



**MAY 31, 2018**

STATEMENT OF QUALIFICATIONS FOR  
**The Town of Belleair**

Engineer of Record  
Professional Services

May 31, 2018

Town of Belleair  
ATTN: Procurement Officer  
901 Ponce de Leon Boulevard  
Belleair, Florida 33756

1715 North Westshore Blvd,  
Suite 500  
Tampa, FL 33607

O 813-289-5550  
F 813-289-0263

[rsandh.com](http://rsandh.com)

**RE: Request for Proposals: Engineer of Record; Professional Engineering Services**

Dear Selection Committee:

The RS&H, Inc. (RS&H) team represents a multidiscipline collaboration of experienced planning, engineering, and environmental professionals who have planned and designed numerous successful public infrastructure projects for municipalities, counties, and the FDOT. Our Tampa office was established in 1959 and has grown to be one of Florida's most recognized names in planning and engineering. RS&H takes pride in this response to the Town of Belleair's Request for Proposals for Engineer of Record Professional Services.

Based on the published list of services, our strongest specializations provided by more than 80 in-house professionals are as follows:



- » Roadway/Civil Engineering
- » Drainage/Stormwater Engineering
- » Pedestrian Facilities
- » Structural Engineering
- » Architecture/Landscape Architecture
- » Planning/Public Involvement
- » Quality Control/Quality Assurance
- » Environmental Permitting/Analysis
- » Specifications/Bid Documents
- » Traffic Engineering/Traffic Calming
- » Bid/Construction Phase Services
- » Project Administration
- » Maintenance of Traffic Services
- » Pavement Management

**Rob Garrigues, PE**, will serve as Project Manager and the primary point-of-contact for the Town. He will be responsible for managing the team and maintaining constant communication with Town staff. Rob has 28 years of experience in a wide variety of roadway and municipal infrastructure projects. He will be readily available to meet, at any time, with Town staff, Town Commission, and residents.

We are confident that RS&H has the experience, expertise, and staff resources to fulfill the scope of work and goals of this contract. We call your attention to the following characteristics that make us exceptionally qualified to undertake this project:

- » **Responsiveness** – RS&H understands that the staff of the Town of Belleair are under a great deal of pressure to be responsive to the residents but have limited resources. The RS&H team will assist the Town of Belleair staff by being extremely responsive to your needs.

- » **Thoughtful participation with stakeholders and the public** – RS&H has orchestrated complex public involvement initiatives for infrastructure projects of all sizes. Our team is well-versed in important issues affecting local residences, utilities, and other stakeholders.
- » **Experience** – RS&H holds contracts with numerous public clients. We understand the pressures facing local governments and the importance of meeting the expectations of the public and community leadership.
- » **Resource allocation** – RS&H is committed to providing the highest quality technical services. We will commit staff and resources from our Tampa office as needed to ensure successful project completion. The RS&H team is ready and available to begin work immediately.
- » **Past performance on related work** – RS&H has a history of completing projects on schedule and within budget.
- » **Commitment to quality** – RS&H understands and shares a commitment to providing the Town of Belleair with a quality product. Quality begins on day one and continues throughout the life of the project.
- » **Ethics and professionalism** – RS&H maintains the highest levels of professional ethical standards. Every project assignment is conducted under this premise.
- » **Value** – The RS&H team brings a unique value culture to this contract. As a national firm, RS&H has created a culture among our engineers and scientists of finding the most economical solution that meets the client's needs. Because of this mindset, we are confident that the design solutions we provide will be the most cost-effective for any assigned task.

RS&H currently has a successful relationship with the Town of Belleair and looks forward to continuing to provide quality service within the Town's budgetary and scheduling requirements. Working together as partners with the Town of Belleair, we believe that our approach to this contract is truly centered on the satisfaction of the end user.

We look forward to hearing favorably from the selection committee in the review of this most important proposal.

Sincerely,  
**RS&H, INC.**



Michael Dixon, PE  
Vice President



Robert Garrigues, PE  
Project Manager

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**1**  
FIRM  
IDENTIFICATION

# 1. FIRM IDENTIFICATION

## QUALIFICATION QUESTIONNAIRE FOR ENGINEER OF RECORD

1. **Firm Name:** RS&H, Inc.

2. **Established:**

a. Year: RS&H, with a history dating back to 1941, is currently an employee-owned corporation established in 1990

b. State: Florida

3. **Former Firm Name(s), if any, and years in business.**

- » RS&H, Inc. (2014 – Present)
- » Reynolds, Smith and Hills, Inc. (1989 – 1/2014)
- » RS&H/RS&H Hunter/Hunter Services, Inc. (1987 – 1989)
- » Reynolds, Smith and Hills Architects-Engineers-Planners, Inc. (1969 – 1987)
- » Reynolds, Smith and Hills, Architects and Engineers (1942 – 1969)
- » Reynolds, Brewton, Smith and Hills (1941 – 1942)

4. **Office/Business Address and Telephone Number:**

**Managing Office:** 1715 N. Westshore Boulevard, Suite 500  
Tampa, Florida 33607  
813-289-5550

**Corporate Office:** 10748 Deerwood Park Boulevard, South  
Jacksonville, FL 32256  
904-256-2500

5. **Branch Offices Business Address and Telephone Numbers:**

**Managing Office:** 1715 N. Westshore Boulevard, Suite 500  
Tampa, Florida 33607  
813-289-5550



## 6. Associates and Principals: Name-Title-Specialties (Attach Resumes):

We have highlighted several of our principals and key personnel, as well as provided a full organization chart of the RS&H team below:

### PRINCIPALS



**Michael Dixon, PE | Project Officer** - Michael is a Vice President and Tampa Office Leader. As the Project Officer for this contract, he will ensure the team has the necessary resources required to complete any project successfully. He will perform client satisfaction calls to ensure that we are performing above and beyond the town's expectations, with a quality product while on schedule and within budget. As Vice President, Michael will authorize final contracts with RS&H and bind the firm to a contractual relationship with the Town of Belleair.



**Katherine Brittian, PE, LEED AP | Quality Control/ Quality Assurance** – Katherine is a Vice President with RS&H. Her 19 years of design experience, commitment to quality, and ability to manage large and diverse teams are ideal characteristics needed to successfully provide quality control for this Town of Belleair contract. Katherine will serve as our project quality manager and will perform our internal quality assurance. As an internal measure to assure a fresh look for QA/QC and provide an outside perspective, she will guarantee compliance with our quality plan following documented and strictly enforced internal project assurance controls.

### KEY PERSONNEL



**Rob Garrigues, PE | Project Manager** – As Project Manager, Rob will lead the RS&H project team as a single point-of-contact and will manage the vast resources available to the Town of Belleair. Under his leadership, RS&H will seamlessly blend the talents of these various individuals into a cohesive and dynamic team. Matching the expertise of each associate with individual work elements represents the true strength of the management of this multi-discipline team. The RS&H Tampa office has all the resources and capabilities to provide the required services for this RFP. Individual task team leaders will report to Rob, and he will maintain direct and consistent contact with the

Town at all times. Depending on the assignment, Rob will assemble a team that matches the specific needs of the project at hand.

Rob will also serve as the Task Leader for **Stormwater/Drainage design, Project Administration, and Grant Administration**. Rob is our Director of Water Resources in Tampa. He has 30 years of experience in the public and private sector designing, permitting and managing drainage and infrastructure improvement projects. His areas of expertise include management and design of drainage collection systems, pond design, preparation of bridge hydraulics reports, pond siting reports, location hydraulics reports, permit coordination, and stormwater field investigations.



**Vincent Shine, PE | Deputy Project Manager** – Vincent has 18 years of experience in the design and construction of public infrastructure projects. His responsibilities include marketing and project management of infrastructure design projects for counties and municipalities along the Gulf Coast. He works closely with the project design team, including subconsultants, to ensure that final design plans meet client needs and industry standards. He will utilize this experience to lead all elements of the design team's efforts. Vincent will also serve as the task leader for **General Civil Engineering Roadway and Pavement Management**.

# Organizational Chart

## Town of Belleair







**Michael Thrasher, PE | Bridges/ Structures Task Manager –**

Michael has 15 years of experience, including the design, rehabilitation, and construction of highway/ roadway, river, and railroad bridges.

His expertise encompasses

design, supervision, and coordination of construction support services and plans review for superstructures, substructures, and foundations for a wide range of bridge types and buildings.



**Chris Dailey | Environmental Task Manager –**

Chris has 24 years of experience with a wide variety of environmental projects. He has worked on projects from marine mapping to wetland delineations. In addition to his field experience, Chris

is also trained as a photo-interpreter, photogrammetrist, and GPS surveyor. Chris leads all environmental assessment and environmental permitting.



**Frederick (Rick) Langlass, PE | PD&E/Planning Task Manager –**

Rick has 19 years of experience, including developing multiple alignments for numerous PD&E studies, calculating costs due to impacts and construction, project

management, including managing personnel and budgets, supervision of field exploration and testing programs, construction engineering and inspection, assistance with design, and plans production.



**Mike DeMeo, RA | Architecture/ Facilities Task Manager –**

Mike has 14 years of experience and is responsible for leading architectural design efforts, including schematic design, graphics and renderings,

construction documentation, project coordination, and construction administration.



**David Bryan, RLA | Landscape Architecture Task Leader –**

David is responsible for overseeing the preparation of site plans, planting plans, and hardscape plans from the conceptual stage of each project through the preparation of

detailed construction drawings, cost estimation, and specifications. He also supervises field activities during project construction.



**Anu Weerasuriya, PhD, PE, PTOE | S&PM Task Leader –**

Anu develops signing and marking plans, signalization plans, lighting plans, and intelligent transportation system plans. He has worked on many signalization projects such as the

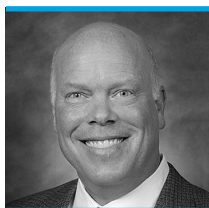
design plans for St. Petersburg that included decorative mast arms, moveable mast arms for parade activities (first location in State of Florida to install rotatable mast arms), and redesign of the existing pedestrian crossings to be ADA compliant.



**Brian Kirkpatrick, PE | Traffic Studies/Modeling Task Leader**

– Brian has 14 years experience, including traffic modeling, traffic signal optimization and traffic noise modeling/analyses, preparation and supervision of data collection

programs, traffic operation and safety studies, and preparation of traffic signal warrant studies. He is experienced with traffic and noise modeling, engineering software, including CORSIM, HCS, Synchro and the Federal Highway Administration Traffic Noise Model.



**Mark Davidson, PE | Construction Management/CEI and Constructability**

– Mark is a Senior Project Engineer with 34 years of progressive CEI experience. Mark specializes in the management of multiple concurrent contracts. One

of his greatest strengths includes his ability to perform efficient and thorough constructability and bidability reviews. He has been directly involved in several constructability reviews for various clients. In many

instances, the constructability reviews were performed in conjunction with construction scheduling analysis, which resulted in additions to the contract documents that removed potential claim issues.



**Matthew Betancourt, AICP | Public Involvement Task Leader**

– Matt has 12 years of experience in the field of transportation planning, including multimodal transportation and school transportation planning, as well as transportation concurrency

exception areas and multimodal transportation districts. He has served as Public Involvement Task Leader on a variety of projects. His experience includes National Environmental Policy Act analysis, assessing community impacts for environmental justice, sociocultural effects evaluations, and Section 4(f) evaluations, and conceptual stage relocation plans. He is experienced with ArcGIS and Trimble GPS Software.



**Jeff Glenn, PE, D.WRE, CFM | Peer Review/Quality Assurance Task Leader**

– Jeff serves as the Water Resources Leader for RS&H. He is responsible for management of projects, as well as hydraulic and hydrologic analyses, bridge

scour analyses, roadway drainage design, potable and reclaimed water distribution and wastewater collection systems designs, and environmental permitting. Jeff has 30 years of experience managing, supervising, and performing hydrologic and hydraulic modeling for a variety of projects in Florida and throughout the East Coast and Texas. He has served as the Quality Control reviewer and/or manager for numerous projects during his career. Jeff has authored, presented, and edited over 25 technical papers and articles that were published in professional journals, proceedings and magazines.



**Lloyd Facklam | GIS Task Leader**

– Lloyd serves as a Senior Highway Technician/Designer for RS&H's Transportation-Infrastructure Practice. He works closely with the design team on a variety of drainage, roadway, and environmental projects.

He is experienced with GEOPAK and ArcGIS, as well as the conversion of Light Detection and Range data (LiDAR) into usable formats.

7. Total Personnel of Firm: 1,153

- a. Professional: 877
- b. Non-Professional: 272
- c. Other: 4

8. Key personnel to be involved in the provision of these services. (Name-Title-Specialties-Degree-Registration-Years Experience)

KEY ASSOCIATES/ DEGREES	TITLE	YEARS OF EXPERIENCE	YEARS WITH RS&H	Planning/PD&E/Public Involvement	Traffic Engineering/Traffic Calming	Architectural/Landscape Architecture Design	Environmental Permitting/Analysis	Roadway/Parking/Civil Engineering	Structural Engineering	Maintenance Of Traffic Services	Stormwater/Drainage Design And Analysis	Project Administration	Pavement Management	Specifications And Construction Documents	Construction Management/Scheduling
<b>Robert Garrigues, PE</b> <i>BS (Environmental Eng.)</i>	Project Manager	30	18				■	■			■	■			
<b>Vincent Shine, PE</b> <i>MS Eng. Mgmt; BSCE</i>	Deputy Project Manager	18	16			■		■		■		■	■	■	
<b>Michael Dixon, PE</b> <i>BSCE</i>	Project Officer	32	22					■				■	■		
<b>Katherine Brittian, PE</b> <i>BSCE</i>	QA/QC	19	19					■		■		■	■	■	
<b>Michael Thrasher, PE</b> <i>BSCE (Civil/Environmental)</i>	Bridges	15	14						■						
<b>Chris Dailey</b> <i>BS (Biology)</i>	Environmental	24	18	■			■								
<b>Rick Langlass, PE</b> <i>MS Eng.; BS (Chemical Eng.)</i>	PD&E/Planning	19	16	■				■							
<b>Michael DeMeo, RA, LEED AP BD+C</b> <i>BA (Architecture)</i>	Architecture	14	13			■						■			
<b>David Bryan, RLA</b> <i>BS (Landscape Architecture)</i>	Landscape Architecture	20	18			■						■			
<b>Anu Weerasuriya, PhD, PE, PTOE</b> <i>PhD; MSCE; BSCE</i>	S&PM	28	4										■		
<b>Brian Kirkpatrick, PE</b> <i>MSCE; BSCE</i>	Traffic Studies/Modeling	14	14		■			■							
<b>Jeff Glenn, PE, D.WRE, CFM</b> <i>MSCE; BSCE</i>	Peer Review	30	17				■				■	■			
<b>Matt Betancourt, AICP</b> <i>BSCE</i>	Public Involvement	12	12	■											
<b>Mark Davidson, PE</b> <i>BSCE</i>	Construction Mgmt/CEI	34	32					■		■		■	■		■
<b>Lloyd Facklam</b> <i>N/A</i>	GIS	37	17					■							

In today's world where public infrastructure is essential to the functioning of a modern society, RS&H offers a unified source for the needs of community preservation and enhancement. The RS&H team has a significant blend of local knowledge and vast experience and can address any project assigned by the Town of Belleair. Our skilled staff of architects, engineers, planners, and environmental scientists have always strived to provide exceptional services to local municipalities and counties. An overview of the services that RS&H team can provide include:

#### ROADWAYS/TRAFFIC CONTROL/TRAILS

- » General Engineering Consulting
- » Local Roadway Design
- » Roadway Analysis and Design
- » Urban/Rural New Construction
- » Reconstruction and Widening
- » Resurfacing
- » ITS and Traffic Engineering Facilities
- » Industrial
- » Site Development
- » Parking Lot Studies

#### BRIDGES/STRUCTURES

- » Grade Separation
- » Pedestrian Overpass Structures
- » Rehabilitation
- » Widening and Inspection
- » Bridge Inspections and Load Testing analysis

#### STORMWATER AND DRAINAGE

- » Hydrologic and Hydraulic Modeling
- » Stormwater Management Facility Design
- » Geographical Information Systems
- » Flooding Studies
- » PD&E Pond Siting
- » Location Hydraulics

#### ENVIRONMENTAL AND PERMITTING

- » Environmental Management Systems
- » Local and State Permitting
- » Sustainable Operations
- » Environmental Compliance Assessments
- » Remediation
- » Environmental Permitting,
- » Wetland Delineation and Impact Analyses
- » Threatened & Endangered Species
- » Wetland Mitigation

#### PD&E AND PLANNING

- » General Planning Consulting
- » Community Planning
- » Streetscaping
- » Visioning
- » Infrastructure Funding
- » Public Outreach
- » Institutional and Management Studies
- » Travel Forecasting and Modeling
- » Community Involvement Programs
- » Multimodal Transportation Planning

#### LANDSCAPE ARCHITECTURE, PARKS AND COMMUNITY DESIGN

- » Facilities
- » Municipal Infrastructure
- » Sustainable Design
- » Urban Design
- » Visualization
- » Landscape Architecture
- » Parks and Recreation
- » Transportation Enhancements

#### ARCHITECTURE/FACILITIES

- » Architectural and Engineering Design
- » Site Planning and Design
- » Life Cycle Cost Analysis
- » Interior Design
- » Feasibility Studies and Cost Analysis
- » Landscape Design
- » Construction Administration

#### CONSTRUCTION MANAGEMENT/CEI AND CONSTRUCTABILITY

- » Design Reviews
- » Preparation of Design-Build Project Criteria Packages
- » Preparation of Construction Specifications For Contractor Bid Packages
- » Review of Contractor Progress Schedules and Utilization of Primavera's Claim Digger Tool
- » Overall Construction Administration
- » Implementation of Quality Assurance Testing Protocol
- » Revenue Forecasting
- » Management of Request For Information (RFI) Process

The resumes, which include more detail regarding specialties and project-specific information, are located in *Section 3 - Appendix*.

Beyond the project personnel detailed in this document, our diversified staff are available to meet the needs of the Town if a situation should arise requiring an increase in staff resources on short notice. Of our 1,153 associates, 670 are located in Florida; and more than 351 of these are dedicated to Transportation-Infrastructure. We pledge availability of all staff illustrated in our organizational chart and will make other resources available, as required to meet your needs.

**9. What outside Associates and Consultants does your firm normally work with?**

<p><b>Service: Geotechnical</b>                  Tierra, Inc.                  7351 Temple Terrace Highway                  Tampa, Florida 33637                  (813) 989-1354  <i>Most Recent Project:</i>                  Good Neighbor Trail Connector (2/2018)</p>	<p><b>Service: Geotechnical</b>                  MC Squared, Inc.                  5905 Breckenridge Parkway Ste. C                  Tampa, Florida                  (813) 623-3399  <i>Most Recent Project:</i>                  Tampa Bldg and Pave Rehab 17 (03/2018)</p>	<p><b>Service: Utility Coordination and SUE</b>                  Omni Communications, LLC                  8509 Benjamin Road, Ste E                  Tampa, Florida 33634                  (813) 852-1888  <i>Most Recent Project:</i> AET Phase 8 Ticket System (12/2017)</p>	<p><b>Service: Survey</b>                  McKim &amp; Creed                  3903 Northdale Boulevard Suite. 115E                  Tampa, FL 33624                  (813) 549-3740  <i>Most Recent Project:</i>                  Palmetto Road (2/2017)</p>
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**10. Is it anticipated that your firm will subcontract any architectural, engineering, landscape design/architecture, or other services when working on specific projects? If so, please discuss the nature and extent of the anticipated subcontracting, including the use of local businesses.**

RS&H is one of the largest Florida-based A/E/C firm in the country, bringing a depth of resources to make any project a success. Our team has virtually all the resources and capabilities located in our Tampa office to provide the required services. RS&H will serve as the prime consultant. We will use local subconsultants for any additional survey, geotechnical, utility coordination or subsurface utility coordination tasks that need to be performed for the specific project.

RS&H works with local municipalities, counties, and permitting agencies from our Tampa Office. Our clients include:

- » Army Corps of Engineers
- » Charlotte County
- » Citrus County
- » City of Largo
- » City of Safety Harbor
- » City of Tampa
- » Florida Department of Environmental Protection
- » Florida Department of Transportation
- » Florida Fish and Wildlife Conservation Commission
- » Hillsborough County
- » Pasco County
- » Pinellas County
- » Polk County
- » Sarasota County
- » Southwest Florida Water Management District
- » Tampa Bay Water

**11. Please describe the types of projects in which your firm has specialized. Include an example of a project which typifies the product of your firm.**

The various services outlined in the scope of services will be completed within RS&H's Infrastructure Practice. The Infrastructure Practice focuses on public streets, stormwater facilities, utilities, parks, buildings, and civil facilities. For more than 20 years, the RS&H Infrastructure Program has maintained a 100% public-sector client base – we do not seek private work. By eliminating any private-sector entanglements, RS&H does not face any potential conflicts of interests in our commitment to our local government clients and agencies.

In the pages to follow, RS&H has provided two typical infrastructure projects – roadway improvements and stormwater design – from the beginning of the task assignment through the construction phase support.

# BAYVIEW DRIVE

Town of Belleair, Florida

## PROJECT OVERVIEW

The Town of Belleair selected RS&H for the design of roadway and drainage improvements for Bayview Drive and associated side streets. The project consisted of a new stormwater collection system constructed along Bayview Drive and through the intersections of Orlando, Sarasota and Ocala roads to help with existing drainage on Palmetto Road. Seven existing outfall pipes that discharged into the bay were plugged and filled, and the proposed collection system consolidated everything into a single proposed baffle box outfall at the intersection of Bayview Drive and Manatee Avenue.

## PROJECT LIMITS

The limits of the project are Bayview Drive from Manatee Road to an existing bridge, a distance of approximately 0.5 miles. The project also includes approximately 0.18 miles of side street improvements along Orlando Road, Sarasota Road and Ocala Road for a total project distance of approximately 0.68 miles.

## PROJECT BACKGROUND

The area along the shoreline adjacent to Bayview Drive had been experiencing sediment deposition caused by unchecked and untreated stormwater discharges. This was caused by stormwater runoff from a 113-acre watershed that discharged through seven existing outfall pipes located along Bayview Drive from Manatee Road to the bridge just north of Ocala Road. These pipes discharged through the side banks of the existing Bayview Drive bluff approximately midway up the slope. In addition to conveying untreated runoff, the existing outfall pipes were also undersized and contributing to upstream localized flooding.



At the top of the bluff, on the west side of Bayview Drive, there is a town park overlooking the Intracoastal Waterway. At elevation 22-feet, this area is one of the highest points along the Intracoastal Waterway in Pinellas County.

### ROADWAY DESIGN

This project consisted of the design and permitting of approximately 3,590 linear feet of roadway. The existing roadway was milled and resurfaced with new curb and gutter, sidewalks, and driveways within the construction limits. The work consisted of 9,221 square yards of proposed roadway consisting of approximately 761 tons of asphaltic concrete. Additionally the improvements included approximately 3,000 linear feet of collection system pipe ranging in diameter from 18-inch to 72-inch along with one baffle box, 55 stormwater inlets and manholes, 2,607 linear feet of 6-inch PVC underdrain, and 4,081 linear feet of sanitary sewer, force main and water main.

### DRAINAGE DESIGN

The goal for the drainage design was to capture, treat and consolidate the runoff currently discharging through the existing stormwater outfalls into a single proposed pipe and outfall location. Just prior to the proposed outfall, the runoff passes through a stormwater baffle box and an inline sump system which collects sediment, removes nitrogen and dissipates the energy to reduce velocities into the bay. To further reduce the velocity of the stormwater discharged directly into the bay, the inline sump was constructed such that the invert elevation of the final outfall pipe from the sump is only slightly above the bottom elevation of the bay. The bluff banks around the new outfall were stabilized with rubble rip-rap. The existing storm outfalls were then removed, abandoned, or capped thus eliminating erosion and sedimentation at those locations.

This improvement provides a significant benefit to the existing seagrasses and mangroves along the shoreline and eliminates localized flooding in the upstream areas. Depending on the inflow sediment loading, this project could reduce sediment loads by up to 30,000 lbs/yr of total suspended solids from stormwater discharging directly into Clearwater Harbor. It is also expected to reduce localized flooding in the residential areas east of Bayview Drive and along Manatee Road and also stabilize bluff banks at the new outfall structure.

### GRANT FUNDING

The Town of Belleair prepared and submitted an application to the Southwest Florida Water Management District's (SWFWMD) Cooperative Funding Initiative (CFI) program. The CFI cooperative funding grant was approved, and the Town of Belleair received \$870,000 for water quality

- a. **Client:** Town of Belleair
- b. **Contact person and phone number:**  
Keith Bodeker  
901 Ponce de Leon Blvd  
Town of Belleair, FL 33756  
727-408-4860
- c. **Services provided:** roadway, drainage, and lighting design; utility design/coordination, structures, S&PM, Permitting, grant funding, traffic control quality control, construction services
- d. **Original estimate of project cost:**  
\$188,490
- e. **Actual project cost:**  
\$188,490
- f. **Original estimate of task completion schedule:**  
Design: 10/2013  
Construction: 12/2015
- g. **Actual completion schedule:**  
Design: 02/2015  
Construction: 03/2016



improvements to Bayshore Drive. The grant required a 50% match from the Town. (SWFWMD Project Number N434-Bayview Drive).

To ensure grant funding was secured for this project, RS&H coordinated directly with SWFWMD management, engineering and environmental staff to include the installation of a sediment removal baffle box.

SWFWMD required that RS&H's proposed design have the following measurable benefits:

- » Reduce sedimentation, erosion, and velocity from seven stormwater discharges collecting stormwater runoff from 113-acre watershed by constructing one baffle box.
- » Reduce localized flooding by upsizing and improving stormwater conveyance system directing runoff from 113-acre watershed to one outfall.
- » Expand area of service
- » Flood risk reduction

#### PROJECT BUDGET AND FUNDING

Description	SWFWMD	Town of Belleair	Total
Design		\$188,490	\$188,490
Construction	\$66,928	\$66,928	\$133,856
Construction - Stormwater System Components	\$761,643	\$761,643	\$1,523,286
Construction - CEI	\$41,429	\$41,429	\$82,858
<b>TOTAL</b>	<b>\$870,000</b>	<b>\$1,058,490</b>	<b>\$1,928,490</b>

#### PROJECT SCHEDULE

The Town of Belleair and RS&H were forced to extend the design, construction and CEI dates due to the departure of key staff, as well as unforeseen field issues in the design phase.

Description	Original Commence Date	Revised Commence Date	Original Complete Date	Revised Complete Date
Design	2/22/13	No Change	10/25/13	3/6/15
Construction	6/17/13	No Change	12/31/15	No Change
Construction - Stormwater System Components	8/1/14	6/30/15	12/31/15	2/19/2016
Construction - CEI	6/17/13	No Change	12/31/15	3/15/16



# DELANEY CREEK

Hillsborough County, Florida

In 2005, the United States Environmental Protection Agency (USEPA) issued a final Total Maximum Daily Load (TMDL) report for Waterbody Identification (WBID) No. 1605 which encompasses this project and lies within the Delaney Creek Watershed. The report identified Nitrogen and Biochemical Oxygen Demand (BOD) as pollutants of concern for Delaney Creek. Additionally, the document mandated pollutant reduction percentages to be achieved within the WBID. A 2015 feasibility study identified potential BMPs that could be implemented by Hillsborough County to meet the USEPA TMDL requirements for WBID 1605. One of the recommended BMPs included the construction of weirs within two man-made channels which contribute stormwater runoff into the main Delaney Creek waterway. In 2016, Hillsborough County contracted with RS&H to develop a design that would implement the recommended BMP within the existing conveyance systems. One conveyance channel identified as the 76th Street ditch is located adjacent to 76th Street and Wishing Well Way. The other ditch identified as the TECO ditch is located adjacent to an existing TECO easement near the Lee Roy Selmon Expressway.

The design analysis included developing hydrologic and hydraulic modeling in ICPR. The input data used in ICPR was collected from the Hillsborough County Delaney Creek SWMM model, as well as from the Hillsborough County GIS database. Construction drawings proposed the installation of multiple gabion weirs of different sizes and shapes within each conveyance channel to maximize the water quality benefit. The construction plans also included the design of an enhanced collection system design to facilitate ditch conveyance and gabion installation. Roadway improvements included a sidewalk, as well as guardrail replacement.

