



## EDUCATION

Bachelor of Science, Civil and Environmental Engineering,  
University of Central Florida, 2002

## REGISTRATIONS

Professional Engineer, 66411, FL,  
2007

## TECHNICAL TRAINING

Permit Required Confined  
Space Entry  
FHWA-NHI-130081  
State of California – Office  
of Emergency Services  
– Safety Assessment  
Program – Earthquake  
Damage  
OSHA 10 hour  
Construction Training  
AISC – Intro to Bridge  
Steel Design  
FHWA-NHI-130087  
FHWA-NHI-130078  
FHWA-NHI-135046  
Florida Advanced MOT  
Control Design  
Autocad Civil 3D Corridor  
Modeling  
NASSCO – Pipeline and  
Manhole Assessment  
Certification Program  
PACP/MACP  
FHWA-NHI-130055  
Geopak Drainage for  
FDOT Standards,  
ModernTech  
ICPR Streamline  
Technologies

## PROFESSIONAL AFFILIATIONS

American Society of Civil  
Engineers

- 2016 FL Infrastructure  
Report Card - Bridges
- West Coast Branch SEI  
Chair
- Florida Section History and  
Heritage Committee Chair
- Communique' Technical  
Chair

## EXPERIENCE PROFILE

Kathleen Ruvarac is a Senior Engineer with over 15 years of a multi-disciplined design approach and project management experience beyond BSCE for infrastructure projects, including highways, bridges, high speed and light rail and site development. Florida Registered Professional Engineer Ms. Ruvarac has proven project management experience with projects delivered on-time and within budget receiving excellent reviews from clients such as FDOT, Florida's Turnpike Enterprise, Orange, Lee and Sarasota Counties, Florida. Plans Production Skills include utilizing Microstation/Geopak Road and Drainage, AutoCAD Civil 3D and Storm and Sanitary Analysis (SSA). Ms. Ruvarac is a FDEP Qualified Stormwater Management Inspector, Florida Advanced Maintenance of Traffic (MOT) Designer and FHWA-NHI trained Bridge and Ancillary Structures Inspector. Ms. Ruvarac has supervised junior engineers and CADD technicians producing construction plans, specifications and cost estimates through final acceptance. Ms. Ruvarac has conducted routine, initial and damage assessment inspections of roadway, drainage structures and bridges. Ms. Ruvarac has also performed roadway and bridge inspections for the FEMA Disaster Recovery Public Assistance Program, wrote scope of proposed construction/repair work, cost estimates, and hazard mitigation proposals for grant funding of over \$10 million.

## REPRESENTATIVE PROJECT EXPERIENCE

### OM Engineering Services, Inc. Senior Engineer, (2017 – Present)

#### **SR 710, FDOT D1, Okeechobee, FL, Senior Engineer & QC**

Assisted with the design of S&PM, the design of master arm locations and overall QC of design components.

#### **SR 82, FDOT D1, Lehigh Acres, FL, Senior Engineer & QC**

Assisted with the development of MOT plans, the design of temporary S&PM, and overall QC of design components.

### HDR Deputy Program Manager, (2015 – 2017)

#### **FDOT District 1, Deputy Program Manager Structure Inspection Services**

Reviewing supervisor of bridge and ancillary structures inspection reports. Conducted inspections, supervised the inspection teams, coordinated subcontractors to include MOT and underwater inspection services and prepared repair recommendations. Surface area computations of various bridge and overhead sign structure components protective coatings. QA/QC review of bridge load ratings to evaluate additional wearing surface loads.

#### **FDOT District 7, Deputy Program Manager Structure Inspection Services**

Reviewing supervisor of bridge and ancillary structures inspection reports. Conducted inspections, supervised the inspection teams, coordinated subcontractors to include MOT and underwater inspection services and prepared repair recommendations. Surface area computations of various bridge and overhead sign



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structure components protective coatings. QA/QC review of culvert load ratings to evaluate damaged metal pipes.

**Sarasota County, Florida, Deputy Program Manager Structure Inspection Services**

Reviewing supervisor for the inspection of 26 pedestrian and non-qualifier bridges. Prepared work safety plan, coordinated the inspections, supervised the inspection teams, coordinated subcontractors to include underwater inspection services, reviewed the inspection the reports for structural conformity and repair recommendations.

**Sarasota, Florida, Deputy Program Manager Structure Inspection Services**

Reviewing supervisor for the inspection of ancillary structure (traffic signal mast arm) inspections at eight intersections along Fruitville Road. Prepared work safety plan, coordinated the inspections, supervised the inspection teams, coordinated subcontractors to include MOT services, and reviewed the reports for structural conformity.

**Dunedin, Florida, Deputy Program Manager Structure Inspection Services**

Confirming Engineer for the inspection of 20 pedestrian and non-qualifier bridges. Conducted inspections, coordinated subcontractors to include underwater inspection services and prepared inspection reports to include repair recommendations.

