous AASHTO Type IV beams supported on multi-column pier with a drilled shaft foundation. Mr. Thompson performed final bridge design calculations and was also responsible for bridge plans quality control.

Fuller Warren Bridge Replacement Over St. John's River- Duval County, Florida. The bridge is 2533 feet long with a 250 foot main span. The main span consists of longitudinally post-tensioned 72" modified Bulb Tee beams continuous over 3 spans. Majority of the river crossing, which is approximately 0.5 mile long, is supported on 30' x 142' x 6' deep footings. All river crossing footings are located on 72" diameter drilled shafts. Vertical clearance is approximately 75'-0. Mr. Thompson performed footing design and superstructure design. He was also

responsible for preparation of all bridge construction plans. He also developed in-house MathCAD template to design hammerhead post tensioned concrete cap.

Florida Overland Express (FOX) – FDOT
Senior Structural Design Engineer for the proposed high speed train. Mr. Thompson was responsible for the bridge design of four 140 ft span continuous span-by-span segmental 10'-0" by 41'-4" wide box girders for an overall 75 miles of proposed elevated viaduct which was post-tensioned longitudinally and transversely taking into account time dependent at 10,001 days. Mr. Thompson was responsible for preparation of bridge design criteria, preparation of all bridge construction plan sheets. Mr. Thompson was responsible for the design of the substructure.

PR 181 San Juan –Puerto Rico
Senior Structural Design Engineer for the proposed balanced cantilevers post-tension segmental box girder bridge structure. Mr. Thompson was responsible for the determination of an optimal box typical section; design of four 250 feet continuous span balanced cantilever segmental concrete box girders 8'-0" by 35'-7" wide units which were post-tensioned longitudinally and transversely taking into account time dependent at 10,001 days for an overall bridge length of 3,500 feet. Mr. Thompson was responsible for obtaining moments and shear forces/stresses; develop controlling live load cases; use the influence charts to obtaining deck moments; layout of transverse and longitudinal post-tension profile.

President George Bush Turnpike Bridge over I-35 and Furneaux Creek-Dallas, Texas This bridge deck area is in excess of 100,000 square feet and is approximately 1.0 mile long with varying deck width (70"-0" to 118'-0"), varying super elevations, horizontal and vertical profiles. This bridge is the major gateway routes for the city of Dallas and its new beltway. Bridge spans range from 90 to 145 feet, which were designed to be supported by AASHTO Type IV prestressed beams. Spans which exceed 130 feet utilize notch prestressed beams. Pursuant TXDOT design guidelines, 28 days concrete strength of 8500psi and released strength equal to or less than the 28 days concrete strength along with drape strands were utilized for the design of beam elements. The substructure consists of a 6'-0" deep by 5'-0" wide cap supported on 8'-0" by 4'-0" column approximately 50'-0" on-center. Each column was supported on a single 8'-0" drilled shaft. The contribution of P-Delta effects were taken into consideration for both column and drilled shaft design. Mr. Thompson was responsible for preparation of plans, geometric layout, superstructure and substructure design, and quality control.

North Pointe & Boudreaux Bridges - Houston, Texas -Senior Structural Design Engineer. This three span continuous bridge is approximately 300 feet long. The continuous superstructure is approximately 140 feet wide and is supported by continuous 54" prestressed post-tension concrete trapezoidal box beams. The substructure consisted on inverted T-cap supported on 6' x 3' multi-columns at 25'-0" on-center. Each footing is supported by 4-18" prestressed piles.

Magplane High Speed Train Transportation System - Polk County, Florida.
Designed longitudinal three span (150'-150'-150') continuous post-tension, hollow, lightweight concrete girders and recommended alternate construction methodology. The substructure consisted of hammerhead piers.