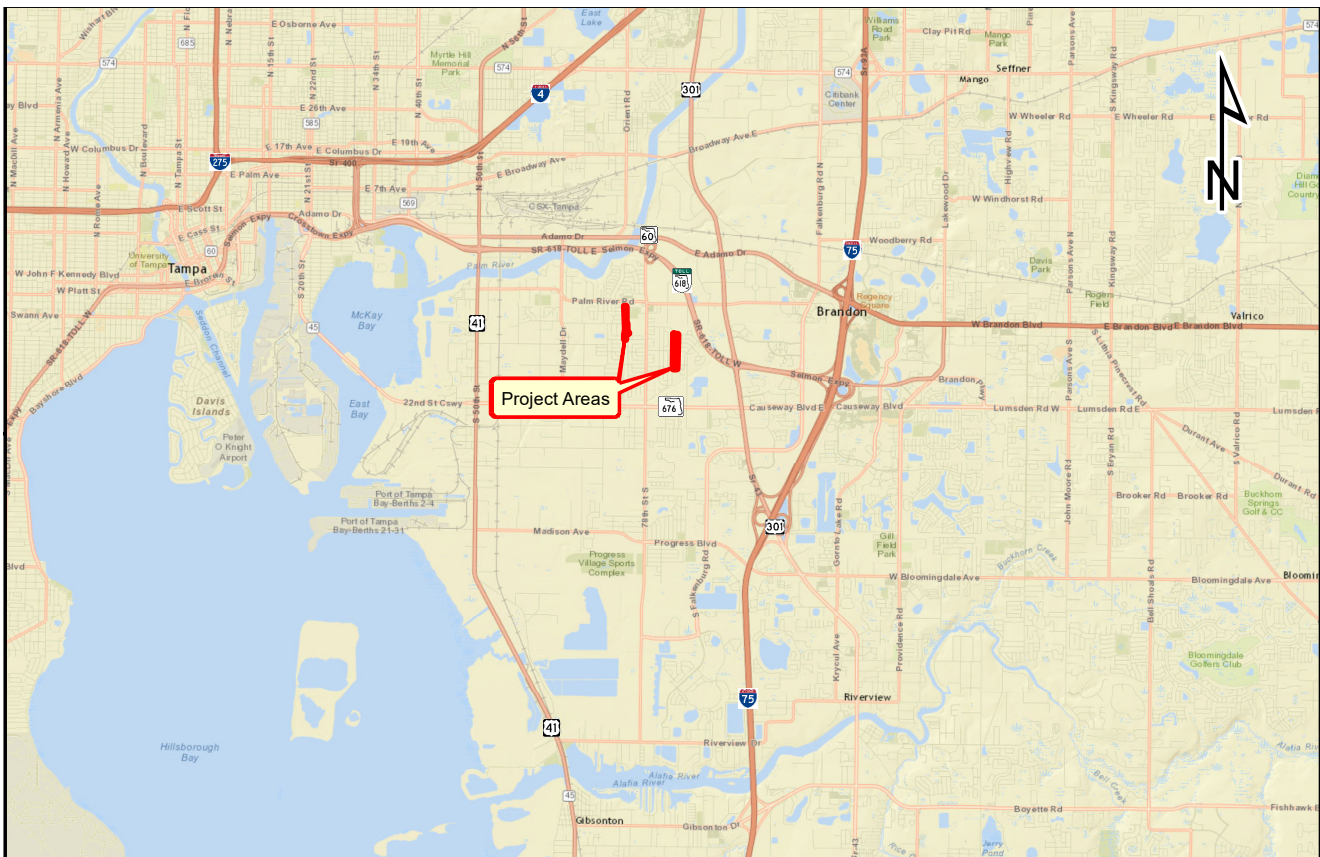


## GRANT FUNDING

Grant funding was also part of the design effort. RS&H engineers assisted the county in securing grant funding by providing the necessary calculations and supporting documentation. Currently, final construction plans will be submitted to the county in June. Construction is anticipated in June or July.



- a. **Client:** Hillsborough County
- b. **Contact person and phone number:**  
John McGee, PE  
601 E. Kennedy Blvd.  
Tampa, FL 33602  
813-744-5671
- c. **Services provided:** design analysis, plans production, permitting and permit coordination (SWFWMD, HCEPC, USACE), utility coordination, project management
- d. **Original estimate of project cost:**  
\$1,000,000
- e. **Actual project cost:**  
\$650,000
- f. **Original estimate of task completion schedule:**  
05/2018
- g. **Actual completion schedule:**  
06/2018



**Delaney Creek Water Quality Improvements**  
Hillsborough County, Florida

**FIGURE 1  
PROJECT LOCATION**

12. Based on your understanding of the proposed scope of services, please attach a list of representative municipal projects or engineering services in which your firm has been involved in the types of engineering services identified in this RFQ, specifically within the past 10 years.

The RS&H team has experience and familiarity with the surrounding municipalities, counties and permitting agencies. We currently hold several long-standing local municipal and county general engineering contracts with similar scopes of services. RS&H prides itself on long term client relationships stemming from our commitment to providing quality work on every project and being able to fulfill all our clients needs easily, quickly, and in a coordinated fashion.

CLIENT / GENERAL ENGINEERING CONTRACT	DATE
Citrus County – Continuing Contract for Professional Services	Ongoing since 2006
Hillsborough County – Professional Miscellaneous Engineering Services for General/Civil	Ongoing since 1997
Hillsborough Area Regional Transportation Authority – Agreement for Consultant Services	Ongoing since 2002
Pinellas County – Agreement for Roadways, Drainage, Structural, Site, and Traffic Engineering Consulting Services	Ongoing since 2011
Sarasota County – Agreement for Continuing Consultant Services	Ongoing since 2007
City of Dunedin – Agreement for Consultant Services	Ongoing since 2011
City of Largo – Professional Services Agreement	Ongoing since 2012
City of Tampa – Work Order Agreement for Consultant Services	Ongoing since 1990
Port Manatee – Professional Engineering Services Continuing	Ongoing since 2014
Town of Belleair – Engineer of Record; Professional Engineering Services	Ongoing since 2012


**Local County & Municipal Projects/Tasks in 20 Years**



**479**  
Florida County and Municipal projects



**18**  
Current Local General Contracts Held



**799**  
Combined Years of Experience

## PEDESTRIAN AND BICYCLE HIGH CRASH AREA SAFETY IMPROVEMENT PROJECTS

Hillsborough County, Florida



Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

## EAST KEYSVILLE ROAD BRIDGE REPLACEMENT OVER THE WEST BRANCH OF ALAFIA RIVER

Hillsborough County, Florida



The East Keysville Road Bridge is a 60-foot-long bridge that is more than 50 years old and functionally obsolete. It does not meet current geometric or hydraulic criteria. RS&H finalized the design, which was developed during preparation of a Technical Investigation Letter Report. Specific design services provided by RS&H included:

- » Design of a 52-foot bridge culvert; three barrels 16-foot x 8-foot each
- » Upgrading 800 feet of roadway to current geometric and clear zone standards
- » Raising the profile to provide correct drift clearance
- » Replacing all driveway side drains and save ditch bottoms to improve drainage
- » Coordinating utilities relocation
- » Providing bid phase and construction phase services

- a. **Client:** Hillsborough County
- b. **Contact person and phone number:**  
Michael Flick, PE  
601 E. Kennedy Blvd., 22nd Floor  
Tampa, FL 33602  
813-307-1881
- c. **Services provided:** traffic studies, feasibility studies, pedestrian safety upgrades, drainage, permitting, utility coordination, S&PM, traffic control, quality control
- d. **Original estimate of project cost:**  
\$3.598M
- e. **Actual project cost:**  
\$3.527M
- f. **Original estimate of task completion schedule:**  
Feasibility Study: 06/2013  
Design: 08/2014  
Construction: 12/2018 (anticipated)
- g. **Actual completion schedule:**  
Feasibility Study: 06/2013  
Design: 08/2014

- a. **Client:** Hillsborough County
- b. **Contact person and phone number:**  
Chris Bridges  
601 E. Kennedy Blvd., 22nd Floor  
Tampa, FL 33602  
813-307-1848
- c. **Services provided:** roadway and drainage design, utility coordination, S&PM, permitting, structural design, traffic control quality control, construction support services
- d. **Original estimate of project cost:**  
\$1.547M
- e. **Actual project cost:**  
N/A
- f. **Original estimate of task completion schedule:**  
Design: 02/2016  
Construction: 07/2019 (estimated)
- g. **Actual completion schedule:**  
Design: 02/2016

## NEIGHBORHOOD DRAINAGE PROJECTS

Hillsborough County, Florida



RS&H developed a small PD&E study for two separate locations in Hillsborough County: Kankakee Lane and 12 Avenue South. Each of these areas experienced historic flooding as a result of housing development and/or inadequate stormwater infrastructure. Based on PD&E recommendations, the final design for Kankakee Lane will include the addition of an outfall pipe, and 12th Avenue South should include the addition of a stormwater management facility at the intersection of 66th Street.

- a. **Client:** Hillsborough County
- b. **Contact person and phone number:**  
Chris Bridges  
601 E. Kennedy Blvd., 22nd Floor  
Tampa, FL 33602  
813-307-1848
- c. **Services provided:** drainage study, stormwater design, roadway assessment, alternative analysis, environmental/utilities impacts, environmental permitting, field review, construction cost estimate
- d. **Original estimate of project cost:**  
\$ 205,146
- e. **Actual project cost:**  
\$ 205,146
- f. **Original estimate of task completion schedule:**  
06/2016
- g. **Actual completion schedule:**  
06/2016

## DRAINAGE STUDY AND STORMWATER DESIGN SUN SEAIR MOBILE HOME PARK

Largo, Florida

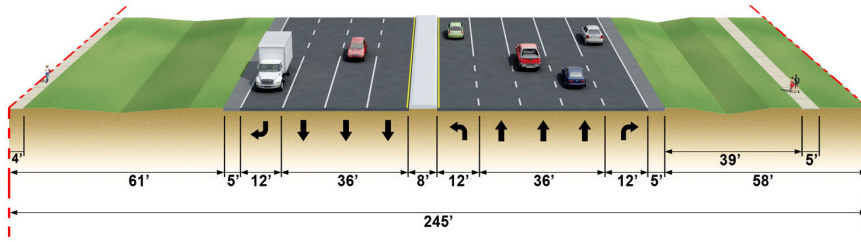


RS&H provided preliminary analysis and drainage design for this project. The overall objective of the study was to analyze the drainage concerns within the Sun Seair Mobile Home Park located along 126th Avenue North just West of 62nd Street. North in Largo. Drainage concerns were identified in the Cross Bayou Watershed Management Plan in November 2013 along with flooding complaints from local residents. RS&H delivered an engineering report that evaluated design opportunities to address the potential the flooding. The watershed model used in the Cross Bayou Watershed Management Plan was updated to include the proposed design alternatives. Analysis of the intersection of 126th Avenue North and 62nd Street North and the upstream contributing area and attenuation storage was also required to determine the reason for significant increase in the hydraulic grade line at the upstream end of the 48-inch culvert under 62nd Street North. Review and modification of the input data for this portion of the Cross Bayou model was necessary to accurately model stages within the mobile home park outfall ditch. Based on the analysis, it was ultimately determined that on-site flooding was a function of off-site tailwater conditions and no on-site improvements would be cost effective.

- a. **Client:** Pinellas County
- b. **Contact person and phone number:**  
John Carpenter, PE  
440 Court Street  
Clearwater, FL 34616  
727-453-3350
- c. **Services provided:** drainage study, stormwater design, alternative analysis, environmental/utilities impacts, environmental permitting, field review, construction cost estimate
- d. **Original estimate of project cost:**  
\$45,286
- e. **Actual project cost:**  
\$45,286
- f. **Original estimate of task completion schedule:**  
03/2013
- g. **Actual completion schedule:**  
03/2013

## CAUSEWAY BOULEVARD AT PROVIDENCE INTERSECTION IMPROVEMENTS

Hillsborough County, Florida



RS&H provided PD&E services for improvements to this intersection. The study initially looked at nine alternatives that were reduced to three for advancement. These three alternatives were presented at a public meeting in June 2010, and a recommended alternative was selected in July 2010. The project included improvements to all four legs of the intersection by adding left and right turn lanes, median improvements, and replacing the existing signal. The project required roadway, stormwater drainage, signing and pavement marking, and traffic signalization. Drainage analysis included spread calculations, existing treatment facility impacts, and storm drain design.

- a. **Client:** Hillsborough County
- b. **Contact person and phone number:**  
Dana Mackey  
601 E. Kennedy Blvd., 22nd Floor  
Tampa, FL 33602  
813-307-1783
- c. **Services provided:** preliminary engineering report, permitting, stormwater design, utility relocation/coordination, signalization, S&PM, traffic control, quality control, construction services
- d. **Original estimate of project cost:**  
\$238,000
- e. **Actual project cost:**  
\$238,356
- f. **Original estimate of task completion schedule:**  
10/2011
- g. **Actual completion schedule:**  
03/2012

## 49TH STREET NORTH RAILROAD CROSSING MODIFICATIONS

Pinellas County, Florida



Pinellas County wanted to accommodate a proposed CSX railroad crossing (CSX Crossing No. 626 680 E) replacement at the intersection of 49th Street just south of 62nd Avenue North. This project consisted of the design and permitting of approximately 500 linear feet of 49th Street N. abutting the CSX railroad. The existing roadway was milled and resurfaced with new curb and gutter, sidewalks, and driveways within the construction limits. RS&H provided the final design and permitting services for roadway, pedestrian, and drainage facilities to accommodate the future rail elevations which are two inches higher than the existing rail. This project also included signing and pavement marking, landscape, drainage and permitting.

- a. **Client:** Pinellas County Department of Environment and Infrastructure
- b. **Contact person and phone number:**  
Nancy McKibben  
727-464-4812  
440 Court Street  
Clearwater FL 34616
- c. **Services provided:** roadway, drainage, permitting, utility coordination, S&PM, traffic control, quality control
- d. **Original estimate of project cost:**  
\$81,053
- e. **Actual project cost:**  
\$81,053
- f. **Original estimate of task completion schedule:**  
Design: 10/2014  
Construction: 11/2015
- g. **Actual completion schedule:**  
Design: 10/2014  
Construction: 11/2015

## SPRUCE STREET FEASIBILITY STUDY AND CONCEPTUAL PLANS

Tampa, Florida



RS&H provided professional engineering and consulting services associated with safety and operational improvements for Spruce Street from Hesperides Street to Himes Avenue. A previous Technical Memorandum completed in May 2013 for the city analyzed the arterial capacity along Spruce Street between N. Lois Avenue and Himes Avenue. An addendum to the Technical Memorandum, completed in October 2013, looked at two additional alternatives to increase capacity along Spruce Street. The alternatives in the addendum made a recommendation for improvements at the driveways to and from the Home Depot on Spruce Street and Dale Mabry Highway. The purpose of the Conceptual Plans development is to further refine the preferred recommendations from the previous Arterial Capacity Analysis and to assist the city with obtaining project concept consensus with the adjacent property owners and stakeholders.

- a. **Client:** City of Tampa
- b. **Contact person and phone number:**  
Ben Money  
306 E. Jackson Street  
Tampa, FL 33602  
813-274-8514
- c. **Services provided:** Feasibility study, roadway, drainage, permitting, utility coordination, S&PM, traffic control, quality control
- d. **Original estimate of project cost:**  
\$99,873
- e. **Actual project cost:**  
\$99,873
- f. **Original estimate of task completion schedule:**  
11/2016
- g. **Actual completion schedule:**  
01/2017

## MYAKKA BRIDGE REPLACEMENT OVER MYAKKA RIVER

Sarasota County, Florida



RS&H was selected by Sarasota County for the Myakka Bridge Replacement project. The aging bridge was replaced after recently experiencing major failures that required significant emergency rehabilitation. Sarasota County, eager to expedite the project, was confident in our ability to develop accelerated, construction plans to replace the existing concrete flat slab bridge with timber piling bent substructures. The project was developed to limit the environmental impacts in order to qualify the bridge replacement as permit. Our coordination of roadway, bridge, drainage, and environmental design concepts was also a determining factor in being selected for this project. The concepts, based on previous experience that directly applied to this site, were tailored for the specific site conditions.

- a. **Client:** Sarasota County
- b. **Contact person and phone number:**  
Vinod Sancheti  
1001 Sarasota Center Blvd  
Sarasota, FL 34240  
941-861-0803
- c. **Services provided:** roadway and structural design, traffic control plans, drainage design, environmental permitting, utility coordination, S&PM, bridge lighting
- d. **Original estimate of project cost:**  
\$4,615,000
- e. **Actual project cost:**  
\$5,413,000
- f. **Original estimate of task completion schedule:**  
03/2018
- g. **Actual completion schedule:**  
03/2018

## ECOLOGICAL MONITORING AND ASSESSMENT CONSULTING SERVICES FOR CYPRESS CREEK WELLFIELD

Pasco County, Florida



RS&H has been involved with this project since it began in October 1994, working on various task orders through our As-Needed Ecological Services Contract with Tampa Bay Water. The general purpose of this ongoing program is to monitor the ecologic health of the CCWF ecosystems in relation to potential environmental perturbations that may occur, either naturally or through human influence, and to document recovery of wetlands as water withdrawals are reduced. The objective is accomplished via the collection, examination, and analysis of biweekly wetland water levels and plant and animal community characteristics, as well as daily regional weather patterns and water production.

- a. **Client:** Tampa Bay Water
- b. **Contact person and phone number:**  
Whitney Kiehn  
2575 Enterprise Road  
Clearwater, FL 33763  
727-792-2357
- c. **Services provided:** ecological/hydrological monitoring, data collection and analysis, environmental documentation
- d. **Original estimate of project cost:**  
\$508,957
- e. **Actual project cost:**  
\$508,957
- f. **Original estimate of task completion schedule:**  
10/2018
- g. **Actual completion schedule:**  
Ongoing

## STORMWATER AND DRAINAGE STUDY FOR LOCAL GROUP 16

Dunedin, Florida



RS&H was selected to develop a study analyzing the drainage concerns in the Local Group 16 subdivision. RS&H delivered a study that provided alternatives to alleviate flooding in the Platon Avenue from Diogenes Street to J. F. Kennedy Street area in Dunedin, Florida. The study included a recommendation on pavement improvement associated with the streets in the subdivision. The study also addressed resurfacing and sidewalk addition along Solon Avenue adjacent to the subdivision, evaluated potential utility impacts, prepared a preliminary cost estimate for drainage infrastructure, as well the recommended pavement repairs for area.

- a. **Client:** Pinellas County
- b. **Contact person and phone number:**  
Angel Lafita  
440 Court Street  
Clearwater, Florida 34616  
727-453-3350
- c. **Services provided:** drainage study, stormwater design, roadway assessment, alternative analysis, environmental/utilities impacts, environmental permitting, field review, construction cost estimate
- d. **Original estimate of project cost:**  
\$30,915
- e. **Actual project cost:**  
N/A
- f. **Original estimate of task completion schedule:**  
03/2015
- g. **Actual completion schedule:**  
N/A



## AS-NEEDED ENGINEERING SERVICES DYE'S CROSSING AND UNDERGROUND POWERLINE PROJECT

Pasco County, Florida



This project was received through our As-Needed Professional Engineering Services contract with Tampa Bay Water. It involved installation of an underground powerline system that will feed each of the existing 13 Cypress Creek production wells and the two pumps to be located at Dye's Crossing sometime in the future. Approximately six miles of underground powerline installed within the existing maintained areas (i.e., mowed) adjacent to the wellfield access roads. Except in the vicinity of the production wells and existing power poles, the new underground lines were installed beneath the existing powerlines which are to remain in place to provide a looped power supply. In addition, 80" by 84" concrete transformer pads were installed at each of the 13 Cypress Creek production wells.

- a. **Client:** Tampa Bay Water
- b. **Contact person and phone number:**  
Maribel Medina  
2575 Enterprise Road  
Clearwater, FL 33763  
727-453-3350
- c. **Services provided:** pump and power plan evaluations, evaluation of facility requirements and field review, site evaluations, permit investigation, engineering feasibility report
- d. **Original estimate of project cost:**  
\$61,264
- e. **Actual project cost:**  
\$61,264
- f. **Original estimate of task completion schedule:**  
12/2012
- g. **Actual completion schedule:**  
12/2012

## FLETCHER AVENUE PD&E STUDY

Hillsborough County, Florida



RS&H conducted a PD&E Study for the widening of Fletcher Avenue in Tampa, Florida. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, the University of South Florida (USF), and the University Community Hospital (UCH) to I-75 in Northeast Tampa.

RS&H met with major stakeholders in the project corridor, including USF, Florida Hospital Tampa, and the Pepin Heart Institute, to learn current needs and future development plans. Using this information, RS&H developed a preferred alternative that will best serve the needs of the community and county.

- a. **Client:** Hillsborough County,
- b. **Contact person and phone number:**  
William Alford  
601 E. Kennedy Blvd., 22nd Floor  
Tampa, FL 33602  
813-307-1920
- c. **Services provided:** Project management, traffic modeling, alternatives development, engineering analyses, environmental analyses, public involvement, ETDM processing
- d. **Original estimate of project cost:**  
\$2,721,943
- e. **Actual project cost:**  
N/A
- f. **Original estimate of task completion schedule:**  
06/2008
- g. **Actual completion schedule:**  
08/2009

## 59TH AVENUE NORTH DRAINAGE STUDY

Pinellas Park, Florida



RS&H was selected to develop a study to address drainage concerns at 59th Avenue and 44th Street North, which included an existing the stormwater pond located in the same vicinity. RS&H was able to deliver this study identifying design alternatives to reduce flooding in the area, improve stormwater conveyance and to meet SWFWMD permitting requirements associated with unpermitted runoff discharging into the existing pond. The study also included a recommendation for pavement improvements along 59th Avenue North.

- a. **Client:** Pinellas County
- b. **Contact person and phone number:**  
John Carpenter, PE  
440 Court Street  
Clearwater, Florida 34616  
727-453-3350
- c. **Services provided:** drainage study, stormwater design, roadway assessment, alternative analysis, environmental/utilities impacts, environmental permitting, field review, construction cost estimate
- d. **Original estimate of project cost:**  
\$367,565
- e. **Actual project cost:**  
N/A (Bid process on-going)
- f. **Original estimate of task completion schedule:**  
04/2015
- g. **Actual completion schedule:**  
03/2016

## PALMETTO ROAD

Pinellas County, Florida



RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system.

- a. **Client:** Town of Belleair
- b. **Contact person and phone number:**  
Keith Bodeker  
901 Ponce de Leon Blvd  
Town of Belleair, FL 33756  
727-408-4860
- c. **Services provided:** roadway, drainage, and lighting design; utility design/coordination, structures, S&PM, Permitting, grant funding, traffic control quality control, construction services
- d. **Original estimate of project cost:**  
\$713,709
- e. **Actual project cost:**  
N/A
- f. **Original estimate of task completion schedule:**  
02/2019 (anticipated)
- g. **Actual completion schedule:**  
Ongoing

## 22ND AVENUE SOUTH PD&E STUDY AND FINAL DESIGN

Pinellas County, Florida



The existing 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. Capacity and operational improvements are needed at the intersections of 50th Street South, 55th Street South, 52nd Street South, 49th Street South, 43rd Street South, 37th Street South, and 34th Street South. There are flooding problems within the project limits and no existing bicycle facilities. 22nd Avenue South runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H led a team that evaluated alternative designs and recommended the most feasible roadway, intersection, stormwater and drainage improvements. Upon acceptance of the PER, the County awarded the final design of this project to RS&H through our General Engineering Consultant Task Order Contract.

- a. **Client:** Pinellas County
- b. **Contact person and phone number:**  
Robert Guercia  
440 Court Street  
Clearwater, FL 34616  
727-464-3661
- c. **Services provided:** roadway, PD&E, Drainage, Quality control, Traffic engineering, Environmental, Public involvement, Bike/ped safety
- d. **Original estimate of project cost:**  
\$567,000
- e. **Actual project cost:**  
\$567,213
- f. **Original estimate of task completion schedule:**  
06/2008
- g. **Actual completion schedule:**  
08/2009

## CURTIS HIXON WATERFRONT PARK

Tampa, Florida

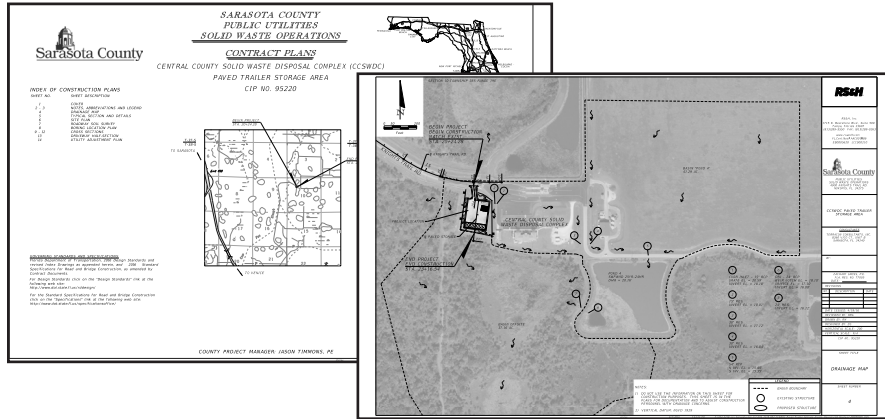


Located along the Hillsborough River in the heart of downtown Tampa, the Curtis Hixon Waterfront Park is the crowning jewel of Tampa's park system. The eight-acre park can hold over 10,000 people for special events and is uniquely designed to host concerts with a sloped grand lawn facing the riverfront featuring elevated seating areas, benches, and raised platforms. Other elements include a modern playground with electronic play features, a fenced in dog run, a monumental fountain and mist fountain where children are encouraged to play, restrooms, and artistic details throughout. In partnership with Thomas Balsley Associates, RS&H served as the Project Manager and Landscape Architect of Record.

- a. **Client:** City of Tampa
- b. **Contact person and phone number:**  
Karla Price  
306 E. Jackson Street  
Tampa, FL 33602  
813-274-5134
- c. **Services provided:** Project management, public involvement, programming, landscape architecture
- d. **Original estimate of project cost:**  
\$183,000
- e. **Actual project cost:**  
\$186,976
- f. **Original estimate of task completion schedule:**  
12/2007
- g. **Actual completion schedule:**  
12/2007

# CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX PARKING LOT DESIGN AND PERMITTING

Sarasota County, Florida

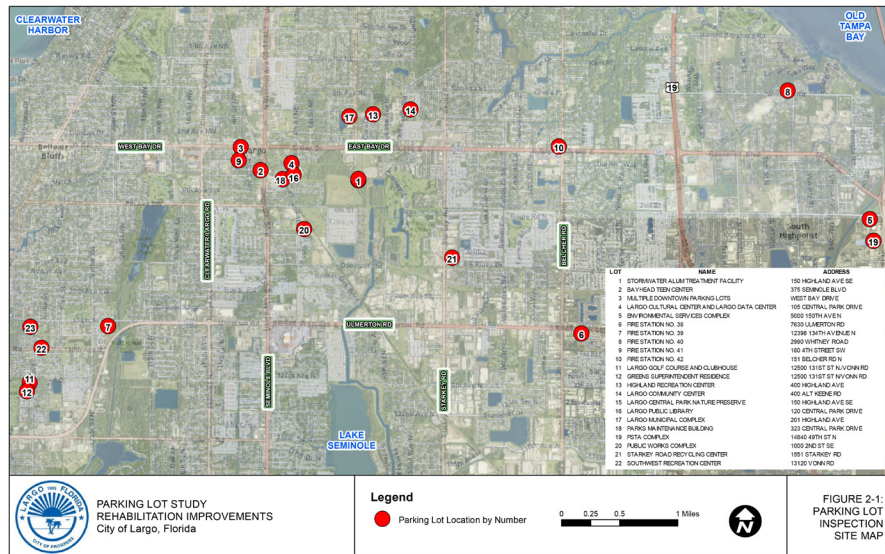


RS&H developed construction plans and permitting for an asphalt parking lot to replace an existing dirt parking lot located adjacent to the Central County Solid Waste Disposal Complex administration building located at 4000 Knights Trail Road in Nokomis, Florida. Plans and permitting were also required for a conveyance and stormwater management facility to accommodate the addition of the asphalt to the existing dirt parking lot.

- a. **Client:** Sarasota County
- b. **Contact person and phone number:** Jason Timmons  
1001 Sarasota Center Boulevard  
Sarasota, Florida 34240  
941-862-1572
- c. **Services provided:** Parking lot design and permitting
- d. **Original estimate of project cost:** \$63,737
- e. **Actual project cost:** \$63,737
- f. **Original estimate of task completion schedule:** 03/2017
- g. **Actual completion schedule:** 04/2017

# CITY OF LARGO PARKING LOT STUDY

City of Largo, Florida



- a. **Client:** City of Largo
- b. **Contact person and phone number:** Charles Jordan, MPA, PWE, FMP  
1000 - 2nd Street SE  
Largo, Florida 33779  
727-587-6740 ext. 4302
- c. **Services provided:** Roadway/parking lot, inspection, drainage, quality control
- d. **Original estimate of project cost:** \$22,585
- e. **Actual project cost:** \$22,585
- f. **Original estimate of task completion schedule:** Review - 09/2015
- g. **Actual completion schedule:** Review - 09/2015

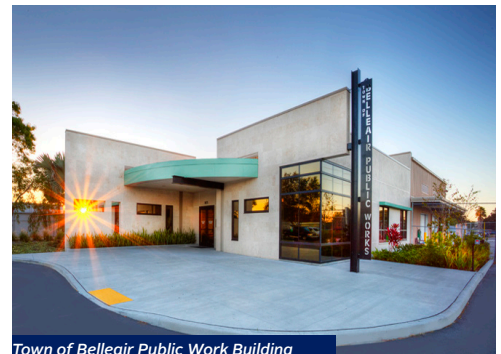
RS&H provided professional engineering and consulting services for the maintenance and rehabilitation of 23 parking lots for the City of Largo. A brief, basic visual inspection was made to determine site conditions and if a pavement core is required at each site. A field review summary was prepared, including location map, site photographs and pavement conditions; a summary of recommendations describing the method of repair for all 23 sites establishing priority and rehabilitation schedule; and an engineer's estimate for each site based on the recommendation.

