

# IRMO CHAPIN RECREATION COMMISSION MASTER PLANNING SERVICES



MARCH 30, 2011

LEXINGTON COUNTY,  
SOUTH CAROLINA



**IRMO CHAPIN  
RECREATION  
COMMISSION**



**DRAKEFORD ARCHITECTS**  
ARCHITECTURE PLANNING INTERIOR DESIGN

**John Ray Williams & Associates**  
CONSULTING ELECTRICAL ENGINEERS  
3918 Rosewood Drive  
Columbia, South Carolina



Kenneth B. Simmons Associates, LLC  
landscape architecture & planning

3135 Millwood Avenue  
Columbia, South Carolina 29205  
Office 803.254.3791 Cell 803.331.7728



# Kenneth B Simmons Associates, LLC

## Company Profile/Introduction

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EN 04-367261

License Landscape Architecture #164C

### SCOPE OF SERVICES OFFERED

1. Detailed Site Analysis and Site Selection
2. Zoning and Planning Evaluation, and Modification
3. Environmental Evaluation and Permitting involving
  - Coastal and Freshwater Critical Areas
  - Wildlife and Archaeological Investigation.
4. Master Planning Land Planning
5. Complete Working Drawings and Specifications to include:
  - Conceptual Site Designs
  - Detailed Site Designs
  - Layout Staking Plans (Of All Exterior Facilities)
  - Grading Plans
  - Storm Drainage Plans
  - Planting Plans
  - Sediment and Erosion Control
  - Vegetative Restoration Plans
  - Irrigation Plans
  - Maintenance and cost estimations

Detailing Of All Items Required Above

1. Complete Specifications (All Bid Documents)
2. Construction Observation
3. Estimating
4. Permitting and Regulatory processing
4. SCDHEC Stormwater & Wetlands

Kenneth B Simmons Associates, LLC (KBSA) is a privately owned business established in 1946 under the ownership of Kenneth B. Simmons, for the professional practice of landscape architecture and site planning, embracing all essential phases of such practice.

From 1968 through 1992 Kenneth B. Simmons Associates operated as a partnership including Kenneth B. Simmons (1968 - 1982), Sidney T. Gattis, Jr. (1968 - 1992) and Kenneth B. Simmons, Jr. (1972 - 1992). In 1992 the firm restructured again as a sole proprietorship with Kenneth B. Simmons, Jr. as owner.

The practice of this office remains broad in both scope of projects and intensity of services. The practice ranges from advisory services to comprehensive consultations, environmental permitting, master planning, and full developmental design services for a wide range of projects. In each of these areas, our team-based interdisciplinary approach means every aspect of your project will receive the highest level of design expertise and project management to assure its total success.

This award winning design firm has completed hundreds of park studies and designs. From the 10,000 acres of State parks on the Richard B Russell Lake to the Three Rivers Greenways in Columbia, West Columbia and Cayce to the design of the Patriots Park Softball/Soccer Complex in Sumter, home of the 2009 Dixie Girls World Series Softball Tournament.

Ken Simmons, Jr. is the owner and major designer in this firm for the past 38 years. Ken began practice as a park planner for SC Parks, Recreation and Tourism (SCPRT) where he obtained extensive experience in all phases of recreational design, operations, permitting and maintenance. After years of state park planning, Ken continued park planning in private practice.

KBSA has worked extensively with numerous towns and cities in South Carolina to develop new recreational areas and restore historical areas including parks, streetscapes and railroad corridors. Over the past five years, ninety percent of the designs by KBSA were recreational design generating more than \$2,334,00.00 in revenue.

Ken Simmons, Jr. has extensive experience in the permitting and regulatory process. One example of this is the Three Rivers Greenway in Columbia, West Columbia and Cayce. Ken Simmons, Jr., compiled a team of environmentalist, archeologist, architects, engineers and surveyors to design and permit all phases of this project. This entire trail system is in federally controlled floodways and flood plains with rare and endangered plants and animals.

The team will be supported by state-of-the-art computer-aided design and drafting systems to facilitate production and efficiency.



## DrakefordAssociates

### Company Profile/Introduction

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EIN 57-0894823

Drakeford Architects is a sole proprietorship established in 1973 and is located at 120 North Main Street, Sumter, South Carolina.

Our company is small by design. It has always been our intention for the office to remain about the same size – a team of 8 to 10 professionals. This size allows us to deliver and provide architectural service in a direct, hands-on manner. We believe that the hands-on approach produces better quality control and brings the benefit of experience and judgment more directly to the project.

Our clients include the South Carolina Department of Parks, Recreation and Tourism, United States Air Force and United States Navy, various city and county governments, Clemson University, Santee Cooper, South Carolina Department of Mental Health, Farmers Telephone Cooperative, South Carolina Alcohol & Drug Commission, churches, schools and private industry.

Drakeford Architects has been in business since 1973 and is experienced in all types of architectural disciplines. We are located in Sumter, South Carolina and have served and successfully administered projects throughout South Carolina.

We are hands on designers and managers believing that this approach produces better quality control and brings the benefit of experience and judgment more directly to each project. Drakeford Architects has extensive experience designing spaces and buildings for office and meeting activities and recreational centers for local, county and state agencies. We are also well versed in commercial, educational, faith based and government architecture. Sustainable design is a focus of our practice and we are experienced in LEED certified design. We have incorporated low maintenance/sustainable design qualities throughout all our projects over the past 42 years.

We provide service to our clients in a friendly, courteous and professional manner in all phases of work. Our clients have many times shown their confidence in us by selecting our office for additional work. Over eighty percent of our work for the past fifteen years has been repeat service for existing clients.



# American Engineering Consultants, Inc

## Company Profile/Introduction

EIN: 57-0995231

### SCOPE OF SERVICES OFFERED

#### Civil/Site

- Master Land Use Planning
- Subdivision Design
- Commercial Development
- Roadway Design
- Site Planning
- Parking Lot Design
- Environmental Site Assessment
- Drainage & Sediment Control

#### Survey

- Boundary & Topography
- ALTA/ACSM Surveys
- Wetland Locations
- Roadway & Utility Alignment
- Easement & Right of Way Acquisition
- Loan & Mortgage Closing Surveys
- Construction Staking
- Global Positioning System Surveys

#### Solid Waste

- Subtitle D Landfills
- Waste Processing Facilities
- Land-Clearing & Yard Trash Landfills
- Groundwater Monitoring
- Construction & Demolition Landfills
- Transfer Stations
- Landfill Gas Management
- Convenience/Recycling Centers

#### Water/Wastewater

- Treatment Plants
- Facultative Lagoons
- Wastewater System Modeling
- Corrosion Control Studies
- Chemistry Balancing
- Instrumentation, Controls & SCADA
- Hydraulic Modeling
- Booster Pump Stations
- Storage & Distribution Systems
- Water Chemistry & Balancing
- Assessment & Analysis

American Engineering Consultants, Inc. (AEC) was formed from the engineering division of Hercules Contractors and Engineers, Inc. and has roots dating back over 40 years. Under this division the firm has enjoyed tremendous growth and complements its experience with youth and innovation, making every effort to keep informed of the latest in technology. The AEC office is centrally located in Cayce, South Carolina, which allows convenient access to state, regulatory, and funding agencies.

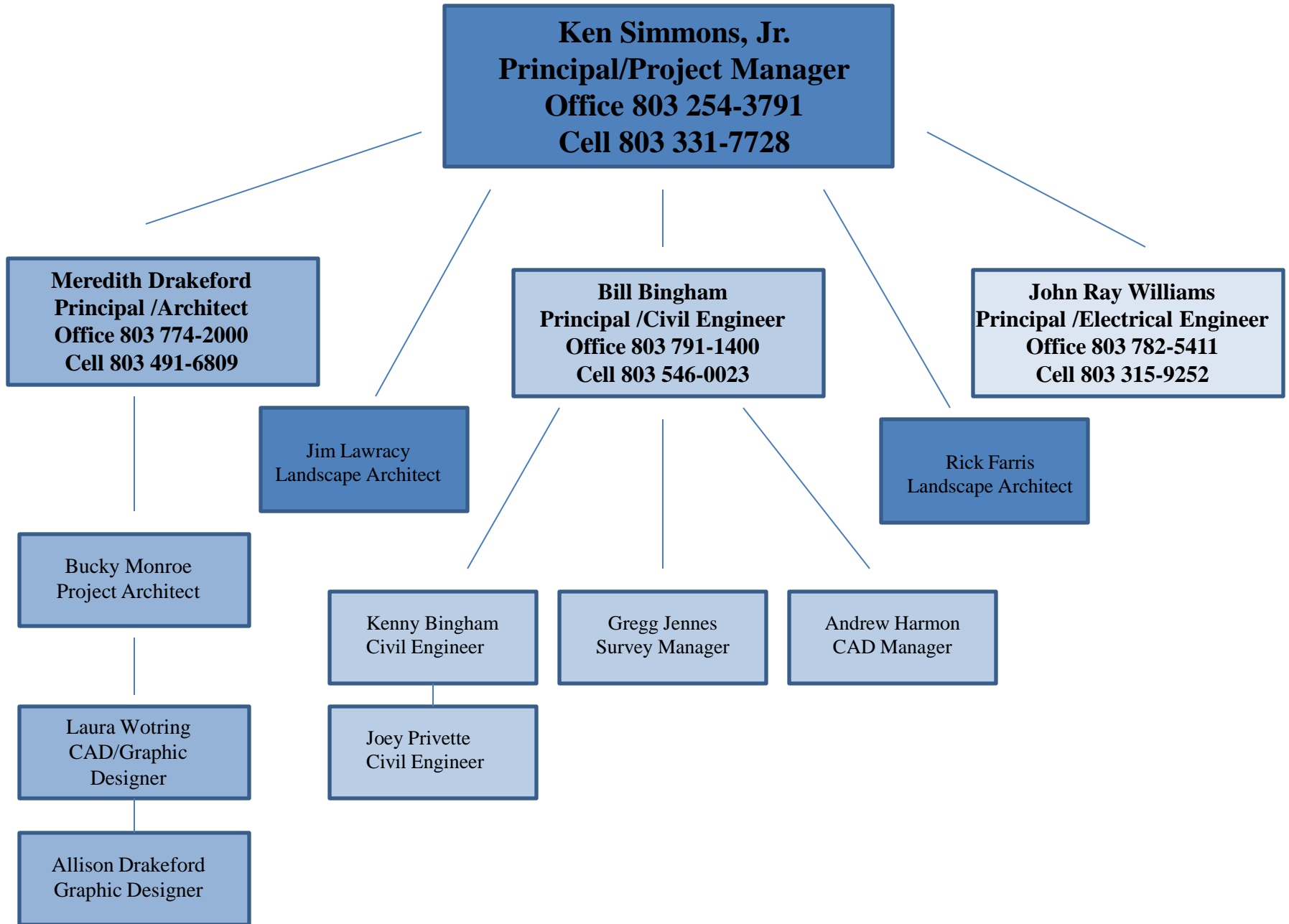
AEC is a full service consulting firm dedicated to serving state, municipal, industrial, and private sector clients in the areas of civil, electrical, structural and environmental engineering, and surveying services. The following is a list of our government and private sector clients: the City of Cayce, the Town of Lexington, the City of West Columbia, the City of Columbia, the Town of Edisto Beach, Lexington County Recreation and Aging Commission, the Joint Municipal Water and Sewer Commission, Lexington County, Richland County, Abbeville County, Orangeburg County, Office of the Adjutant General of South Carolina, South Carolina Department of Agriculture, SCANA, Palmetto Utilities, Bay Capital Water Works, CDA Architects, Stevens and Wilkinson of South Carolina, CMC Steel, Sauer, Inc., Temple-Inland, and Sunflower Development. Projects vary from the planning, design and permitting of municipal water, stormwater, and wastewater systems, to solid waste facilities and industrial and business park projects. Land planning, surveying, site engineering, construction observation, construction administration, project scheduling, and plant startup services are also provided and are an integral part of our overall experience. The diverse client and project base has been a distinct advantage to AEC. We also have extensive experience with the procedures and processes of local, state, and federal agencies.