**Fort Lauderdale, Florida, Deputy Program Manager, Structure Inspection Services**

Confirming engineer of inspection of City of Ft. Lauderdale Helistop, spaceframe/truss supported concrete deck, located on 6<sup>th</sup> floor of the City Park Mall Parking Garage. Coordinated inspection efforts and prepared work safety plan, supervised the inspection team, and prepared inspection report to include repair recommendations.

**Tennessee Valley Authority, Deputy Program Manager Structure Inspection Services**

Confirming Engineer of inspections of three TVA fracture critical steel structures at Pickwick Dam, Chickamauga Dam and Watts Bar Dam Bridges over the Tennessee River. Prepared work safety plan, conducted the inspections, supervised the inspection teams, coordinated subcontractors providing under bridge access equipment, MOT and ultrasonic testing services and prepared inspection report to include repair recommendations.

**City of Largo, Florida**  
**Engineer III. (2014 – 2015)**

**In-House Design Team Leader/Supervisor Engineering Division**

Project Manager of design for Capital Improvement Projects of local roadways, repair and pavement maintenance. Storm sewer and sanitary sewer inspection, design of repair projects, and traffic engineering support. Performed supervision during construction, contract document preparation and project procurement.

**DMK Associates**  
**Project Manager/Bridge Inspector. (2013 – 2014)**

**Community Development District Engineer Services – Project Manager/Roadway and Drainage Design Engineer**

Construction Plan and shop drawing review for Street Lighting Improvement Project, prepared pavement assessment reports to include inspections and drainage studies for infrastructure improvement projects, performed inspections for SWFWMD Pond re-certifications for the Woodlands, Bobcat Trail, and Lakeside Plantation communities in North Port, FL.

**FEMA Disaster DR-4145-CO (2013–2014) Denver, CO, FEMA Technical Area Contractor (TAC)**

Road and Bridge specialist for the FEMA Public Assistance Recovery Program. Performing road and bridge inspections,



writing damage descriptions and scope of proposed work, preparing cost estimates for the repair and/or replacement of facilities.

**W. Dearborn St. Low Impact Development LID - (Innovative Drainage Solutions) Pilot Project, Sarasota County, FL, Project Engineer**

Shop drawing review, construction inspection services, and permit compliance. Computed Total Maximum Daily Load (TMDL) pollutant loading calculations to meet permitted water quality standards for stormwater runoff outfalling to Lemon Bay. Redesign of box culvert and hydrodynamic separators.

**Gulf Gate Stormwater Assessment Area 1-A, Sarasota County, FL, Project Manager**

Stormwater Infrastructure Rehabilitation Program (SWIRP) – Sarasota County Capital Improvement Program. Data interpretation of County survey using ArcGIS. Reviewed CCTV of 10,000 LF of pipe and over 100 structures (manholes, culverts and inlets) analyzed for structural defects utilizing NASSCO PACP/MACP guidelines, hydraulic modeling of existing and proposed conditions using ICP, planning level cost estimates, repair recommendations, and stormwater modeling of secondary system with proposed improvements in Autocad Civil 3D.

**Hanson Professional Services  
Contractor, (2012)**

**FEMA Disaster DR-4030-PA, Harrisburg, PA, FEMA Technical Area Contractor (TAC)**

Road and Bridge specialist for the FEMA Public Assistance Disaster Recovery Program. Performing road and bridge inspections, writing damage descriptions and scope of proposed work, preparing cost estimates for the repair and/or replacement of facilities.

**CDM-SMITH**

**Project Manager/Highway Project Engineer/Structural Engineer/Road and Bridge Inspector, (2006 – 2011)**

Bridge specialist for the FEMA Public Assistance Recovery Program, working directly with applicants (municipalities and local agencies), State Departments of Transportation, State Departments of Emergency Management Services, and FEMA Department of Homeland Security Regions One, Three and Eight

**FEMA Disaster DR-1981-ND, Bismarck and Minot, ND, FEMA TAC**

Bridge specialist for FEMA Public Assistance and Recovery Efforts. Critical Infrastructure Assessment Team.

**FEMA Disaster DR-1894-RI, Warwick, RI, FEMA TAC**

Bridge specialist for FEMA Public Assistance and Recovery Efforts.

**FEMA Disaster DR-1829-ND, Fargo and Bismarck, ND, FEMA TAC**

Bridge specialist for FEMA Public Assistance and Recovery Efforts.

**Florida High Speed Rail (FHSR) FDOT Florida's Turnpike Enterprise, Polk County, FL, Highway Project Engineer**

Horizontal and vertical control of an 11 mile segment of the Tampa to Orlando route within the I-4 median. Designed the Kathleen Road Station roadway design layout and prepared quantities computation packages for construction cost estimates. Prepared design variances/exceptions packages for FDOT. Analysis and design of shoulder gutter profiles for median drainage system to accommodate rail improvements.

