



AVERY MONROE, PE, LEED AP

PROJECT MANAGER / LEAD MECHANICAL ENGINEER

Mr. Monroe is the director of RMF's Charlotte office with experience in the design, analysis and construction administration of MEP building systems serving **municipal, sports and recreational**, educational, healthcare, laboratory, military and commercial facilities. **Local to the Queen City, Mr. Monroe has extensive experience working with local clients including Mecklenburg County Government, The City of Charlotte, UNC at Charlotte, Central Piedmont Community College and Queens University of Charlotte.**

Mr. Monroe's

goal in designing institutional buildings is to provide a quality project that optimizes value and meets the needs of the program now and in the future. He is experienced in the HVAC, plumbing and fire protection systems and the extensive exhaust and control systems, and has designed both renovation and new building projects.



SEAN RASK, PE

MECHANICAL ENGINEER

Mr. Rask is a mechanical engineer with experience in the design and analysis of HVAC, plumbing and fire protection systems serving **municipal**, healthcare, educational, laboratory and commercial facilities. **Local to the Queen City, Mr. Rask has extensive experience working with local clients including Mecklenburg County Government, The City of Charlotte, UNC at Charlotte and Central Piedmont Community College.** His experience includes new as well as renovation work and frequently includes the coordination of multiple MEP systems and construction phases. He is able to define and develop a variety of MEP systems to meet the specific needs of the building program and owner requirements.



JOSH THOMPSON, PE, RCDD

LEAD ELECTRICAL ENGINEER

Mr. Thompson is an electrical engineer with design and construction project management experience in the **municipal, sports and recreational**, healthcare, higher education, entertainment and commercial real estate markets. **Local to the Queen City, Mr. Rask has extensive experience working with local clients including Mecklenburg County Government, The City of Charlotte, UNC at Charlotte and Central Piedmont Community College.** He has experience in designing normal, emergency and critical electrical generation and distribution, lighting systems, fire alarm, telecommunications, audio/visual and security systems. Mr. Thompson also has experience on-site as a project field engineer, working hand-in-hand with electricians and technicians performing installations and maintaining a strong relationship with his clients through the life of the project.



TERESA WHITE

ELECTRICAL DESIGNER

Ms. White is an Electrical/Lighting Designer with RMF, and her experience has been applied to various institutional buildings. **Local to the Queen City, Mr. Monroe has extensive experience working with local clients including Mecklenburg County Government, The City of Charlotte, UNC at Charlotte, Central Piedmont Community College and Queens University of Charlotte.** Her main contribution to projects includes design development, A&E coordination, M&E coordination, construction documents, construction administration and commissioning. Ms. White has been responsible for low voltage electrical distribution, interior/exterior lighting systems, fire alarm systems and new and renovated facilities systems designs. Her responsibilities also include management of electrical design standards, firm maintenance standards and drawing standards of the firm.



C DESIGN

Dean McKenzie's detailed technical and production skills bring an organized approach to each project. By taking initiative and effectively communicating design solutions, he provides leadership from design conception through construction completion. Building client relationships comes naturally to Dean due to his dedication to the client's needs and unwavering reliability.

Dean joined C DESIGN in 2011, diligently completed his architectural registration exams to earn his North Carolina Architect License and was subsequently promoted to Associate as a result of his steadfast performance.



Structural Capacity, PC

STRUCTURAL CONSULTING GROUP



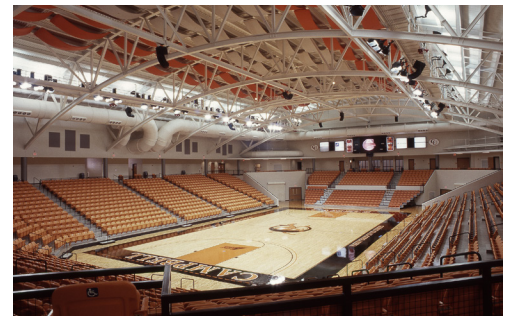
Adrian S. Durham is a licensed Structural Engineer (SE), licensed Professional Engineer (PE) and LEED Accredited Professional Building Design + Construction.

Mr. Durham has 17 years of noteworthy experience in the structural engineering industry. He has been involved with and has successfully managed a broad range of construction projects including retail offices, K-12 schools, higher education facilities, healthcare facilities, religious facilities, detention and correction facilities, and multi-family residential projects.