AEC's staff consists of six Registered Engineers, two Design Engineers, two Registered Land Surveyors, one Survey Technician, one Office Manager/Grants Coordinator, two Construction Inspectors, three CAD Technicians, one Director of Marketing, and three Administrative Assistants. The AEC Team strives to apply practicality, common sense, and excellence to designs by employing cutting edge, state-of-the-art technology to obtain cost-effective engineering solutions that require more than mere "textbook" knowledge and application. Principals of value engineering are applied to each design by taking the owner's needs into consideration in light of regulatory requirements. We believe that this background provides an important advantage in the development of project drawings and specifications. Too many times, engineers focus only on the design calculations and general aesthetics of the project but do not spend sufficient time in the development of the details required to properly convey to the Contractor what is required of them. Failure to produce a set of contract documents with these details leads to construction problems, omissions, change orders, maintenance problems, delays, liquidated damages, and litigation. We understand a contractor's requirements in the way of details, dimensions, and specifications, as well as how to organize the project to facilitate the best possible pricing for the owner.

The bottom line is that American Engineering Consultants, Inc. is capable, qualified and eager to provide our clients with the technical solutions demanded in today's "fast lane" technological journey. Our clients can have comfort in knowing that they can expect individual attention and that the management of AEC will be directly involved in the design and contract administration of their projects.

# Organizational Chart

# Organizational Chart ICRC Project



Project  
Team  
Members

**Project Responsibility:**

- Landscape Architect
- Project Manager

**Experience:**

- 1 year SCPRT
- 37 years KBSA

**Registration****Landscape Architect:**

- South Carolina #004
- Alabama #273
- Florida #891
- Georgia #944
- North Carolina #0788
- Virginia #0407-000796

**Education:**

- Clemson University  
BS/Ornamental  
Horticulture
- University of Georgia  
MS/Landscape  
Architecture

**Professional Distinctions:**

- SC Recreation & Parks - Member
- Construction Specifications  
Institute - Member
- American Planning Association  
Member
- American Society of Landscape  
Architect - Fellow
- SC Tourism Council  
Secretary/Treasurer
- Richland County Conservation  
Commission - Former Chairman



**Kenneth B. Simmons, Jr., FASLA**  
Land Planner/Landscape Architect/Owner

Ken Simmons began his professional career in 1972 as a park planner with the South Carolina Department of Parks, Recreation and Tourism (SCPRT). In this position Ken worked on revisions to existing parks, evaluation of sites for potential acquisition and, programming, planning and design of new parks.

Upon leaving SCPRT, Ken began practicing with Kenneth B Simmons Associates and became the owner in 1992. For the past thirty-nine years Ken has designed over seventy five different recreational facilities involving over \$140,000,000 in construction. Projects designed have ranged from ball field redesign to 12,000 acre new parks.

Ken enjoys landscape architecture and welcomes a diverse range of challenging projects as it only helps improve his knowledge base and desire for excellence.

Based on his education, knowledge, experience and dedication Ken has developed a unique ability to mesh complicated environmental and historical rules and regulations to create unique landscape experiences in all types of design. These areas have won several awards from the American Society of Landscape Architects, the South Carolina Department of Natural Resources and the South Carolina Land Resources Commission. Also, several of these unique recreation areas have been featured in magazines such as *South Carolina Wildlife* and *Southern Living*.

In 1982 Ken was elected as president of the Council of Landscape Architectural Registration Board (National organization for Landscape Architects).

In 1995 Ken was elected as a Fellow in the American Society of Landscape Architects. This is the highest honor the landscape architecture profession can bestow on an individual. Less than two percent of all landscape architects obtain this recognition throughout their careers.

# Parks & Recreational Projects

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30 Bridge Park – Lake Marion  
Andrew Jackson State Park – Lancaster, SC  
\*Baker Creek State Park – McCormick County, SC  
Ballentine Park – Richland County, SC  
Bates Park – Columbia, SC  
Batesburg/Leesville Recreation Center  
\*Bethune Recreational Park – Kershaw County, SC  
Black River Soccer – Florence County, SC  
Camden Athletic Area  
Camden Baseball Complex  
Camden/Kershaw Recreational Center  
Caughman Road Park – Columbia, SC  
Charleston County Parks  
Charlestowne Landing – Charleston, SC  
Charlestowne Landing – Bear/Puma Habitat  
Cheraw State Park  
Circle Park – North Charleston  
Clarendon County Country Club  
\*Clark Hill Marina & Reservoir – McCormick  
Columbia Tennis Center – Columbia, SC  
Community Center Park – Winnsboro, SC  
Coquina Harbor – Horry County  
Courthouse Athletic Complex  
\*Crowder’s Mountain – Kings Mountain, NC  
Daniel Island Park – Charleston, SC  
Dutch Fork Tennis Center  
Earlewood Park – Columbia, SC  
Eastover Park  
Edisto Memorial Gardens – Orangeburg, SC  
Fairfield Park  
\*Florence Country Club  
Forest Lake Country Club – Columbia, SC  
\*Fort Jackson Golf Course  
\*Fort Jackson Skating Rink  
Fort Jackson Youth Sports Complex  
Francis Marion Park – Georgetown, SC  
Frankie’s Fun Park – Charleston, Columbia,  
Greenville and Raleigh, NC  
Fury’s Ferry Park – Columbus, GA  
Gibson Road Park – Lexington, SC  
\*Graham Golf Course, N.C.  
Granby Park – Columbia  
Greenways Trail – Beaufort, SC  
Hampton Park – Charleston, SC  
Harban Park  
\*Harbison Golf Links – Columbia, SC  
\*Harbison State Forest  
Hartsville Recreation Complex  
\*Hartwell Reservoir – McCormick County, SC  
Historic Camden Park – Camden, SC  
\*Hunting Island – Beaufort, SC  
\*Huntington Beach – Georgetown County, SC  
I-20 Soccer Complex – Columbia, SC-  
\*I-85 Project - SC Parks, Recreation & Tourism  
Johns Island Park  
Kershaw County Recreation  
\*Kirkwood Commons Park

Lake Moultrie Park  
\*Lake Murray Golf Course  
Lake Rabon Recreational Area  
Laurinton Farm – Richland County, SC  
Longtown Park – Columbia, SC  
\*Loring Mill Golf Course  
Mary McCleod Park – Mayesville, SC  
Maxcy Gregg Park – Columbia, SC  
\*McClinton Park – Columbia, SC  
McDuffie Park – Sumter, SC  
Meadowlake Park - Columbia, SC  
Melrose Park – Columbia, SC  
New Horizons Park  
North Hope Center – Sumter, SC  
\*Northside Country Club – Orangeburg, SC  
Old Canal State Park – Santee, SC  
Olympia Park – Columbia, SC  
Oolenoy Recreation Area  
Palmetto Park – Sumter, SC  
Patriot’s Parkway – Sumter County, SC  
\*Pinecrest Golf Course  
Playcard Swamp – Horry County, SC  
Polo Road Soccer Complex  
\*Quinne Forrest  
Renaissance Park – Spartanburg, SC  
Rhoads Park – Bamberg Sports Complex  
Richard Russell Lake  
Richland County Recreation Park  
\*Ridgeway Community Center  
\*Riverbanks Zoo – Botanical Gardens  
\*Rockbridge Golf Course – Columbia, SC  
Santee Cooper Golf Course  
Shot Pouch Creek – Sumter, SC  
\*Solutia Park – Greenwood, SC  
South East Park – Columbia, SC  
South Pine Street – Pride Trail, Spartanburg, SC  
Spring Island – Summer Lake & Golf Course  
\*Spring Valley Country Club – Columbia, SC  
Stono Ferry & Retreat – Charleston, SC  
St Anna Park – Columbia, SC  
Sumter Memorial Park  
Sumter Recreational Facility  
Sumter Swampwalk  
\*Sunset Country Club – Columbia, SC  
\*Sunset Driving Range – Columbia, SC  
Swan Lake & Iris Gardens – Sumter, SC  
Taw Caw Creek Park – Clarendon County  
Three Rivers Greenway – Columbia, SC  
Tree Grove Park – Rock Hill, SC  
USC Baseball Complex – Sumter, SC  
\*Virgin Island National Park  
Wampee Recreation/Convention Facility – Santee Cooper River, SC  
West Ashley Park – Charleston, SC

\* Denotes projects handled by KBSA however, Ken Simmons, Jr. was not directly involved with these projects





**C. Meredith Drakeford, Jr., AIA**  
Architect/Owner

**Project Responsibility:**

- Project Architect

**Experience:**

- 42 years

**Registration**

**Architect:**

- South Carolina #1605

**Education:**

- Clemson University  
BA/Architecture
- University of Colorado  
Master of Architecture

Mr. Drakeford has 42 years experience as an architect. He personally manages and is responsible for programming, design, construction documentation, procurement, and construction administration for each project. He is a strong proponent and practitioner of hands on design and management as the key to successful work.