13. Discuss how your firm will respond quickly to Town needs. How will you maintain close effective communications with Town staff?

Rob will meet regularly with Keith Bodeker, Construction Projects Supervisor, to ensure the Town's objectives and expectations are being met. Rob will manage the project from beginning to end, providing the continuity necessary for a project of this complexity and visibility. Rob is one of RS&H's top Project Managers and is thoroughly familiar with the Town of Belleair. He will take a hands-on approach to management of each task assignment and will satisfy all requirements of the project scope. He will serve as the Town's single point-of-contact and will provide unbiased communication between all stakeholders. He will identify and resolve critical issues early in the planning, design and review process and will lead the team to produce quality construction plans and secure all appropriate permits on time, while ensuring the design addresses the interests and concerns of all stakeholders. When the project proceeds to construction, he will also lead the team's post-design services. Rob's number one objective is to provide superior service to the Town.

Rob will lead the RS&H project team and will manage the vast resources available to the Town of Belleair. Under his leadership, RS&H will seamlessly blend the talents of these various individuals into a cohesive and dynamic team. Matching each associates expertise with individual work elements represents the true strength of the management of this multi-discipline team. Individual task team leaders will report to Rob and he will maintain direct and consistent contact with the Town at all times. We will be flexible and responsive to the Town's needs. In fact, should another type of project be assigned that does not match the expertise of one of the initially identified task managers, we will, with the approval of the Town, select another of our task managers whose expertise fits the particular work assignment.

- » As Project Manager, Rob, will breakdown the Task Order into scope components with input from the team along the lines of the graphic shown on the following page.
- » Prepare and distribute a project-specific Project Management Plan that details the following:
  - What is to be done (Deliverables)
  - Who is going to do it (Leadership and staffing)
  - Who reports to whom (Communication)
  - When it will be done (Schedule and milestones)
  - How much it will cost (Budget)
  - How quality is controlled (RS&H and Town checklists)
- » Engage Town staff in internal design meetings to expedite decision-making



- » Delegate appropriate work, coordinated by experienced project task managers
- » Report status of the budget on a monthly basis

The RS&H team will meet or exceed the project-specific schedules, respond quickly to task assignments, and complete tasks on accelerated schedules and within budget. We have a proven practice of keeping multiple key staff members “plugged in” to ongoing projects. Throughout planning and design, Rob and each task leader will all be involved in contract management, subconsultant management, project scheduling, team meetings, public involvement, and providing constant peer review of plans and documents prior to submittal to the town. In addition to these key project leaders, RS&H will have highly qualified staff members working in concert with our task leaders. Our ability to satisfy task work order-oriented assignments with specific schedules and budgets has already been proven with our previous projects for the Town of Belleair.

### Task Order Work Flow



14. Provide a discussion of your firm's familiarity with typical problems which might arise with the provision of engineering services in the manner described in the RFQ.

In the current economic climate in Florida, municipalities must juggle the increased financial burden of building and maintaining an aging infrastructure while fending off ever increasing budgetary constraints. RS&H understands the financial constraints and work program goals that the Town of Belleair has promised to meet.

Project budgets can often be strained by seemingly incompatible design elements. Questions such as “How do we minimize or eliminate costly right-of-way while still meeting ADA criteria?” or “What would be the best traffic calming solution, that meets the safety needs of the neighborhood yet can still be cost effectively maintained?” RS&H staff has experience solving critical design issues similar to these by balancing safety, durability, ease of maintenance and cost effectiveness when designing any and every project. RS&H can help the Town of Belleair meet its goals and budgets by bringing this experience to bear utilizing the following steps.

- » **Identify the Stakeholders** – RS&H understands that often the reasons behind a project's competing design aspect come from parties that have different desires, needs or wants. We have been in the Tampa Bay Area since 1965. We know the area; we know the stakeholders; and we have the experience bringing together parties with disparate views, explaining technical issues using straightforward language and simple graphics.
- » **Determine Need** – Sometimes political pressure or general specifications dictate that a particular design element be provided to satisfy a desire instead of a need or because of a “perceived” unsafe situation. Our staff has design experience in a variety of projects, from new alignments to milling and resurfacing projects, and from rural to urban conditions. RS&H can quickly mine our staff's knowledge to assist the Town of Belleair in determining if the need truly exists.
- » **Establish Hierarchy** – Our experience has shown that in most cases with competing design elements,

one will have a higher priority than the other. Determining which one is more important requires blending the Town's requirements with the desires of the community. RS&H's experience has shown us that proceeding without establishing this hierarchy can lead to unnecessary design iterations that may not resolve the issue at hand.

- » **Establish Design Criteria** – Quickly establishing the design elements of a specific project will set the path for the design and guide the design throughout the life of the project.
- » **Understand the Project Constraints** – Determining the constraints on a design is crucial when determining the most cost effective design and staying within an established project scope. Often the procurement of right-of-way is too costly for a milling & resurfacing project, yet we must still provide for the properly designed ADA requirements.
- » **Establish Alternatives** – Understanding the scope of the project, having established the most important of the conflicting project aspects, and understanding the project's constraints allows the RS&H's experienced staff to develop the alternative design concepts that meet the established design criteria, the community's needs and the Town's budget and schedule.
- » **Facilitate Consensus** – RS&H has the experience to assist the Town with the appropriate level of assistance in bringing together the stakeholders and obtaining a consensus of opinion and direction for the future design of the project. Without this agreement in place, time and dollars can be lost in scope creep and re-design.

At RS&H, we do not approach projects with a “one size fits all” mentality. We spend significant effort in developing designs that are well-engineered, constructable, maintainable and affordable. We also study potential design exceptions and variations that may reduce construction costs while still providing a functional project.

15. Document your firm's ability to provide a high quality service on schedule and within budget. Discuss the control systems you will utilize to effectively manage projects.

RS&H has a long history of providing quality projects on time and within budget for a variety of clients and has the resources and capabilities in our Tampa office to provide all of the core services outlined in the Scope of Services. A quality project is also one that the Town of Belleair and the public perceives as well planned and managed, with the public funds carefully and prudently spent.

**PROJECT MANAGEMENT PLAN**

In order to keep on schedule and on budget, RS&H will prepare a detailed Project Management Plan (PMP) at the start of the project/task order. This PMP will fully address the coordination, public awareness, technical aspects, financial controls, quality control, and scheduling requirements of each task assignment. The detailed plan contains a project contact list, project file directory, scope of services, negotiated man-hours, schedule, budget, and a project-specific Quality Assurance (QA) Manual with a Quality Control (QC) Plan. Rob, Project Manager, will prepare this plan at the start of the project and will continually maintain, update, and follow this plan throughout the life of the project. All updates will be provided to the Town of Belleair with our monthly progress and schedule tracking reports and will be delivered to the town in PDF format each month.

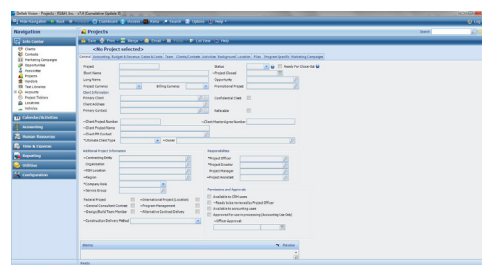
The PMP provides a structure for ensuring that the project schedule is followed to the letter. RS&H's approach to maintaining this schedule will include regularly scheduled project status meetings between Rob and the team members. To ensure complete compliance with the schedule, Town of Belleair representatives will be extended an invitation to each meeting.

**TRACKING SCHEDULE AND BUDGET**

RS&H uses a variety of software packages, including Primavera and Microsoft Project, for scheduling. The Primavera suite is considered the industry standard for Critical Path Method (CPM) precedence diagramming schedule development and analysis. It allows for unlimited numbers of activities, customized calendars, Gantt and PERT charting, cost loading and resource leveling of activities, and dynamic filter and report creation. In addition, Primavera is the best platform for the preparation of base schedules, reviewing original construction schedules, analyzing monthly schedule updates, performing time impact analysis and what-if scenarios, and documenting construction progress.

RS&H also utilizes a sophisticated internal budget tracking system software that provides regular reports to task managers, as well as the Project Manager. These reports describe project labor charges, direct costs to the project, and relative percent of the fee utilized. Rob, RS&H's

Project Management Plan			
Short Form			
<b>GENERAL</b>			
DATE: April 20, 2015	ISSUE NO:	PREPARED BY: Vincent Shine	
APPROVED BY/TITLE: Michael S. Dixon, PE / Vice President			
PROJECT NAME: Lakeshore Rd. / Wilcox Rd. Utility Relocations			
CLIENT: Hillsborough County			
PROJECT LOCATION: Hillsborough County, Florida			
TYPE OF CONTRACT: Cost Plus		BUDGET \$: 37,635,05	
PROJECT NO: 104-2823-007		PROJECT MANAGER: Vincent Shine	
CLIENT MANAGER: Robert Garrigues		TECH DIRECTOR:	
<b>CLIENT [ Organization Chart Attached ]</b>			
CONTACT: Kevin Linne		TITLE: Project Manager	
PHONE: 813-307-1765		FAX:	
MAIL ADDRESS: 601E Kennedy Blvd.		COURIER ADDRESS:	
22 <sup>nd</sup> Floor, Tampa, Florida 33602			
<b>PROJECT DESCRIPTION [ Scope of Work Attached ]</b>			
Intersection Improvements to Lakeshore Rd. / Wilcox Rd. Intersection			
<b>PROJECT OBJECTIVES [ These must be specific and measurable ]</b>			
Peer review of 100% Roadway Plans			
Relocate approx. 1500' of 8" WM as part of widening the intersection			
Relocate approx. 50' of 4" FM as part of widening the intersection			
<b>DELIVERABLES, MILESTONES, AND SCHEDULE [ Schedule Attached ]</b>			
NO	DELIVERABLE/MILESTONE	DATE	REMARKS
	Peer Review Comments	May 15, 2015	
	60% Utility Plans	July 17, 2015	
	DEP Permit	July 31, 2015	
	Final Utility Plans	Sept. 11, 2015	

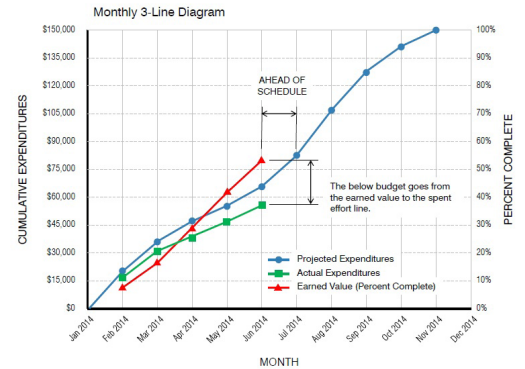




Project Manager, has immediate access to these reports throughout the life of the project. As a management tool, we also use Deltek Vision software in projecting available revenues and staffing needs. Deltek Vision is linked to RS&H's budgeting software to provide accurate and continuously updated information.

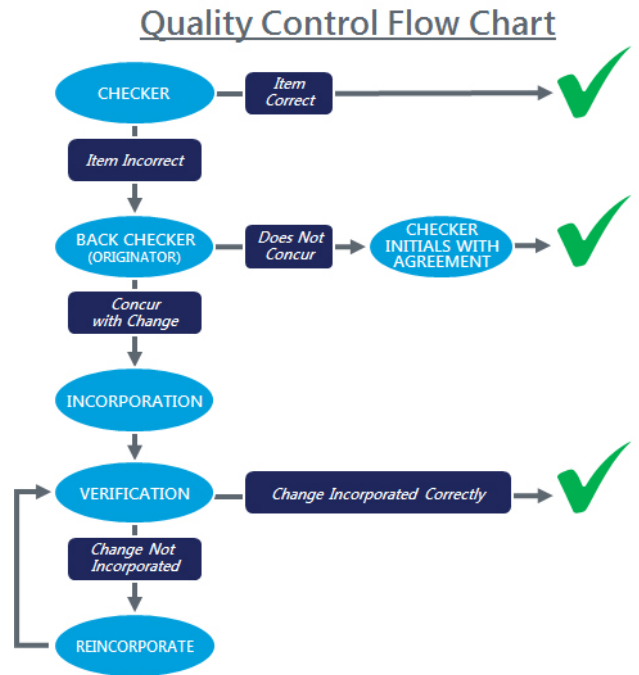
At a minimum, Rob will review the project status on a monthly basis by loading current financial information into a three-line diagram (see figure on the following page) that provides a comparison of planned performance to actual progress. This exercise ensures that any staffing adjustments are identified and resolved as soon as possible and on a regular basis.

RS&H utilizes Deltek Vision software to monitor project reporting. Deltek Vision provides a variety of options that allow management of the complete project process including clients, contacts, project opportunities, associates, projects, and vendors (subconsultants). The flexibility of the program allows associations to be established between each of the project components that then allows for greater efficiency during project management. The software documents all incurred labor and non-labor expenses for each RS&H project and includes reporting capabilities. Also housed within Deltek is electronic time sheets that all RS&H employees are required to complete and submit. In the contract startup phase RS&H will work to ensure that the Deltek accounting, billing, and reporting portions of the software all provide the required documentation requested by the town.



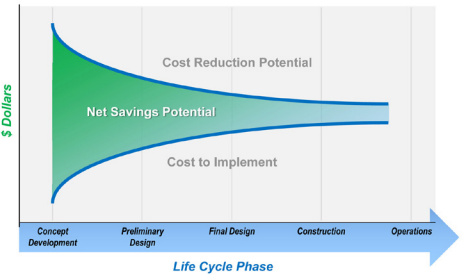
### QUALITY CONTROL/QUALITY ASSURANCE

RS&H's Quality Assurance/Quality Control (QA/QC) process is strictly applied to every project as part of our firm's standard operating procedures. Time and funding for QA/QC are incorporated into the project schedule and budget to assure that QA/QC procedures are followed and deliverables are made as scheduled. The Quality Control Plan is a document that outlines numerous checks and back checks that scrutinize every deliverable prior to submittal to the town. A simplified graphic representation of this process is shown to the right.



As part of the process, we will develop a tailored, project-specific QA Manual for each task assignment. This QA Manual will include provisions for:

- » **QC Plans Checking** – The team will prepare a QC Plan as part of the QA Manual. Prior to all submittals, plans will be checked and back-checked in accordance with procedures outlined in the QA Manual. Ms. Katherine Brittan, PE will serve as the Quality Control Manager. She and her QC review staff will be completely separate from the production staff, with their review factored into the overall project schedule to allow adequate time for completion of all QC tasks identified in the project.
- » **Internal Peer Reviews** – Peer reviews are utilized prior to all phase submittals and are accomplished by a licensed professional within RS&H.
- » **Constructability Reviews** – RS&H offers significant construction experience and understands that cost containment provides added protection to taxpayers. RS&H will utilize these professionals to provide independent constructability reviews to evaluate the design alternatives. All decision making will be reviewed with Town of Belleair and documented.
- » **Value Engineering** – This phase of the QA process ensures that the budget is appropriately expended to obtain the best value for project dollars without jeopardizing the intent of the project. This step includes input from the entire RS&H team, as well as pertinent Town of Belleair staff, and involves evaluation of alternative designs.

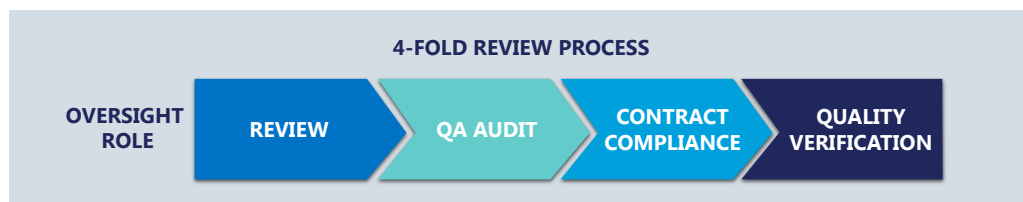


## QUALITY CONTROL PROCEDURES

### 5-STEP INTERNAL QC/QA PROCESS



### 4-FOLD REVIEW PROCESS



16. Provide a list of Municipal, State, and Federal references which can be contacted.

**Pinellas County**

Nancy McKibben  
14 S. Fort Harrison  
Clearwater, FL 33756  
727-464-4812  
nmckibben@co.pinellas.fl.us

**Polk County**

Douglas Gable  
330 W. Church Street  
Bartow, FL 33830  
863-534-6715  
DougGable@polk-county.net

**City of Largo**

Charles Jordan  
1000 - 2nd Street SE  
Largo, Florida 33779  
727-587-6740 x4302  
cjordan@largo.com

**Hillsborough County**

Tommy Rawls  
601 E Kennedy Blvd, 23rd Floor  
813-209-3004  
rawlst@HCFLGov.net

**Hillsborough County**

Chris Bridges  
601 E Kennedy Blvd, 23rd Floor  
Tampa, Florida 33602  
813-307-1848  
bridgesc@hillsboroughcounty.org

**Florida Department of Transportation  
FDOT D-7, Project Management Support**

Justin Hall  
11201 N. McKinley Drive, M.S. 7-600  
Tampa, Florida 33612  
813-975-6061  
Justin.Hall@dot.state.fl.us

**Sarasota County Public Utilities | Solid Waste  
Engineer**

Jason Timmons, PE  
4000 Knights Trail Road  
Nokomis, Florida 34275  
941-861-1572  
jtimmons@scgov.net

**City of St. Petersburg**

Ziba Mohammadi, PE, CBI, PTOE  
One 4th St N, 7th Floor  
St. Petersburg, Florida 33701  
727-892-5302  
ziba.mohammadi@stpete.org

**Sarasota County – Public Works**

Vinod Sancheti, PE, PMP  
1001 Sarasota Center Boulevard  
Sarasota, Florida 34240  
941-861-0803  
vsancheti@scgov.net



**POLICY NO. 1.1.1:**  
**Equal Employment Opportunity & Affirmative Action**

**Policy**

RS&H, Inc. is an equal employment opportunity and affirmative action employer. It is RS&H's policy to ensure equal employment opportunity to all applicants and staff without regard to race, sex, sexual orientation, gender identity or expression, color, religion, age, national origin, marital status, veteran status whether Vietnam Era or other, or disability of qualified individuals.

Our commitment extends to the administration of policies and practices relating to recruitment, selection, training, compensation, benefits, promotions, transfers, layoffs, recalls from layoffs, and Company sponsored educational, social and recreational programs.

At RS&H, we take great pride in our diverse and talented workforce. Our associates are the cornerstones of our business, and our continued success largely depends upon the full and effective utilization of all qualified associates. Therefore, RS&H will continue to direct its employment and human resource practices in a manner that ensures its commitment to equal opportunity for everyone.

RS&H is committed to furthering the objectives of Equal Employment Opportunity and Affirmative Action, and will take affirmative action to:

- recruit, employ and promote minorities and women for positions from which they have been traditionally excluded, including executive positions, and to offer such associates applicable training opportunities to foster such development;
- recruit, employ and promote physically challenged people for positions from which they have been traditionally excluded, including executive positions, and to offer such associates applicable training opportunities to foster such development;
- recruit, employ and promote veterans of any era (including Vietnam) for positions from which they have been traditionally excluded, including executive positions, and to offer such associates applicable training opportunities to foster such development.

Periodic reviews and analyses of human resource records will be conducted to ensure that all qualified minorities, women, physically challenged associates (including veterans), veterans of any era (including Vietnam), and associates of any age, continue to receive equal consideration; and that only valid requirements are imposed on opportunities for transfer, advancement, or promotions, including promotions into and within all levels of management.

The Director of Human Resources will have responsibility for the implementation of our affirmative action program. With the cooperation and assistance of appropriate staff and operating associates, the Director will direct periodic surveys to determine whether the program is achieving its objectives. We intend to measure ourselves against objectives that will provide for equal participation of all qualified associates in the opportunities available at RS&H.

RS&H will establish and maintain a written affirmative action program to achieve prompt and full utilization of the protected groups described above. The program will be reviewed annually by Human Resources and will be revised as needed to meet stated goals.

RS&H is committed to providing a work environment that is free of discrimination and harassment, and expects all associates to engage in maintaining such an environment. RS&H strives to maintain a professional work environment which requires the highest standard of personal conduct. Our Harassment and Discrimination Policy (Policy #6.3) details this commitment.

While the overall authority for implementing this policy is assigned to the Director of Human Resources, all levels of staff bear the responsibility of following the above guidelines. This policy (as are all RS&H policies) is available on-line to all associates, and all are advised to familiarize themselves with it. Any associates who believe they are the victims of discrimination or harassment have a responsibility to report this immediately and directly to their management and/or the Director of Human Resources. Also, associates are encouraged to contact their management or the Human Resources Department should they have any questions or concerns relative to RS&H's EEO/Affirmative Action initiatives.

18. Please indicate if you are aware of any personal or organizational conflicts of interests. Provide an explanation of your firm's involvement in ongoing or pending litigation, claims, suits against the Town of Belleair, if any.

RS&H has no conflicts of interest. RS&H has no ongoing or pending litigation, claims, or suits against the Town of Belleair.

19. Provide any additional information which you feel may be pertinent to the provision of these services, but not specifically required elsewhere in the RFQ.

RS&H takes great pride in our achievements, as every award affirms our drive to fulfill our commitment of excellence to our clients. But the real satisfaction comes in winning on our clients' behalf. To us, these awards recognize the dedication, hard work, and success of our collaboration. Several of the significant national, regional and local awards we have received are listed below.

**Bayview Drive Roadway and Drainage Improvements, Town of Belleair, Florida**

- » 2017 APWA Florida Chapter - Project of the Year - Transportation

**Tallahassee-St. Marks Historic Railroad Trail Widening and Resurfacing, Florida Department of Environmental Protection Office of Greenways and Trails**

- » 2012 APWA Florida Chapter - Consultant of the Year in Buildings and Grounds

**Curtis Hixon Waterfront Park, City of Tampa, Florida**

- » 2011 APWA Florida Chapter West Coast Branch - Project of the Year in Parks and Recreation
- » 2010 APWA Florida Chapter - Consultant of the Year in Buildings and Grounds
- » 2010 Southeast Construction's Best of 2010 - Best Landscape/Urban Planning
- » 2010 Tampa Downtown Partnership Fourth Annual Urban Excellence Award Winner
- » 2010 28th Annual Community Design Awards, Hillsborough County City-County Planning Commission
- » 2010 - Outstanding Contribution to the Community (Highest Honor)



Curtis Hixon Waterfront Park

**New Kings Road Overpass, City of Jacksonville, Florida**

- » 2011 APWA Florida Chapter, Consultant of the Year in Roads and

**Kiley Garden Restoration, City of Tampa, Florida**

- » 2011 APWA Florida Chapter West Coast Branch - Project of the Year in Historic Restoration
- » 2011 American Institute of Architects, Tampa Bay Chapter - Award of Merit for Architecture, Historic Category
- » 2010 Southeast Construction's Best of 2010 - Award of Excellence in Small Projects



New Kings Road (US 1) Railroad Overpass

**Ulmerton Road Widening, FDOT District Seven**

- » 2009 APWA Florida Chapter - Consultant of the Year in Roads and Highways
- » 2009 Roads and Bridges Magazine - Top Ten Roads

**Cypress Creek Wellfield Surface Water Management and Wetland, Restoration Tampa Bay Water, Florida**

- » 2010 APWA Florida Chapter - Consultant of the Year in Stormwater
- » The Legacy Trail
- » Sarasota County Public Works, Florida
- » 2009 Florida Redevelopment Association (FRA) Best Book Awards - Roy F. Kenzie Award for Best Transportation/Transit Enhancement



West Orange Trail

**West Orange Trail Phase 3A Pedestrian Bridge, Orange County, Florida**

- » 2008 APWA Florida Chapter - Consultant of the Year in Buildings and Grounds
- » 2008 Orange County Design Excellence Awards - Award of Excellence
- » 2007 FRA Best Book Awards - Roy F. Kenzie Award for Best Transportation/Transit Enhancement



Marion Transit Center

**Marion Transit Center, Hillsborough Area Regional Transit Authority, Florida**

- » 2007 APWA Florida Chapter - Consultant of the Year in Buildings and Grounds

20. *Is your firm a certified minority business enterprise with a government agency, such as the Florida Department of Management Services? If yes, please indicate as such and include documentation of an active certification for your firm.*

RS&H is not a minority business enterprise but we know how important it is to the local community to support minority and small business companies. Which is why we always try to use experienced local minority and small business consultants.

*Please Indicate the Types of Work for which your firm is submitting its qualifications by marking an X in the box to its left (Please mark X for all that apply).*

<input checked="" type="checkbox"/>	A. DESIGN PHASE	<input type="checkbox"/>	G. GEOTECHNICAL ENGINEERING
<input checked="" type="checkbox"/>	B. CONSTRUCTION AND INSPECTION PHASE SERVICES	<input checked="" type="checkbox"/>	H. PAVEMENT MANAGEMENT
<input checked="" type="checkbox"/>	C. PROJECT ADMINISTRATION	<input checked="" type="checkbox"/>	I. GEOGRAPHIC INFORMATION SYSTEMS SERVICES (GIS)
<input checked="" type="checkbox"/>	D. GENERAL CIVIL/STORMWATER ENGINEERING	<input checked="" type="checkbox"/>	J. GRANT ADMINISTRATION
<input checked="" type="checkbox"/>	E. TRAFFIC ENGINEERING	<input checked="" type="checkbox"/>	K. GENERAL ENGINEERING CONSULTATION / PEER REVIEW/QUALITY ASSURANCE REVIEW
<input type="checkbox"/>	F. WATER/WASTEWATER ENGINEERING	<input type="checkbox"/>	



## 2 STATEMENT OF UNDERSTANDING

## 2. STATEMENT OF UNDERSTANDING

RS&H's approach to a Town of Belleair project is developed around the specific project needs. Our strategy to complete the project encompasses a number of vital project considerations:

- » **Service the client** – RS&H understands that the Public Works Director and staff of the Town of Belleair are under a great deal of pressure to be responsive to the residents but have limited resources. The RS&H team will assist the Town of Belleair staff by being extremely responsive to your needs.
- » **Well-coordinated project team** – The Town of Belleair needs an experienced, consolidated, and responsive design team; a team that has successfully designed infrastructure improvements in similar settings. RS&H's wide array of professional capabilities match the Scope of Services outlined in the RFP. Our in-house, Tampa-based team has decades of experience working together on similar projects for municipalities and counties across Florida.
- » **Strict project schedule and budget requirements** – The design work needs to be completed quickly and efficiently. RS&H has built a reputation for assisting cities and counties with their infrastructure needs. We realize the importance of meeting tight deadlines and managing valuable financial resources. Our design procedures have been refined through decades of experience for maximum efficiency.
- » **Thoughtful participation with stakeholders and the public** – RS&H has orchestrated complex public-involvement initiatives for infrastructure projects of all sizes. Our team is well-versed in important issues affecting nearby residences, utilities and other stakeholders.
- » **Maintenance of traffic through construction** – The construction of a new facility must not impact existing traffic. Our comprehensive construction experience will enable uninterrupted travel through the construction zone while still providing maximum safety to the public and work crews.

The RS&H team is made up of the right people with the right experience for the project. RS&H has in-depth experience in every required discipline, including civil engineers, drainage engineers, environmental scientists, structural engineers, and public involvement experts.

Our focus on infrastructure work demonstrates our ability to meet schedules and budgets common to local governments. For the Town of Belleair, this means a project that is:

- » Well-designed
- » On time and within budget
- » Publicly supported
- » Compliant with environmental regulations



## A. DESIGN PHASE SERVICES

Proactive communication and coordination is essential for the success of any municipal project. Projects in urban areas take many disciplines – such as roadway, drainage, signing and marking, signalization, maintenance of traffic, utility coordination, and public involvement – to design a successful project. Up front coordination with all stakeholders is fundamental in resolving access management issues, driveway locations, right and left-turn lanes, median openings, and traffic signals. RS&H proposes to initiate the coordination process at the beginning of the design phase. It may also be beneficial to periodically include selected parties in the regularly scheduled monthly meetings between the RS&H team and the Town.

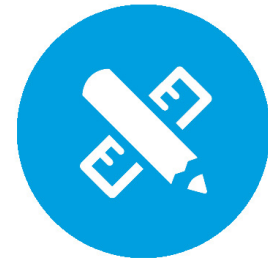
The Design Phase Services can be broken into three major parts: pre-design investigation, design services, and post design services. The pre-design investigation will include a topographic survey, geotechnical and soil investigation, utility locates, contaminated soil investigate, and coordination with the Town and stakeholders. During the design phase, the RS&H team will provide professional engineering services, obtain all permits, prepare construction plans, prepare specification, and coordinate with the Town staff and stakeholders. The design services will be consistent with sound engineering practices and shall meet all applicable codes, regulations, grant or funding requirements, and appropriate standards. Post design services will include administration of the bid process, plan distribution, preparation of addendums, preparation of the bid opening, analysis of the bids, and make bid award recommendations.