SIMILAR PROJECT EXPERIENCE

In addition to our representative projects shown, a sample of RMF's stadium / arena experience includes the following:

- » **New John W. Pope Jr. Convocation Center**, Campbell University
- » **Wallace Wade Football Stadium Renovations**, Duke University
- » **Cameron Indoor Stadium Renovations**, Duke University
- » **Dowdy-Ficklen Football Stadium Lighting**, East Carolina University
- » **Harrington Baseball Field Lighting**, East Carolina University
- » **Aggie Baseball Stadium Lighting**, NC A&T State University
- » **New Jerry Richardson Indoor Arena**, Wofford College
- » **New Rock Hill University Center Indoor Athletic Facility**, The City of Rock Hill
- » **Doug Kingsmore Baseball Stadium Electrical Upgrades**, Clemson University
- » **Student Recreation & Convocation Center**, Coastal Carolina University
- » **New Softball Stadium**, Clemson University
- » **Memorial Stadium Renovations & West End Zone Addition**, Clemson University
- » **New Softball Stadium**, University of South Carolina
- » **Baseball Stadium Conduit Survey**, University of South Carolina
- » **Baseball Stadium Scoreboard Fuel Cell Design**, University of South Carolina
- » **Athletics Village Softball Stadium Utilities**, University of South Carolina
- » **Williams Brice Stadium Electrical Upgrades**, University of South Carolina
- » **Williams Brice Stadium Site Improvements and Game Day Building**, University of South Carolina
- » **Stone Soccer Stadium Electrical Upgrades**, University of South Carolina
- » **Track & Field Upgrades**, University of South Carolina
- » **New Baseball / Softball Stadium Complex**, Coastal Carolina University
- » **New Tennis Complex**, Coastal Carolina University
- » **New Baltimore Ravens NFL Stadium**, Baltimore, MD
- » **New Pittsburgh Steelers NFL Stadium**, Pittsburgh, PA
- » **Memorial Stadium Upgrades**, Baltimore, MD
- » **Three Rivers Stadium Improvements**, Pittsburgh, PA
- » **Various Renovations to Oriole Park at Camden Yards**, Baltimore, MD





MOORE GYMNASIUM ATHLETICS HVAC UPGRADES

NORTH CAROLINA A&T STATE UNIVERSITY | GREENSBORO, NORTH CAROLINA

PROJECT STATUS: Complete

PROJECT DESCRIPTION: This project consisted of upgrades to the HVAC systems serving the Moore Gymnasium Athletics Department offices at North Carolina A&T State University. RMF provided full service mechanical and electrical design services for the HVAC upgrades that previously consisted of window air conditioners and hot water convectors. RMF's scope of work consisted of field verification of existing office layouts and existing HVAC equipment, calculating cooling loads, designing an HVAC system to handle the heating, cooling and ventilation requirements and construction administration services.

PROJECT OWNER:

North Carolina A&T State University | Bill Barlow | Greensboro, NC | 336.334.7572 | barlow@ncat.edu

PROJECT SCHEDULE:

Design: 2011 | Construction: 2011

PROJECT CONSTRUCTION COST:

Estimated: \$360,000 | Actual: \$531,144

PROJECT CHANGE ORDERS:

\$77,753 (Total)

PROFESSIONAL SERVICES PROVIDED:

Mechanical & Electrical Design Services

PROJECT MANAGER:

RMF Engineering (MEP): Avery Monroe

KEY TEAM MEMBERS:

Vines Architecture (Architect): Victor Vines (Raleigh, NC)
RMF Engineering (MEP): Avery Monroe, Teresa White (Charlotte, NC)
Balfour Beatty (GC): Jimmy Anderson (Greensboro, NC)

SIMILARITY TO GRADY COLE ELECTRICAL MODIFICATIONS & HVAC REPLACEMENT PROJECT:

This project was a renovation of a 1953 gymnasium building on NCA&T's campus. The building houses the athletic department, basketball practice, volleyball and other sports. The swimming pool was filled in and locker rooms were converted into student office spaces. Most of the HVAC systems were original to the building and were replaced. Other areas such as the practice gym and offices only had steam heat, ventilation fans and window air conditioning units. Neither ACAD or Revit files were available for this project. We had to create electronic plans based on TIF files and field measurements.