Meredith practices throughout South Carolina and his work includes institutional, health care, educational, recreational and public administrative architecture.

He has been an elected volunteer of several boards including York Place Home for Children, Boy Scouts of America, Sumter Downtown Design Review, Sumter YMCA, and The Standing Committee of the Episcopal Diocese of South Carolina.

He is married to his high school sweetheart Rosemary (43 years) and has two children and four grand-children.

**Related Experience:**

1. Patriot Park Sports Complex (Soccer, Baseball, and future Environmental Center) - *Sumter, SC*
2. Palmetto Park (Tennis and Baseball), - *Sumter, SC*
3. Lynches River Environmental Discovery Center, - *Coward, SC (Florence County)*
4. Old Santee Canal State Park Interpretive Center, - *Moncks Corner, SC*
5. Charlestown Landing Visitors Center, -*Charleston, SC*
6. Wilson Hall School Gym Addition, - *Sumter, SC*
7. Saluda River Club - Chickawa Clubhouse, - *Lexington, SC*
8. Sumter High School - Renovation and Addition, - *Sumter, SC*
9. Carolina Theatre - Renovation and Addition, - *Allendale, SC*
10. Holy Comforter Parish Hall - Renovation and Addition, - *Sumter, SC*
11. Sumter Opera House and City Offices Renovation and Addition, - *Sumter, SC*



**William H. Bingham, Jr., M.E., P.E.**  
Civil Engineer/Principal/President

#### **Project Responsibility:**

- Civil Engineering
- Structural Engineering
- Water Resources
- Sanitary
- Electrical Instrumentation
- Control Engineering

#### **Experience:**

- 17 years American Engineering Consultant, Inc.
- 15years Hercules Contractors & Engineers, Inc

#### **Registration**

Professional Engineer:  
South Carolina #15833

#### **Education:**

- BA Civil Engineering (Magna Cum Laude) University of South Carolina
- Masters Environmental Engineering, University of South Carolina Graduate School

#### **Professional Distinctions:**

- American Society of Civil Engineers
- National Society of Professional Engineers
- Construction Specifications Institute
- Water Environmental Federation
- American Water Works Association
- Phi Beta Kappa
- Chi Epsilon
- Tau Beta Pi
- Lexington County School District No 2 Board of Trustees 2000 present, Chairman 2005-2006
- City of Cayce Planning Commission 1996-2000 Vice President

Prior to the establishment of American Engineering Consultants, Inc., Mr. Bingham served as Vice President of Engineering for Hercules Contractors and Engineers, Inc. During that tenure, Mr. Bingham received extensive training in construction project management, CPM project scheduling techniques, construction cost estimating in the municipal water and wastewater infrastructure field. He brings that experience into the practice of engineering that is invaluable as a project manager and design engineer. Mr. Bingham specializes in computer analysis, modeling, and design of all types of civil and environmental engineering projects. His education and expertise extends over a broad spectrum including structural analysis, roadways and land development, water resources and hydrology, environmental treatment process, electrical instrumentation, and control systems. He has immeasurable experience in both the design of facilities from an engineering perspective and their construction from a contracting perspective.

#### **PROJECT EXPERIENCE**

1. Broad River WWTP, Richland County, SC - Construction Manager. Project involved the preparation of cost evaluation report on the proposed design of a 6 MGD WWTP Expansion for Richland County Public Works. The purpose of the report was to provide recommendations on reducing construction costs, including the possibility of redesigning to bring project within budget. The project also includes Construction Management for the construction of the WWTP.
2. Lake Murray Water Treatment Plant, West Columbia, SC - Project Engineering Manager for the design of a 9 MGD expansion and upgrade of the City of West Columbia's WTP. The project involved preparation of plans and specifications detailing modifications to the existing WTP plant and its expansion from 13.50 MGD to 22.50 MGD.
3. E. H. Heustess Wastewater Treatment Plant, Cayce, SC - Project Engineering Manager for the design of an expansion and replacement of the existing City of Cayce WWTP. The project involved preparation of preliminary and final engineering reports, process design, preliminary drawings, design development plans and specifications, and final plans and specifications detailing the modifications necessary for the existing WWTP and for the construction of the new 25.0 MGD WWTP. This project also involved extensive permitting and the preparation of construction cost estimates.
4. Columbia Metro Wastewater Treatment Plant, Columbia, SC - Project Engineering Manager for the design of a 160 MGD effluent pumping station and post aeration structure at the City's WWTP.
5. Columbia Metro Wastewater Treatment Plant, Columbia, SC - Project Engineering Manager for the design of a 160 MGD twin 48" effluent river diffuser installed across the Congaree River outside of the City's WWTP to improve mixing and reduce the toxicity of the effluent.
6. Stanley L. Goodwin Water Treatment Plant, Cayce, SC - Project Engineering Manager for the design of an upgrade to the City of Cayce Water Treatment Plant. The project involved the design of a new 2.5 million gallon clearwell, two 350,000 gallon Chlorine Contact Tanks, a new high service pump station, two upflow solids contact clarifiers, a new sludge thickener, a sludge pump station, and new filters to increase WTP capacity from 6.4 to 9.6 MGD. The project also included storm drainage design, site layout, and building refurbishment. A related project was the design and permitting of a new raw water intake and pump station, raw water reservoir, and 30 inch raw water forcemain to serve the City's Water Treatment Plant.
7. Lexington County Joint Municipal Water and Sewer Commission - Project engineering manager for design and permitting of a 4000 gpm sewer pump station and approximately 72,000 lf of 30" and 36" forcemain to connect the Old Barnwell WWTP to City of Cayce's WWTP. Engineer for the design of a 1.5 mgd pump station and 28,000 lf of 14 inch force main to interconnect the Old Barnwell Road WWTP and the Two Notch Road WWTP.
8. Grand Strand Water & Sewer Authority, Myrtle Beach, SC - Project Engineering Manager for design of a project to supply water and sewer service to the Aynor Multi-County Business/Industrial Park. Project involved the design of 75,000 LF of 12" water line from Conway, SC to Aynor, SC and a 1500 gpm Booster Pump Station.

9. Town of Lexington, SC - Project Manager for Hendrix Street elevated water tank design. Project consisted of a new 750,000 gallon elevated single pedestal water storage tank in Lexington, SC.
10. Engineer of Record for City of Cayce - The City of Cayce had no City Engineer and therefore contracted with American Engineering to provide all of their engineering needs. Mr. Bingham has been responsible for the design of a number of miscellaneous projects that were completed under the contract with the City of Cayce. They include: Troubleshooting and re-design of telemetry and controls for a new 6 mgd water treatment plant. Provided start-up training on the plant's operation to plant operators and regulatory personnel. Re-design of the plant's Raw-Water pump station to provide variable frequency drives to the pump motors. Inflow/Infiltration study of the City's sewer system and a process evaluation/optimization of the City's WWTP. Provided operation and maintenance training to WWTP personnel. I/I analysis of the City's sewer system. Design of a gravity sewer system to serve the Pinewood, Lybrand Rd., and Cypress Street sections of the City. Design of a gravity sewer system to serve the Edenwood Subdivision within the City. Design of a 10-inch water line to improve system performance at the Columbia Metropolitan Airport. Design of a project to remediate problems in the water distribution system in the vicinity of White Knoll School booster pump station, and Starmount Subdivision. Design of a gravity sewer system to serve a recently annexed portion of Edenwood Subdivision. Design of approximately nine miles of 10 and 12 inch water line and a 400,000 gallon elevated tank and booster pump station to provide fire protection to the White Knoll and Three Fountains areas of the City's service area. Oversaw design and permitting of approximately 20,000 LF of 10" water line, a 500,000 gallon elevated storage tank, a booster pump station, and 15,000 LF of 12" sewer line.
11. Kranzco Realty Trust - Tractor Supply Company. Project Manager for civil site design for a 19,000 square foot retail establishment and a 20,000 square foot sales area located in Spartanburg County, SC. Includes surveying, design of parking areas, driveways, water distribution system, drainage system, sanitary sewage system, and evaluation of traffic flow for this development.
12. Spencer Place Apartments - Project Manager for civil site design of a 20 acre student housing complex located in Lexington County, SC. Includes surveying, construction staking, contract administration, permit submittals, and the design of roadways, pavement specifications, drainage/stormwater system, water distribution system, sanitary sewerage system, and construction inspections.
13. The Under Par Group - Ridgemont Subdivision. Project Manager for civil project for the design of a 52 lot residential development near Imo, SC. Includes surveying, construction staking, design of roadways, water, sewer, and drainage systems for the project.
14. Kranzco Realty Trust - Stein Mart Retail Center. Project Manager for civil site design for a 36,000 square foot retail establishment in Richland County, SC. Includes surveying, design of parking areas, driveways, water distribution system, drainage system, sanitary sewage system, and evaluation of traffic flow for this development.
15. David Boland, Inc. - Fort Jackson Central Energy Plant Revitalization Program, Phase I. Project Engineer and Manager for the design of thermal expansion of 16,000 LF of hot water lines used for energy distribution. The project included surveying and design of 16,000 linear feet of cast-in-place concrete trenches throughout Fort Jackson, SC. The trenches consisted of parallel pipes which includes the supply and return of the hot water distribution piping system from on-site central energy plants.
16. Sauer, Inc. - Fort Jackson Central Energy Plant Revitalization Program, Phase II. Project Engineer and Manager for the design of thermal expansion of 31,000 LF of hot water lines used for energy distribution. The project included surveying and design of 31,000 linear feet of cast-in-place concrete trenches throughout Fort Jackson, SC. The trenches consisted of parallel pipes which includes the supply and return of the hot water distribution piping system from on-site central energy plants.
17. Carolina Convenience Corp. - Coopers Corner Amoco Retail Center. Project Manager for the civil site design of a 3 acre retail center located in Lexington County, which includes a petroleum/convenience store, car wash and laundry facility. Includes the design of roadways/parking areas, drainage/stormwater system, stormwater detention facility, water distribution system, sanitary sewerage system, and the preparation of plans and specifications.
18. Steadman & Associates, Inc. - Walnut Grove Subdivision. Project Manager for design of a 45 lot residential development near Ballentine, SC. Includes design of roadways, water, sewer, and drainage systems for the project.
19. City of North Myrtle Beach - Coordinated, Designed, and submitted for regulatory review treatment alternatives for the interim treatment of wastewater during the construction of plant upgrades.

