

bkm



Summary of Qualifications Federal Market Sector

working to enhance the everyday

Burdette, Koehler, Murphy & Associates Inc. (BKM) is a full-service engineering firm that designs mechanical, electrical, and plumbing solutions to further our clients' missions. With a 58 year legacy of responding to our clients' needs and collaboration at our core, we develop solutions that harmonize with their surroundings and stay reliable in use.

Headquartered in Baltimore, Maryland, our team of 117 professional and technical staff includes 42 registered engineers, and 25 LEED Accredited Professionals. Our engineers have extensive experience across education, government, healthcare, science & technology, commercial, and mission critical sectors, and are deeply knowledgeable of the codes and regulations our work must satisfy.

55%

MEP Prime Work Allocation

<1%

MEP Prime Change Orders

54

Years of working with Federal Government

58

Years of Service Excellence

42

Professional Engineers

81%

Work from Repeat Clients

Collaboration is at our core.

With collaboration at our core and a legacy of responding to our clients' needs, we design MEP solutions that harmonize with their surroundings and further our clients' missions.

We're engineers who listen.

Our people make BKM the company it is. We're a dedicated team of creative people who genuinely enjoy each other and solving problems together. Most of all, we love turning challenges into smart, practical designs that allow our clients to do their best work.

We work to enhance the everyday.

Buildings are living spaces. At BKM, we respond to our clients' needs with mechanical, electrical, and plumbing solutions designed to support everyday life.

Every project is a partnership.

When BKM was founded on April 1, 1968, three Baltimoreans realized their idea of creating an engineering firm where collaboration, transparency, and responsiveness produced better MEP designs.

Collaboration has been crucial to helping our clients succeed. That's why our team brings openness, responsiveness, and a transparent design process to every project.



Team Capabilities



Mechanical Design

Our engineers recommend systems that will best serve the function of the space and provide the best possible environment for its occupants.



Electrical Design

Our engineers design safe, reliable, and efficient power distribution systems.



Plumbing Design

As with all other systems, plumbing must suit the client's objectives for sustainability, user convenience, cost constraints, and space limitations.



Lighting Design

Effective lighting design balances artistic vision with the comfort and safety of its occupants.



Commissioning

Our goal is to train the building manager to effectively monitor and adjust the facility's components to meet the changing needs of occupants throughout its life-cycle.



Building Assessments

We can quickly recognize the positive and negative impacts of various decisions, helping our clients to work through the possibilities, clarify their vision, and then make it a reality.

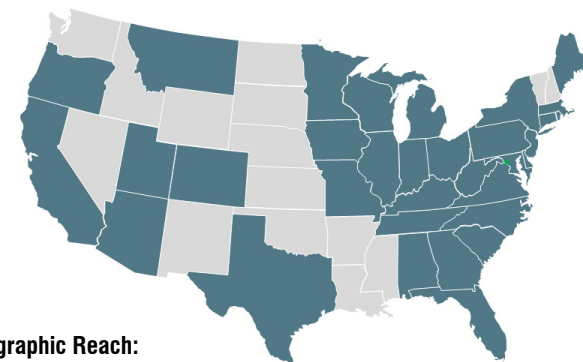


Power Systems Studies

Our goal is to train the building manager to effectively monitor and adjust the facility's components to meet the changing needs of occupants throughout its life-cycle.

Clients

- US Army Corps of Engineers, Baltimore District
- US Army Corps of Engineers, Huntsville District
- US Army Corps of Engineers, Norfolk District
- US Centers for Disease Control and Prevention
- US Department of Commerce
- US Department of Defense
- US Department of Health and Human Services
- US Department of Veteran Affairs (Various VAMC)
- US Environmental Protection Agency
- US National Aeronautics and Space Administration
- US National Institute of Health
- US National Institute of Standards and Technology
- US National Oceanographic and Atmospheric Administration
- US National Parks



Geographic Reach:

BKM is licensed in 33 states, including Washington DC.

Fast Facts

CAGE CODE	1BJF0
UEI	GKK6JE2LNQK5

ADDRESSES	
<u>Baltimore Headquarters</u>	<u>Norfolk, VA</u>
6300 Blair Hill Lane, Suite 400	400 Granby Street, Suite 200
Baltimore, MD 21209	Norfolk, VA 23510

ACTIVE MENTOR PROTEGE

BKM PRIME AE SB JV, LLC
 NAICS: 541330
 Cage Code: 9CFY8
 UEI: NDLQWZF6Z1E8



Federal Leadership



Anthony R. Page, PE, LEED AP

Tony has extensive experience with government projects. As an extension of infrastructure, he specializes in power distribution engineering and power systems studies. He places a special emphasis on quality control and trade coordination.