**I-75 Express Toll Lanes, Southwest Florida Expressway Authority, FDOT District 1, Lee and Collier Counties, FL,**



### **Highway Project Engineer**

Performed conceptual interchange and ramp design for a 35-mile widening of I-75 to accommodate six express toll lanes for a traffic and revenue study.

### **Veterans Expressway Bridge Painting at Gunn Highway and Ehrlich Road, Florida's Turnpike Enterprise, Hillsborough County, FL, Deputy Project Manager**

Prepared MOT concept and construction plans detailing detours. Quantified structural steel components from existing bridge plans for FDOT construction cost estimate.

### **Neal Road Paved Shoulders, Lee County FL, Deputy Project Manager**

Performed roadway design, plans production, and project management for a 3-mile roadway design project, extending from Buckingham Road to Orange River Road.

### **Honore Avenue/Pinebrook Road Extension Design, Sarasota County, FL, Structural Engineer**

Structural design and QA/QC of structural analysis of proposed beam alternatives for bridges over Cow Pen Slough, Salt Creek and Fox Creek for 3.8-mile, 4-lane divided urban roadway on a new alignment. QA/QC of structural design for cast-in-place backwalls for twin bridges.

### **SR 70 Bridges EB and WB and Shared Use Path over Header Creek Canal, St. Lucie County, FL, Structural Engineer**

QA/QC review of shop drawings and bridge deck design to accommodate stay-in-place forms.

### **HNTB**

### **Structural Engineer, (2005 – 2006)**

### **Florida's Turnpike Widening from Atlantic Boulevard to Palm Beach County Line, Broward County, FL**

Bridge geometrics, structural design and analysis, quantity computation, roadway, drainage and utility coordination. Prepared bridge development reports including review of preliminary design of structural components such as concrete deck, beams and retaining walls. Reviewed sound barrier wall shop drawing submittals.

### **SR 408 Contract 253B, Crystal Lake Drive to Conway Road, Pedestrian Bridge over Lake Underhill, Orlando-Orange County Expressway Authority (OOCEA), Orange County, FL**

Performed structural design and analysis of custom architectural precast concrete exterior beam and rail combination.

### **Interstate 275 SB – Ramp S over Ramp U, Bridge No. 100824, FDOT District 7, Hillsborough County, FL**

Performed initial bridge load rating calculations.

### **SR 25 (US 27), Broward County, FL**

Performed high mast light pole and base plate design and structural analysis.

### **Parsons Transportation Group**

### **Senior Drainage Engineer (1998 – 2005)**

**Transportation Expansion Project (TRES) Light Rail, Design-Build, Colorado DOT and Regional Transportation District, Denver, CO**



Design of drainage systems, hydrologic and hydraulic watershed analysis, floodplain and culvert analysis. Plans production, quantities computation, survey and utility coordination

**Charlotte Area Transit System (CATS) Light Rail (Blue Line), City of Charlotte, Charlotte, NC**

Design of drainage systems, hydrologic and hydraulic watershed analysis, floodplain and culvert analysis. Plans production, quantities computation, roadway-at-grade intersection design, survey and utility coordination, expansion of existing trolley system.

**US 1 (SR 5), from Rosa L. Jones to Cidco Road, FDOT District 5, Brevard County, FL**

The 4.5-mile project extends from Rosa L. Jones Drive to Cidco Road and involves widening SR 5 (U.S. 1) from four to six lanes through the city of Cocoa. Design of secondary drainage systems, hydrologic and hydraulic watershed analysis, floodplain and culvert analysis. Plans production, quantities computation, survey and utility coordination and permitting.

**Palm Bay Parkway PD&E, FDOT District 5, Brevard County, FL**

Eight miles of new roadway corridor proposed as a hurricane evacuation route in Palm Bay. Preparation of pond siting and location hydraulics reports. Participated in public involvement workshops.

**SR 408 Widening, from West of Tampa Avenue to I-4, Contract 252A, Orlando-Orange County Expressway Authority (OOCEA), Orange County, FL**

Four-lane to six-lane widening and reconstruction of 1.2 miles of SR 408. Design of secondary drainage systems, plans production, quantities computation, permitting, survey and utility coordination.

**Econlockhatchee Trail from SR 50 to Trevarthon Road Final Design, Orange County, FL**

One mile reconstruction entailed realigning substandard curves, evaluating an existing bridge structure, and constructing a new bridge over the Little Econlockhatchee River Tributary. Roadway design of bike trail and pedestrian bridges during construction, drainage design of secondary system, permitting, and post design construction services.

**27th Avenue, FDOT District 4, Vero Beach, FL**

Widening of 27th Avenue in Vero Beach, Florida. The corridor provided a major airport connection through a residential neighborhood with design emphasis on streetscape and drainage improvements. Drainage design of secondary system and permitting.