Designed control modifications to allow the facility to operate in alternate modes during the period of construction.

20. City of Walterboro - Provided modified structural, instrumentation and controls, and process design for the City's WWTP. Provided interim process design for the existing WWTP to provide for treatment of the City's wastewater during construction of a new wastewater treatment facility and modification of the existing plant.
21. Prime South, Inc. - Provided consulting services on the startup of the 4 mgd Rifle Range Road WWTP for the Mount Pleasant Waterworks and Sewer Commission. Revised and designed modifications and provided troubleshooting on the plant's instrumentation and controls.
22. Courtyard Villas Development - Designed water, sewer, roads, and storm drainage and provided structural design for 21 single family patio home resort development in North Myrtle Beach, SC.
23. Capital Heights Subdivision - Richland County, SC - Project Manager for the design of roads, water, sewer, site grading, stormwater drainage and erosion control structures for 102 lot single-family residential subdivision.
24. Bay Berry Mews Subdivision, Richland County, SC - Project Manager for the design of roads, water, sewer, site grading, drainage and erosion control structures for 100 lot single-family residential subdivision. Project included two 300 gpm water wells with disinfection and a 250,000 gallon elevated water storage tank.

**Project Responsibility:**

- Electrical Engineer

**Experience:**

- 26 years John Ray Williams Associates
- 25 years Holladay, Coleman, Williams & Associates

**Registration****Professional Engineer:**

- South Carolina #3026
- Georgia #6632

**Education:**

- BS Degree  
University of South Carolina

**Professional Distinctions:**

- Illuminating Engineering Society  
Former President & Treasurer  
Current Member Emeritus
- City of Columbia Board of  
Electrical Examiners  
Former Chairman -  
Current Member



**John Ray Williams**  
Engineer/Owner/President

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EIN 57-079729

John Ray Williams began his career as a part-time draftsman with Carroll G. Holladay & Associates (Holladay, Coleman, Williams & Associates) while attending USC. After obtaining his degree, he became an associate with the company And in 1967 a partner. In 1985, John Ray became the principal for John Ray Williams Associates in 1985. He personally manages the day to day operations and is responsible for all services rendered by his firm.

John Ray has provided electrical services in eight different states for the past fifty years.

Examples of his work in South Carolina are as follows:

- Saluda Shoals Park, Lexington County, SC
- Canalside, Columbia, SC
- Three Rivers Greenway, Cayce, Columbia & West Columbia, SC
- State Street Streetscape, Cayce, Sc
- Town of Manning Streetscape, Manning, SC
- Town of Williston Streetscape, Williston, SC
- Town of St Matthews, St Matthews, SC
- Entrance Lander College, Greenwood, SC

Key

Personnel/Staff



**James P. Lawracy, RLA**  
Landscape Architect

**Project Responsibility:**

- Project Landscape Architect

**Experience:**

- 17 years City of Columbia Parks Dept
- 2 years KBSA

**Registration**

**Landscape Architect:**

- South Carolina #452
- General Contractor SC #102070
- Construction Manager SC #545

**Education:**

- University Georgia BS/Landscape Architecture
- University of Georgia Summer Program Italian Park Design & City Planning in Crotona, Italy

**Professional Distinctions:**

- Richland County Appearance Commission Landscape Architect
- Richland County Conservation Commission Member
- Ancient Order of Hibernians State Director, President & Memorial Chairman
- St John Neuman School Board Member & past President

Jim joined KBSA in September 2007, after working with the City of Columbia for over 17 years, two years as Planning/Landmark Administrator and over 15 years as the Parks Planner. In this capacity, Jim answered directly to the Assistant City Manager for public services and was responsible for acquisition, planning, design and construction in 33 existing parks and 22 new parks.

In Jim's extensive landscape/land planning career, he also held other job titles including Landscape Construction Foreman, Chief Landscape Architect, Ornamental Horticulture Instructor, Landscape Design Assistant Professor, and Campus Horticulturalist/Landscape Architect.

His responsibilities with KBSA include master planning, project management and handling the day to day operations of the firm. Jim is involved in all levels of projects from information gathering, encroachment permitting and site analysis to construction documents and administration.

Specific major highlights with the city include: Memorial Park, re-development and organizing as the SC State War Memorial including layout of over 8 memorials; Earlewood Park, re-develop site plan and parking, develop outdoor amphitheater, major building renovations, upgrades and additions; Greenview Park, added 9 tennis courts (USTA award), lighted walking/jogging trail, new gymnasium, enlarged and renovated existing building and renovated pool; Drew Park and Wellness Center, helped developed the concept for a city wide wellness center with pool, cardio fitness area, indoor/outdoor jogging/walking track, gymnasium, aerobic center and commercial kitchen; Owens Field, the 68 acre WWII Air base was converted into a park with 9 soccer fields, Tee-ball fields, inline hockey rink, skating rink, skateboard park with 8 stations, 18 hole disc golf course, restroom and concession stand; renovations of 8 community and neighborhood centers; the construction of 6 miles of the Three Rivers Greenway project and the Southeast Park, all of which were designed by KBSA.

# James P. Lawracy, Project Manager Experience with City of Columbia

## Drew Wellness Center Columbia, SC

### Amenities

The \$7.5 million facility consists of 40,000 square feet of building space. There is a competition size swimming pool and gymnasium on the first floor, and cardio/weight area and jogging track on the second level.

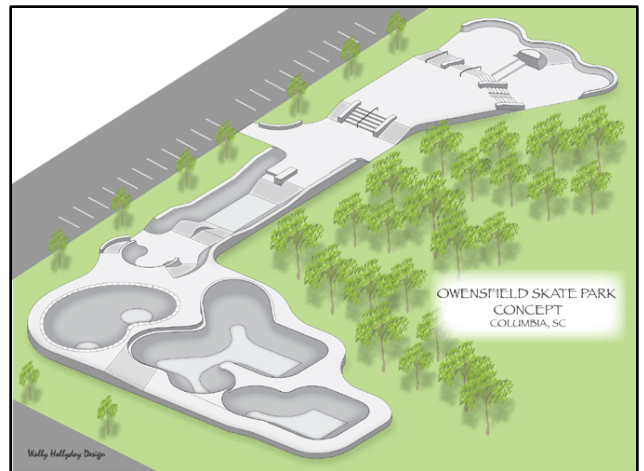
- Gymnasium seating capacity 500 - total building capacity 1,900
- Two half courts, six basketball goals and one volleyball court, athletic wood flooring
- Indoor 8 lane 25-meter pool holds about 200,000 gallons of water
- Water depths - 3 feet to 8 feet at the deep end
- Swimming pool capacity 455 bathers according to South Carolina Code.



- Four 42-inch plasma screen televisions locations: (1) lobby and (3) fitness area
- Each piece of cardio-equipment has a broadcast vision television for CDs and DVDs
- Several pieces of equipment are ADA accessible
- Instructional training kitchen
- Parking for 150 cars
- 18 interior and 4 exterior closed circuit TV cameras controlled from front desk
- Public Address System in all areas. Patron initiated call-in switches located in pool, gym and weight/cardio area.
- One exterior biometric palm reader access control system and three interior palm readers. Interior access to pool, gym, and the fitness area.

## Owens Field Park Columbia, SC

Below, the new design of the Skate Park and to the left, the finished results with a total construction cost of \$568,000



## Earlewood Park Columbia, SC

The newly designed amphitheater in Earlewood Park was just one of the improvements for this park handled by Jim as the project manager. The cost was \$155,000.





## Greenview Park Columbia, South Carolina

Renovations and additions to Greenview park included; 9 tennis courts (USTA award), lighted walking/jogging trail, new gymnasium, enlarged and renovated existing building and renovated pool



This downtown 7-acre park features a large monument and two free standing walls with the names of 980 South Carolinians who were killed or missing in action in Vietnam. The Vietnam memorial is the largest of its type outside of Washington, D.C. Other war memorials are located in and planned for the park.

**Vietnam Memorial Inscription:** *In memory of the sons and daughters of South Carolina who lost their lives in the service of their country in Vietnam.* Dedicated November 1986.

**Pearl Harbor Memorial Inscription:** *In memory of the twenty-five men from South Carolina who gave their lives during the Japanese attack on Pearl Harbor and on other military bases on 7 December 1941.* Dedicated September 1995

There are also memorials for veterans of the China-Burma-India campaigns during World War II and for the U.S.S. Columbia CL-56. The U.S.S. Columbia was in service 29 July 1942 - 2 September 1945 and was credited for downing 27 planes and assisting in the sinking of 2 cruisers, 2 destroyers and 2 battleships. It was awarded 10 battle stars and 2 Navy Unit citations.

**Project Responsibility:**

- Project Landscape Architect

**Experience:**

- 3 years Columbia engineering firm
- 9 years KBSA

**Registration****Landscape Architect:**

- South Carolina #1028

**Education:**

- Clemson University  
BA/ Landscape  
Architecture



**Richard "Rick" Farris, RLA**  
Landscape Architect

Rick came to KBSA in August, 2001 after three years experience with a Columbia engineering firm. He is a graduate of Clemson University with a BA and a registered Landscape Architect.