RS&H will help the Town of Belleair meet its project goals and budgets by utilizing the following steps:

- » **Define overall objectives** – Senior members of the RS&H team, including Project Manager Rob Garrigues, will work closely with Town staff to establish the overall objectives for the project. The assignments will be evaluated in the context of other Town initiatives in the area and the objectives will guide the development of all phases of the assigned project.
- » **Communicate budgetary constraints** – The RS&H team will confirm the Town's budget for design and construction and prepare Cost Trend Reports as part of the monthly progress report. All issues with a significant impact on the Estimated Construction Cost will be communicated to the Town as soon as reliable information is available to describe the impact, potential costs, and proposed remedial actions to neutralize them.



Pre-Design Investigation



Design Services



Post-Design Services

- » **Evaluate site conditions** – The RS&H team, including leaders of each project discipline, will review project data and survey information. They will conduct on-site evaluations of conditions that will affect the design, including available right-of-way, stormwater runoff conditions, lines of sight for pedestrians and vehicles, and location and condition of existing utilities. Our team will engage utility owners early, resulting in a well-coordinated and efficient effort throughout the course of the assignment.
- » **Identify and engage stakeholders** – Stakeholder consensus will be vital to setting priorities for the project. RS&H will use advanced visualization technology to quickly and effectively communicate design options. We will work with Town staff to evaluate and incorporate stakeholder input.
- » **Establish priorities and design criteria** – RS&H will bring together the Town's goals and objectives, site opportunities and constraints, regulatory requirements, and stakeholder input to formulate priorities for the project and develop comprehensive design criteria for the project.
- » **Complete preliminary design** – Based on the approved design criteria, RS&H will complete a preliminary design that will confirm project objectives have been met. We will avoid wasted time and effort by using tested design strategies and processes.
- » **Coordinate with regulatory agencies** – Early coordination with regulatory agencies will improve the efficiency of project compliance. The RS&H team has worked with staff at each agency over many years and this familiarity will help to keep the project on track and avoid permitting hang-ups.
- » **Gather community feedback** – RS&H will continue to engage the community throughout the course of the project. By keeping the stakeholders apprised of progress, the team will garner feedback and make refinements to the design along the way. We will work to ensure there will be no surprises for stakeholders and community members.
- » **Confirm construction cost estimate** – RS&H tracks probable construction costs at every phase of the project. In so doing, we confirm that the final design will meet the budgetary constraints of the project.
- » **Complete final design** – RS&H has a talented and experienced staff of engineers, landscape architects, and designers who are focused solely on infrastructure projects. We have developed efficient systems and procedures that ensure a high-quality, comprehensive set of construction documents. We have a built-in peer review and quality control program. The final design will be rigorously checked to confirm its completeness and constructability.



## B. CONSTRUCTION AND INSPECTION PHASE SERVICES

RS&H's Transportation Construction Management Practice (T-CM) is one of the industry's leading project management and engineering firms and has extensive expertise and experience relating to construction management, inspection, and testing. The team takes a proactive approach in resolving issues and is highly diversified, thus able to offer clients additional support beyond what other traditional construction management groups.

Our primary objective is to meet the client's needs and expectations for project management and construction inspection. We will ensure that the prime contractor completes construction within accepted tolerances, on time, within budget constraints, with minimum environmental impacts, and with minimal inconvenience to the residents and traveling public. These guiding principles have served us and our clients well on past projects and have helped to increase our working knowledge for all future projects.

The project staff has a wealth of project management and construction experience. All of our staff has received stormwater management or stormwater inspection training. This ensures that during construction, the environmentally sensitive areas are protected. In addition, RS&H's T-CM group has been working aggressively on our sustainability initiative. This initiative encourages the use of recycled products in construction projects not only to decrease construction costs, but also to decrease the raw materials incorporated in the project. It also encourages the saving of existing vegetation and landscaping by strictly defined clearing and grubbing limits.



## C. PROJECT ADMINISTRATION

RS&H's Project Administration strategies have proven themselves time and again. Serving multiple clients in Project Administration roles, RS&H provides budget and schedule reporting, design reviews and construction inspection services. RS&H has successfully used program management tools such as web-based document control programs to facilitate communication with consultants and contractors.

When RS&H is providing professional services for the Town of Belleair, it is understood that we will act on the behalf of the Town as an agent, when providing administration for a project. The administrative duties shall include all the items listed in the Scope of Services, Sections A – Design Phase Services, and B – Construction and Inspection Phase Services.

During the Design Phase Services, responsibilities may include:

- » Coordinating the advertising of a project bidding
- » Attend Bid Openings
- » Tabulating Bid Tabs
- » Recommending an Acceptable Bidder

During the Construction and Inspection Phase Services, responsibilities may include:

- » Project Administration
- » Conducting Pre-construction Meetings
- » Holding Progress Meetings
- » Preparing Meeting Minutes and Progress Reports
- » Updating Construction Progress on the Town's website
- » Preparing Pay Estimates
- » Coordinating all phases of the project on behalf of the Town

#### D. GENERAL CIVIL/STORMWATER ENGINEERING

The RS&H Infrastructure Practice provide a full range of planning, architectural, engineering, and construction administration services to local government and state government agencies. RS&H's Infrastructure Practice includes a specialized team of engineers, planners, environmental scientists, and analysts who offer a full range of roadway and stormwater management services. RS&H remains on the leading edge of roadway design, water resources, environmental, and GIS technology and continuously provides clients with innovative solutions for meeting today's challenges while planning for tomorrow.

##### **Civil/Roadway Engineering**

Coordination is essential for success of any roadway project. Roadway projects in urban areas take many disciplines – such as, roadway, drainage, signing & marking, signalization, maintenance of traffic, utility coordination and public involvement to name a few – to design a successful project. Upfront coordination with all stakeholders is fundamental in resolving access management issues, driveway locations, right and left turn lanes, median openings and traffic signals. RS&H proposes to initiate the coordination process at the beginning of the design phase. It may also be beneficial to periodically include selected parties in the regularly scheduled monthly meetings between the RS&H team and the city. These would be in addition to the anticipated meetings with civic groups and stakeholders noted in the Public Involvement portion of this Approach.



The RS&H roadway design team is comprised of design professionals who are well suited for this type of contract. Our team has a great deal of roadway design experience including intersection improvements, bike trails, sidewalks, milling and resurfacing, turn-lane additions, transit upgrades, and general roadway safety improvements. We are capable of providing all of the engineering services associated with each of these improvements including utility coordination, signal and signage, maintenance of traffic, and traffic analysis.

### **Stormwater Engineering**

The Water Resources Group in the Tampa Office is led by Project Manager Rob Garrigues. Rob's staff totals seven members including six professional engineers ranging in experience from 5-years to 30-years. The drainage experience of the Tampa office is significant and varied. Representative projects include flooding studies, permit coordination, roadway designs, pond siting reports, bridge hydraulic analyses, cost estimates, and future planning exercises.

We have developed and permitted drainage designs on major limited access facilities such as I-75 and the Florida's Turnpike. We have also developed and permitted drainage designs on many smaller rural and urban roadways, such as East Keyville Road Bridge (Hillsborough County), 102nd Avenue Intersection Improvements (Pinellas County), and Causeway Boulevard at Providence Intersection improvements (Hillsborough).. In addition to traditional roadway design, the Tampa office is also experienced in many other facets of water resources. Each of these projects included a Project Development and Environment component. In addition, we were responsible for updating and improving the stormwater master plan for the Tampa International Airport. This airport-wide project was a critical element in the drainage design and permitting of the future north terminal addition anticipated in the future by airport management and all production was required in AutoCAD.

The tools that we use to facilitate our design efforts are the most advanced in the industry. In addition to the traditional Inter Connected Pond Routing program used to design stormwater management facilities, and the software typically used to design stormwater collection systems, we are extremely familiar with the available GIS data and packages that can be used to facilitate water resources designs. We utilize Light Detection and Range Data on a regular basis by converting the information to raster images that are ultimately used to develop contours and basin boundaries. We also utilize ArcHydro which is established on the GIS platform to identify basin boundaries, CN values, and Time of Concentration information.



## Environmental Permitting

The RS&H team focuses on the interrelationships between water resources and the environment to protect our natural ecosystems while fulfilling the needs of communities and regions. Comprehensive services include environmental permitting, waste removal, wetland mitigation and enhancement as well as stream relocation, land exchanges and wetland treatment systems. RS&H also has the ability to use GIS to evaluate and quantify the environmental impacts and issues of projects. We are able to overlay project alignments or study areas on a large database of GIS data sets to calculate the impacted features.

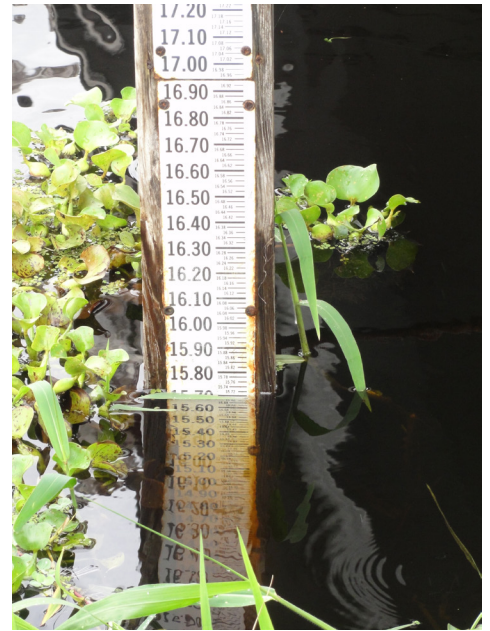
Our team has the experience and depth of staff to address the Town of Belleair's need for environmental analysis that may arise for the coastal Town. In addition to analysis, our environmental scientists and marine biologists have extensive permitting experience. Wetland and wildlife impacts are a key concern of permitting agencies like the SWFWMD, FFWCC, USACOE, USFWS, and USCG. RS&H's environmental staff has extensive experience providing environmental analysis and permitting services to local and state agencies including Tampa Bay Water, the FDEP, and the FDOT.

## Public Involvement

Communication is key to ensuring that each task assignment fully meets the needs of Town of Belleair, the community, and other key project stakeholders. We will carry it through the design of this project with clear, two-way communication as the foundation of our Public Involvement program.

Through previous experience on similar projects, we anticipate that property owners adjacent to the facility may express concern over the project, primarily relating to access management. These concerns will only be intensified for property owners with driveways directly in a construction zone. Our Public Involvement program will help to mitigate these concerns, as well as identify opportunities to incorporate stakeholder input with the goal of building consensus and public support.

Following the project kick-off meeting, the RS&H team will develop a project-specific public involvement program, which emphasizes collaboration among the project team, community, and all stakeholders. The public involvement program will hinge on the transparency of the project team and our honest sharing of project information with the public. It will be important for us to establish trust with residents and other stakeholders by carefully listening to their concerns and finding ways to cost-effectively and feasibly address these issues in the design.



**Information** – Town Hall Meetings, Project Website, Newsletters, Fliers, Project Kiosks, Media Kits, Radio Programs



**Collaboration** – Focus Group Meetings, Social Media, Community Workshops, Partner Coordination Meetings



**Planning & Evaluation** – Project Steering Committee, Task Force Committees



**Obtaining Feedback** – Interviews, Surveys, Comment Forms, On-Line Polling.

The RS&H team will take this input and incorporate it into the design. Our goal is to address these concerns up front while meeting the Town's needs for this project and minimizing impacts to feasibility and schedule.

### **Maintenance of Traffic**

RS&H's roadway engineers are certified by FDOT in maintenance of traffic (MOT) standards and procedures and are extremely familiar with MUTCD and Standard Index 600 requirements. The importance of these MOT activities and the safety of the motoring public cannot be overstated. Construction activities can be simplified by a solid design effort, complete and clear construction documents, and the utilization of knowledgeable, experienced staff. Key considerations in our MOT plan will include:

- » Roadway and drainage design
- » Construction phasing
- » Utility coordination
- » Temporary drainage
- » Environmental constraints
- » Emergency vehicles
- » Access to residences
- » Worker and pedestrian safety

The RS&H team is fully aware of the impacts that utilities can have on project design, costs, and construction schedules if not properly coordinated early in the design process.

### **Architecture and Landscape Architecture**

As a result of our committed focus on serving municipal clients, the RS&H team is well versed in public projects of all types. We've provided architectural and landscape architectural services for public buildings, service buildings, schools, parks, and other community amenities. RS&H's in-house capabilities include:

- » Architecture
- » Landscape architecture
- » Site planning
- » Structural engineering
- » Mechanical, electrical and plumbing
- » Cost estimating
- » Construction contract administration/monitoring

Our team is experienced in all architectural and landscape architectural project phases, such as:

- » Preliminary studies
- » Design development and schematic design
- » Contract documents



- » Bidding and award
- » Construction assistance
- » Post design phase

All RS&H designs will meet state and federal requirements, as well as all Town Building Code requirements, and will conform to all applicable local codes, ordinances, regulations and standards, including ADA and ANSI requirements.

RS&H designers are leaders in environmental stewardship who promote energy-efficient, durable, and environmentally responsible buildings and project sites.

## E. TRAFFIC ENGINEERING

The Traffic Engineering scope calls for the collection of traffic data, analysis and design of traffic calming features, and safety reviews. The traffic data collection provides the necessary information to identify sites that warrant traffic calming features. There are several different types of traffic calming features that can be applied, including but not limited to, speed humps or tables, chicanes, and traffic circles. The nature of the problem(s) identified by an analysis of the traffic data will guide the selection of the traffic calming measure. We have experience collecting traffic data for various roadway improvement projects including the neighborhood and residential traffic calming program that was conducted by Hillsborough County from 2004 to 2007.

Roadway Safety Audits can provide useful information to identify potential safety issues and develop recommendations to increase safety. We have experience conducting safety analyses for a variety of projects including PD&E studies and design projects as well as standalone safety studies such as the intersection improvement project at Beneva Road and 17th Street for Sarasota County. In addition to the development of safety and operational improvements, our team has a broad range of experience that aids in the process of detailed cost estimating and cost/benefit analysis that can be used to prioritize projects for funding.

## H. PAVEMENT MANAGEMENT

RS&H is experienced with the Pavement Management process of planning the maintenance and repair of a network of roadways for a variety of clients including municipalities, the FDOT and Florida's Turnpike Enterprise, in order to optimize pavement conditions over the entire network. RS&H's intent is to build on the pavement management system process already in use by the Town of Belleair for its 22 miles of streets and introduce enhancements that will streamline the pavement management process to make it more efficient and economical. Since it is far less expensive to keep a road in good condition than it is to repair it once it has deteriorated, our pavement management system will





emphasize preventive maintenance of roads in good condition, as well as reconstructing roads in poor condition. In terms of lifetime cost and long-term pavement conditions, this will result in better system performance.

Our effective pavement management system will incorporate life cycle costs into a systematic approach to road maintenance and reconstruction projects. We will consider the needs of the entire network, as well as budget projections before projects are executed. Our pavement management approach will encompass the many aspects and tasks needed to maintain a quality pavement inventory and ensure that the overall condition of the road network can be sustained at desired levels while still staying within the Town's fiscal restrictions.

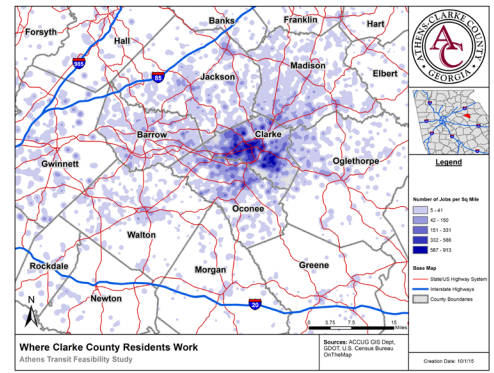
The RS&H pavement management process is an approach that consists of the following cyclical steps:

1. Produce an inventory that defines the street network by segment length and typical section and assigns importance ratings for road segments based on traffic volumes, road functional class, and community demand.
2. Conduct a survey of pavement conditions and document the existing pavement condition to establish the remaining pavement life for each segment. RS&H is familiar with many rating methods and will tailor the system to meet the Town of Belleair's preferences.
3. Rank the roadway segments in order to assure that the most severe and the most cost-effective projects are considered first.
4. Prepare and submit the Work Planning Recommendation for approval. This report will prioritize the segments, provide segment cost estimates and detail the scheduling and necessary funding for the work to be done.
5. The work program will be implemented. This step represents the feedback between maintenance needs and fiscal resources and also relates the program to the realized outcome (work completed). RS&H will implement a street network database inventory in a Town approved GIS format that allows easy data entry after scheduled inspections and completed rehabilitation work. The database will be able to provide data mining for formatted report output.



## I. GEOGRAPHIC INFORMATION SYSTEMS

The RS&H team is highly experienced in providing services to support Geographic Information System (GIS) efforts, both in analyses and cartographic skills, including GPS data collection, digitization, analysis, training, web server applications, database creation, integration, and management. RS&H professionals are proficient in the use of the following Esri products: ArcGIS for Desktop (including all extensions), Mobile, Server, and Online. As a result of GIS analyses, we can create databases and web applications for staff to easily gather information on project as needed. In addition to our extensive analysis capabilities using GIS, we also have the capability of displaying volumes of information in graphical formats that are easily understood and processed by the end-user, which is particularly important when utilizing GIS in support of public engagement activities.



## J. GRANT ADMINISTRATION

Preparation of compliant applications for resources available through state, federal, and other resource agencies includes assistance in seeking out grant opportunities. The RS&H Team will prepare or assist the Town of Belleair in seeking potential grant opportunities, grant applications necessary for the town to compete for federal, state, and other financial resources. Applications shall be submitted in accordance with grant program rules and requirements. All necessary forms and supporting documents will be developed. The RS&H Team will submit draft and final grant applications (with forms, exhibits, and supporting documentation) and appropriate Standard Operating Procedures for Grant Application Preparation.



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## K. GENERAL ENGINEERING CONSULTANT/PEER REVIEW/QUALITY ASSURANCE REVIEW

RS&H provides Constructability/ Peer Reviews of Design and Bid Documents before they are released to help reduce inconsistencies, verify references, review material compatibility and proper uses, review documents for constructability, code compliance and ADA accessibility. Our in-house peer reviews by senior professionals whom have real life experience, can provide quick turn-around times, allowing time to make adjustments in documents prior to release of bid documents. Reviews include complete review of all discipline drawings and specifications to identify interdisciplinary coordination issues, identification of constructability items, reference checks, ADA/Code plan review, facility standards verification, and field review to assist in the elimination of potential conflicts, reduction in time consuming questions during construction and potential change order claims.





# 3

APPENDIX

# ROBERT GARRIGUES, PE

## PROJECT MANAGER/PROJECT ADMINISTRATION/DRAINAGE/ GRANT ADMINISTRATION

### INTRODUCTION

Robert Garrigues serves as the Tampa Water Resources Group Leader for RS&H's Transportation-Infrastructure Practice. He has 30 years of general engineering experience, including 21 in drainage design and permitting. His areas of expertise include management and design of highway stormwater collection systems; pond design; and preparation of bridge hydraulics reports, pond-siting reports, location hydraulics reports, watershed studies, permit coordination, and stormwater field investigations.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Florida - Drainage Engineer and Drainage Design and Permitting Engineer-of-Record.** RS&H modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road, and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Palmetto Road from Manatee Road to Ocala Road, Town of Belleair, Belleair, FL - Drainage Design Engineer.** RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system.

**Rosery Road Improvements, Town of Belleair, Belleair, FL - Project Manager.** Prepared documentation and submitted a joint funding application to SWFWMD for collection system improvements, including a Suntree Baffle Box for sediment and nutrient removal. Coordinated with SWFWMD via meetings and email. Prepared all necessary calculations in addition to paperwork. Grant was approved by SWFWMD staff and funding is estimated at \$1.3 million. Construction cost estimated at \$2.6 million.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, FL - Drainage Design.** Scope of work included improving all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project required roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**Cypress Creek Wellfield Surface Water Management Project, Tampa Bay Water, Wesley Chapel, FL - Project Manager.** The Cypress Creek Wellfield (CCWF) Surface Water Management project is a multi-objective wetland restoration and surface water management project. The primary objective was to modify surface water drainage patterns resulting in improved wetland hydrology at

sites in the eastern portion of the CCWF that were previously identified. An additional objective was to reduce nuisance flooding in Saddlewood Estates, located east of the CCWF, and Quail Hollow, which is located to the southeast of the CCWF. In cooperation with Tampa Bay Water and the SWFWMD, RS&H constructed a series of culverts and berms so that the water that once flooded neighborhood streets is now diverted westward through a series of wetlands across the wellfield. This westward movement of above-normal water levels will precipitate the movement of water into specific “target wetlands” that are not expected to recover hydrologically with the current reductions in pumping.

**Myakka Bridge Replacement, Sarasota County, Sarasota, FL - Drainage Design Engineer.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, and consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Project Director.** Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL – Drainage Design Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Completed pond-siting report.

## CREDENTIALS

Total Years of Experience: 30; With RS&H: 18

Bachelor of Science, Environmental Engineering; University of Florida

Registered Professional Engineer: Florida (No. 47652), 1994; Georgia (No. 035766), 2011; Illinois (No. 062063329), 2011; North Carolina (No. 32257), 2006

# MICHAEL DIXON, PE

## PROJECT OFFICER

### INTRODUCTION

Michael Dixon serves as the Tampa Office Leader for RS&H's Transportation-Infrastructure Practice. He is responsible for project management of transportation design, as well as the technical aspects of project design, including horizontal and vertical geometric calculations, roadway drainage design, utility conflicts, and plans preparation. Michael is experienced in the development of final roadway and traffic control plans, and coordination with subconsultants and clients to ensure that projects are on schedule and within budget.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Florida- Project Officer.** RS&H modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road, and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Palmetto Road from Manatee Road to Ocala Road, Town of Belleair, Belleair, FL - Project Officer.** RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system.

**Rosery Road Improvements, Town of Belleair, Belleair, FL - Project Officer.** RS&H Prepared documentation and submitted a joint funding application to SWFWMD for collection system improvements including a Suntree Baffle Box for sediment and nutrient removal. Coordinated with SWFWMD via meetings and email. RS&H prepared all necessary calculations in addition to documentation. Grant was approved by SWFWMD staff and funding is estimated at \$1.3 million. Construction cost estimated at \$2.6 million.

**Bruce B. Downs at Bearss Avenue PD&E Study, Hillsborough County, Tampa, FL - Project Officer.** RS&H completed a PD&E study for the identification and evaluation of interim and ultimate intersection improvements using CORSIM traffic simulation. Project alternatives included grade-separated concepts to improve capacity and safety at the study intersection.

**Ecological Monitoring at the Cypress Creek Wellfield, Tampa Bay Water, Land O'Lakes, FL - Project Officer.** RS&H provided ecological and hydrological monitoring services at the Cypress Creek Wellfield. Tasks included annual report preparation, Wetland Assessment Procedure data collection and data entry, assistance with recovery analysis, and other miscellaneous tasks.

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Project Officer.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**Myakka Bridge Replacement, Sarasota County, Sarasota, FL - Project Officer.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**CR 150 Bridge Wetlands Monitoring, Madison County, Greenville, FL - Project Officer.** RS&H provided wetland mitigation monitoring and reporting as a significant subconsultant. The team conducted semi-annual monitoring and prepared annual monitoring reports to meet the special conditions of a permit obtained from the US Army Corps of Engineers. The team established monitoring and photo stations to provide year-round access from the right-of-way and used a GPS-equipped camera to ensure that photographic documentation of the site was taken from the same location during each monitoring event. RS&H previously provided design and permitting services and designed the mitigation site and has acquired extensive knowledge of the project and site's history.

## CREDENTIALS

Total Years of Experience: 32; With RS&H: 22

Bachelor of Science, Civil Engineering; North Carolina State University

Registered Professional Engineer: Florida (No. 49114), 1995; Georgia (No. 035504), 2010; Illinois (No. 062.063031), 2010; North Carolina (No. 17601), 1991; Virginia (No. 0402048054), 2010

American Society of Highway Engineers (ASHE)

# KATHERINE BRITTIAN, PE, LEED AP

## QUALITY ASSURANCE/QUALITY CONTROL

### INTRODUCTION

Katherine Brittian serves as the Tampa Highway Group Leader for RS&H's Transportation-Infrastructure Practice. She works with the project design team ensuring that final design plans meet client needs and industry criteria. Her responsibilities include the management and design of roadway and bridge design projects. Katherine has 19 years of experience in roadway design and project management. Key design aspects include establishment of horizontal and vertical geometry, drainage design, flexible pavement design, traffic control plan development, and noise analysis. Her project management responsibilities include client and subconsultant communication and coordination, budget negotiation and control, QA/QC procedures, construction assistance, and shop drawing reviews.

### PROJECTS

**US 301 Rehabilitation, FDOT District 7, Dade City, FL - Project Engineer.** The project plans included multimodal aspects along with the 5-mile resurfacing of the four-lane divided rural highway. A sidewalk location assessment was performed to determine the desirable position for the walkways on each side of the roadway to minimize environmental and drainage impacts while improving safety and Americans with Disabilities Act compliant access to the numerous bus stops in the corridor. A crosswalk location study was also performed to determine the most desirable site to connect the separate paths, considering pedestrian safety, roadway geometry, highway speeds, and visibility.

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL - Project Manager.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis.

**Alligator Alley (I-75) Rest Area, FDOT District 1, Naples, FL - Project Engineer.** RS&H designed a new rest area on the north side of the Alligator Alley segment of I-75. The rest area was designed to LEED standards and is adjacent to recreational parking and access to the Florida National Scenic Trail located within the Big Cypress National Preserve. RS&H's LEED experience, which includes the design of two LEED Gold rest areas in Pasco County, was invaluable since this rest area is one of the first in District 1 that will be constructed to LEED standards. In addition to the design, FDOT asked RS&H to help manage permitting coordination with the Army Corps of Engineers and South Florida Water Management District for this rest area, as well as the south side, which is being delivered as a design-build. We have assisted by clarifying permitting issues and providing direction to the FDOT, which is especially important for the design-build project due to the tight schedule.

**US 27 VWS & Bi-Directional Static Scales, FDOT District 1, Clewiston, FL - Project Engineer.** RS&H is responsible for providing the design services for the construction of a bi-directional static weigh station scale in the existing median of US 27 and one weigh-in-motion sensor site in each direction in advance of the static scale. The project also includes a bypass site to identify trucks attempting to avoid the weigh station by utilizing CR 720. Design services include roadway design, drainage design, environmental permitting, signing and pavement marking, and lighting.



**I-75 Widening from North of River Road to North of SR 681, FDOT District 1, Venice, FL - Project Manager.** RS&H provided design services to widen approximately 9 miles of I-75 from north of River Road (CR 777) to north of SR 681. The four-lane divided configuration was widened to a six-lane facility with drainage facilities capable of accommodating the ultimate eight-lane facility. The project also involved the realignment of approximately 2 miles of southbound I-75 into the median to facilitate Sarasota County's plan to construct an extension of Honore Avenue, a parallel four-lane divided urban arterial roadway. This alignment shift required new bridge structures over Salt Creek and Cow Pen Slough. Nineteen drainage basins and outfall systems, six bridge widenings, and multiphased traffic control plans are some of the unique elements necessary because of the rolling terrain and the heavy traffic volumes in this rapidly developing section of Florida's west coast.

**I-75 Widening from South of Harborview Road to North of Kings Highway, FDOT District 1, Charlotte County, FL - Project Manager.** Widening of approximately 5 miles of I-75 from south of Harborview Road to the DeSoto County line. Project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. Design services include roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, miscellaneous structure design, environmental permitting, and noise analysis.

**US 27 (SR 25), FDOT District 1, Polk County, Florida - Project Engineer and Project Manager.** Project involved the widening of US 27 (SR 25) from four lanes to six lanes between SR 544 and Blue Heron Bay Boulevard. Additional through lanes were constructed within the existing median and/or on the outside in both the northbound and southbound directions. The roadway typical section varies from urban, within the city limits of Haines City, to rural, the less developed areas of the project. The project included the full replacement of the bridge over CSX railroad. The bridge replacement required both a permanent and temporary retaining wall construction and a multiphase ramp detour plan due to its proximity to the interchange with US 17/92. Community enhancement features were also included in the form of a decorative street lighting, extra wide sidewalks and extensive landscaping. Other services provided include storm sewer design, stormwater permitting and pond design, highway signage, and signalization for four intersections.