Category – 4.2.2-Steel

Westwood Connector over Beeline (SR 528)- Orange County, Florida. Senior Structural Engineer providing bridge design computations/checking and plans preparation/checking for this project which involved a continuous steel box flyover SR528 (Beeline), that connects Westwood Boulevard and the Orange County Convention Center. The new bridge will accommodate one lane of traffic in each direction with provision for pedestrian walkway on one side of the bridge structure. The new five continuous span bridge structure is approximately 1000 feet long with a main span of 205 feet with hammerhead pier substructure. The superstructure consisted of a twin curved steel box girder supported on post-tensioned hammerhead piers. The sequence of construction dictated the steel box girder splice locations to prevent interruption of traffic on SR528. Mr. Thompson was responsible for the preparation of bridge design criteria, checking of all bridge construction plan sheets, checking pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, box girder design, check pot bearing design, computation of finish grade elevations, check calculation of bent cap elevations,

check pile cut off elevations, check pedestal elevations, perform vertical clearance calculations, perform camber calculations to include steel dead load, slab dead load, superimposed dead load geometric camber and total camber, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, hammerhead pier column design, footing design, determination of piles lateral loads and longitudinal loads, checking of girder erection stages, field splice design, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, end steel diaphragm design, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure, wind on live load to be inputted into the RC-Pier software to design intermediate pier, MSE wall elevation calculations and control wall design.

Gilcrease Expressway over US 75- Tulsa County, Oklahoma. Senior Structural Engineer providing bridge design computations/checking and plans preparation/checking for this project. The new bridge is a three span continuous steel plate girder each approximately 250 feet. The superstructure consisted of a flared superstructure cross-section with steel plate girder supported on multi-column piers. Mr. Thompson was responsible for the preparation of bridge design criteria, checking of all bridge construction plan sheets, checking pay items and computation of quantities for all pay items for the preparation of the computation book, developed bridge MOT to match roadway MOT, LFD bridge design of deck, plate girder design, check bearing design, computation of finish grade elevations, check calculation of bent cap elevations, check pile cut off elevations, check pedestal elevations, perform vertical clearance calculations, perform camber calculations to include steel dead load, slab dead load, superimposed dead load geometric camber and total camber, bridge expansion joint design, determination of required number of piles and required pile loads at end bents and pier footing piles, multi-column pier design, footing design, determination of piles lateral loads and longitudinal loads, checking of girder erection stages, field splice design, developed STAAD model to design end bents to determine flexural and shear reinforcement requirements, developed in-house MathCAD template for bent cap design, backwall design, end steel diaphragm design, wingwall cap design, development of loads such as braking force, centrifugal force, temperature force, wind on structure and wind on live load to be inputted into the STAAD model

Norfolk Southern Railroad Cloggsville Bypass-Cleveland, Ohio. Senior Structural Engineer providing bridge design computations/checking and plans preparation/checking for this project. The new bridge is a single span steel plate girder of approximately 151 feet. The superstructure is 38'-0" wide, 9" thick cast-in-place concrete deck, 1'-6" thick of ballast and is supported on steel plate girder deigned to provide support to dual train tracks dead and copper E-80 train live loads. Mr. Thompson was responsible for the preparation of bridge design criteria pursuant to AREA manual, checking of all bridge construction plan sheets, checking pay items and computation of quantities for all pay items for the preparation of the computation book, LFD bridge design of deck, plate girder design, check bearing design, abutment design, bent cap elevations, check pile cut off elevations, check pedestal elevations, perform vertical clearance calculations, perform camber calculations to include steel dead load, slab dead load, superimposed dead load geometric camber and total camber, bridge expansion joint design, determination of required number of piles and required pile loads at abutments, determination of piles lateral loads and longitudinal loads, developed in-house MathCAD template for bent cap design, backwall design, end steel diaphragm design, development of loads such as braking force, centrifugal force, temperature force, wind on structure and wind on live load to be inputted into the STAAD model

Fuller Warren Bridge Replacement over St. John's River- Duval County, Florida-Steel Alternate. See above for project description previously described under 4.2.1. The superstructure consisted of four units; each unit consisting of four continuous span of 250 feet steel plate girder supported on hammerhead piers. Mr. Thompson was responsible for checking the four span continuous plate girder design calculations for compliance against allowable stresses and construction plans for the steel plate girder alternate. Post-tensioned substructure was design to resist ship impact.