With Rick's extended knowledge and expertise of computers and computer programs, his primary responsibility is computer graphics and planning of large scale projects including measurements, base mapping, digital imagery, cross-section and elevation.

Rick's service to the firm also includes our computer system and network administration.

Rick's project experience includes:

1. Frankies Fun Parks in Charleston, Columbia , Greenville and Raleigh, NC
2. Granby Park, City of Columbia, SC
3. Kershaw County Recreation, Kershaw County Government, SC
4. Laurenton Farms, for the Mungo Companies, Richland County, SC
5. Longtown Park, for the Mungo Companies, Columbia, SC
6. Melrose Park, City of Columbia, SC
7. Palmetto Park, City of Sumter, SC
8. Patriots Park, Sumter County, SC
9. Richland County Recreational Park, Richland County, SC
10. Rosewood Community Parks (5), City of Columbia, SC
11. South East Park, City of Columbia, SC
12. St Anna Park, City of Columbia, SC
13. Three Rivers Greenway, River Alliance, Columbia, SC



## Laura Wotring CAD & Graphic Design

### Experience:

- 7 years Drakeford Architects

### Education:

- Winthrop University  
BS/Architecture
- Trident Technical  
College AA – Industrial  
Drafting

Laura is a Winthrop University graduate (class of 1998). She began work at Drakeford Architects in 2004 as a CAD designer. Her experience includes architectural work with a firm in Norfolk, Virginia where she designed retail spaces throughout the United States. In addition, Laura brings a diversified background (14 years) in commercial, institutional, residential, and educational design experience. Her computer knowledge and document management abilities make her an integral part of the office. Laura is married with one daughter and enjoys her position as a Girls Scout Troop leader.

### Related Experience:

1. Patriot Park Sports Complex (Soccer, Baseball, and future Environmental Center) - *Sumter, SC*
1. Palmetto Park (Tennis and Baseball), - *Sumter, SC*
2. Lynches River Environmental Discovery Center, - *Coward, SC (Florence County)*
1. Wilson Hall School Gym Addition, - *Sumter, SC*
2. Saluda River Club - Chickawa Clubhouse, - *Lexington, SC*
3. Palmetto Park (Tennis and Baseball), - *Sumter, SC*
4. Carolina Theatre - Renovation and Addition, - *Allendale, SC*
5. Holy Comforter Parish Hall - Renovation and Addition, - *Sumter, SC*
6. Williamsburg County SC Fire Stations
7. Academic Learning Center - Renovation and Addition, - *Sumter, SC*
8. Adult Education Center - Renovation and Addition, - *Sumter, SC*
9. Columbia Mental Health Center - *Columbia, SC*
10. Charleston Mental Health Center - *Charleston, SC*

**Experience:**

- 16 years Drakeford Architects

**Registration Architect:**

- South Carolina

**Education:**

- Clemson University  
BS/Architecture

**Experience:**

- 2 years Drakeford Architects

**Education:**

- Clemson University  
BS/Graphic Communications



**Edward P. Monroe, III**  
Project Architect

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Bucky has developed skills and leadership to become an award winning architect. As Project Architect, Bucky personally supervises master planning, programming, budgeting, design development and construction administration. Bucky also has strong skills in model construction, photography and graphic design.

**Related Experience:**

1. Patriot Park Sports Complex (Soccer, Baseball, and future Environmental Center) - *Sumter, SC*
2. Palmetto Park (Tennis and Baseball), - *Sumter, SC*
3. Lynches River Environmental Discovery Center, - *Coward, SC (Florence County)*
4. Old Santee Canal State Park Interpretive Center, - *Moncks Corner, SC*
5. Charlestown Landing Visitors Center, -*Charleston, SC*
6. Wilson Hall School Gym Addition, - *Sumter, SC*
7. Saluda River Club - Chickawa Clubhouse, - *Lexington, SC*
8. Sumter High School - Renovation and Addition, - *Sumter, SC*
9. Carolina Theatre - Renovation and Addition, - *Allendale, SC*
10. Holy Comforter Parish Hall - Renovation and Addition, - *Sumter, SC*
11. Sumter Opera House and City Offices Renovation and Addition, - *Sumter, SC*



**Allison Hope Drakeford**  
Graphic Designer

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Allison joined Drakeford Architects in 2008 after working in the printing industry. She served as Art Director for 6 years at a label printing company in Columbia, SC before joining Drakeford Architects. She brings extensive graphics background and strong communication skills to the firm.

**Project Responsibility:**

- Civil Engineering
- Water Resources
- Storm Water Management
- Solid Waste

**Experience:**

- 17 years American Engineering Consultant, Inc.
- 15years Hercules Contractors & Engineers, Inc

**Registration**

Professional Engineer:  
South Carolina #15832

**Education:**

- BA Civil Engineering,  
University of South  
Carolina

**Professional Distinctions:**

- American Society of Civil Engineers
- American Water Works Association
- Water Environment Federation
- Member of SC House of Representatives
- House of Representative Majority Leader
- Member of the House Ways and Means Committee
- City of Cayce Planning Commission – former member
- Lexington County School District Two Board of Trustees - Chairman

S.C. House of Representatives District 89, Lexington County, SC  
Kenny has served in the House of Representatives since 2000 and is a past member of both the Medical, Military, and Municipal Affairs Committee and the Labor, Commerce, and Industry Committee. Currently, Kenny is Majority Leader in the House and serves on the House Ways and Means Committee. Kenny provides invaluable experience to our clients through his understanding of all aspects of funding sources that are either granted or administered by the State of South Carolina or the Federal Government.



**Kenneth A. Bingham, P.E.**  
Civil Engineer/Principal/Vice President

Prior to the establishment of American Engineering Consultants, Inc., Mr. Bingham was employed by Hercules Contractors and Engineers, Inc. as Vice-President of Construction and a Project Engineer. Mr. Bingham's primary duties included project estimating, project management, project scheduling, structural design, and design of temporary drainage and erosion control systems. Since the founding of AEC, Mr. Bingham has been actively involved in civil engineering design, having designed roads, water and sewer systems, detention ponds, parking facilities, and storm drainage systems. He has also been instrumental in providing value-engineering services to our clients. By combining his vast experience in project estimating and construction, with his engineering knowledge, Mr. Bingham has been able to provide cost effective engineering solutions. In addition to his design work, Mr. Bingham is in charge of client relations, sales, contract negotiations as well as the day-to-day operations and scheduling of work to make sure that each project is on schedule and completed on time and in budget.

In addition to his work for AEC, Mr. Bingham has served in the South Carolina House of Representatives since 2000. His experiences in dealing with the public and governmental agencies as an elected official prove invaluable when dealing with the public on sensitive issues, conducting public hearings, and obtaining permits. His innate ability to calm tensions and bring people to consensus is unrivaled and is a tremendous asset for our clients.

**PROJECT EXPERIENCE**

1. Broad River WWTP, Richland County, SC - Construction Engineer. Project involved the preparation of cost evaluation report on the proposed design of a 6 MGD WWTP Expansion for Richland County Public Works. The purpose of the report was to provide recommendations on reducing construction costs, including the possibility of redesigning to bring project within budget. The project also includes Construction Management for the construction of the WWTP.
2. Lake Murray Water Treatment Plant, West Columbia, SC - Project Engineer for the design of a 9 MGD expansion and upgrade of the City of West Columbia's WTP. The project involved preparation of plans and specifications detailing modifications to the existing WTP plant and its expansion from 13.50 MGD to 22.50 MGD.
3. E. H. Heustess Wastewater Treatment Plant, City of Cayce, SC - Project Engineer for the design of an expansion and replacement of the existing City of Cayce WWTP. The project involved preparation of preliminary and final engineering reports, process design, preliminary drawings, design development plans and specifications, and final plans and specifications detailing the modifications necessary for the existing WWTP and for the construction of the new 25.0 MGD WWTP. This project also involved extensive permitting and the preparation of construction cost estimates.
4. Columbia Metro Wastewater Treatment Plant, City of Columbia, SC - Project Engineer for the design of a 160 MGD effluent pumping station and post aeration structure at the City's WWTP.
5. Columbia Metro Wastewater Treatment Plant, City of Columbia, SC - Project Engineer for the design of a 160 MGD twin 48" effluent river diffuser installed across the Congaree River outside of the City's WWTP to improve mixing and reduce the toxicity of the effluent.
6. Stanley L. Goodwin Water Treatment Plant, City of Cayce, SC - Construction Manager for the design of an upgrade to the City of Cayce Water Treatment Plant. The project involved the design of a new 2.5 million gallon clearwell, two 350,000 gallon Chlorine Contact Tanks, a new high service pump station, two upflow solids contact clarifiers, a new sludge thickener, a sludge pump station, and new filters to increase WTP capacity from 6.4 to 9.6 MGD. The project also included storm drainage design, site layout, and building refurbishment. A related project was the design and permitting of a new raw water intake and pump station, raw water reservoir, and 30 inch raw water forcemain to serve the City's Water Treatment Plant.