## CREDENTIALS

Total Years of Experience: 19; With RS&H: 19

Bachelor of Science, Civil Engineering; University of Florida

Registered Professional Engineer: Florida (No. 60861), 2004

American Society of Civil Engineers (ASCE)

FDOT/ATSSA Advanced WZTC/MOT; Florida Department of Transportation

LEED Accredited Professional; U.S. Green Building Council

Specifications Package Preparation Training for Consultants; Florida Department of Transportation

# VINCENT SHINE, PE

## DEPUTY PROJECT MANAGER/PROJECT ADMINISTRATION/ROADWAY/PAVEMENT MANAGEMENT

### INTRODUCTION

Vincent Shine serves as a Senior Transportation Engineer for RS&H's Transportation-Infrastructure Practice. His responsibilities include design and management of roadway design projects. Vincent works closely with the transportation design team on a variety of roadway projects.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Florida- Project Engineer.** RS&H modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road, and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Palmetto Road from Manatee Road to Ocala Road, Town of Belleair, Belleair, FL - Project Engineer.** RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system. Responsible for quality control of roadway plans.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, Florida - Project Engineer.** Scope of work was to improve all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project requires roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Project Manager.** Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**Keyville Road Bridge Replacement, Hillsborough County, Tampa, FL - Project Manager.** The East Keyville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to

the river crossing include shoulder widening and accommodations for future sidewalks. Responsible for the roadway design and plan development of the bridge culvert, as well as coordination with Hillsborough County and SWFWMD.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Project Engineer.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**CR 54 (Ronald Reagan Parkway) Widening from US 27 to US 17/US 92, Polk County, Bartow, FL - Project Engineer.** RS&H provided engineering and design services for the widening of approximately 7 miles of CR 54 (Ronald Reagan Parkway). RS&H previously completed the corridor study for this project, which was divided into five segments for the design stage. The segments were bid separately, and each was awarded to RS&H. The widening project consisted of reconstructing the roadway from a two-lane undivided rural facility to a four-lane divided urban facility to add much needed capacity to this rapidly developing area. Traffic signals along with turn lanes, 4-foot bike lanes and 6-foot sidewalks were included to make the corridor more pedestrian-friendly. A new bridge was constructed over I-4, allowing the two-way bridge to be used for one-way traffic with pedestrian accommodations. RS&H designed the roadway to be widened with minimal right-of-way acquisition, which will save the county valuable time and money.

**Cypress Creek Wellfield Surface Water Management Project, Tampa Bay Water, Wesley Chapel, FL – Project Engineer.** The Cypress Creek Wellfield (CCWF) Surface Water Management Project is a multi-objective wetland restoration and surface water management project. The primary objective was to modify surface water drainage patterns resulting in improved wetland hydrology at sites in the eastern portion of the CCWF that were previously identified. An additional objective was to reduce nuisance flooding in Saddlewood Estates, located east of the CCWF, and Quail Hollow, which is located to the southeast of the CCWF. In cooperation with Tampa Bay Water and the SWFWMD, RS&H constructed a series of culverts and berms so that the water that once flooded neighborhood streets is now diverted westward through a series of wetlands across the wellfield.

## CREDENTIALS

Total Years of Experience: 18; With RS&H: 16

Master of Science, Engineering Management; University of South Florida

Bachelor of Science, Civil Engineering; University of South Florida

Professional Engineer #67387; Florida; 2008

Advanced Work Zone Traffic Control; Florida Department of Transportation

# ALEJANDRO MENDEZ, PE

## ROADWAY DESIGN/PAVEMENT MANAGEMENT

### INTRODUCTION

Alejandro Mendez serves as a Transportation Engineer for RS&H's Transportation-Infrastructure Practice. He has a broad knowledge in road and highway design and has demonstrated success in the completion, budget adherence, and timely delivery of projects meeting and in most cases exceeding the client's expectations. Alejandro has 11 years of experience with significant knowledge in roadway and highway design, as well as maintenance of traffic for various phases of highway construction and site development. He has participated in the preparation of marketing proposals and project pursuits leading to the successful awarding of contracts. Alejandro is knowledgeable in IT and proficient in the use of various relevant software packages, such as MicroStation, GEOPAK, AutoTurn, Corridor Modeling, and AutoCAD. He also has in-depth knowledge of codes of practice, design criteria, and standards of governmental agencies, including the AASHTO Code, FDOT, TxDOT, VDOT, and Association of Australasian Road Transport and Traffic agencies.

### PROJECTS

**Palmetto Road from Manatee Road to Ocala Road, Town of Belleair, Belleair, FL - Project Manager.** RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system. Responsible for design, plans development, and coordination with utility companies, Town of Belleair, and internal disciplines.

**Pinellas County Flooding Studies, Pinellas County, Dunedin, FL - Lead Roadway Engineer.** Project involved a flooding complaint at the back of Local Group 16 Subdivision in Dunedin. Property owner was experiencing flooding within the cul-de-sac adjacent to his property. RS&H studied the area and developed three alternatives of increasing cost and presented them to the client for review. Alternatives varied from removing accumulated sediment from the area to adding additional inlets to capture runoff prior to reaching the cul-de-sac. Ultimately, the flooding was determined to be nuisance flooding, not related to physical property impacts, and the client decided that no improvements to the conveyance system were required. Responsible for field reviews, engineering analysis, design recommendations, and roadway complaint investigations.

**59th Avenue North Drainage Study, Pinellas County, Pinellas Park, FL - Lead Roadway Engineer. Responsible** for field reviews, engineering analysis, design recommendations, and roadway complaint investigations. After several field visits and close coordination with county staff, team was able to deliver an effective report that addressed drainage concerns and roadway flood issues for the county to be able to move forward with the project.

**Eastport Development Design-Build, Port Tampa Bay, Tampa, FL – Roadway Engineer.** Project included roadway design, permitting and construction of a Berth 150 Finger Pier with a roll on/off ramp that accesses the new Eastport upland 25-acre cargo yard. The design also constructed the realignment of Rockport Road to provide access from Causeway Boulevard (CR 676) to the cargo yard. Responsible for assisting with design, plans production, quantities, and plan revisions.

**Spruce Street PER & Conceptual Plans, City of Tampa, Tampa, FL – Roadway Engineer.** RS&H provided professional engineering and consulting services associated with safety and operational improvements for Spruce Street from Hesperides Street to Himes Avenue. A previous technical memorandum completed in May 2013 for the city analyzed the arterial capacity along Spruce Street

between North Lois Avenue and Himes Avenue. This technical memorandum made a recommendation for improvements at the driveway to and from the Home Depot on Spruce Street. This recommendation will be further analyzed as part of this project. RS&H developed a Preliminary Engineering Report, prepare Conceptual Roadway Plans, participate in public meetings, and presented presentations. Responsible for lane configuration and other roadway design alternatives as well as pavement, signalization, and utility relocation cost estimates for various phases of the study.

**SR 29 Widening, FDOT District 1, Felda, FL - Assistant Project Manager.** RS&H is responsible for designing the 5.6-mile widening of SR 29 from CR 832 (Keri Road) to F Road. In addition to expanding from a two-lane to a four-lane divided roadway, the design also includes the replacement of two bridge culverts and intersection lighting. The US Fish and Wildlife Service's Panther Recovery Implementation Team (PRIT) identified SR 29 as a candidate project to construct a wildlife crossing as a result of observed panther migration and panther deaths within the area. RS&H's environmental scientist attended multiple PRIT meetings to determine the preferences for a wildlife crossing. The project limits include two box culverts in poor condition due to the high acidity levels in the water. RS&H proposed replacing the structures due to their degradation, which would allow for the wildlife crossing. Responsible for design services and plans production.

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL – Roadway Engineer.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis. Responsible for assisting with design services and plans production.

**I-75 from South of North Jones Loop to North of US 17, FDOT District 1, Punta Gorda, FL – Roadway Engineer.** This project involves the widening of approximately 4 miles of I-75 from south of North Jones Loop Road to the Peace River Bridge. The project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. The existing bridges over North Jones Loop Road and the Seminole Gulf Railway will be widened. Services include traffic analysis, roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, bridge design, environmental permitting, ITS, and noise analysis. Responsible for horizontal and vertical geometry design, plans preparation, traffic control plans, and coordination with internal disciplines.

## CREDENTIALS

Total Years of Experience: 5; With RS&H: 5

Master of Engineering, Civil Engineering; University of Florida

Bachelor of Science, Civil Engineering; University of Florida

Professional Engineer #83301; Florida; 2017

Construction Plans Reading; Florida Department of Transportation

# RACHEL WRIGHT, PE, LEED AP BD+C

## ROADWAY DESIGN

### INTRODUCTION

Rachel Wright serves as a Transportation Engineer for RS&H's Transportation-Infrastructure Practice. Her responsibilities include complete design, plans preparation, quantity tabulation, and cost estimation for highway design projects. She works closely with the project manager to ensure that final design plans meet client needs and industry criteria. Rachel also assists with the development and design of temporary traffic control plans for highway design projects. She has 11 years of experience and has assisted with several design-build proposals through the Charlotte and Jacksonville offices, including helping to develop the DDI for the I-85 Widening Project. Several of these projects have allowed her to gain knowledge of NCDOT design standards, as well as the design-build process and creating a team environment across several offices.

### PROJECTS

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, FL - Project Engineer.** Scope of work was to improve all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project requires roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Project Engineer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**US 41/SR 54 Interchange PD&E Study, FDOT District 7, Land O' Lakes, FL - Project Engineer.** RS&H is completing a PD&E study for the US 41/SR 54 interchange. The study is evaluating different interchange configurations at this extremely congested major intersection in southern Pasco County. The project has several complicating factors, including connection to an evacuation route (SR 54), a major Florida Progress substation, an active railroad crossing, a fire station, and potential braided ramps and flyovers at Dale Mabry apex to the south. RS&H developed alternatives that provided general purpose lanes on the overpass while also allowing the managed lanes to be added later. In response to a new requirement that all overpass movements would be tolled, the team conceived alternatives that include tolled lanes over US 41 and two general purpose through lanes at the intersection.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Project Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban

roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**22nd Avenue South PD&E Study, Pinellas County, Gulfport, FL - Project Engineer.** Located in Pinellas County, 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. There are flooding problems within the project limits and no existing bicycle facilities. The roadway runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H completed the PD&E study, led a team in evaluating alternative designs, and recommended the most feasible roadway, intersection, stormwater, and drainage improvements.

**Depot Avenue Rail-Trail Pedestrian Overpass, Gainesville Community Redevelopment, Gainesville, FL - Project Engineer.** RS&H's design featured a simulated railroad track twisted into a vibrantly colored DNA strand spanning US HWY 441/SW 13th Street. Design also included a plaza and staircase adjacent to the overpass to link the rail-trail system to an extensive network of multimodal access points. After a robust design process, the structure was fabricated and preassembled off site prior to installation, which expedited the construction process and had minimal impact on traffic and the surrounding neighborhood. Ultimately, the project converted an unattractive, blighted, and poorly functioning pedestrian overpass into artistic and functional infrastructure.

**Keyville Road Bridge Replacement, Hillsborough County, Tampa, FL - Project Engineer.** The East Keyville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**US 301 Rehabilitation, FDOT District 7, Dade City, FL - Project Engineer.** RS&H provided design services for the resurfacing, restoration, and rehabilitation of a 5.2-mile stretch of US 301 from north of Pioneer Museum Road to south of Mosstown Road, just north of Dade City. In addition to the design elements, RS&H completed a multimodal study to evaluate the pedestrian, bicycle, and transit facility needs of the corridor. The project plans included milling and resurfacing, drainage improvements, safety enhancements, more than 10 miles of sidewalk incorporating provisions for bus stop, and minor widening of the right-turn lanes to accommodate bicycle "keyholes." The team saved the client time and money by eliminating substantial portions of their originally planned gravity wall by minimizing the number and extent of utility conflicts with the sidewalk, as well as qualifying the project for a Southwest Florida Water Management District permit exemption.

## CREDENTIALS

Total Years of Experience: 11; With RS&H: 11

Bachelor of Science, Civil Engineering; University of South Florida

Professional Engineer #76901; Florida; 2014

American Society of Civil Engineers (ASCE)

Advanced Maintenance of Traffic; Florida Department of Transportation; 3/20/2019

LEED Accredited Professional; U.S. Green Building Council

# MICHAEL THRASHER, PE

## BRIDGE DESIGN

### INTRODUCTION

Michael Thrasher serves as a Bridge Engineer for RS&H'S Transportation-Infrastructure Practice. He has 15 years of experience in bridge and transportation-related structures design. He is skilled in numerous programs, including MicroStation, GEOPAK, MathCAD, AutoCAD, ConSpan, MDX, RCPier, STAAD, and LEAP Bridge.

### PROJECTS

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Structural Engineer.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Structural Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**I-75 Widening from North of River Road to North of SR 681, FDOT District 1, Venice, FL - Structural Engineer.** RS&H provided design services to widen approximately 9 miles of I-75 from north of River Road (CR 777) to north of SR 681. The four-lane divided configuration was widened to a six-lane facility with drainage facilities capable of accommodating the ultimate eight-lane facility. The project also involved the realignment of approximately 2 miles of southbound I-75 into the median to facilitate Sarasota County's plan to construct an extension of Honore Avenue, a parallel four-lane divided urban arterial roadway. This alignment shift required new bridge structures over Salt Creek and Cow Pen Slough. Nineteen drainage basins and outfall systems, six bridge widenings, and multiphased traffic control plans are some of the unique elements necessary



because of the rolling terrain and the heavy traffic volumes in this rapidly developing section of Florida's west coast.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Structural Engineer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**I-75 from South of North Jones Loop to North of US 17, FDOT District 1, Punta Gorda, FL - Structural Engineer.** This project involves the widening of approximately 4 miles of I-75 from south of North Jones Loop Road to the Peace River Bridge. The project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. The existing bridges over North Jones Loop Road and the Seminole Gulf Railway will be widened. Services include traffic analysis, roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, bridge design, environmental permitting, ITS, and noise analysis.

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Structural Engineer.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**Madison County GEC, Madison County, FL - Structural Engineer.** RS&H has provided general engineering consulting services to Madison County since 1998. Under this contract, projects have included FEMA and USDA Natural Resources Conservation Service projects, resurfacing projects financed by FDOT, and many other miscellaneous services required by the Department of Public Works and the Board of County Commissioners. RS&H is responsible for a wide variety of services, including survey; design and permitting for roadway, stormwater system, and water distribution and sewage collection systems; land planning; environmental permitting; and construction inspection.

**SR 574 Widening, FDOT District 7, FL - Structural Engineer.** RS&H provided design services for the widening of SR 574. Once completed, the improvements will provide a better level of service and a safer, more efficient roadway, as well as minimized wetland impacts on the I-75 on-ramp. The project design encompassed both flexible and rigid pavement design. Specific design improvements provided by RS&H included: signalized dual left-turn lanes for eastbound SR 574 to the northbound I-75 movement without widening eastbound SR 574 on the I-75 overpass bridge; widening of the northbound I-75 entrance ramp to receive the two lanes of left-turning traffic (also taper the two lanes into a single lane prior to the merger with the I-75 mainline); and west of the I-75 overpass bridge, extend the outside, third westbound SR 574 through lane to the existing gore of the I-75 southbound exit ramp (this work will be let later as a separate project under a to-be-determined FPID number).

## CREDENTIALS

Total Years of Experience: 15; With RS&H: 14

Bachelor of Science, Civil and Environmental Engineering; University of South Florida

Professional Engineer #74725; Florida; 2012

Civil Engineer #118360; Texas; 2014

# JUSTIN WELLBORN, PE

## BRIDGE ENGINEER

### INTRODUCTION

Justin Wellborn serves as a Bridge Engineer for RS&H's Transportation-Infrastructure Practice. He has 12 years of engineering experience with highway structures and serves as a structures project manager, lead structures engineer, and Engineer-of-Record for highway structures, including bridges of various complexity. He also performs Load and Resistance Factor Rating and Letter of Final Determination load rating analysis of proposed and existing bridges. Justin is well versed in FDOT, TxDOT, AASHTO, and local agency design standards, procedures, and preferences.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Belleair, FL - Lead Structural Engineer.** Modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Structures Project Manager.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Structural Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in

each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Lead Structural Engineer.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**US 27 VWS & Bi-Directional Static Scales, FDOT District 1, Clewiston, FL - Lead Structural Engineer.** RS&H is responsible for providing the design services for the construction of a bi-directional static weigh station scale in the existing median of US 27 and one weigh-in-motion sensor site in each direction in advance of the static scale. The project also includes a bypass site to identify trucks attempting to avoid the weigh station by utilizing CR 720. Design services include roadway design, drainage design, environmental permitting, signing and pavement marking, and lighting.

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL - Lead Structural Engineer.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis.

**US 301 Rehabilitation, FDOT District 7, Dade City, FL - Lead Structural Engineer.** RS&H provided design services for the resurfacing, restoration, and rehabilitation of a 5.2-mile stretch of US 301 from north of Pioneer Museum Road to south of Mosstown Road, just north of Dade City. In addition to the design elements, RS&H completed a multimodal study to evaluate the pedestrian, bicycle, and transit facility needs of the corridor. The project plans included milling and resurfacing, drainage improvements, safety enhancements, more than 10 miles of sidewalk incorporating provisions for bus stop, and minor widening of the right-turn lanes to accommodate bicycle "keyholes." The team saved the client time and money by eliminating substantial portions of their originally planned gravity wall by minimizing the number and extent of utility conflicts with the sidewalk, as well as qualifying the project for a Southwest Florida Water Management District permit exemption.

## CREDENTIALS

Total Years of Experience: 12; With RS&H: 12

Bachelor of Science, Civil Engineering; University of South Florida

Professional Engineer #72951; Florida; 2011

Civil Engineer #118014; Texas; 2014

American Institute of Steel Construction (AISC)

American Society of Civil Engineers (ASCE)

# SKYLAR STEVENS, PE

## BRIDGE DESIGN

### INTRODUCTION

Skylar Stevens serves as a Bridge Engineer for RS&H's Transportation-Infrastructure Practice and brings seven years of experience in the transportation industry and. She is responsible for design of highway structures, including bridges, box culverts, retaining walls, mast arm signals, and overhead sign structures, as well as structural plans preparation, quantity tabulation, and cost estimation for structural design projects. She is proficient in MicroStation, Microsoft Office, Adobe Acrobat, CONSPAN, RCPier, MATHCAD, and MDX. Skylar is a licensed PE and a member of ASCE and Florida Structural Engineers Association.

### PROJECTS

#### **Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Structural Engineer.**

The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks. Responsible for design of bridge culvert, cost estimates, and plans preparation.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Structural Engineer.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits. Responsible for structural design, cost estimates, and plans preparation.

**SR 29 Widening, FDOT District 1, Felde, FL - Structural Engineer.** RS&H is responsible for designing the 5.6-mile widening of SR 29 from CR 832 (Keri Road) to F Road. In addition to expanding from a two-lane to a four-lane divided roadway, the design also includes the replacement of two bridge culverts and intersection lighting. The US Fish and Wildlife Service's Panther Recovery Implementation Team (PRIT) identified SR 29 as a candidate project to construct a wildlife crossing because of observed panther migration and panther deaths within the area. RS&H's environmental scientist attended multiple PRIT meetings to determine the preferences for a wildlife crossing. The project limits include two box culverts in poor condition due to the high acidity levels in the water. RS&H proposed replacing the structures due to their degradation, which would allow for the wildlife crossing. Responsible for structural design and plans preparation.

**I-75 from South of North Jones Loop to North of US 17, FDOT District 1, Punta Gorda, FL - Structural Engineer.** This project involves the widening of approximately 4 miles of I-75 from south of North Jones Loop Road to the Peace River Bridge. The project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. The existing bridges over North Jones Loop Road and the Seminole Gulf Railway will be widened. Services include traffic analysis, roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, bridge design, environmental permitting, ITS, and noise analysis. Responsible for design of miscellaneous structural elements, plans development, and coordination with other disciplines and subconsultants.

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL - Structural Engineer.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis.

**US 301 Rehabilitation, FDOT District 7, Dade City, FL - Structural Engineer.** RS&H provided design and post-design services for the resurfacing, restoration, and rehabilitation of a 5.2-mile stretch of US 301 from north of Pioneer Museum Road to south of Mosstown Road, just north of Dade City. In addition to the design elements, RS&H completed a multimodal study to evaluate the pedestrian, bicycle, and transit facility needs of the corridor. The project plans included milling and resurfacing, drainage improvements, safety enhancements, more than 10 miles of sidewalk incorporating provisions for bus stop, and minor widening of the right-turn lanes to accommodate bicycle "keyholes." The team saved the client time and money by eliminating substantial portions of their originally planned gravity wall by minimizing the number and extent of utility conflicts with the sidewalk, as well as qualifying the project for a Southwest Florida Water Management District permit exemption.

**SR 686 (Roosevelt Boulevard) Flyover at CR 611 (49th Street), FDOT District 7, Clearwater, FL - Structural Engineer.** This project evaluated the construction of a new third-level flyover bridge carrying southbound CR 611 (49th Street) traffic to eastbound SR 686 (Roosevelt Boulevard). During the BDR phase, a concrete segmental box girder structure was compared with a steel girder structure. RS&H was the project's steel bridge design subconsultant and responsibilities included steel box girder, steel plate girder, and pier designs. Moving forward with the segmental box girder alternative, RS&H developed the end bent designs and segmental box girder erection sequence. After 45 percent plans were developed, the project was rolled into the Gateway Express design-build project. Responsible for substructure design and plans development.

## CREDENTIALS

Total Years of Experience: 7; With RS&H: 5

Master of Science, Civil Engineering; University of Florida

Bachelor of Science, Civil Engineering; University of Florida

Professional Engineer #81318; Florida; 2016

American Society of Civil Engineers (ASCE)

# JAMES FIKE, PE, CFM

## *DRAINAGE DESIGN*

### INTRODUCTION

James Fike serves as a Senior Water Resources Engineer for RS&H's Transportation-Infrastructure Practice. He is responsible for providing the documentation necessary to obtain environmental resource permits from local water management districts and developing drainage design for FDOT and county projects. He has 17 years of experience with various hydrologic modeling techniques, including Natural Resources Conservation methodology and rational method, with an extensive understanding of best management practice selection and sizing practices. He has designed stormwater management facility retrofits to meet National Pollutant Discharge Elimination System requirements and provided design for open and closed drainage systems, including culvert and storm drain sizing, inlet spacing, ditch, and channel design. James has performed dam breach and scour analyses and is proficient in the use of Interconnected Pond Routing, Hydrologic Engineering Centers River Analysis System, Automated Storm Sewer Analysis & Design, MODRET, HY-8, TR-20, Win TR-55, Bentley Haestad Methods Hydraulic Software, MicroStation, GEOPAK, ArcGIS, Microsoft Word, and Microsoft Excel.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Belleair, FL - Drainage Design.** Modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntime Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, Brandon, FL - Drainage Design.** Scope of work included improving all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project required roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Drainage Design.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in

length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**Cypress Creek Wellfield Surface Water Improvements- Final Design and Construction, Tampa Bay Water, Land O' Lakes, FL - Drainage Design.** As a continuation of the Cypress Creek Wellfield Surface Water Management project, RS&H completed a second phase of work, including a feasibility study, design, permitting, and construction services. RS&H performed numerous services for the feasibility study and permitting process, including field data collection, wetland characterization/assessment, review of ecological and hydrological monitoring data, impact assessment, and surface water modeling, as well as establishing seasonal high and normal pool elevations. Improvements recommended in the feasibility study were designed and plans prepared. Construction of the additional improvements and modifications to the existing surface water management system were completed. Throughout the construction process, RS&H provided bidding and post-design services. The goal of this project was to further enhance wetlands and increase aquifer recharge.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Drainage Design.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**Keyville Road Bridge Replacement, Hillsborough County, Tampa, FL – Drainage Design.** The East Keyville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**Delaney Creek Water Quality, Hillsborough County, FL - Drainage.** This Delaney Creek Total Maximum Daily Load (TMDL) Compliance project includes improving the water quality along Dowdell Drain and TECO powerline easement.

## CREDENTIALS

Total Years of Experience: 17; With RS&H: 11

Bachelor of Science, Civil Engineering; West Virginia University

Professional Engineer #037608; North Carolina; 2011

Professional Engineer #PE035772; Georgia; 2011

Professional Engineer #67096; Florida; 2007

Association of State Floodplain Managers (ASFPM)

National Council of Examiners for Engineering and Surveying (NCEES)

Certified Floodplain Manager; Association of State Floodplain Managers; 7/31/2018

# ZACHARY GROSS, PE

## DRAINAGE DESIGN

### INTRODUCTION

Zachary Gross serves as a Water Resources Engineer for RS&H's Transportation-Infrastructure Practice. He has 11 years of experience and provides drainage and stormwater management design services. Zachary has served as a project engineer and project manager on a vast variety of projects providing stormwater analysis and modeling, drainage engineering and permitting, and plans production for FDOT, Florida's Turnpike Enterprise, and local municipalities. He is proficient with environmental permitting research, rules and regulations, and acquiring permits from various water management districts. He has performed a broad range of tasks involving interconnected pond routing modeling, storm sewer system hydraulics, French drain and underdrain analysis, floodplain analysis, bridge hydraulics, spread analysis, basin delineation, ditch design, gabion ditch and spillway design, nutrient loading, and pollutant removal calculations. He is also proficient with MicroStation, GEOPAK, ArcGIS, ICPR, MODRET, HEC-RAS, GEOPAK Drainage, ASAD, Culvert Master, Flow Master, HY-8, MathCAD, Microsoft Office, and Adobe Professional.

### PROJECTS

**Bayview Drive – Roadway and Drainage Improvements, Town of Belleair, Belleair, FL - Drainage Design.** RS&H modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road, and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Drainage Design.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.



**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Drainage Design.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**59th Avenue North Drainage Study, Pinellas County, Pinellas Park, FL - Project Manager.** Responsible for serving as Project Manager and Engineer-of-Record and for meeting with clients, scheduling, invoicing, three-line diagrams, data collection, ICPR analysis, ArcGIS, and drainage documentation. Submitted Technical Memorandums that identify areas of flooding and erosion, the cause of such problems, and evaluation of design alternatives that would alleviate flooding along 59th Avenue North and improve conveyance around the privately-owned Molex pond.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, Tampa, FL - Drainage Design.** Scope of work was to improve all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project requires roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**Cypress Creek Wellfield Surface Water Improvements- Final Design and Construction, Tampa Bay Water, Land O' Lakes, FL - Drainage Design.** As a continuation of the Cypress Creek Wellfield Surface Water Management project, RS&H completed a second phase of work, including a feasibility study, design, permitting, and construction services. RS&H performed numerous services for the feasibility study and permitting process, including field data collection, wetland characterization/assessment, review of ecological and hydrological monitoring data, impact assessment, and surface water modeling, as well as establishing seasonal high and normal pool elevations. Improvements recommended in the feasibility study were designed and plans prepared. Construction of the additional improvements and modifications to the existing surface water management system were completed. Throughout the construction process, RS&H provided bidding and post-design services. The goal of this project was to further enhance wetlands and increase aquifer recharge.

**Delaney Creek Water Quality, Hillsborough County, FL - Drainage.** This Delaney Creek Total Maximum Daily Load (TMDL) Compliance project includes improving the water quality along Dowdell Drain and TECO powerline easement. Responsible for assisting with SWFWMD permitting and quality control reviews.

## CREDENTIALS

Total Years of Experience: 11; With RS&H: 11

Bachelor of Science, Civil Engineering; University of South Florida

Professional Engineer #77005; Florida; 2014

HEC-RAS Computer Workshop; American Society of Civil Engineers

# CHRISTOPHER DAILEY

## ENVIRONMENTAL/PUBLIC INVOLVEMENT/GIS

### INTRODUCTION

Christopher Dailey serves as a Senior Environmental Scientist/GIS Analyst for RS&H's Transportation-Infrastructure Practice. He is responsible for the leadership of all GIS tasks, environmental permitting tasks, and public involvement efforts. Christopher has experience with a wide variety of environmental projects. He has worked on projects from marine mapping to wetland delineations. In addition to his field experience, Christopher is also trained as a photo-interpreter, photogrammetrist, and GPS surveyor.

### PROJECTS

**22nd Avenue South PD&E Study, Pinellas County, Gulfport, FL - Environmental Document Manager.** Located in Pinellas County, 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. There are flooding problems within the project limits and no existing bicycle facilities. The roadway runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H completed the PD&E study, led a team in evaluating alternative designs, and recommended the most feasible roadway, intersection, stormwater, and drainage improvements. Responsible for all aspects of National Environmental Policy Act compliance including natural environment, contamination, Section 4(f), and environmental justice.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, Tampa, FL - Environmental Permitting.** Scope of work was to improve all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project requires roadway, stormwater drainage, signing and pavement marking, and traffic signalization.

**CR 54 (Ronald Reagan Parkway) Widening from US 27 to US 17/US 92, Polk County, Bartow, FL - Environmental Document Manager.** RS&H provided engineering and design services for the widening of approximately 7 miles of CR 54 (Ronald Reagan Parkway). RS&H previously completed the corridor study for this project, which was divided into five segments for the design stage. The segments were bid separately, and each was awarded to RS&H. The widening project consisted of reconstructing the roadway from a two-lane undivided rural facility to a four-lane divided urban facility to add much needed capacity to this rapidly developing area. Traffic signals along with turn lanes, 4-foot bike lanes and 6-foot sidewalks were included to make the corridor more pedestrian-friendly. A new bridge was constructed over I-4, allowing the two-way bridge to be used for one-way traffic with pedestrian accommodations. RS&H designed the roadway to be widened with minimal right-of-way acquisition, which will save the county valuable time and money.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Environmental Document Manager.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Environmental**

**Permitting.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Environmental**

**Permitting.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of-way limits.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL -**

**Permits Manager.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**CREDENTIALS**

Total Years of Experience: 24; With RS&H: 18

Bachelor of Science, Biology; Saint Leo College

Florida Association of Environmental Professionals (FAEP)

Society of Wetland Scientists (SWS)

Virginia Association of Wetland Professionals

OSHA 40-hour HAZWOPER; United States Occupational Safety and Health Administration

# KYLE OLEJNICZAK

## ENVIRONMENTAL

### INTRODUCTION

Kyle Olejniczak serves as an Environmental Specialist for RS&H's Transportation-Infrastructure Practice. He has experience in environmental science, MEPA, CEQA, NEPA, mitigation and restoration of coastal systems, environmental policy, environmental regulations and impact assessment, environmental economics, sustainable coastal zone management, environmental chemistry, and marine and environmental pollution.