Joseph E. Rothe, PE

Joe is an Associate and Electrical Engineer responsible for drawings, specifications, cost estimating, code compliance review, and quality control of electrical systems, including power, lighting, and special systems. His experience consists of a variety of work for municipal and federal government agencies.

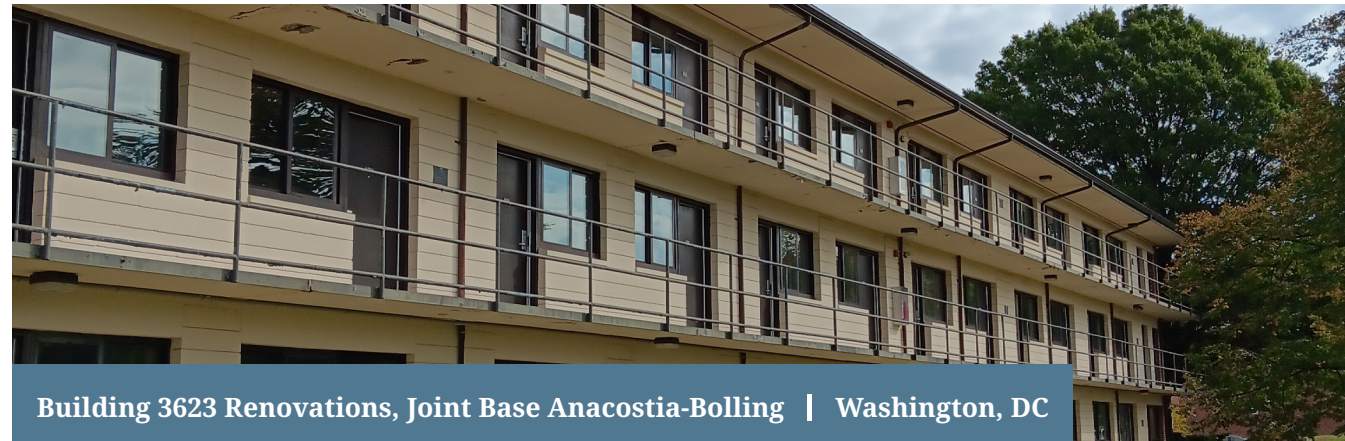


Raymond Krick, PE, LEED AP, CxA, DBIA

Ray has 20 years of experience designing new, renovation, and addition projects for government agencies. Ray specializes in HVAC and plumbing system design, condition assessments, contract document production, as well as performing energy simulation analyses for LEED Energy and Atmosphere credits

Root Hall Gym and Upton Hall HVAC and Electrical | US Army Corps of Engineers - Baltimore District

Federal Portfolio



Building 3623 Renovations, Joint Base Anacostia-Bolling | Washington, DC

BKM performed full design-bid-build design services for the renovation of Building 3623 at Joint Base Anacostia-Bolling (JBAB).

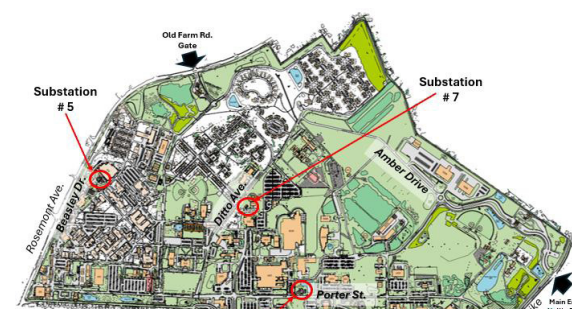
Renovation of Building 3623 at Joint Base Anacostia-Bolling (JBAB). The 46,145 SF building is a 101-bed dormitory built in 1975 that is being fully renovated. Renovation scope includes mold remediation, repair/reinforcement of balconies, repairing interior and exterior finishes, and updating electrical and mechanical systems.



Facilities Buildings Jennings Randolph Lake | Jennings Randolph Lake, WV

BKM performed full design-bid-build design services for new construction of one existing building, and two new buildings at Jennings Randolph Lake (JRL) in West Virginia (civil works funded).

The design of the project included a new combined Admin/Ranger Building, a new High Bay Garage, renovation of the existing maintenance building and a new parking lot. This design was based on recommendations included in the Charrette Report that had been developed by the design team.



Fort Detrick Substation Upgrades Planning Charrette and DD Form 1391 | Fort Detrick, MD

BKM provided Engineering and Prime Consulting support for this large electrical infrastructure upgrade planning effort.

As design prime, BKM managed a DD 1391 planning specialist, civil engineers, structural engineers, cost estimators, and 3rd party peer review consultants. BKM also provided Electrical Engineering as well as Project Management. The purpose of the project was to improve maintenance operations, costs, resilience, energy usage, and reliability.