7. Lexington County Joint Municipal Water and Sewer Commission - Project Engineer for design and permitting of a 4000 gpm sewer pump station and approximately 72,000 lf of 30" and 36" forcemain to connect the Old Barnwell WWTP to City of Cayce's WWTP. Design Engineer for a 1.5 mgd pump station and 28,000 lf of 14 inch force main to interconnect the Old Barnwell Road WWTP and the Two Notch Road WWTP.
8. Grand Strand Water & Sewer Authority - Project Engineer for design of a project to supply water and sewer service to the Aynor Multi-County Business/Industrial Park. Project involved the design of 7,000 LF of 12" water line from Conway, SC to Aynor, SC and a 1500 gpm Booster Pump Station.
9. Spencer Place Apartments - Design Manager for the Civil Site Design of a 20-acre student housing complex located in Lexington County, SC. Includes surveying, construction staking, contract administration, permit submittals, and the design of roadways, pavement specifications, drainage/stormwater system, water distribution system, sanitary sewerage system, and construction inspections.
10. Kranzco Realty Trust - Tractor Supply Company. Design Manager for the Civil Site Design for a 19,000 square foot retail establishment and a 20,000 square foot sales area located in Spartanburg County, SC. Includes surveying, design of parking areas, driveways, water distribution system, drainage system, sanitary sewage system, and evaluation of traffic flow for this development.
11. Cherokee Lakes Subdivision Phases II, III, IV, and V - Design Engineer for roads, water, sewer, and storm drainage systems for a 100 lot single family residential subdivision. Assisted in the analysis of the 100 year flood boundary for the project.
12. Regency Square Subdivision Phases 1 and 2 - Design Engineer for roads, water, sewer, and storm drainage systems for a 145 lot single-family residential subdivision. Design of roads, water, sewer, and drainage system for a 94-lot addition to the project.
13. Plowden Place Apartments - Design Engineer for parking, drives, water, sewer, and storm drainage for a 24-unit multi-family apartment complex.
14. Capital Heights Subdivision - Design Engineer for roads, water, sewer, grading, and drainage for a 102 lot single-family residential subdivision.
15. Bay Berry Mews Subdivision - Design Engineer for roads, water, sewer, grading, and drainage for a 100 lot single-family residential subdivision.
16. The University Club Country Club - Prepared a PER to evaluate the possibility for them to own and operate their own wastewater treatment facility and utilize spray irrigation to the golf course for their discharge. Also worked with them to handle their water and site design needs for their Club House, Swim and Tennis Center, Cottages and Motel Suites.
17. Prime South, Inc. - Provided start-up consulting and scheduling services to bring on line a new \$7 million WWTP for the Mount Pleasant Waterworks and Sewer Commission.
18. City of Dillon - Design Engineer for a new belt press and sludge handling facility. Designed storm drainage improvements to relieve flooding in two flood prone areas of town. Also provided streetscape design.
19. City of Cayce - Provided start-up services to obtain operational permits for a new 6 mgd rapid filtration water plant.
20. City of Columbia - Design Engineer in charge of construction management for a \$10 million expansion to the Metro WWTP.
21. City of Columbia - Project Engineer for the Refurbishment and replacement of the Raw Wastewater and Primary Wastewater Pumping Stations at the WWTP including the replacement of six (6) - 10 MGD Screw Pumps.
22. Georgetown County Water and Sewer Authority - Project Engineer in charge of construction management for \$7 million in expansions to the Murrells Inlet WWTP and Regional Plant "C".



**Gregg Jenness, P.L.S.**  
Surveying, Project Manager

**Project Responsibility:**

- Survey Manager

**Experience:**

- 3 years American Engineering Consultant, Inc.
- 4 years Whitworth & Associates Land Surveyors, Inc
- 3 years B.P. Barber & Associates
- 10 years Baughman Land Surveyors, Inc

**Registration**

**Professional Land Surveyor :**  
**South Carolina #17928**

**Education:**

- Western Carolina University

**Professional Distinctions:**

- SC Society of Professional Land Surveyors
- Midlands Chapter of Professional Land Surveyors

Mr. Jenness joined the staff of American Engineering Consultants, Inc., as the Head of the Surveying Department. His experience includes boundary surveys, topographical surveys, construction staking and layout, GPS surveys, wetlands surveys, as-built surveys, route surveys, utility surveys, easement acquisitions, 3-D laser scanning, preparation of plats and maps, as well as numerous other surveying and engineering concepts.

**SURVEYING MANAGEMENT EXPERIENCE**

1. Lexington County Recreation & Aging Commission – Performed as-built and topographic surveys in support of engineering design of Sandhills Recreational Facility, which included soccer fields, tennis courts and volley ball areas.
2. Lexington County Recreation & Aging Commission - Provided as-built and topographic surveys in support of engineering design for Pelion Recreational Facility which includes baseball fields, soccer fields and football field.
3. IPG Architects – Weston Lake RV Park Improvements – Organized and performed topographic, as-built and tree location surveys on the Weston Lake RV Park in support of the civil design and construction of the new 21 space RV campground addition. Also provided construction staking and layout services on the park addition for new roads, RV spaces, sanitary sewer structures and other utilities. This new RV Park lies between the existing campground and a protected Red Cockaded Woodpecker habitat along the shores of Weston Lake on Fort Jackson. Design focused on minimal tree removal and a habitat friendly grading and layout plan for the camp sites.
4. 3-34<sup>th</sup> PT Track – Performed as-built and topographic surveys prior to engineering design of ¼ mile running track at Fort Jackson. Services also included construction staking on stormwater system, track layout for site grading and construction, as well as post construction as-built surveys.
5. University of South Carolina – Sumter and Greene Street Steam Line Improvement Project – Organized and performed topographic, as-built and tree location surveys, as well as Level ‘B’ S.U.E. surveys along Sumter Street, Greene Street, the parking lot area in front of the McCutchen Building, and into the Horseshoe at the McKissick Museum. The tree survey also included the location of each tree’s canopy to determine drip line protection areas. Survey data was used to support the civil and mechanical design and construction of new steam lines.
6. University of South Carolina – Health Sciences Building Renovations – Performed topographic, as-built and tree location surveys on the grounds surrounding the Health Sciences Building.
7. SCE&G – Graniteville Substation No. 2 Expansion Project – Performed topographic survey on 18 acres adjoining the existing substation site for use in the design of the new substation expansion and for a planned re-route of high voltage electric transmission lines.
8. SCE&G - Saluda Dam Remediation Project – Organize and perform construction surveying and layout across the entire dam site, rock fill areas, quarry and backup dam. Extensive use of GPS technology during all phases of construction. Topographic and as-built surveys were also performed throughout the construction process.
9. The Retreat – Columbia, SC - Organize and direct field crews to perform construction staking and layout on the 137 unit student townhome community. As-built surveys were later done on utilities as construction neared completion.
10. Cedarcrest Village Apartments – Lexington, SC – Performed ALTA/ACSM survey on the newly constructed 300 unit apartment complex, as-built surveys on utilities, and provided construction staking for building layout at the beginning of this project.
11. Greenwood Metro District GIS Mapping Project – Greenwood, SC - Sanitary sewer mapping and as-built project. Organize and perform GPS and conventional surveying to locate and map sanitary sewer system for the City of Greenwood. Organize and perform as-built surveys on approximately 8,000 manholes for the development of a GIS mapping database for the Metro District’s sanitary sewer system.

12. Blythe Creek Subdivision – Organize and perform boundary survey and infrastructure construction staking for 43 acre, 156 lot subdivision.
13. Sofa Factory Site – Charleston, South Carolina - Organize and perform 3-D laser scans on fire accident scene. Performed control traverse for target location, 3-D scans on portions of the exterior and interior for fire scene damage assessment.
14. Meade-Westvaco Chemical Plant – North Charleston, SC - Organize and perform 3-D laser scans on pipe bridge sections inside chemical processing areas.
15. McCormick County, SC – Organize and perform wetland boundary surveys on 1600 acres south of McCormick. Wetlands along Stevens Creek and the tributaries that flowed into it were located within a proposed quarry site.
16. Edisto Bay Company – Edisto Bay Subdivision, Aiken County - Organize and direct field crews on boundary survey of 630 acre tract. Traversed and located the run of the Edisto River for approximately 2 miles. Subdivided tract into 20.0 acre to 30.0 acre parcels.
17. Michelin Boulevard – Anderson County, SC - Organize and perform route surveying during Pre-construction, right of way acquisition and construction/demolition phases on a by-pass route to existing Michelin Plant.
18. SCE&G – Parr Hydroelectric Plant – Jenkinsville, SC - Organize and perform topographic survey of the generating plants intake lagoon. Topographic survey was used to compare current bottom contours to design contours for silt removal.
19. SCE&G – Stevens Creek Hydroelectric Plant – Augusta, GA - Perform topographic survey of the generating plants intake lagoon area to monitor the placement of rip rap along barge docking area.
20. SCE&G – Cope Station – Cope, SC - GPS Survey and construction staking for cell development on the ash landfill.
21. SCE&G – Williams Station – Charleston, SC - Perform GPS control surveys and construction staking for column placement on new coal conveyor system. Performed topographic survey on barge docking area on Cooper River in support of conveyor system.
22. Proposed Daimler Chrysler Manufacturing Plant – Summerville, SC - Organize and perform boundary surveys, wetland boundary surveys, as-built surveys, and route surveys for 1200 acre site. Performed route survey and topographic survey for proposed railroad spur line to the site.
23. International Paper – Eastover, SC - Perform as-built surveys for the evaluation, demolition and construction of roadways on plant site and timber storage area.



**Andrew F. Harmon**  
CAD Manager

**Project Responsibility:**

- CAD, Information

**Experience:**

- 17 years American Engineering Consultant, Inc.

**Education:**

- Associates Degree in Engineering Graphics  
1994 Midlands Technical College, Columbia, SC

Mr. Harmon joined the staff of American Engineering in September of 1994. Since joining AEC, he has gained extensive knowledge in CAD design, management, and coordination skills. His project experience includes subdivisions, water and wastewater facilities, pump stations, water tanks, water and wastewater distribution and collection systems, road paving and resurfacing, building services (mechanical, electrical), and commercial site work. Mr. Harmon has extensive experience in computer design software including Autodesk, Eagle Point, Bentley and other various programs which aid in the design and creation of construction drawings.

Mr. Harmon is also experienced in computer system administration. He manages 30 computer workstations on a Windows Server network. Software experience includes Microsoft Windows, Microsoft Office, Windows Server, Exchange, SQL, ISA, Corel, Adobe, Trend Micro, SurfControl, and Symantec.