### PROJECTS

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Environmental Specialist.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**Sunshine Skyway Rest Areas Design-Build, FDOT District 1, FL - Environmental Specialist.** RS&H is serving as the lead designer for the Sunshine Skyway Rest Areas design-build project. The project includes design and reconstruction of the Manatee and Pinellas County rest area sites, which will be located at the north and south ends of the Sunshine Skyway Bridge. It also entails west-side seawall cap repair and implementation of erosion protection measures, and east-side seawall and grading improvements adjacent to the ITS maintenance building. The scope of work further encompasses the reconstruction of two FDOT standard small rest area facility buildings, each including a security office, vending areas, a maintenance office, 17 picnic pavilions (nine in Pinellas County and eight in Manatee County), and dog walk enhancements.

**I-75 Rest Areas PD&E Study, FDOT District 1, Punta Gorda, FL - Environmental Specialist.** RS&H is conducting a PD&E study for two new rest areas along I-75. These rest areas will replace the recently closed Jones Loop Road rest area and will be the only ones between southern Hillsborough County and Collier County along I-75. To analyze the 50-mile corridor and identify viable sites for new rest areas, RS&H developed a methodology using GIS data to screen the corridor for undesirable impacts and was able to quickly reduce the project to four viable segments, each approximately 1 mile in length.

**SR 29 Widening, FDOT District 1, Felde, FL - Environmental Specialist.** RS&H is responsible for designing the 5.6-mile widening of SR 29 from CR 832 (Keri Road) to F Road. In addition to expanding from a two-lane to a four-lane divided roadway, the design also includes the replacement of two bridge culverts and intersection lighting. The US Fish and Wildlife Service's Panther Recovery Implementation Team (PRIT) identified SR 29 as a candidate project to construct a wildlife crossing because of observed panther migration and panther deaths within the area. RS&H's environmental scientist attended multiple PRIT meetings to determine the preferences for a wildlife crossing. The project limits include two box culverts in poor condition due to the high acidity levels in the water. RS&H proposed replacing the structures due to their degradation, which would allow for the wildlife crossing.

**SR A1A Permanent Repairs, FDOT District 5, FL - Environmental Specialist.** RS&H is serving as lead designer for the permanent repairs of three segments of SR A1A. The repair/revetment project will provide roadway stabilization solutions to address the damage caused by Hurricane Matthew. RS&H will design engineering solutions to account for storm surge, wave action, and anticipated scour depths determined through coastal analysis and modeling to yield the most cost-effective risk reduction to the department. In addition to analysis and design, the project requires review of access to properties adjacent to SR A1A in conjunction with the appropriate traffic control plan, provision for maintenance of pedestrian and bicycle traffic, restoration of signing and pavement markings, and permanent prohibition to parking along the three segments of SR A1A (beach side) to properly establish dune vegetation.

#### CREDENTIALS

Total Years of Experience: 3; With RS&H: 1

Master of Science, Applied Marine Science; California State University Monterey Bay

Bachelor of Science, Oceanography; Florida Institute of Technology

# KRISTI SAVIO, GTA

## ENVIRONMENTAL

### INTRODUCTION

Kristi Savio serves as an Environmental Specialist and is responsible for the collection and organization of hydrologic data at the Cypress Creek Wellfield and map creation for ecological and transportation projects. She has 6 years of experience in GIS and 3 years of experience in traffic noise and ecological studies. Her experience includes work with FDOT, NCDOT, TxDOT, Tampa Bay Water, and local government agencies.

### PROJECTS

#### **Neighborhood Drainage Projects, Hillsborough County, Tampa, FL - Environmental Specialist.**

This project includes a Project Development and Environment (PD&E) Study for two separate locations in Hillsborough County; Kankakee Lane and 12th Avenue South. Responsibilities include stormwater management plan and writing technical memorandum.

**22nd Avenue South PER Update, Pinellas County, St. Petersburg/Gulfport, FL - Environmental Specialist.** Project updated the analysis of a previous PD&E study. Project identified feasible alternatives for the corridor and the phasing of the improvements.

**Ecological Monitoring at the Cypress Creek Wellfield (WY2016), Tampa Bay Water, Land O' Lakes, FL - Environmental Specialist.** RS&H provided ecological and hydrological monitoring services at the Cypress Creek Wellfield. Tasks include annual report preparation, Wetland Assessment Procedure data collection and data entry, assistance with recovery analysis, and other miscellaneous tasks. Responsible for assisting with the creation of hydroperiod, normal pool offset (NPO), OROP tables, and associated maps for semi-annual and annual reports. Responsible for performing yearly Wetland Assessment Procedure (WAP). Added value by streamlining GIS maps used in the semi-annual and annual reports and keeping the project on time and within budget.

**CR 14A over Econfinia River PD&E Study and Final Design, FDOT District 2, Shady Grove, FL - Environmental Specialist.** RS&H provided PD&E and final design services for the replacement of a county-owned bridge carrying CR 14A over the Econfinia River. The study required close coordinating with Taylor County and the development of a suitable detour plan to close the roadway during the bridge replacement, as the existing bridge is one lane. RS&H prepared all PD&E Study documents and the final design plans for letting in December 2017.

**Cypress Creek Wellfield Ecological Monitoring, Tampa Bay Water, Land of Lakes, FL - Environmental Specialist.** RS&H has performed ecological monitoring at the Cypress Creek Wellfield (CCWF) dating back to 1986. The general purpose of the program is to monitor the ecological health of the CCWF ecosystems in relation to potential environmental perturbations that may occur, either naturally or through human influence. This is accomplished via examination and analysis of regional weather patterns, wetland water levels, qualitative monitoring of plant and animal communities, and water production.

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL - Environmental Specialist.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing

bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis.

**US 41/SR 54 Interchange PD&E Study, FDOT District 7, Land O' Lakes, FL - Environmental Specialist.** RS&H is completing a PD&E study for the US 41/SR 54 interchange. The study is evaluating different interchange configurations at this extremely congested major intersection in southern Pasco County. The project has several complicating factors, including connection to an evacuation route (SR 54), a major Florida Progress substation, an active railroad crossing, a fire station, and potential braided ramps and flyovers at Dale Mabry apex to the south. RS&H developed alternatives that provided general purpose lanes on the overpass while also allowing the managed lanes to be added later. In response to a new requirement that all overpass movements would be tolled, the team conceived alternatives that include tolled lanes over US 41 and two general purpose through lanes at the intersection.

**SW 10th Street PD&E Study, FDOT District 4, FL - Environmental Specialist.** RS&H is completing a PD&E study to evaluate the implementation of a limited access facility and local roadway facility within the existing roadway corridor along SW 10th Street in South Florida. The project is unique as it proposes two roadways with very different characteristics to serve very different needs within the same corridor. The corridor represents the "missing link" to the regional express lanes network that will connect the Sawgrass Expressway to the Florida's Turnpike and I-95. Also, in the same right-of-way envelope, the local facility will be preserved to maintain neighborhood connectivity for the residential and business communities in the immediate vicinity. This project is on an accelerated 16-month schedule to achieve Location Design Concept Acceptance and will segue into the design-build criteria package production and procurement phases. RS&H will provide owner's representative support services for the final design and construction phases of the project.

**I-75 from Jones Loop to US 17, FDOT District 1, Charlotte County, FL - Environmental Specialist.** This is a 3.3-mile widening project. Assisted with creation of wetland and surface water maps for the project corridor. Created Land Use Maps for permitting use and assisted with performing wetland assessments (UMAM's) of mitigation sites and potentially affected wetlands. The federally listed Florida bonneted bats main habitat is in south Florida where this project takes place. To determine if the species was within specified areas of the project area, bat monitors were set up. In charge of reviewing the recorded bat data using Analook software to identify bat species near the project

## CREDENTIALS

Total Years of Experience: 3; With RS&H: 3

Bachelor of Science, Environmental Science and Policy; University of South Florida

Master of Science, Environmental Science and Policy; University of South Florida

Authorized Gopher Tortoise Agent; Florida Fish and Wildlife Conservation Commission; 5/19/2019

Geographical Information Systems Certification; University of South Florida

Geographical Information Systems Certification

OSHA Construction Safety and Health; United States Occupational Safety and Health Administration

Traffic Noise Analysis; Florida Department of Transportation

Traffic Noise Analysis; Florida Department of Transportation

# RICK LANGLASS, PE

## PD&E/PLANNING

### INTRODUCTION

Rick Langlass serves as a Senior Transportation Development Engineer and has a proven ability to manage time and personnel and has established effective methods needed to complete multiple tasks. He possesses excellent communication skills and has the personality to work with clients and collaborate with colleagues. In addition, he demonstrates firmness dealing with contractors, ensuring that project specifications are met. Rick has 19 years of experience, including managing and serving as engineering task manager for numerous PD&E studies, developing alignments and interchange alternatives, calculating costs due to impacts and construction, managing personnel and budgets, supervising field exploration and testing programs, performing construction engineering and inspection, assisting with design, and producing plans.

### PROJECTS

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, Tampa, FL - Project Manager.** Scope of work was to improve all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project requires roadway, stormwater drainage, signing and pavement marking, and traffic signalization. Responsible for leading the project. Developed intersection alternatives, managed schedule and budget, and coordinated with clients and stakeholders.

**22nd Avenue South PD&E Study, Pinellas County, Gulfport, FL - Transportation Development.** Located in Pinellas County, 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. There are flooding problems within the project limits and no existing bicycle facilities. The roadway runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H completed the PD&E study, led a team in evaluating alternative designs, and recommended the most feasible roadway, intersection, stormwater, and drainage improvements.

**22nd Avenue South PER Update, Pinellas County, St. Petersburg/Gulfport, FL - Project Manager.** Project updated the analysis of a previous PD&E study. Project identified feasible alternatives for the corridor and the phasing of the improvements. Responsible for managing the project. Developed corridor improvements, managed the schedule and budget, and coordinated the public involvement effort between the client and stakeholders.

**Myakka Road Over Myakka River, Bridge Replacement, Sarasota County, FL - Project Engineer.** Environmental Permitting. RS&H is providing bridge and roadway engineering services to improve the failing safety rating of the existing bridge. Construction plans are being developed to replace the existing concrete flat slab bridge with timber piling bent substructures. The project will be developed to limit the environmental impacts to qualify the bridge replacement as permit. Services include roadway design, structural design, traffic control plans, drainage design, environmental permitting, signing and pavement markings, utility coordination, and bridge lighting.

**Clinton Avenue (CR 52A) Reconstruction, Pasco County, Dade City, FL - Project Engineer.** RS&H performed the field survey, geotechnical investigation, roadway and drainage design services, and permitting for the reconstruction of over 1.5 miles of Clinton Avenue (CR 52A). The project limits are from west of CR 41 to east of US 301, and the existing rural two-lane roadway was reconstructed to a four-lane urban divided typical section that includes bicycle lanes and sidewalks on both sides of the roadway. The project included a new closed drainage system and four new



retention ponds to treat stormwater runoff in four distinct drainage basins. The project also included signalization of two major intersections, with one at Clinton Avenue and CR 41 and the other at Clinton Avenue and US 301. Various permits were obtained from FDOT District 7 in order to modify the signalized intersection with US 301 that required revisions to the affected turn lane lengths on US 301 due to the widening of Clinton Avenue.

**CR 54 (Ronald Reagan Parkway) Widening from US 27 to US 17/US 92, Polk County, Bartow, FL - Project Engineer.** RS&H provided engineering and design services for the widening of approximately 7 miles of CR 54 (Ronald Reagan Parkway). RS&H previously completed the corridor study for this project, which was divided into five segments for the design stage. The segments were bid separately, and each was awarded to RS&H. The widening project consisted of reconstructing the roadway from a two-lane undivided rural facility to a four-lane divided urban facility to add much needed capacity to this rapidly developing area. Traffic signals along with turn lanes, 4-foot bike lanes and 6-foot sidewalks were included to make the corridor more pedestrian-friendly. A new bridge was constructed over I-4, allowing the two-way bridge to be used for one-way traffic with pedestrian accommodations. RS&H designed the roadway to be widened with minimal right-of-way acquisition, which will save the county valuable time and money.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Assistant Project Manager.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort. Responsible for engineering effort for the project. Interacted with the county's project manager, developed alignments for preliminary design evaluations using current engineering standards, and managed the budget and schedule for the project.

**SR 45 (US 41) at SR 54 Project Development and Environment Study, Pasco County, FL - Project Engineer.** Project analyzed creating a graded separated interchange at the existing intersection to improve safety and traffic level of service. Assistant project manager and engineering task manager for the project. Developed interchange alternatives and ensured Quality Assurance/Quality Control procedure was followed. Managed the budget and schedule for the project.

## CREDENTIALS

Total Years of Experience: 19; With RS&H: 16

Master of Science, Engineering; University of South Florida

Bachelor of Science, Chemical Engineering; Georgia Institute of Technology

Professional Engineer #62498; Florida; 2005

Tampa Bay Institute of Transportation Engineers (TBITE)

# MATT BETANCOURT, AICP

## *PD&E/PLANNING/PUBLIC INVOLVEMENT/GRANT ADMINISTRATION*

### INTRODUCTION

Matt Betancourt serves as a Transportation Planner for RS&H's Transportation-Infrastructure Practice. He has 12 years of experience in transportation planning, including multimodal transportation and school transportation planning, as well as Transportation Concurrency Exception Areas and Multimodal Transportation Districts. Matt supports the Project Development and Environment Group on a wide range of transportation projects by performing GIS analysis, public involvement, roadway and transit alternatives analyses, and traffic and noise data collection, as well as providing planning services and environmental and engineering documentation. He has served as Public Involvement Task Leader on a variety of projects. Matt's experience includes NEPA analysis, assessing community impacts for environmental justice, sociocultural effects evaluations, and Section 4(f) evaluations, and Conceptual Stage Relocation Plans. He is experienced with ArcGIS and Trimble GPS Software.

### PROJECTS

**22nd Avenue South PD&E Study, Pinellas County, Gulfport, FL - Project Manager.** Located in Pinellas County, 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. There are flooding problems within the project limits and no existing bicycle facilities. The roadway runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H completed the PD&E study, led a team in evaluating alternative designs, and recommended the most feasible roadway, intersection, stormwater, and drainage improvements.

**22nd Avenue South PER Update, Pinellas County, St. Petersburg/Gulfport, FL - Assistant Project Manager.** Project updated the analysis of a previous PD&E study. Project identified feasible alternatives for the corridor and the phasing of the improvements. Responsible for conducting a reevaluation of Pinellas County's 22nd Avenue South PD&E Study, including the conceptual development and evaluation of phased improvements to two miles of 22nd Avenue in Gulfport and St. Petersburg. Developed phased improvements that allowed for increased mobility that could be scaled to match funding levels available for improvements.

**Cypress Creek Wellfield Surface Water Management Project, Tampa Bay Water, Wesley Chapel, FL - Transportation Planner.** The Cypress Creek Wellfield (CCWF) Surface Water Management Project is a multi-objective wetland restoration and surface water management project. The primary objective was to modify surface water drainage patterns resulting in improved wetland hydrology at sites in the eastern portion of the CCWF that were previously identified. An additional objective was to reduce nuisance flooding in Saddlewood Estates, located east of the CCWF, and Quail Hollow, which is located to the southeast of the CCWF. In cooperation with Tampa Bay Water and the SWFWMD, RS&H constructed a series of culverts and berms so that the water that once flooded neighborhood streets is now diverted westward through a series of wetlands across the wellfield. This westward movement of above-normal water levels will precipitate the movement of water into specific "target wetlands" that are not expected to recover hydrologically with the current reductions in pumping.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Planner.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community

and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort. Responsible for assisting in the development of a NEPA document that analyzes multimodal transportation improvements from Bruce B. Downs Boulevard to I-75, while accommodating the very high level of pedestrian and bicycle traffic in the University of South Florida area. Responsibilities included assessing impacts associated with each of the proposed alternatives for the corridor and conducting public involvement efforts throughout project's duration.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Transportation Planner.** Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Transportation Planner.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**Sarasota County Bicycle and Pedestrian Plan Peer Review, Sarasota County, FL - Task Manager.** Responsibilities included reviewing Sarasota County's Bicycle and Pedestrian Plan, analyzing existing conditions, using public survey data, crash data mapping, and geographical information system to recommend strategies for how the county could improve the plan's goals, objectives, and policies.

**Delaney Creek Water Quality, Hillsborough County, FL - Transportation Planner.** This Delaney Creek Total Maximum Daily Load (TMDL) Compliance project includes improving the water quality along Dowdell Drain and TECO powerline easement.

## CREDENTIALS

Total Years of Experience: 12; With RS&H: 12

Master of Arts, Urban and Regional Planning; University of Florida

Bachelor of Science, Psychology; University of Florida

American Institute of Certified Planners (AICP) #024168; United States; 2010

American Planning Association (APA)

# MICHAEL DEMEO, RA, LEED AP BD+C

## ARCHITECTURE/FACILITIES

### INTRODUCTION

Michael DeMeo serves as an Architect for RS&H's Transportation-Infrastructure Practice. He is responsible for leading architectural design efforts, including schematic design, architectural graphics and renderings, construction documentation, project coordination, and construction administration. Michael has 14 years of architectural experience, which includes transit, tolling, warehouse/industrial, multimodal, and aviation projects.

### PROJECTS

**US 17 (SR 35) from DeSoto County Line to CR 634 (Sweetwater Road), FDOT District 1, Zolfo Springs, FL - Project Architect.** RS&H provided design services for the new construction of approximately 5 miles of US 17 from the DeSoto/Hardee County Line to CR 634 (Sweetwater Road). The project involves expanding the existing two-lane facility to a four-lane divided facility with a 64-foot median. The existing bridge over Charlie Creek will be widened and used for the northbound lanes; a new southbound bridge over Charlie Creek will be constructed. The existing bridge over Charlie Creek Overflow will be reconstructed and used for the northbound lanes; a new southbound bridge over Charlie Creek Overflow will be constructed. Services include roadway, drainage, bridge, and signing and pavement marking design; environmental permitting; and noise analysis.

**West Tampa Transfer Center, Hillsborough Area Reg Tran/HARTline, Tampa, FL - Project Architect.** RS&H provided site design and permitting, landscape architecture, architectural, and design services for a new bus transfer facility. The new permanent transfer facility provides improved conditions for passengers waiting for buses and transferring between routes. It accommodates transfer capabilities for five bus routes and includes capacity for five bus loading bays, four staging bays, and one perimeter bus pull-in bay. The new permanent transfer facility consists of a covered waiting area with an enclosed structure of approximately 1,000 square feet that features public information kiosks, ticketing and refreshment vending machines, pay phones, customer and employee restrooms, water fountains, and an information systems/security rooms. Pedestrian, bicycle, and ADA access with enhanced landscaping throughout and buffering the facility were also incorporated into the final design for the project.

**Terminal Curbside Improvements, Hillsborough County Aviation Authority, Tampa, FL - Project Architect.** This project included this installation of a glass cladding system on the exterior walls of the terminal curbside at Tampa International Airport. The glass cladding was colored red and blue to maintain the airport's existing red side/blue side theme. The project was completed under construction budget and on schedule. The Authority was pleased with the final product.

**Motor Carrier Compliance General Consultant, FDOT - Central Office, Tallahassee, FL - Project Architect.** As the general consultant to the FDOT's Office of Motor Carrier Size and Weights (MCSAW), RS&H assisted the state in the planning, design, construction, and management of various projects involving truck weigh/WIM stations and other facilities. RS&H helped MCSAW determine the best alternatives for meeting the state's operational needs, as well as minimize impacts and costs. The team also assisted in the development of design criteria for design-build projects and provides staffing support to MCSAW located in the FDOT Central Office. Prior to serving as MCSAW's general consultant, RS&H completed a Statewide Weigh/WIM Station plan that identified building and site issues at every weigh/WIM station across the state. The plan also provided cost feasible designs and station prototypes for improving these facilities. Improvements

to these facilities are critical to the enforcement of the state's weight restrictions and in preventing the premature destruction of the state's highways.

**Kiley Garden Restoration, City of Tampa, Tampa, FL - Project Architect.** Originally opened in 1988, Nations Bank Plaza (renamed Kiley Garden) in Tampa is a masterwork of its creator, pioneering modernist landscape architect Dan Kiley. The rooftop garden sits along the Hillsborough River atop the underground parking garage at 400 North Ashley Street in downtown. Because of the garden's local and national significance, RS&H developed a plan to rehabilitate the structure and park while maintaining the integrity of Kiley's design. The restoration began with meticulous research of the project's history, a detailed site inventory, and a structural evaluation of the garage. To solve the drainage issues, the team designed a robust new drainage system using high-density Styrofoam and engineered soil, coupled with a modern marine-grade waterproofing system. These improvements resulted in less weight on the structure, as well as prevented water from collecting and leaking into the garage, extending the life of the garage for another 25 years.

**I-75 Rest Areas, FDOT District 7, FL - Project Manager.** RS&H designed Florida's first ultra-modern, green rest areas located along I-75 in Pasco County. Striving to achieve FDOT's first LEED-Silver certified project, RS&H exceeded expectations by attaining Gold. Now the project, which features light sensors, waterless toilets, and many other earth-friendly elements, will serve as a prototype for future rest areas throughout the state. The project is also the first in the state to use continuously reinforced concrete pavement. The new technology uses reinforcing steels bars within the concrete, which reduces long-term maintenance costs of the facility. The team also worked to ensure that the northbound rest area access ramps are compatible with future I-75 widening efforts by closely coordinating with teams from four other adjacent construction projects.

**Alligator Alley (I-75) Rest Area, FDOT District 1, Naples, FL - Project Manager.** RS&H designed a new rest area on the north side of the Alligator Alley segment of I-75. The rest area was designed to LEED standards and is adjacent to recreational parking and access to the Florida National Scenic Trail located within the Big Cypress National Preserve. RS&H's LEED experience, which includes the design of two LEED Gold rest areas in Pasco County, was invaluable since this rest area is one of the first in District 1 that will be constructed to LEED standards. In addition to the design, FDOT asked RS&H to help manage permitting coordination with the Army Corps of Engineers and South Florida Water Management District for this rest area, as well as the south side, which is being delivered as a design-build. We have assisted by clarifying permitting issues and providing direction to the FDOT, which is especially important for the design-build project due to the tight schedule.

**Depot Avenue Rail-Trail Pedestrian Overpass, Gainesville Community Redevelopment, Gainesville, FL - Project Architect.** RS&H's design featured a simulated railroad track twisted into a vibrantly colored DNA strand spanning US HWY 441/SW 13th Street. RS&H's design also included a plaza and staircase adjacent to the overpass to link the rail-trail system to an extensive network of multimodal access points. After a robust design process, the structure was fabricated and preassembled off site prior to installation, which expedited the construction process and had minimal impact on traffic and the surrounding neighborhood. Ultimately, the project converted an unattractive, blighted, and poorly functioning pedestrian overpass into artistic and functional infrastructure.

## CREDENTIALS

Total Years of Experience: 14; With RS&H: 13

Bachelor of Architecture, Architecture; University of Miami

Architect #AR96731; Florida; 2013

Nat'l Council of Arch. Reg. Boards (NCARB) #76705; United States; 2013

LEED Accredited Professional; U.S. Green Building Council

# DAVID BRYAN, RLA

## LANDSCAPE ARCHITECTURE

### INTRODUCTION

David Bryan serves as a Landscape Architect for RS&H's Transportation-Infrastructure Practice. He is responsible for overseeing the preparation of site plans, planting plans, and hardscape plans from the conceptual stage of each project through the preparation of detailed construction drawings, cost estimation, and specifications. He also supervises field activities during project construction and reviews daily project budget reports to ensure projects are staying within the project budgets. David has 20 years of experience in landscape architecture and as a Project Manager of both small- and large-scale projects. His experience in landscape architecture and background in construction contribute to his excellent skills in project coordination.

### PROJECTS

**Depot Avenue Rail-Trail Pedestrian Overpass, Gainesville Community Redevelopment, Gainesville, FL - Landscape Architect.** RS&H's design featured a simulated railroad track twisted into a vibrantly colored DNA strand spanning US HWY 441/SW 13th Street. Design also included a plaza and staircase adjacent to the overpass to link the rail-trail system to an extensive network of multimodal access points. After a robust design process, the structure was fabricated and preassembled off site prior to installation, which expedited the construction process and had minimal impact on traffic and the surrounding neighborhood. Ultimately, the project converted an unattractive, blighted, and poorly functioning pedestrian overpass into artistic and functional infrastructure.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Landscape Architect.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

**I-75 Widening from North of River Road to North of SR 681, FDOT District 1, Venice, FL - Landscape Architect.** RS&H provided design services to widen approximately 9 miles of I-75 from north of River Road (CR 777) to north of SR 681. The four-lane divided configuration was widened to a six-lane facility with drainage facilities capable of accommodating the ultimate eight-lane facility. The project also involved the realignment of approximately 2 miles of southbound I-75 into the median to facilitate Sarasota County's plan to construct an extension of Honore Avenue, a parallel four-lane divided urban arterial roadway. This alignment shift required new bridge structures over Salt Creek and Cow Pen Slough. Nineteen drainage basins and outfall systems, six bridge widenings, and multiphased traffic control plans are some of the unique elements necessary because of the rolling terrain and the heavy traffic volumes in this rapidly developing section of Florida's west coast.

**Curtis Hixon Waterfront Park, City of Tampa, Tampa, FL - Landscape Architect.** RS&H served as the Project Manager and Landscape Architect of Record for the Curtis Hixon Waterfront Park. The 8-acre park can hold over 10,000 people for special events and is uniquely designed to host concerts with a sloped grand lawn facing the riverfront featuring elevated seating areas, benches, and raised platforms. Other elements include a modern playground with electronic play features, a fenced in dog run, a monumental fountain and mist fountain where children are encouraged to play, restrooms, and artistic details throughout. During the design phase, RS&H identified a number of sustainable solutions, including the use of reclaimed water for irrigation and drainage improvements that lower the amount of stormwater runoff.

**St. Marks Trail Widening, Dept. of Environment Protection, FL - Landscape Architect.** RS&H developed construction documents, specifications, plans, and cost estimates for the widening and repaving of the St. Marks Historic Rail Trail. The trail was Florida's first rail-to-trail project and was originally constructed only 8 feet wide. RS&H prepared plans for widening and resurfacing the trail in accordance with current standards, which call for a 12-foot-wide surface. A portion of the trail is shared by equestrian users, requiring adequate space for shared activities. Vital to the success of the project was the careful protection of the natural environment along the corridor. To preserve existing trees, RS&H developed detailed specifications to guide the contractor's activities during construction. Extensive drainage improvements were also designed. RS&H applied for permits through the North Florida Water Management District and Army Corp of Engineers and assisted with construction administration.

**SR A1A Permanent Repairs, FDOT District 5, Flagler County, FL - Landscape Architect.** RS&H is serving as lead designer for the permanent repairs of three segments of SR A1A. The repair/revetment project will provide roadway stabilization solutions to address the damage caused by Hurricane Matthew. RS&H will design engineering solutions to account for storm surge, wave action, and anticipated scour depths determined through coastal analysis and modeling to yield the most cost-effective risk reduction to the department. In addition to analysis and design, the project requires review of access to properties adjacent to SR A1A in conjunction with the appropriate traffic control plan, provision for maintenance of pedestrian and bicycle traffic, restoration of signing and pavement markings, and permanent prohibition to parking along the three segments of SR A1A (beach side) to properly establish dune vegetation.

**Orange Avenue Stormwater Improvements, City of Winter Springs, Winter Springs, FL - Landscape Architect.** RS&H designed the stormwater management systems for improvements to 0.8 miles of Orange Avenue, a two-lane roadway in the Winter Springs Town Center. The new stormwater management systems included retrofits of the two existing stormwater ponds and outlet control structures to accommodate the increased runoff from Orange Avenue. The existing ponds were enlarged and re-shaped, and the outlet control structures were modified. Additionally, many portions of the storm sewer collection systems were modified and retained in the proposed condition. The storm sewer collection systems and ponds were designed for the 25-year, 24-hour storm in accordance with the City's Land Development Code and St. Johns River Water Management District (SJRWMD) Lake Jesup watershed criteria. A Standard Environmental Resource Permit was obtained from SJRWMD, and a No-Permit-Required letter was obtained from the US Army Corps of Engineers.

## CREDENTIALS

Total Years of Experience: 20; With RS&H: 18

Bachelor of Science, Landscape Architecture; University of Florida

Landscape Architect #LA6667353; Florida; 2017

American Society of Landscape Architects (ASLA)

Council of Landscape Architectural Registration Boards (CLARB)

# ANU WEERASURIYA, PhD, PE, PTOE

## SIGNING & PAVEMENT MARKINGS

### INTRODUCTION

Anu Weerasuriya serves as a Senior Traffic Engineer for RS&H's Transportation-Infrastructure Practice. He has 28 years of experience in traffic design plan preparation in Florida. He develops signing and marking, signalization, lighting, and ITS plans while working closely with RS&H's Transportation-Infrastructure Practice to ensure that highway plans meet all CADD guidelines. Anu's diverse experience includes working in the private-sector and representing the public-sector in major transportation programs in the Tampa Bay area.

