

YOUR ADVANCE TEAM

WATER & WASTEWATER ENGINEERING

JAMES MARK-IGE, P.E., PH.D.

35+ Years End-to-End Water Expertise | Design Through Operations



AEC COMPANY OVERVIEW

Advance Engineering & Construction, LLC (AEC) is a water and wastewater engineering firm serving municipal, federal, and industrial clients across the southeastern United States. Led by Dr. James Mark-Ige, P.E., Ph.D., AEC brings over 35 years of technical leadership across the complete water lifecycle — from engineering design and hydraulic modeling through construction management and long-term operations.

Dr. Mark-Ige's career spans three distinct phases of wastewater infrastructure: engineering design at Fulton County Public Works, where he led treatment process design and permitting; construction project management, including oversight of the \$230M Big Creek Advanced Wastewater Treatment Plant expansion; and countywide operations, managing sewer maintenance programs, field crews, CCTV inspection, and asset management across one of Georgia's largest sanitary sewer systems.

AEC holds SBA 8(a) certification through 2031 and is DBE certified, qualifying the firm as a small business partner for federal, state, and local procurement. As a proven federal prime contractor, AEC has delivered for the Department of the Air Force at Robins AFB and supported Army facility operations at Fort Gordon. Engineering staff hold active P.E. licensure in Georgia and Virginia, with additional certifications in stormwater compliance and design.

AEC's approach is built on disciplined project management, technical precision, and direct principal involvement — the same commitment that has supported more than \$290M in water and wastewater infrastructure across Georgia and beyond.

AEC DIFFERENTIATORS

- **35+ years of hands-on water & wastewater technical leadership**
- **End-to-end lifecycle experience: design, construction, and operations**
- **Proven federal prime contractor — USAF and US Army**
- **Ph.D.-level leadership with field-level operational command**
- **SBA 8(a) and DBE certified — dual small business advantage**

COMPANY DATA

UEI	GLYVM7NGKGT8
CAGE	8FZJ3
8(A) CERT.	SBA 8(a) Certified through 2031
PRIMARY NAICS	541330 — Engineering Services
ADD'L NAICS	541620 · 541611 541618 · 562211 · 561621

EDUCATION & CERTIFICATIONS

- **Ph.D., Civil Engineering,** Mississippi State University, 2022
- **M.S., Civil Engineering,** Southern Polytechnic State University, 2016
- **B.T., Civil Engineering,** Savannah State University, 1985
- **Licensed P.E.,** Georgia & Virginia
- **Level II Certified Design Professional,** Georgia
- **MS4 Compliance & Enforcement Certified Inspector,** Georgia
- **SBA 8(a) Certified to 2031**
- **Disadvantaged Business Enterprise (DBE) Certified**

 **PAST PERFORMANCE
& RELEVANT EXPERIENCE**

Big Creek Advanced Wastewater Treatment Plant — Fulton County

- Construction management of a \$230M WWTP expansion increasing plant capacity from 36 MGD to 54 MGD for EPA/EPD compliance. Oversaw headworks, aeration basins, MBR systems, chemical storage, and dewatering facility. Administered full CDA program: submittals, RFIs, RFPs, and change orders.

Fulton County / Black & Veatch — CMOM Compliance Program

- Directed a \$58M+ EPA Consent Decree compliance program for Fulton County's sanitary sewer system. Led PSARP and MMS — the two most complex Consent Decree programs. Managed system-wide flow/rainfall monitoring, hydraulic modeling, GIS sewer mapping, and SSO reduction portfolio.

Robins Air Force Base — Industrial Process Waste (IPW) Cleaning

- Prime contractor for 280+ task line items — 5,600+ individual industrial process waste cleaning tasks performed annually. Contract FA857118C0012 | FFP \$5.3M | 5-Year Program. Maintained three-tier QA protocol across all DoD work orders.

DeKalb County — Small Diameter Sewer Program

- Hydraulic cleaning, CCTV verification, and condition assessment across a 2,700-mile sanitary sewer network. Cityworks CMMS documentation supporting capital planning, work order management, and rehabilitation prioritization.

GDOT Transform 285/400 Corridor

- Construction engineering, inspection, and QA/QC support for major interchange improvements including flyover ramps and collector-distributor lanes across 10.5 miles of interstate.

AEC CORE CAPABILITIES

Collection System Engineering

- Sanitary sewer collection & transmission system design
- Gravity sewer, force main & lift station design
- Hydraulic modeling and flow analysis
- Sewer CCTV inspection & condition assessment
- System-wide hydraulic cleaning programs
- GIS-based sewer mapping & asset documentation

Treatment Plant Engineering

- Wastewater treatment plant design and expansion
- Headworks, aeration basins & MBR systems
- Dewatering and solids handling systems
- Chemical storage system design and oversight
- Plant capacity analysis & EPD/EPA compliance
- Process design and hydraulic calculations

Construction Engineering & Inspection

- Construction mgmt. for WW treatment plant expansions
- Submittal, RFI, RFP & change order administration
- Contractor performance monitoring and verification
- Materials testing coordination and QA/QC
- Owner's representative & construction administration

Program & Compliance Mgmt.

- EPA Consent Decree program management (CMOM)
- Sanitary Sewer Overflow (SSO) reduction programs
- NPDES and SPCC planning, reporting & monitoring
- Priority Area Sewer Assessment & Rehab (PSARP)
- Maintenance Management System (MMS) implementation
- Cityworks CMMS documentation and workflow

Operations & Maintenance Direction

- Countywide sewer maintenance program management
- Field crew scheduling, safety & performance oversight
- Capital repair prioritization and asset planning
- Preventive maintenance planning and execution
- Alarm monitoring and facility diagnostics

Federal & Industrial Engineering

- DoD industrial process waste system management
- Industrial water/wastewater evaluation & design
- Federal prime contracting (USAF, US Army)
- Environmental assessments & compliance documentation
- NPDES and SPCC compliance for industrial facilities



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