3rd. Ave Swing Bridge - New York City. Structural Engineer. This steel truss bridge structure is a movable swing bridge and Mr. Thompson was responsible for performing load rating; evaluation of columns, stringers, plate girders, and prepared in-depth inspection reports.

Riverdrive Train Overpass - Norwalk Connecticut. Structural Engineer.
Developed roadway geometry; designed all 180'-0" simple supported steel plate girder structural members, and evaluated quantity of materials.

Category – 5.1 & 5.4 –Conventional Bridge Inspection

Bridge inspection, inspection report and load rating -Orange County, Florida.

Final Bridge Inspection Report (WDW # 16)-FDOT 756405
Final Bridge Inspection Report (WDW # 20)-FDOT 756408
Final Bridge Inspection Report (WDW # 49, 55 & 171)
Final Bridge Inspection Report (WDW # 172)
Final Bridge Inspection Report (WDW # 18)-FDOT 756406
North Bear Island Crossing I-405 Bridge #71 FDOT 756420
South Bear Island Crossing C-4 Bridge #72 FDOT 756421
Bridge Load Rating- SR 528/Landstreet Road- Bridge # 750094 & 750221
Bridge Load Rating- SR 528/Orange Ave- Bridge # 750098 & 750224
Bridge Load Rating- SR 528/Orangewood- Bridge # 750089 & 750216

Bridge Load Rating- Black Still Bridge Load Rating-Lake County, Florida

Mr. Thompson-Structural Engineer was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing AASHTO prestressed beams superstructure and substructure, prepared Bridge Inventory Data sheet and prepared in-depth inspection reports pursuant to the National Bridge Inspection Standard.

Category – 5.2 & 5.4 –Moveable Bride Inspection

3rd. Ave Swing Bridge - New York City. Structural Engineer. This steel truss bridge structure is a movable swing bridge and Mr. Thompson was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing columns, stringers, plate girders, prepared Bridge Inventory Data and prepared in-depth inspection reports pursuant to the National Bridge Inspection Standard.

Marine Parkway Bridge - New York City. Structural Engineer. This steel truss bridge structure is a movable lift bridge located between Brooklyn and Queens Far-rockaway and Mr. Thompson was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing columns, stringers, plate girders, prepared Bridge Inventory Data and prepared in-depth inspection reports pursuant to the National Bridge Inspection Standard.

Willis Ave Swing Bridge - New York City. Structural Engineer. This steel truss bridge structure is a movable swing bridge located between Bronx and Manhattan and Mr. Thompson was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing columns, stringers, plate girders, prepared Bridge Inventory Data and prepared in-depth inspection reports pursuant to the National Bridge Inspection Standard.

Andrews over the New River -Fort Lauderdale, Florida, Structural Engineer. Mr. Thompson was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing superstructure and substructure associated with this moveable bascule bridge structure.

3rd Avenue Bridges over the New River- Fort Lauderdale, Florida, Structural Engineer. Mr. Thompson was responsible for performing bridge inspection, bridge load rating; structural evaluation of existing superstructure and substructure associated with both the fix and moveable bascule bridge structure.

Category – 5.3 & 5.4 –Complex Bridge Inspection

Whitestone Bridge –Cable Stay Bridge - New York City. Structural Engineer. This complex steel cable stay bridge structure is a fix steel bridge structure and Mr. Thompson was responsible for performing bridge inspection, bridge load rating and assist in the preparation of prepared Bridge Inventory Data and inspection reports pursuant to the National Bridge Inspection Standard.

Riverdrive Train Overpass - Norwalk Connecticut. Structural Engineer.
Mr. Thompson was responsible for performing bridge inspection; structural evaluation of 180'-0" simple supported steel plate girder structural members, bridge load rating, evaluated quantity of materials, prepared Bridge Inventory Data and prepared in-depth inspection reports pursuant to the National Bridge Inspection Standard.