### PROJECTS

#### **Bayview Drive – Roadway and Drainage Improvements – Roadway and Drainage Improvements, Town of Belleair, FL - Lighting, S&PM Design Task Leader.**

RS&H modified a proposed in-house collection system design along Bayview Drive based on the addition of three proposed collection systems associated with improvements to Orlando Road, Sarasota Road, and Ocala Road. Pipe sizes ranged from 18-inch to 72-inch in diameter. Collection system was designed using automated storm sewer analysis and design. Project also included design of a Suntree Baffle Box to provide sediment and nutrient removal from the stormwater runoff. Construction cost was partially offset by a matching funds grant obtained from Southwest Florida Water Management District. The biggest challenge was locating collection system pipes, inlets and baffle box to avoid impacts to much cherished bluff within this extremely affluent neighborhood. Close coordination with Town of Belleair and RS&H structural engineers allowed the baffle box and trunkline to be constructed with no impact to existing bluff which was much appreciated by the client.

**Causeway Boulevard Traffic Operations Analysis, FDOT District 7, Tampa, FL - Traffic Design Engineer.** Evaluated several geometric, traffic controls and timing operations utilizing CORSIM. The project involved presentations to FDOT staff on the process and results of the study.

#### **49th Street North Railroad Crossing Modifications, Pinellas County, FL - Quality Control.**

RS&H provided paving and drainage improvements along Bayview Drive. The project is approximately 0.5 miles in length beginning at Manatee Road and continuing north to the existing bridge.

**Bruce B. Downs Boulevard from Fletcher Avenue to Bearss Avenue, Hillsborough County, FL - Senior Traffic Engineer.** Milling and resurfacing project. Project design includes adding 4,000 feet of sidewalk to improve the safety of the motorist, pedestrians, and bicyclist.

#### **Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Lead Traffic Design Engineer.**

The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.



**CR 581 from Fletcher Avenue to Bearss Avenue, Hillsborough County, Tampa, FL - Lead Traffic Design Engineer.** Project design includes adding 4,000 feet of sidewalk to improve the safety of the motorist, pedestrians, and bicyclist.

**I-75 from South of North Jones Loop to North of US 17, FDOT District 1, Punta Gorda, FL - Lead Traffic/ITS Engineer.** This project involves the widening of approximately 4 miles of I-75 from south of North Jones Loop Road to the Peace River Bridge. The project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. The existing bridges over North Jones Loop Road and the Seminole Gulf Railway will be widened. Services include traffic analysis, roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, bridge design, environmental permitting, ITS, and noise analysis.

**SW 10th Street PD&E Study, FDOT District 4, FL - Intelligent Transportation Systems.** RS&H is completing a PD&E study to evaluate the implementation of a limited access facility and local roadway facility within the existing roadway corridor along SW 10th Street in South Florida. The project is unique as it proposes two roadways with very different characteristics to serve very different needs within the same corridor. The corridor represents the "missing link" to the regional express lanes network that will connect the Sawgrass Expressway to the Florida's Turnpike and I-95. Also, in the same right-of-way envelope, the local facility will be preserved to maintain neighborhood connectivity for the residential and business communities in the immediate vicinity. This project is on an accelerated 16-month schedule to achieve Location Design Concept Acceptance and will segue into the design-build criteria package production and procurement phases. RS&H will provide owner's representative support services for the final design and construction phases of the project.

**SR 826 PD&E Study, FDOT District 6, Miami, FL – Lead Traffic/ITS Engineer.** RS&H completed a PD&E study to determine improvements along a portion of the corridor. Within the study limits, the expressway is a six-lane divided limited access facility that widens to eight-lane divided and, in some areas, includes a frontage road for access to businesses located along the corridor. This study included evaluating traffic capacity, operational, and safety improvements, which include express lanes, active traffic management and ITS strategies, lane additions, major interchange modifications, and bus rapid transit. The study determined the number and type of travel lanes and interchange improvements required to accommodate anticipated traffic volumes and improve safety conditions. Through the study process, various alternatives for minimizing impacts to the surrounding communities were addressed through social, economic, and environmental reviews.

## CREDENTIALS

Total Years of Experience: 28; With RS&H: 4

Doctorate of Philosophy, Civil Engineering; University of South Florida

Master of Science, Civil Engineering; Clarkson University

Bachelor of Science, Civil Engineering; University of Moratuwa

Professional Engineer #57629; Florida; 2001

Professional Engineer #PE041645; Georgia; 2017

Professional Engineer #55090; Minnesota; 2017

Professional Engineer #043408; North Carolina; 2016

Professional Traffic Operations Engineer (PTOE) #809; United States; 2001

Institute of Transportation Engineers (ITE)

# CHOWDHURY HAIDER, PE, PTOE

## SIGNING & PAVEMENT MARKINGS

### INTRODUCTION

Chowdhury Haider serves as Senior Transportation Engineer for RS&H's Transportation-Infrastructure Practice. He has 20 years of experience in client relationship management, plan production, execution of multifunctional projects, personnel management of cross-functional teams, writing proposals, attending interviews, defining scopes of work, and creating and maintaining budgets. Chowdhury is experienced in managing and mentoring a team of design engineers. He has experience with traffic engineering plans, specifications, and cost estimates involving new traffic signals, signing and striping, overhead sign design, stage construction/traffic control, and construction detour plans. He also has experience in ITS plans, specifications, and cost estimates involving CCTV camera systems, DMS, traffic monitoring and communication plans, lighting (roadway) planning and design services involving horizontal and vertical illuminance calculations, light pole layout concepts, engineering plans, specifications, and cost estimates. Chowdhury is also experienced in traffic operations, including traffic data analysis, capacity analysis, and signal timing and phasing. His transportation planning experience involves traffic impact studies, traffic circulation studies, left-turn storage studies, and traffic signal warrant studies.

### PROJECTS

#### **Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Traffic Engineer.**

Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**SW 10th Street PD&E Study, FDOT District 4, FL - Traffic Engineer.** RS&H is completing a PD&E study to evaluate the implementation of a limited access facility and local roadway facility within the existing roadway corridor along SW 10th Street in South Florida. The project is unique as it proposes two roadways with very different characteristics to serve very different needs within the same corridor. The corridor represents the "missing link" to the regional express lanes network that will connect the Sawgrass Expressway to the Florida's Turnpike and I-95. Also, in the same right-of-way envelope, the local facility will be preserved to maintain neighborhood connectivity for the residential and business communities in the immediate vicinity. This project is on an accelerated 16-month schedule to achieve Location Design Concept Acceptance and will segue into the design-build criteria package production and procurement phases. RS&H will provide owner's representative support services for the final design and construction phases of the project.

**I-75 from South of North Jones Loop to North of US 17, FDOT District 1, Punta Gorda, FL - Traffic Engineer.** This project involves the widening of approximately 4 miles of I-75 from south of North Jones Loop Road to the Peace River Bridge. The project involves milling and resurfacing the existing four-lane interstate and adding two new lanes to the median. The existing bridges over North Jones Loop Road and the Seminole Gulf Railway will be widened. Services include traffic analysis, roadway design, drainage design, traffic control plans, signing and pavement marking analysis, lighting design, bridge design, environmental permitting, ITS, and noise analysis.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Traffic Engineer.**

Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL – Traffic Engineer.**

This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits.

**SW 10th Street PD&E Study, FDOT District 4, FL - Traffic Engineer.**

RS&H is completing a PD&E study to evaluate the implementation of a limited access facility and local roadway facility within the existing roadway corridor along SW 10th Street in South Florida. The project is unique as it proposes two roadways with very different characteristics to serve very different needs within the same corridor. The corridor represents the “missing link” to the regional express lanes network that will connect the Sawgrass Expressway to the Florida’s Turnpike and I-95. Also, in the same right-of-way envelope, the local facility will be preserved to maintain neighborhood connectivity for the residential and business communities in the immediate vicinity. This project is on an accelerated 16-month schedule to achieve Location Design Concept Acceptance and will segue into the design-build criteria package production and procurement phases. RS&H will provide owner’s representative support services for the final design and construction phases of the project.

**CREDENTIALS**

Total Years of Experience: 20; With RS&H: 1

Master of Science, Civil Engineering; North Dakota State University

Bachelor of Science, Civil Engineering; Bangladesh University of Engineering and Technology

Professional Engineer #66783; Florida; 2007

Professional Traffic Operations Engineer (PTOE) #2359; United States; 2007

American Society of Highway Engineers (ASHE)

Institute of Transportation Engineers (ITE)

FDOT/ATSSA Advanced WZTC/MOT; Florida Department of Transportation; 3/17/2020

Specifications Package Preparation Training for Consultants; Florida Department of Transportation

# BRIAN KIRKPATRICK, PE

## TRAFFIC STUDIES/MODELING

### INTRODUCTION

Brian Kirkpatrick serves as a Transportation Engineer for RS&H's Transportation-Infrastructure Practice and works closely with the transportation development and design teams on a variety of transportation projects. His primary responsibilities include traffic operation and safety analyses, as well as traffic noise analyses associated with PD&E studies and design projects. Brian brings 14 years of experience in the transportation engineering and planning industry and has worked with FDOT and Florida municipalities on a broad range of transportation projects.

### PROJECTS

**22nd Avenue South PD&E Study, Pinellas County, Gulfport, FL – Project Engineer.** Located in Pinellas County, 22nd Avenue South is a four-lane undivided roadway with a closed drainage system. There are flooding problems within the project limits and no existing bicycle facilities. The roadway runs through an older section of the Town of Gulfport and is fronted by many residences with direct driveway access, some of which require vehicles to back out into the through lanes. RS&H completed the PD&E study, led a team in evaluating alternative designs, and recommended the most feasible roadway, intersection, stormwater, and drainage improvements. Responsible for various engineering tasks including traffic operational analysis, development of intersection improvements alternatives and cost estimates, and conceptual design of a designated pedestrian crossing near a school as part of the PD&E Study.

**Bruce B. Downs at Bearss Avenue PD&E Study, Hillsborough County, Tampa, FL - Project Manager.** RS&H completed a PD&E study for the identification and evaluation of interim and ultimate intersection improvements using CORSIM traffic simulation. Project alternatives included grade-separated concepts to improve capacity and safety at the study intersection. Responsible for leading the traffic study including grade separated alternatives using CORSIM. Assisted with the alternatives analysis process and developed improvements recommendations for phased implementation.

**Causeway Boulevard at Providence Intersection Improvements, Hillsborough County, FL – Project Engineer.** Scope of work included improving all four legs of this intersection by adding left-turn lanes (triple lefts on Providence Road), closing median openings, and extending the right-turn lane in all directions. The project required roadway, stormwater drainage, signing and pavement marking, and traffic signalization. Responsible for traffic data collection efforts, intersection operational analysis including pedestrian and bicycle safety recommendations, and preparation of Preliminary Engineering Report as part of Project Development and Environment Study.

**Cypress Creek Wellfield Surface Water Management Project, Tampa Bay Water, Wesley Chapel, FL – Project Engineer.** The Cypress Creek Wellfield (CCWF) Surface Water Management Project is a multi-objective wetland restoration and surface water management project. The primary objective was to modify surface water drainage patterns resulting in improved wetland hydrology at sites in the eastern portion of the CCWF that were previously identified. An additional objective was to reduce nuisance flooding in Saddlewood Estates, located east of the CCWF, and Quail Hollow, which is located to the southeast of the CCWF. In cooperation with Tampa Bay Water and the SWFWMD, RS&H constructed a series of culverts and berms so that the water that once flooded neighborhood streets is now diverted westward through a series of wetlands across the wellfield. This westward movement of above-normal water levels will precipitate the movement of water into

specific “target wetlands” that are not expected to recover hydrologically with the current reductions in pumping.

**Dunn Avenue Extension Environmental Report, Volusia County, Daytona Beach, FL - Project Engineer.** The extension of Dunn Avenue west over I-95 connecting with Tomoka Farms Road provides a much-needed alternative east-west route. Although the project was originally designed by RS&H, it remained on hold until the county obtained federal funds for right-of-way acquisition. Subsequently, RS&H was selected to provide conceptual engineering and a NEPA Type 2 Categorical Exclusion that would document the impacts of the roadway’s extension to obtain approval by FHWA. Using the original design plans, RS&H developed conceptual plans for evaluation and analysis of the impacts of the project on the surrounding social, natural and physical environments. The team also conducted several public meetings to obtain public input used in determining a recommended design. After FHWA approved the NEPA document, RS&H moved forward with updating the original plans. With the approval of the NEPA document, the project received ARAA funding in the amount of \$5.5 million of the \$6.6 million project.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Project Engineer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort. Responsible for leading the PD&E phase traffic study. Prepared the project traffic report and noise study report.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Project Engineer.** Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO. Responsible for feasibility evaluations for proposed safety improvements including multiple midblock pedestrian crossings. Also responsible for the preparation of Feasibility Study Reports and the preparation of materials for multiple public meetings.

**Myakka Road at Wilson Road and Myakka Road at Hancock Road Intersection Improvements, Sarasota County, FL - Project Manager.** Responsible for evaluation of feasibility of constructing roundabouts at two intersections. Study included the assessment of right-of-way impacts and cost estimates for the construction of roundabouts and alternative intersection configurations at two study intersections.

## CREDENTIALS

Total Years of Experience: 14; With RS&H: 14

Master of Science, Civil Engineering; University of Florida

Bachelor of Science, Civil Engineering; University of Florida

Professional Engineer #66588; Florida; 2007

Institute of Transportation Engineers (ITE)

Highway Traffic Noise; National Highway Institute

# RICHARD TILLERY JR., AICP

## TRAFFIC STUDIES/MODELING

### INTRODUCTION

Richard Tillery serves as a Senior Transportation Planner for RS&H's Transportation-Infrastructure Practice and is experienced in all areas of transportation and planning. His overall responsibilities include completing future travel demand forecasting, traffic operational analyses, and transportation data preparation and analysis. Richard has 22 years of experience managing and planning for transportation studies, including long-range plans, strategic plans, and analysis. He is experienced in the development, validation, and application of travel demand models and is proficient in the use of ArcGIS, the Florida Standard Urban Transportation Model Structure, TRANPLAN, TP+, Cube Voyager, Transcad, Synchro, and Highway Capacity Software.

### PROJECTS

#### **Bruce B. Downs at Bearss Avenue PD&E Study, FL - Travel Demand Forecasting Task Leader.**

RS&H completed a PD&E study for the identification and evaluation of interim and ultimate intersection improvements using CORSIM traffic simulation. Project alternatives included grade-separated concepts to improve capacity and safety at the study intersection. Responsible for conducting a subarea validation of the TBRPM and developing future year traffic forecasts to support the development of alternative year DDHVs. The development of traffic forecasts to evaluate improvements to the Bearss/Bruce B. Downs intersection, as well as improvements to Bearss Avenue between Livingston Boulevard and Bruce B. Downs Boulevard aided in the optimization of operational strategies.

**Fletcher Avenue PD&E Study, Hillsborough County, FL - Chief Modeler.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort. Responsible for developing future traffic forecasts. The built-out nature of the corridor provided numerous challenges in the forecasting of future traffic growth in the corridor.

**Osceola County Long-Range Transit Plan, Osceola County, FL – Chief Modeler.** RS&H conducted a comprehensive study to develop a Long-Range Transit Master Plan for Osceola County's urban growth area. The county set an aggressive schedule that required project completion within eight months. Stakeholder and inter-governmental coordination efforts were a significant component of the study, as well as close coordination with several regional transit providers, including LYNX. RS&H conducted assessments of continuing and proposed land development projects in Osceola and Orange Counties, high-speed and commuter rail lines and intermodal stations, connection to the Orlando International Airport, and the extension of a multilane toll road as a multimodal corridor. The plan also incorporates appropriate multimodal provisions into development reviews, roadway planning, and other strategic planning activities as the county continues to develop. Responsible for development of future ridership forecasts. The lack of existing transit service in the corridor posed numerous challenges in the reasonable forecasting of future transit. Since it was not possible to calibrate the model to existing premium service standards, innovative off model approaches had to be utilized.

**Pensacola Bay Bridge PD&E Study, FL -Traffic Engineer.** RS&H provided numerous services related to this PD&E study, including assistance in the NEPA process, preparation of NEPA and design traffic documents, development of alternative alignments to avoid and minimize impacts to Section 4(f) properties, evaluation of wetland impacts and mitigation alternatives, preparation of cost estimates, and toll feasibility studies. RS&H faced two major challenges on the project. The first was public involvement and achieving consensus among the two involved municipalities and two separate counties on the preferred replacement bridge location. RS&H's ability to elevate the regional benefits of the project improvements above the parochial issues on each side of the bay were instrumental in securing consensus for the project. The second challenge was securing FHWA approval of the use of parkland on each side of the bay crossing and demonstrating that there was no feasible alternative to the use of park property. RS&H's familiarity with the NEPA process and preparation of quality documents minimized FHWA review time and provided a legally sufficient decision for the use of Section 4(f) parkland and a NEPA compliant "Finding of No Significant Impact" for the project.

**Thomasville Road IMR, FL - Travel Demand Forecasting Task Leader.** The Thomasville Road IMR will identify capacity constraints and analyze mobility improvements for the I-10 (SR 8) and Thomasville Road (SR 61)/Capital Circle Northeast (SR 263) interchange. Several alternatives will be analyzed to evaluate the operational improvements for the anticipated travel demand within the corridor. The analysis methodology and alternatives development will be consistent with FDOT and FHWA IAR procedures. In addition, an environmental fatal flaw analysis will be completed to identify significant environmental issues for each of the alternatives considered. The final IMR will provide a recommended alternative and financial plan to support the proposed improvements.

**Thomasville Road Planning Study, FL - Travel Demand Forecasting Task Leader.** The goal of this study was to analyze traffic patterns, projected growth, and potential roadway improvement impacts in the Northeast Tallahassee area to determine a preferred corridor for future improvements. RS&H was responsible for the traffic and environmental analyses, corridor evaluations, and public involvement efforts. RS&H also evaluated sustainable transportation alternatives through a variety of mobility improvements. Responsible for CRTPA model validation and application to support the development of DDHVs for traffic analysis of alternatives.

**US 41/SR 54 Interchange PD&E Study, FL - Task Leader.** RS&H is completing a PD&E study for the US 41/SR 54 interchange. The study is evaluating different interchange configurations at this extremely congested major intersection in southern Pasco County. The project has several complicating factors, including connection to an evacuation route (SR 54), a major Florida Progress substation, an active railroad crossing, a fire station, and potential braided ramps and flyovers at Dale Mabry apex to the south. RS&H developed alternatives that provided general purpose lanes on the overpass while also allowing the managed lanes to be added later. In response to a new requirement that all overpass movements would be tolled, the team conceived alternatives that include tolled lanes over US 41 and two general purpose through lanes at the intersection.

## CREDENTIALS

Total Years of Experience: 22; With RS&H: 8

Bachelor of Arts, Regional and Urban Planning; University of Alabama

American Institute of Certified Planners (AICP) #17067; United States; 2001

# MARK DAVIDSON, PE

## CONSTRUCTION MANAGEMENT/CEI & CONSTRUCTIBILITY

### INTRODUCTION

Mark is a Senior Project Engineer with 33 years of progressive Construction Engineering and Inspection (CEI) experience. His areas of expertise include work in major segmental bridge construction, prestressed American Association of State Highway and Transportation Officials (AASHTO) beams construction, plate-girder, steel-beam construction pile installation, hot-mix bituminous asphalt placement, milling and resurfacing, asphalt rubber membrane interlayer, superpave placement, and asphalt base construction. Mark has extensive experience in contract administration, bid preparation, cost estimates, force accounts, material sampling and testing, public relations, purchasing, coordination of subcontracts, federal aid participation, Equal Employment Opportunity Commission (EEOC) and Disadvantaged Business Enterprise (DBE) administration, documentation of contract changes, claims and time extension requests, and documentation and preparation of final estimates.

### PROJECTS

**Atlantic Avenue and Silver Beach Avenue Intersection Streetscape, City of Daytona Beach and FDOT District 5, Volusia County, FL - Senior Project Engineer.** This FDOT Local Agency Program (LAP) streetscape project required the removal of existing asphalt and base material and reconstruction with decorative concrete pavement. All sidewalks were upgraded to ADA compliance and landscaping with irrigation was added. Other inspection duties included reclaimed water utility installation, earthwork, and asphalt removal/replacement.

**Mills Avenue Safety Improvements and Concrete Pavement Replacement, Orlando, FL - Senior Project Engineer.** This was a federally funded LAP roadway improvement project between Virginia Drive and Dorchester Street, and included the intersections at Marks Street and Lake Highland Drive. The project replaced damaged concrete slab sections, made intersection improvements, and upgraded signal poles, in addition to adding a multi-use trail, a pedestrian bridge across Lake Estelle, sidewalks, and parking.

**Neptune Road Widening, Osceola County, FL - Senior Project Engineer.** This project involved the reconstruction of 2.4 miles of heavily traveled urban roadway, intersection upgrades, utility coordination, landscaping/beautification, drainage, roadway widening from two lanes to four lanes, environmental impact awareness, and heavy earthwork operations.

**Median Safety Improvements Project, FDOT District 5, Sumter County, FL - Senior Project Engineer.** Improvements consisted of installation of median guardrail and ancillary improvements such as improving median slopes, drainage improvements, and emergency U-turns.

**Group 126, FDOT District 5, Volusia County, FL - Project Manager/Project Administrator.** This was a Residency CEI for Daytona Construction. Project entailed the coordination of personnel and equipment to assure inspection staff performs in accordance with the contract.

**Milling/Resurfacing and Guardrail Update, Osceola County, FL - Senior Project Engineer.** Work consisted of the milling, resurfacing, and design criteria upgrades on the Turnpike Mainline (SR 91) in Osceola County, MP 198.50 to MP 249.2.

**Intersection Improvements at SR 60 Ramp/Yeehaw Junction, FDOT District 5, Osceola County, FL - Senior Project Engineer.** Project consisted of intersection improvements at SR 60 entrance/exit ramps at Yeehaw Junction and the Turnpike.



**Lake County Mainline Milling and Resurfacing, Roadside Improvements, and Median Guardrail, FDOT District 5, Lake County, FL - Senior Project Engineer.** The improvements under this contract consisted of installation of median guardrail, milling and resurfacing of the southbound lanes (MP275.677 to MP281.834), and safety improvements on SR 91.

**Kissimmee Park Road Interchange, Florida's Turnpike, (MP 138), FDOT, FL - Senior Project Engineer.** The improvements under this contract consisted of replacing the bridge over the Florida's Turnpike (SR 91) for Kissimmee Park Road and providing a SunPass Only exit ramp from Southbound Turnpike onto Kissimmee Park Road and a SunPass Only northbound entrance from Kissimmee Park Road to the Turnpike. SR 91 was milled and resurfaced in the limits of the interchange. Lighting, toll facilities, and landscaping was also provided in the interchange area. The SunPass Only ramps (northbound and southbound) constructed new aluminum gantries and equipment buildings.

**Seminole Expressway Resurfacing and Guardrail Update, FDOT District 5, Seminole County, FL - Senior Project Engineer.** Improvements consisted of milling and resurfacing both the northbound and southbound travel lanes of the Seminole County Expressway from milepost 37.7 to milepost 46.3. Other activities included the extension of the existing northbound Aloma Avenue entrance ramp, milling and resurfacing of the existing entrance and exit ramps, construction of guardrail as well as the replacement of the existing pavement marking.

**Hathaway Bridge Replacement Project, FDOT District 3, Panama City, FL - Project Engineer.** This \$81 million project was a twin-span, segmentally constructed one.

Intersection Improvements at SR 60 Ramp/Yeehaw Junction, FTE, FL - Senior Project Engineer. Work consisted of intersection improvements at SR 60 entrance/exit ramps at Yeehaw Junction and the Turnpike.

**Milling and Resurfacing and Guardrail Update, FTE, Osceola County, FL - Senior Project Engineer.** Work consisted of the milling, resurfacing, and design criteria upgrades on the Turnpike Mainline (SR 91) in Osceola County, MP 198.50 to MP 249.2.

**Turnpike/SR 91 Widening, FTE, Osceola County, FL - Senior Project Engineer.** Project included the widening from the Osceola County Line (MP 249.3) to the Beachline Expressway/SR 528 (MP 254) from four to eight travel lanes, including two express lanes in both directions for the FTE. Features of the work include concrete pavement, the construction of nine new bridge structures, the extension of two box culverts, ramp construction, drainage improvements, and Intelligent Transportation System (ITS) upgrade with Dynamic Message Signs (DMS).

## CREDENTIALS

Total Years of Experience: 34; With RS&H: 32

Bachelor of Science, Civil Engineering; Pennsylvania State University

Civil Engineer #29523; Arizona; 1995

Professional Engineer #47145; Florida; 1993

Professional Engineer #PE078972; Pennsylvania; 2011

Civil Engineer #106688; Texas; 2010

American Society of Civil Engineers (ASCE)

NRC Nuclear Gauge Safety; U.S. Nuclear Regulatory Commission; 5/28/2099

NRC Radiation Safety Officer (RSO); U.S. Nuclear Regulatory Commission; 12/3/2099

OSHA Construction Safety and Health; United States Occupational Safety and Health Administration; 12/31/2099

# WILLIAM CRANK

## CONSTRUCION MANAGEMENT/CEI & CONSTRUCTABILITY

### INTRODUCTION

William Crank has 13 years of CEI Inspection experience in Florida, and his background includes inspection during both roadway and structure construction. His areas of expertise include materials sampling/testing and inspection for embankment, wall construction, drainage, concrete structures, subgrade, base operations and asphalt paving.

### PROJECTS

**Cypress Creek Wellfield Surface Water Improvements - Final Design and Construction, Tampa Bay Water, Land O' Lakes, FL - Senior Inspector.** As a continuation of the Cypress Creek Wellfield Surface Water Management project, RS&H completed a second phase of work, including a feasibility study, design, permitting, and construction services. RS&H performed numerous services for the feasibility study and permitting process, including field data collection, wetland characterization/assessment, review of ecological and hydrological monitoring data, impact assessment, and surface water modeling, as well as establishing seasonal high and normal pool elevations. Improvements recommended in the feasibility study were designed and plans prepared. Construction of the additional improvements and modifications to the existing surface water management system were completed. Throughout the construction process, RS&H provided bidding and post-design services. The goal of this project was to further enhance wetlands and increase aquifer recharge.

**Countywide CEI Support Services Contract, Pasco County, New Port Richey, FL - Senior Inspector.** RS&H provided CEI project management and inspection services under a countywide contract with Pasco County. Senior Inspector

**County-Pinellas General CEI 2012, Pinellas County, Pinellas, FL - Senior Inspector.** on the General CEI Contract of 2012 for Pinellas County. This contract encompasses ADA, sidewalk / trail, roadway, and drainage improvements throughout the County. 101-0468-CN; Senior Inspector

**FDOT D1 SR 60 from Diesel Rd to CR 555, FDOT District 1, Mulberry, FL - Senior Inspector.** on the SR-60 Milling and Resurfacing project in Polk County for FDOT District 1. This rehabilitation effort covers a 7.9-mile section of SR-60 between Diesel Road and CR 555, along with a 0.23-mile stretch of SR-60 from Nichols Road (Old Highway 60) to Prairie Industrial Parkway. Additional work includes new concrete medians, sidewalk, curb and gutter, and driveway turnouts.

### CREDENTIALS

Total Years of Experience: 14; With RS&H: 4

ACI Concrete Field Level 1; American Concrete Institute; 10/4/2019

ACI CTCI (Level 2); American Concrete Institute; 8/31/2020

FDOT Critical Structures; Florida Department of Transportation; 10/10/2019

FDOT/ATSSA Advanced WZTC/MOT; American Traffic Safety Services Association; 11/21/2018

FDOT/CTQP Asphalt Paving Level 1; Florida Department of Transportation; 3/17/2022

FDOT/CTQP Asphalt Paving Level 2; Florida Department of Transportation; 3/17/2022

FDOT/CTQP Concrete Field Level 1; Florida Department of Transportation; 10/4/2019

FDOT/CTQP Concrete Field Specification; Florida Department of Transportation; 11/19/2019

FDOT/CTQP Drilled Shaft; Florida Department of Transportation; 11/1/2018

FDOT/CTQP Earthwork Level 1; Florida Department of Transportation; 8/5/2019

FDOT/CTQP Earthwork Level 2; Florida Department of Transportation; 8/7/2019

FDOT/CTQP Final Estimates Level 1; Florida Department of Transportation; 10/21/2021

FDOT/CTQP Pile Driving; Florida Department of Transportation; 7/1/2019

FDOT/FDEP Stormwater Management Inspector; Florida Association of Environmental Professionals;  
12/31/2099

NRC Nuclear Gauge Safety; U.S. Nuclear Regulatory Commission; 12/31/2099

OSHA Construction Safety and Health; United States Occupational Safety and Health  
Administration; 12/31/2099

# BRANDI ALLEGOOD

## PROJECT ADMINISTRATION/PUBLIC INVOLVEMENT

### INTRODUCTION

Brandi Allegood acts as liaison between RS&H and infrastructure clients to ensure that lines of communication remain open and projects are handled and permitted expeditiously. As a client advocate, she is responsible for representing clients at various forums and is involved with many professional and community-related organizations. She regularly meets with leaders of local government, including city and county administrators, commissioners and many department directors and has played an active role in governmentally appointed task forces for the streamlining of permitting processes.