**PROJECT EXPERIENCE**

1. BFS, Inc. - Cherokee Lakes Subdivision, Phases III, IV, and V, and Regency Square Subdivision, Phases I and II.
2. Deharder Investment - Capital Heights Subdivision in Columbia, South Carolina and Bayberry Mews Subdivision in Columbia, South Carolina.
3. Joint Municipal Water and Sewer Commission - US Highway 378 Waterline Extension.
4. City of Cayce - White Knoll / Three Fountains Water System Improvements.
5. Joint Municipal Water and Sewer Commission - US Highway 6 and Platt Springs Road Regional Pump Station and Forcemain.
6. City of Cayce - U.S. Highway 321 Regional Sewer Line.
7. Kranzco Realty Trust - Stein Mart Retail Center in Columbia, South Carolina.
8. Town of Springdale - Sewer System Expansion.
9. Tech Express - Fifteen Circle K Convenience Stores in South Carolina and Georgia.
10. Carolina Convenience Corporation - Coopers Corner Amoco Retail Center, in Lexington County, South Carolina.
11. City of Cayce - City of Cayce Waterline Improvements.
12. Sauer Inc. - Fort Jackson, South Carolina Central Energy Plant Revitalization, Phase II.
13. City of Cayce - Airport Waterline Improvements.
14. City of Cayce - Raw Water Pump Station.
15. Liberty Properties - Liberty Property Forcemain and Water Main.
16. South Carolina National Guard - Saluda Washrack, Hampton Washrack, Florence Washrack and Newberry Washrack.
17. City of Cayce - Wastewater Treatment Plant Expansion.
18. Picerne Development - Bay Berry Elevated Storage Tank.
19. City of Cayce - Essex Drive Sanitary Sewer System.
20. Joint Municipal Water and Sewer Commission - Interconnection of Old Barnwell WWTP with Two Notch Road WWTP.
21. Joint Municipal Water and Sewer Commission - Elevated Storage Tank.
22. City of Cayce - Edenwood Sewer Project.
23. Joint Municipal Water and Sewer Commission - Highway 378 and Beechwood Road Water Main.

24. City of Cayce - Edenwood Sewer Project.
25. Joint Municipal Water and Sewer Commission - Highway 378 and Beechwood Road Water Main.
26. City of Cayce - New State Road Pump Station Modifications.
27. City of Cayce - Cayce Belt Press Facility.
28. Joint Municipal Water and Sewer Commission - Old Orangeburg Road and Platt Springs Road Forcemain.
29. City of Cayce - Gantt Street Sewer Extension.
30. Wayne Skipper - Vista Hills Subdivision Water and Sewer Design.
31. Jumper Carter and Sease - Batesburg-Leesville Middle School Civil Site Design.
32. Harold Pickrell - Fairview Estates Phase II, Civil Site Design in Columbia, South Carolina.
33. J. Bland Quantz - 11-Acre Industrial Park Civil Site Design in Lexington, South Carolina.
34. Hendon Properties - Interchange Commons Civil Site Design in Columbia, South Carolina.
35. Harold Pickrell - Ridgemont Subdivision in Columbia, South Carolina.
36. Prime Hospitality - Amerisuites and Homegate Hotels Civil Site Design in Columbia, South Carolina.
37. Wilkins Wood and Goforth - Edgefield Prison Sanitary Sewer System.
38. South Carolina National Guard - Leesburg Road Training Facility Civil Site Design in Columbia, South Carolina.
39. A & S of Columbia - Deerwood Place Apartments Civil Site Design in Columbia, South Carolina.
40. City of Cayce - Platt Springs Road 10" Forcemain.
41. City of Cayce - Cayce Water Treatment Plant Upgrade Divisions A-J.
42. City of Cayce - WWTP 8 MGD Expansion Upgrade and Modifications.
43. Jumper Carter and Sease - Trinity Baptist Church Expansion.
44. City of Columbia - Metro Wastewater Treatment Plant Screw Pumps, Raw and Primary Pump Stations.
45. Joint Municipal Water and Sewer Commission - Platt Springs Road and Highway 6 Pump Station and Forcemain.
46. City of Cayce - Loxcreen Pump Station and Forcemain.
47. Kranzco Realty Trust - Tractor Supply Company Civil Site Design in Spartanburg, South Carolina.
48. City of Cayce - Demolition of Abandoned Water Treatment Plant.
49. City of Cayce - Highway 302 Forcemain and Pump Station Relocation.
50. Joint Municipal Water and Sewer Commission - Interconnect Old Barnwell Road WWTP with City of Cayce WWTP.
51. City of Cayce - Blossom Street Bridge Interconnect with City of Columbia.
52. The Dinerstein Companies - Spencer Place Apartments Civil Site Design in Cayce, South Carolina.
53. City of Cayce - Highway 602 Water and Sewer Line Relocation.
54. City of Cayce - Overlook Pump Station Rehabilitation.
55. City of Cayce - Highway 302 Water Line Relocation.
56. City of West Columbia - U.S. Highway No. 1 Water Main Extension.
57. City of Columbia - Metro Wastewater Treatment Plant Diffuser and Pump Station.
58. City of West Columbia - West Columbia City Hall. Civil Site Design for a new municipal facility.
59. Burroughs and Chapin, Inc. - Cool Spring Business Park - Phase 1, Horry County, South Carolina.
60. Church View Commons, LLC - Church View Commons Subdivision, Lexington County, South Carolina.
61. Town of Summit - Town of Summit Pedestrian Path, Lexington County, South Carolina.
62. Town of Lexington, SC - Town Of Lexington Water System Improvements. 1 Mg Elevated Water Storage Tank and New 12" Waterlines.
63. Joint Municipal Water and Sewer Commission – Boiling Springs Road Water Main Extension and Booster Pump Station.
64. City of Cayce – City of Cayce Wastewater Treatment Plant Upgrade and Expansion to 25 MGD.
65. Joint Municipal Water and Sewer Commission – AAA Utilities Connections.



**Joey H. Privette, P.E.**  
Civil Engineer

**Project Responsibility:**

- Civil Engineering
- Water Resources
- Storm Water Management
- Solid Waste

**Experience:**

- 10 years American Engineering Consultant, Inc
- 6 years B.P. Barber & Associates, Inc.
- 5 years Steffen Robertson & Kirsten, Inc.

**Registration**

Professional Engineer:  
South Carolina #17644

**Education:**

- BA Civil Engineering,  
University of South  
Carolina

**Professional Distinctions:**

- American Society of Civil  
Engineers
- Solid Waste Association of North  
America

Mr. Privette joined American Engineering Consultants, Inc. in 2001. His duties include design and design supervision for projects, including recreational facilities, site development, roadway, storm drainage systems, water distribution systems, wastewater collection, solid waste management facilities and transfer systems, stormwater detention basins, and construction inspection and administration. He has managed, permitted, and inspected all types of projects throughout the state.

**PROJECT EXPERIENCE**

**Site Development**

1. Lexington County Recreation & Aging Commission - Engineering design of Sandhills Recreational Facility including soccer fields, tennis courts and volley ball areas. Services included design of stormwater conveyance system, preparation of bid documents and assist owner with bid process.
2. Lexington County Recreation & Aging Commission - Services included construction administration of Pelion Recreational Facility which includes baseball fields, soccer fields and football field. Services included design of improvements to stormwater conveyance system.
3. Lexington County Recreation & Aging Commission - Engineering design and construction administration for Cayce Tennis Complex including 22 courts, one stadium court and fast start/training courts. Services included design of parking lots, 12-inch water line extension to project site, wastewater pump station and stormwater detention basins
4. IPG Architects – Weston Lake RV Park Improvements – Services included the design, permitting and construction observation of the civil portions of the new Weston Lake RV Park which included 21 space RV campground addition. This new RV park lies between the existing campground and a protected Red Cockaded Woodpecker habitat along the shores of Weston Lake on Fort Jackson. Design focused on minimal tree removal and a habitat friendly grading and layout plan for the camp sites. Design services included water distributions based on existing well system and wastewater collection system.
5. 3-34<sup>th</sup> PT Track – Engineering services related to design of ¼ mile running track at Fort Jackson. Services include stormwater system design, site grading, and stormwater inspections.
6. SC Farmers Market – Engineering services related to design of storm drainage system, site grading and water and sewer system for the consumer service lab and conference center for SC Department of Agriculture.
7. WRCI Dairy Facility – Engineering services related to design of dairy facility at Wateree River Correction Facility including storm drainage, site grading, sewer pump station, and potable/nonpotable water conveyance system.
8. Lexington County Roadways - Engineering services related to design and permitting for improvements to existing dirt roads to asphalt surface. Projects include Jim Rucker Road (13,000 LF), Payne Lane (2400 LF), Shannon Street (800 LF), Martin Neese Road (1225 LF) and Backman Drive (1850 LF). Services also included bidding/award assistance and construction administration/observation.
9. Hunters Ridge Subdivision - Engineering services related to the design and permitting of 84 lot subdivision including stormwater, road and water and sewer.
10. CMC Metal Recycling - Engineering services related to obtaining SCDOT encroachment permit, zoning permit and land disturbance permit for new driveway for shredder facility and proposed laydown yard. Services include weekly inspection of project for coverage under NPDES General Permit.
11. SC Army National Guard – McCrady Training Center and Edgefield Armory. Served as project manager on several grading projects on the McCrady Training Center and the expansion of Edgefield Armory. Performed drainage, grading, and parking lot design. (Approx. 60 Acres between the three projects).

12. CDA Architects - Fort Jackson, South Carolina. Design of grading plans, water and wastewater for two (2) new medical buildings at Fort Jackson.
13. Sunflower Development - Engineering services related to the design and permitting of 146 lot subdivision including stormwater, road and water and sewer.
14. SCE&G - Engineering services related to development of new electrical substation including preparation of grading plan, erosion control plan and facility layout plan.
15. Kershaw County - Design of roadway improvements for approximately 3000 LF of existing dirt road to asphalt pavement.
16. CMC Metal Recycling - Engineering services related to obtaining zoning and land-disturbance permit for proposed 15-acre stockpile area adjacent to existing landfill.
17. Abbeville County - Engineering services related to preparation of construction drawings and bid documents for installation of guardrail along Hanover Road crossing of pond dam.
18. Estates of Persimmon Hill - Engineering design of 268 lot residential subdivision including roads, stormwater, water and sewer systems.
19. Abbeville County - Engineering services related to improvements to Westwood Road and Hanover Court including removal/replacement of patch areas, resurfacing and stormwater system upgrades. Services also included bid, award and construction administration.
20. Cedar Crest Village - Design of 10-acre commercial development including master plan for stormwater conveyance system, roadways, and water and sewer.
21. Abbeville County - Preparation of bid packages for Improvements to Lake Shore Drive for roadway resurfacing. Services included construction administration and observation.
22. Greenwood School District 50 - Overview of civil plans for new Middle School located on approximately 50 acres. The project included preliminary grading, final grading, stormwater/sediment control, and water and sewer lines.
23. Marion County Jail Facility - Design of civil engineering aspects of development of new facility. Work included preparation of engineering drawings, prepared South Carolina Department of Transportation Encroachment Permits, stormwater calculations and layout of sanitary sewer and water supply lines.
24. Pee Dee Electric Cooperative - Design of civil engineering aspects of expansion of the existing facility and development of a new facility. Work included preparation of stormwater collection and detention system, erosion control procedure, South Carolina Department of Transportation Encroachment Permit and water supply and sanitary sewer layout.
25. Saturn of Florence - Design of civil engineering aspects of development of new facility. Work included stormwater/sediment calculations, encroachment permits and preparation of engineering plans.
26. Hoover Chrysler Plymouth Dodge - Design of civil engineering aspects of expansion of the existing facility and development of a new facility. Work included preparation of stormwater collection and detention system, erosion control procedure and South Carolina Department of Transportation Encroachment Permit.
27. Anderson County Solid Waste Convenience Centers - Design of eleven (11) solid waste convenience centers in Anderson County. Work included the preparation of engineering drawings, specifications, and cost estimates.