### PROJECTS

**RS&H, Inc. - Business Development Representative.** Organize and coordinate company events (i.e. conferences, seminars, presentations, summits, etc.) for the Transportation-Infrastructure practice. Duties may include assisting with development of tabletop display board, ordering promotional materials, manning the exhibit or booth area; and handling all formalities for sponsorship and registrations. Provide support when needed for strategic marketing initiatives such as PowerPoint presentations, proposals and LOIs, Sales Goals and Prospects Report for FY10. Monitor practice resume updates and request reviews/updates according to the schedule dictated in the marketing SOPs. Analyze the corporate sales report to ensure updates are made monthly. Compile Sales Report data and produce status reports for review and approval by the Director of Marketing. Monitor the programs proposal section on the Intranet. Update the "Best of" proposals, "examples and templates", proposals completed in the "last 6 months," and maintain an "archive" of all completed proposals.

**Marketing Assistant for Major Dealership.** Responsibilities included writing quarterly reports that reviewed, analyzed, and evaluated marketing position with suggestions on how to improve and expand services. Coordinated and assisted with marketing activities which included planning and executing company events, processed mailing list changes for in-house publication and identified and monitored competitors, market conditions or changes in the industry that may have affected sales. Ensured accurate inventory of all literature materials in accord with inventory cycles and organizational philosophy. Conducted daily inventory analysis to solve inventory problems as well as developed and implemented inventory control procedures. Recorded and maintained control of all inventory items purchased and produced for the dealership.

**Corporate Executive Assistant for Real Estate Company.** Responsibilities included managing a recruiting database containing thousands of individuals for senior management, 12 branch managers and the training department. Developed and maintained detailed expense spreadsheets for all corporate litigation. Organized and led quarterly training and information sessions for more than 25 branch staff members. Maintained and updated lead management website, receiving over 10,000 inquiries each year. Trained corporate office and 12 branch offices in the integration of new phone systems. Created marketing material and user guide for more than 200 users and provided on-site support in multiple locations. Initiated a program with non-profit organizations to relocate and dispose of more than 500 pieces of preowned office furniture. Orchestrated the redesign of 20 percent of the corporate floor space to accommodate **additional staff and a new department.** **Worked with numerous external vendors to meet tight deadlines, while providing ongoing communications to inform all corporate staff.**

### CREDENTIALS

Total Years of Experience: 11; With RS&H: 11  
Associate of Arts, Business Administration; Pasco-Hernando Community College

# JEFF GLENN, PE, D.WRE, CFM

## GENERAL ENGINEERING CONSULTATION/PEER REVIEW/QUALITY ASSURANCE REVIEW

### INTRODUCTION

Jeff Glenn serves as the Water Resources Group Leader for RS&H's Transportation-Infrastructure Practice. He is responsible for management of projects, as well as hydraulic and hydrologic analyses, bridge scour analyses, floodplain mapping, roadway drainage design, potable and reclaimed water distribution and wastewater collection systems designs, and environmental permitting. Jeff has 30 years of experience managing, supervising, and performing hydrologic and hydraulic modeling for a variety of projects throughout the east coast and Texas. These projects include environmental permitting, power plant permitting, stormwater management, water resources planning studies, floodplain mapping, riverbed scour at bridges, dam evaluations, reservoir safe-yield studies, combined sewer overflow design and evaluation, and water and wastewater system hydraulic analyses. He has developed and applied computer-based hydrologic and hydraulic models for municipal, land development, and research projects.

### PROJECTS

**Clinton Avenue (CR 52A) Reconstruction, Pasco County, Dade City, FL - Senior Drainage Engineer.** RS&H performed the field survey, geotechnical investigation, roadway and drainage design services, and permitting for the reconstruction of over 1.5 miles of Clinton Avenue (CR 52A). The project limits are from west of CR 41 to east of US 301, and the existing rural two-lane roadway was reconstructed to a four-lane urban divided typical section that includes bicycle lanes and sidewalks on both sides of the roadway. The project included a new closed drainage system and four new retention ponds to treat stormwater runoff in four distinct drainage basins. The project also included signalization of two major intersections, with one at Clinton Avenue and CR 41 and the other at Clinton Avenue and US 301. Various permits were obtained from FDOT District 7 in order to modify the signalized intersection with US 301 that required revisions to the affected turn lane lengths on US 301 due to the widening of Clinton Avenue. Responsible for proposed two-lane to four-lane roadway widening project. Work included 1.5-mile section of CR 52A and two major intersections, along with new closed drainage systems, four new retention ponds and environmental permitting.

**Depot Avenue Rail-Trail Pedestrian Overpass, Gainesville Community Redevelopment, Gainesville, FL - Quality Control Review.** RS&H's design featured a simulated railroad track twisted into a vibrantly colored DNA strand spanning US HWY 441/SW 13th Street. Our design also included a plaza and staircase adjacent to the overpass to link the rail-trail system to an extensive network of multimodal access points. After a robust design process, the structure was fabricated and preassembled off site prior to installation, which expedited the construction process and had minimal impact on traffic and the surrounding neighborhood. Ultimately, the project converted an unattractive, blighted, and poorly functioning pedestrian overpass into artistic and functional infrastructure.

**Dunn Avenue Extension, Volusia County, DeLand, FL - Senior Water Resources Engineer.** The extension of Dunn Avenue west over I-95 connecting with Tomoka Farms Road provides a much-needed alternative east-west route and relieves traffic on both heavily congested US 192 to the south, and LPGA Boulevard to the north. RS&H provided field survey; geotechnical investigation; roadway, drainage, and structures design; and permitting for the construction of over 1 mile of the roadway on new alignment. The initial two-lane cross section includes two 12-foot lanes, a 5-foot

paved outside shoulder with curb and gutter, an 8-foot sidewalk on the north side of the roadway, and a 4-foot paved shoulder adjacent to a future 20-foot raised median. Stormwater management facilities and permitting were designed for the proposed four-lane roadway, including tree ponds, one of which is a joint use with FDOT. Mitigation for Riparian Habitat Protection Zone, gopher tortoise, floodplain, and wetlands impacts were also developed. The project includes a 442-foot bridge over I-95 and Tomoka Farms Road with two 12-foot lanes, an outside paved shoulder, and a 10-foot concrete sidewalk.

**Southeast Lakes Drainage Improvements from Lake Cherokee to Lake Davis, City of Orlando, Orlando, FL - Project Manager.** RS&H provided roadway and drainage design and environmental permitting services for an improved hydraulic connection between the two lakes and reconstruction of a local brick street. The new drainage connection includes over 700 feet of 48-inch pipe under Woodlawn Boulevard and a control structure at Lake Cherokee with a manually-operated adjustable weir. RS&H also coordinated with the existing utility owners during development of construction plans and specifications. RS&H assisted the city during public information meetings and obtained an Environmental Resource Permit from SJRWMD and a Nationwide Permit from USACE.

**Stormwater Permit Application Reviews, City of Orlando, Orlando, FL - Project Manager.** RS&H assisted the City of Orlando as an extension of their staff with reviewing stormwater permit application packages submitted to the city by developers, residents, and land owners. RS&H provided qualified stormwater professionals to review the permit applications at the city's offices using the city's specialized software and procedures. The stormwater professionals reviewed the permit applications and produced comments in compliance with the rules and design criteria of the city, SJRWMD, FDEP, and FEMA.

**Permit Reviews, City of Orlando, Orlando, FL - Project Manager.** RS&H assisted the city with reviewing stormwater permit applications at the Orlando City Hall Permitting Department.

**Orlando W. Lake Fairview Drainage Study, City of Orlando, Orlando, FL - Project Manager.** Along with our subconsultant, RS&H conducted a drainage study of the West Lake Fairview watershed. The study included development of hydrologic and hydraulic models that were directly coupled with ArcGIS. Flooding potential throughout the watershed was analyzed and Levels of Service were developed for major features. Recommended improvements to mitigate the flooding and improve the Levels of Service throughout the watershed were presented in a detailed report.

## CREDENTIALS

Total Years of Experience: 30; With RS&H: 17

Master of Engineering, Civil Engineering; Pennsylvania State University

Bachelor of Science, Civil Engineering; New England College

Civil Engineer #38595; Massachusetts; 1995

Civil Engineer #81185; Texas; 1996

Professional Engineer #0402048798; Virginia; 2011

Professional Engineer #PEN.0018930; Connecticut; 1995

Professional Engineer #47210; Florida; 1993

Professional Engineer #PE031172; Georgia; 2006

Professional Engineer #062063402; Illinois; 2011

Professional Engineer #PE8272; Maine; 1995

Professional Engineer #038034; North Carolina; 2011

Professional Engineer #08123; New Hampshire; 1991

Professional Engineer #PE.0006390; Rhode Island; 1995

Professional Engineer #32599; South Carolina; 2015

Certified Floodplain Manager, Association of State Floodplain Managers (No. US-07-03135), 2007Diplomate, Water Resources Engineer; American Academy of Water Resources Engineers; 5/31/2018

# JUSTIN TOWRY, PE

## GENERAL ENGINEERING CONSULTATION/PEER REVIEW/QUALITY ASSURANCE REVIEW

### INTRODUCTION

Justin Towry serves as a Senior Transportation Engineer for RS&H's Transportation-Infrastructure Practice. His responsibilities include the design and management of roadway design projects. He works closely with the transportation design team in a variety of roadway projects.

### PROJECTS

#### **Pauls Drive (Brandon's Main Street), Hillsborough County, Brandon, FL - Project Engineer.**

RS&H completed a PD&E study and provided final design services, including the design of recommended facilities, for a segment of Pauls Drive. The project involves rebuilding a rural road into a traditional neighborhood design for Brandon's Main Street, which will include on-street parking, wide sidewalks, and street furnishings. In addition to these improvements, the area also includes a new Chamber of Commerce Building, a proposed County Service Center for Brandon, and access for a major proposed development of adjacent agricultural land. As part of final design, RS&H provided roadway and drainage design, signing and pavement marking, signalization, watermain and forcemain utility coordination, and landscape architecture. The project also included engineering and environmental analysis, public involvement, environmental permitting, and extensive investigation of pond sites. Major challenges in this project included negotiating best management practices with the SWFWMD, as on-site ponds are unavailable or financially unfeasible. The team also worked closely with Hillsborough County stormwater staff to avoid negative impacts to the model for Delaney Creek.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Project Engineer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**Good Neighbor Trail from West of Suncoast Parkway to SR 50/ Cortez Boulevard, FDOT District 7, Tampa, FL - Quality Assurance/Quality Control.** This project provides for a portion of the statewide Coast to Coast Connector Trail. The scope of work encompasses the design and construction of a 12-foot bidirectional shared-use path that will create two separate new trail sections. Responsible for the QC of the plan set for phase deliveries.

**Alligator Alley (I-75) Rest Area, FDOT District 1, Naples, FL - Project Engineer.** RS&H designed a new rest area on the north side of the Alligator Alley segment of I-75. The rest area was designed to LEED standards and is adjacent to recreational parking and access to the Florida National Scenic Trail located within the Big Cypress National Preserve. RS&H's LEED experience, which includes the design of two LEED Gold rest areas in Pasco County, was invaluable since this rest area is one of the first in District 1 that will be constructed to LEED standards. In addition to the design, FDOT asked RS&H to help manage permitting coordination with the Army Corps of Engineers and South Florida Water Management District for this rest area, as well as the south side, which is being delivered as a

design-build. We have assisted by clarifying permitting issues and providing direction to the FDOT, which is especially important for the design-build project due to the tight schedule.

**I-75 Widening from North of River Road to North of SR 681, FDOT District 1, Venice, FL - Project Engineer.** RS&H provided design services to widen approximately 9 miles of I-75 from north of River Road (CR 777) to north of SR 681. The four-lane divided configuration was widened to a six-lane facility with drainage facilities capable of accommodating the ultimate eight-lane facility. The project also involved the realignment of approximately 2 miles of southbound I-75 into the median to facilitate Sarasota County's plan to construct an extension of Honore Avenue, a parallel four-lane divided urban arterial roadway. This alignment shift required new bridge structures over Salt Creek and Cow Pen Slough. Nineteen drainage basins and outfall systems, six bridge widenings, and multiphased traffic control plans are some of the unique elements necessary because of the rolling terrain and the heavy traffic volumes in this rapidly developing section of Florida's west coast.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Roadway Design Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT. Responsible for assisting with the roadway design and plans production of the project.

**US 27 VWS & Bi-Directional Static Scales, FDOT District 1, Clewiston, FL - Project Manager.** RS&H is responsible for providing the design services for the construction of a bi-directional static weigh station scale in the existing median of US 27 and one weigh-in-motion sensor site in each direction in advance of the static scale. The project also includes a bypass site to identify trucks attempting to avoid the weigh station by utilizing CR 720. Design services include roadway design, drainage design, environmental permitting, signing and pavement marking, and lighting. Responsible for managing the project, which includes coordination with several disciplines and subconsultants to ultimately produce a set of final construction plans. The main challenge involved with this project was learning the process and details of weigh stations constructed in Florida. Weigh station construction is a highly specified field and required close coordination with the manufacturer of the weigh station.

## CREDENTIALS

Total Years of Experience: 16; With RS&H: 16

Bachelor of Science, Civil Engineering; University of Florida

Professional Engineer #65732; Florida; 2007

Advanced Work Zone Traffic Control; Florida Department of Transportation

Specifications Package Preparation Training for Consultants



# PETER ROGAS, PE

## GENERAL ENGINEERING CONSULTATION/PEER REVIEW/QUALITY ASSURANCE REVIEW

### INTRODUCTION

Peter Rogas serves as the Tampa Bridge Group Leader for RS&H's Transportation-Infrastructure Practice, a position he has held for the past 18 years. He brings 38 years of experience in the transportation industry and is responsible for participating in and leading the structures design teams in preparing design calculations, bridge contract plans, bridge specifications, and construction cost estimates.

### PROJECTS

**CR 150 Bridge and Approaches, Madison County, Madison, FL - Quality Assurance/Quality Control.** Responsible for serving as department supervisor and QA/QC. Structure was a flat slab concrete superstructure support on pile bent substructures utilizing 18-inch square concrete piles.

**CR 158 over Sundown Creek, Madison County, Greenville, FL - Project Director.** The project replaced an aging three-cell box culvert with a single-span prestressed concrete beam bridge. A portion of the existing box culvert bottom slab was left in-place as scour protection. Design was performed under a compressed schedule to meet the Small County Outreach Program funding requirements. Responsible for serving as department supervisor and QA/QC. Structure was a single span FIB 36 beam bridge on steel H-pile foundations.

**CR 54 (Ronald Reagan Parkway) Widening from US 27 to US 17/US 92, Polk County, Bartow, FL - Quality Assurance/Quality Control.** RS&H provided engineering and design services for the widening of approximately 7 miles of CR 54 (Ronald Reagan Parkway). RS&H previously completed the corridor study for this project, which was divided into five segments for the design stage. The segments were bid separately, and each was awarded to RS&H. The widening project consisted of reconstructing the roadway from a two-lane undivided rural facility to a four-lane divided urban facility to add much needed capacity to this rapidly developing area. Traffic signals along with turn lanes, 4-foot bike lanes and 6-foot sidewalks were included to make the corridor more pedestrian-friendly. A new bridge was constructed over I-4, allowing the two-way bridge to be used for one-way traffic with pedestrian accommodations. RS&H designed the roadway to be widened with minimal right-of-way acquisition, which will save the county valuable time and money. Responsible for serving as department supervisor and QA/QC. Structures included MSE walls, mast arms, and overhead sign structures.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Lead Engineer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort. Responsible for serving as lead engineer for the PD&E bridge replacement study.

**Fort Fraser Trail Bridge Replacement over Banana Creek, FDOT District 1, Lakeland, FL - Project Director.** RS&H provided design and architectural services for the replacement of the Fort Fraser Trail Bridge over Banana Creek. The original rails-to-trails bridge had deteriorated to a

structurally deficient condition. This project replaced the bridge with a new prefabricated truss that closely recreated the existing aesthetic and blended with the environment. The team used weathering steel, a material not typically used on prefabricated trusses, as a unique innovation to eliminate future maintenance costs. The weathering steel eliminates the need to sandblast and repaint the bridge structure over the environmentally-sensitive area of Banana Creek, located within the Lake Hancock/Peace River watersheds. The bridge site's close proximity to the electric transmission lines required several power shutdowns during construction. The construction was ultimately completed with minimal power outages, used mainly for piling installation and steel superstructure erection. Responsible for serving as department supervisor and QA/QC.

**Myakka Bridge Replacement Project, Sarasota County, Sarasota, FL - Project Director.** This project replaced the existing CR 780 (Hancock Road) bridge over the Myakka River. This section of the Myakka River is classified as a Wild and Scenic Waterway by FDEP. The existing bridge, originally constructed in 1955, consisted of transversely post-tensioned concrete T-Beams founded on timber piles, experienced a major settlement event in 2010 that required closure and repair with crutch bents and pile jackets. Due to a very narrow restricted right-of-way, environmentally sensitive nature of the river, and impractical detour caused by closing the bridge, an accelerated phased construction method was developed to replace the existing bridge while maintaining traffic flow. The new bridge was constructed in halves using in-line construction techniques. The first half was constructed immediately adjacent to the existing bridge, which continued to carry traffic. Once completed, the traffic was shifted to the new structure. The existing bridge was then demolished, and the second half of the new bridge was constructed in its place. The new bridge is 330 feet in length and comprised of 12-inch prestressed concrete slab units with a concrete deck topping founded on precast bent caps and prestressed concrete piles. More than 1,500 linear feet of mechanically stabilized earth retaining walls were used to maintain the proposed roadway fill within the narrow right-of way limits. Responsible for serving as department supervisor.

**Keyville Road Bridge Replacement, Hillsborough County, Tampa, FL – Project Director.** The East Keyville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL – Lead Bridge Engineer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

## CREDENTIALS

Total Years of Experience: 38; With RS&H: 19

Bachelor of Science, Civil Engineering; Louisiana State University

Professional Engineer #40426; Florida; 1988

Civil Engineer #PE.0021107; Louisiana; 1984

Civil Engineer #119503; Texas; 2015

# LLOYD FACKLAM

## GEOGRAPHIC INFORMATION SYSTEMS

### INTRODUCTION

Lloyd Facklam serves as a Senior Highway Technician/Designer for RS&H's Transportation-Infrastructure Practice. He works closely with the design team on a variety of drainage, roadway, and environmental projects. He is experienced with GIS, light detection and ranging, traffic noise models, as well as GEOPAK and MicroStation.

### PROJECTS

**CCWF Surface Water Improvements – Design and Permitting, Tampa Bay Water, Clearwater, FL - Designer.** As a continuation of the Cypress Creek Wellfield Surface Water Management project, RS&H completed a second phase of work, including a feasibility study, design, permitting, and construction services. RS&H performed numerous services for the feasibility study and permitting process, including field data collection, wetland characterization/assessment, review of ecological and hydrological monitoring data, impact assessment, and surface water modeling, as well as establishing seasonal high and normal pool elevations. Improvements recommended in the feasibility study were designed and plans prepared. Construction of the additional improvements and modifications to the existing surface water management system were completed. Throughout the construction process, RS&H provided bidding and post-design services. The goal of this project was to further enhance wetlands and increase aquifer recharge.

**CR 54 (Ronald Reagan Parkway) Widening from US 27 to US 17/US 92, Polk County, Bartow, FL - Designer.** RS&H provided engineering and design services for the widening of approximately 7 miles of CR 54 (Ronald Reagan Parkway). RS&H previously completed the corridor study for this project, which was divided into five segments for the design stage. The segments were bid separately, and each was awarded to RS&H. The widening project consisted of reconstructing the roadway from a two-lane undivided rural facility to a four-lane divided urban facility to add much needed capacity to this rapidly developing area. Traffic signals along with turn lanes, 4-foot bike lanes and 6-foot sidewalks were included to make the corridor more pedestrian-friendly. A new bridge was constructed over I-4, allowing the two-way bridge to be used for one-way traffic with pedestrian accommodations. RS&H designed the roadway to be widened with minimal right-of-way acquisition, which will save the county valuable time and money.

**Curtis Hixon Waterfront Park, City of Tampa, Tampa, FL - Designer.** RS&H served as the Project Manager and Landscape Architect of Record for the Curtis Hixon Waterfront Park. The 8-acre park can hold over 10,000 people for special events and is uniquely designed to host concerts with a sloped grand lawn facing the riverfront featuring elevated seating areas, benches, and raised platforms. Other elements include a modern playground with electronic play features, a fenced in dog run, a monumental fountain and mist fountain where children are encouraged to play, restrooms, and artistic details throughout. During the design phase, RS&H identified a number of sustainable solutions, including the use of reclaimed water for irrigation and drainage improvements that lower the amount of stormwater runoff. In addition, the construction team faced difficult subsoil conditions, as the site had been developed and redeveloped over the past 100 years.

**Cypress Creek Wellfield Surface Water Management Project, Tampa Bay Water, Wesley Chapel, FL - Designer.** The Cypress Creek Wellfield (CCWF) Surface Water Management Project is a multi-objective wetland restoration and surface water management project. The primary objective was to modify surface water drainage patterns resulting in improved wetland hydrology at sites in

the eastern portion of the CCWF that were previously identified. An additional objective was to reduce nuisance flooding in Saddlewood Estates, located east of the CCWF, and Quail Hollow, which is located to the southeast of the CCWF. In cooperation with Tampa Bay Water and the SWFWMD, RS&H constructed a series of culverts and berms so that the water that once flooded neighborhood streets is now diverted westward through a series of wetlands across the wellfield. This westward movement of above-normal water levels will precipitate the movement of water into specific "target wetlands" that are not expected to recover hydrologically with the current reductions in pumping.

**Fletcher Avenue PD&E Study, Hillsborough County, Tampa, FL - Designer.** RS&H conducted a PD&E study for the widening of Fletcher Avenue. Fletcher Avenue is a major urban arterial roadway linking businesses, neighborhoods, USF, and the University Community Hospital to I-75 in Northeast Tampa. RS&H developed alternatives that will best serve the needs of the community and county. The preferred alternative provides a six-lane urban typical section through the project. While the project could not be approved by FHWA due to funding issues, the project was completed to federal NEPA standards. Therefore, when funds become available for the next phases of the project, the county can submit the document for federal funding with very limited additional effort.

**SR 54 Reconstruction East of I-75 to East of Curley Road, Pasco County, Wesley Chapel, FL - Designer.** RS&H provided design services to improve 4 miles of SR 54 from west of I-75 to east of CR 577/Curley Road. The project included a portion of CR 54 from west of I-75 to SR 581 and is located on SR 54 through the remainder of the project limits. The existing segment from west of I-75 to approximately 0.26 miles east of SR 581 was a multilane facility. The typical section includes three through lanes, double left turn lanes, and separate right turn lanes at SR 581, as well as auxiliary lanes. From SR 581 to east of Curley Road, an existing two-lane road, the typical section includes a 22-foot median with three travel lanes. Both sections have an undesignated bike lane in each direction and sidewalks. Revising the roadway from a two-lane rural to a six-lane urban roadway added sorely needed capacity to this rapidly developing area and alleviated mile-long traffic backups both east and west-bound. Major challenges included maintaining communication and coordination between Pasco County and FDOT.

## CREDENTIALS

Total Years of Experience: 37; With RS&H: 17

# REBECCA MILLER, EI

## GEOGRAPHIC INFORMATION SYSTEMS/GRANT ADMINISTRATION

### INTRODUCTION

Rebecca Miller serves as a Water Resources Associate for RS&H's Transportation-Infrastructure Practice. She is responsible for drainage design for transportation and aviation projects, including stormwater management, hydrologic and hydraulic modeling, floodplain compensation, and environmental. Rebecca has five years of experience in drainage design, stormwater modeling, and environmental permitting for aviation and urban/rural roadway projects. She has assisted with data generation for noise improvement studies.

### PROJECTS

**Palmetto Road from Manatee Road to Ocala Road, Town of Belleair, Belleair, FL - Water Resources Engineering.** RS&H is designing paving and drainage improvements along approximately 0.3 miles along Palmetto Road. The project begins at Manatee Road and continues to the south curb returns of Ocala Road. The scope includes reconstruction and regrading of pavement and curbs to provide positive drainage and extend pavement life, as well as an underdrain system to collect storm runoff and groundwater conveying it to the existing drainage system. Responsible for drainage plans and stormwater design. Completed stormwater system proposed design and plan sheets corresponding with the drainage design.

**Neighborhood Drainage Projects, Hillsborough County, FL - Water Resources Engineering.** This project includes a Project Development and Environment Study for two separate locations in Hillsborough County; Kankakee Lane and 12th Avenue South. Responsibilities include stormwater management plan and writing technical memorandum.

**CCWF Surface Water Improvements – Design and Permitting, Tampa Bay Water, Clearwater, FL - Water Resources Engineering.** As a continuation of the Cypress Creek Wellfield Surface Water Management project, RS&H completed a second phase of work, including a feasibility study, design, permitting, and construction services. RS&H performed numerous services for the feasibility study and permitting process, including field data collection, wetland characterization/assessment, review of ecological and hydrological monitoring data, impact assessment, and surface water modeling, as well as establishing seasonal high and normal pool elevations. Improvements recommended in the feasibility study were designed and plans prepared. Construction of the additional improvements and modifications to the existing surface water management system were completed. Throughout the construction process, RS&H provided bidding and post-design services. The goal of this project was to further enhance wetlands and increase aquifer recharge. Responsible for Interconnected Pond Routing (ICPR) modeling of existing and proposed conditions, creating figures, nodal diagrams, and environmental permitting. A challenge associated with this project was increasing or decreasing stage where it was needed. Directing water away from adjacent developments, and towards wetlands that have been dry in recent history. Played a key role in efficiency, especially with creating a nodal diagram with an aerial background. The nodal diagram helped to locate where the nodes were spatially located, helping to make the results clearer from the ICPR models.

**Eastport Development Design-Build, Port Tampa Bay, Tampa, FL - Water Resources Engineering.** Project included roadway design, permitting and construction of a Berth 150 Finger Pier with a roll on/off ramp that accesses the new Eastport upland 25-acre cargo yard. The design also constructed the realignment of Rockport Road to provide access from Causeway Boulevard (CR 676) to the cargo yard. Responsible for runoff, water quality, and recovery calculations using local

stormwater criteria, drainage design, and plans development. A challenge associated with this project was fitting enough runoff treatment while staying within right-of-way and tying into existing drainage systems. Played a role in helping design stormwater ponds that met treatment and attenuation requirements all while minimizing the surface area.

**Keysville Road Bridge Replacement, Hillsborough County, Tampa, FL - Water Resources Engineering.** The East Keysville Road bridge replacement project will replace the existing bridge over the West Branch Alafia River in eastern Hillsborough County. The existing bridge is a two-span precast inverted U-beam bridge with an asphalt overlay. The existing bridge will be replaced with a three cell 16-foot by 9-foot bridge culverts. Additional roadway improvements along the approaches to the river crossing include shoulder widening and accommodations for future sidewalks. Responsible for Hydrologic Engineering Centers River Analysis System (HEC-RAS) modeling, drainage design, and plans development. One challenge associated with this project was maintaining the stages in the West Branch of the Alafia River with the proposed bridge replacement, and meeting required clearance to the low member of the box culvert. Played a key role in efficiency, and modeling the waterway, which showed a box culvert could be used to replace the existing bridge.

**Bike and Pedestrian Safety Improvements, Hillsborough County, Tampa, FL - Water Resources Engineering.** Hillsborough County identified a series of projects in which to perform feasibility studies. The projects then advanced to final design plan preparation and construction. These improvements are needed to improve safety and mobility for all transportation users, including bicyclists, pedestrians, transit patrons, children, seniors, and persons with disabilities. RS&H was tasked with three of the Top Ten High Crash Locations identified in the July 2012 Pedestrian and Bicycle High Crash Areas Strategic Plan for Unincorporated Hillsborough County Roads by the Hillsborough MPO.

**US 27 VWS & Bi-Directional Static Scales, FDOT District 1, Clewiston, FL - Water Resources Engineering.** RS&H is responsible for providing the design services for the construction of a bi-directional static weigh station scale in the existing median of US 27 and one weigh-in-motion sensor site in each direction in advance of the static scale. The project also includes a bypass site to identify trucks attempting to avoid the weigh station by utilizing CR 720. Design services include roadway design, drainage design, environmental permitting, signing and pavement marking, and lighting.

**Districtwide Miscellaneous Drainage Design, FDOT District 5, Various, FL - Water Resources Engineering.** RS&H was reselected for drainage and stormwater management design and permitting throughout District 5 as an extension of their staff. The project included plans and report review services, value engineering studies, pond siting reports, floodplain analysis and compensation design, hydrologic and hydraulic modeling of riverine and estuarine waterbodies, bridge scour analysis, and scour countermeasure design.

## CREDENTIALS

Total Years of Experience: 5; With RS&H: 5

Master of Science, Civil Engineering; University of South Florida

Bachelor of Science, Civil and Environmental Engineering; University of South Florida

Civil Engineer Intern (EI) #1100016513; Florida; 2012

OSHA Construction Safety and Health; Red Vector

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