### **Solid Waste Management**

1. Subtitle D/Class Three Industrial Landfills - Design and permitting services in accordance with federal and state regulations. Services included preparation of an engineering report, Preliminary Hydrogeologic Characterization Report, Groundwater Work Plan and Site Hydrogeologic Characterization Report. Work included design calculations, engineering drawings, a stormwater and sediment control system, gas management layer, composite liner system and leachate collection system, construction overview, review/approval of shop drawing, preparation of construction certification report and assist the Authority with the Facility Issues Negotiation (FIN) process. Projects include:
  - York County Subtitle D Landfill Expansion
  - Abbeville County Subtitle D Landfill Expansion
  - Anderson Regional Landfill, LLC - Phase III Vertical Expansion
  - Pee Dee Regional Landfill Phase I
  - CMC-Lexington Class 3 Industrial Landfill
  - Anderson Regional Landfill, LLC - Subtitle D Lateral Expansion

2. Vertical Expansions - Design and permitting services for vertical expansion of existing landfill. Work included preparation of engineering report, plans and stormwater and sediment control system. Projects include:
  - Anderson County Landfill - Vertical Expansion
  - Charleston County Bees Ferry Landfill - Vertical Expansion
  - Kershaw County Landfill - Vertical Expansion
  - York County Landfill - Vertical Expansion - Phase I & II
3. Landfill Closures - Preparation and submission of Closure /Post-Closure Care Plans including engineering report, stormwater/sediment calculation, and plans. Projects include:
  - Abbeville County Landfill Closure
  - Anderson County Landfill Closure
  - York County Landfill Closure
  - City of Orangeburg C&D Landfill Closure
4. Construction, Demolition and Land-Clearing Debris Landfills - Site evaluation, design and permitting services for the C&D Landfill including preparation of engineering report, plans and stormwater and sediment control system. Projects include:
  - Anderson County Starr C&D Landfill
  - Charleston County C&D Landfill
  - Florence County C&D Landfill
  - S&T Recycling Land-Clearing Debris Landfill
  - City of Marion C&D Landfill
  - Dillon County C&D Landfill
  - S&T Grading Highway C&D Landfill
  - Calhoun County C&D Landfill Vertical Expansion
5. Waste Processing Facilities - Services include permitting and preparation of engineering reports, plans, air permitting calculations for wood chipping, screening, composting and concrete processing facilities. Projects include:
  - S&T Grading & Excavating\Wood Chipping\Concrete Crushing Facility
  - S&T Recycling Wood Chipping\Concrete Crushing Facility
  - Abbeville County Landfill Wood Chipping Facility
  - City of Marion Composting Facility
6. Groundwater/Landfill Gas Monitoring/Management - Services include evaluation of groundwater monitoring system, overview of monitoring wells/gas monitoring probe installation, review of sampling data, review of remediation options, preparation of Annual Monitoring Report, conduct statistical analysis of laboratory analytical data, preparation of groundwater, potentiometric maps and prepare groundwater sampling analysis plan and a statistical analysis plan. Facilities include:
  - Lexington County Solid Waste Management Facilities
  - Anderson Regional Landfill, L.L.C.
  - Abbeville County Landfill
  - Dillon County Landfill
  - York County Landfill
  - City of Myrtle Beach
7. Solid Waste Transfer Stations - Design and permitting of a solid waste transfer stations. Work included engineering report preparation, engineering drawings, technical specifications, cost estimates, contract administration and construction overview. Projects include:
  - Cherokee County/Allied Waste Industries - Solid Waste Transfer Station
  - Clarendon County Solid Waste Transfer Station
  - Trash-A-Way, Inc. Solid Waste Processing Facility
8. Solid Waste Management Studies & Financial Analysis - Services included evaluation of population, waste generation projections, types of solid waste processed and existing solid waste transfer procedures. Work also include recommendations for short-term and long-term solid waste transfer options, including transfer stations and rail transport of solid waste. Perform an engineering and financial analysis of waste management alternatives and private versus public management of waste system.
  - Horry County Solid Waste Authority Management Study
  - City of Myrtle Beach Solid Waste Management Study
  - Anderson County Solid Waste Financial Analysis

- York County Waste Management System Analysis
  - Chester County Waste Management Alternative Analysis
  - a. Abbeville County Financial Analysis
9. Solid Waste Management Plans
    - a. Lexington County
    - b. Clarendon County
    - c. Marion County
    - d. Florence County
    - e. Anderson County
    - f. Sumter County
    - g. Kershaw County
    - h. Marlboro County

### **Water/Wastewater System**

1. SCANA Campus – Engineering design of water and sewer system. Included a 700 GPM pump station, 2590 LF of 12” water line, 7625 LF of 8” water line, 750 LF of 6” water line, and 1970 LF of 8” gravity sewer.
2. Edisto Beach Wastewater Master Plan - Preparation of master plan for upgrades to wastewater collection system as well as treatment system. Project includes gravity sewer, pump stations, forcemain, lagoon treatment facility and spray irrigation of effluent.
3. Edisto Beach Water System Upgrades - Preparation of report for recommendation of upgrades to water distribution system including new water supply wells, new elevated storage tanks and additional water lines to provide additional capacity and increased fire flow service.
4. City of Columbia Metro Wastewater Treatment Plant Effluent Diffuser and Pump Station - Design and permitting of effluent diffuser into Congaree River, post-aeration system, dechlorination system and pump station for peak discharge of 160 MGD. Services include evaluation of diffuser design utilizing CORMIX and Cybernet computer models.
5. City of Cayce\Town of Springdale - Overview of design and preparation of specifications for gravity sewer system for Springdale community to tie into City of Cayce system. System consists of approximately 18,000 LF of 8” gravity sewer, 1700 LF of 14/15” gravity sewer and 2000 LF of 8” to 14’ Pipe bursting.
6. City of Cayce Overlook Business Park Pump Station - Design, permitting and construction administration of rehabilitation of existing suction lift pump station. System included conversion to submersible pumps, wet well rehabilitation, and VFD control.
7. Joint Municipal Water & Sewer Commission - Interconnect of Old Barnwell to City of Cayce WWTP. Overview of design and permitting of approximately 72,000 LF of 24”/30”/ and 36” Sewer Forcemain to connect old Barnwell WWTP to City of Cayce WWTP.
8. City of Cayce Airport Connector Road Utility Relocation - Design and construction administration services for water and sewer line relocation resulting from construction of limited access road. Services included preparation of preliminary layout, associated cost estimates and Utility Agreement documents.
9. City of Cayce Highway 321 & 21 Water and Sewer Expansion - Supervise design and permitting of approximately 40,000 LF of 8” / 10” / & 12” water line and 500,000 gallon elevated storage tank, as well as, 15,000 LF of 12” sewer line.
10. City of Cayce Pump Station No. 2 and Force Main - Evaluation of upgrades to existing pump station from 1 MGD to 2 MGD, as well as, approximately 6,000 LF of 14” sewer forcemain to replace existing 8” forcemain.

### **Environmental Services**

1. Anderson County Stormwater Pollution Prevention Plans - Prepared Stormwater Pollution Prevention Plan for Anderson County's Maintenance Facility, Six and Twenty Wastewater Treatment Plant and Airport. Work included site reconnaissance, evaluation of stormwater drainage system, data interpretation and technical report preparation.
2. Barnwell County Airport - Performed environmental site assessment of an approximately 1200 acre parcel of which approximately 650 acre designated for a future industrial park. Work included site reconnaissance, historical and regulatory review, data interpretation and technical report preparation.
3. Dixie Clay Company - Preparation of Preliminary Engineering Report for stormwater and sediment control system for approximately 1900 acre kaolin mine.

4. Clarendon County Industrial Park - Performed preliminary environmental site assessment for 183-acre site. Work included site reconnaissance, historical and regulatory review, data interpretation and technical report preparation.
5. South Carolina Water and Sewer, LLC - Performed environmental site assessment of thirty-three (33) groundwater supply well systems. Work included site reconnaissance, historical and regulatory review, data interpretation and technical report preparation.
6. South Carolina Department of Health and Environmental Control Emergency Response Projects - Responsibilities include on-site overview, liaison with regulatory and government agencies, sampling and disposal of the waste streams and technical report preparation.
7. Wolverine Brass Works - Involved with preparation and submittal of approved Part B Permit Application for RCRA facility. Responsible for groundwater sampling program, data interpretation, and technical report preparation. Design and installation overview of groundwater collection system.
8. Oxford Industries, Various Sites in South Carolina and Georgia - Responsibilities include client liaison, cost preparation, overview of underground storage tank projects, environmental assessment and recommendations for water treatment system and facilities at truck wash.
9. Sunbird Boats - Responsible for selection, design, and overview of stormwater sampling collection points. Performed data evaluation and report preparation.
10. Resolution Trust Corporation, Various Sites across South Carolina - Responsible for proposal preparation, site reconnaissance, historical and regulatory review, data interpretation and technical report preparation.