Size
67,500 SF

Cost
\$6.64 M

Completion
2023

Capabilities
Mechanical
Electrical
Plumbing

BKM, as Prime, provided MEP design services for the renovation of two existing buildings at the US Army War College in Carlisle, PA. As the design prime, BKM managed a team of architects, civil engineers, structural engineers, industrial hygienists, and cost estimators.

Upton Hall is a 62,450 SF, four-story office building originally constructed in 1941 as a training school for medics. Prior to construction, the building included aging and inefficient HVAC systems, including 10 constant volume air handling units with limited temperature and humidity control capabilities. Chilled water is provided to the building via a connection to the campus chilled water loop, which originates in the soon-to-be demolished Root Hall Building. In order to provide a stand-alone HVAC system with better temperature/humidity control and energy efficiency, BKM designed new direct expansion variable air volume (VAV) air handling units to serve each floor of Upton Hall. Ceilings and lighting fixtures were replaced throughout the building. Mechanical rooms were modified as required to accommodate the new HVAC equipment and UFC requirements for outdoor air intakes.

Originally constructed in the 1980s, Root Hall Gym is an 11,500 SF gymnasium building complete with a gymnasium, sports offices, racquetball court, and locker rooms. The HVAC systems that serviced the Root Hall Gym were located in the adjacent Root Hall Building. The project's goal was to renovate the gymnasium, making its mechanical systems self-reliant, to enable the demolition of the Root Hall Building. The renovation of the gymnasium building included an HVAC upgrade and an electrical upgrade. The HVAC upgrade included the replacement of the existing rooftop air handling unit serving the gymnasium, extension of new gas service to the building, construction of a new boiler plant, installation of a new domestic water heater, and installation of building automation controls in compliance with UFC requirements. The electrical upgrades included modifications to the existing 480V service to the building. The two existing feeders were disconnected and removed. A new pad-mounted transformer and switch was provided to serve the building. A medium voltage feeder was extended from the sectionalizing cabinet.

George Washington Carver Center Power System Study | Washington, DC

Power System Study for a large campus electrical upgrade project. The main campus 15KV Switchgear was analyzed as well as (2) double ended dry-type unit substations. Total substation capacity was 10MVA. The campus facility included 4 buildings, (3) exterior generators, and approximately 360 panels.

Electrical studies included fault current evaluation, load flow analysis, system protection & coordination, Arc Flash Evaluation, and motor starting transient analysis. We were able to assist the engineer of record by helping to solve NEC required selective coordination problems associated with the life safety and elevator systems. We provided a code analysis of the existing system to assist the contractor and USDA in correcting several existing system deficiencies.



Project Challenges:

1. Determining the existing medium voltage relay characteristics as well as CT ratios without causing Project Challenges:
1. Determining the existing medium voltage relay characteristics as well as CT ratios without causing an outage on the campus.
2. Existing legacy substations were specified with the incorrect primary winding ratios. We made recommendations on adjusting the taps as needed to obtain correct voltages and compensating for load flow voltage drop.
3. Integration of (2) existing solar PV systems into the model. Total system capacity was 2.2 MW. Due to long distances of the transmission cables, medium voltage transformers were used to step up the voltage for transmission to the facility.
4. Extensive invasive survey was needed to obtain the field data. Freestate Electric assisted BKM in removing equipment covers for this data acquisition. BKM wore all appropriate PPE per NFPA 70E.
5. Recommendations were required in an effort to properly protect new and existing transfer switches. We assisted the engineer of record in selecting the proper over current protection to properly protect the new and existing transfer switches. We were able to protect the switches such that expensive and large 30 cycle switches were not required. They would not have fit in the space allocated.



Bldg 215 Cleanroom Renovation | Gaithersburg, Maryland

BKM provided design for the cleanroom HVAC renovation at Building 215 on the NIST Bethesda campus. BKM developed and designed improvements to existing deficiencies within the building to return pressurization and airflows to the original operating condition.

It is currently one of the most advanced laboratories of its type in the world, showcasing advanced laboratory environmental controls in the areas of temperature and humidity control, vibration isolation, air cleanliness, and electrical power quality in support of NIST's most-demanding laboratory programs. Building 215 is the cleanroom facility within the AML complex, housing 20,000 SF cleanroom, of which 8,000 SF is Class 100.



RTP Main Campus Power Systems Study | Durham, North Carolina

BKM provided a full power systems study consisting of short circuit analysis, equipment evaluation, protective device coordination study, and arc flash study for the EPA RTP Campus electrical distribution system.

The scope of the study includes the 480V substations and all distribution equipment down to the 208V branch panels in buildings A, B, C, D, E, High Bay, FEELC and the NCC building which houses the EPA datacenter. Analysis included the upstream NIH 15KV Switchgear, two additional line ups of 15KV Metal Clad Switchgear, and approximately six double ended unit substations as well as approximately 1,710 panelboards, MCCs, Switchboards, etc.



Ronald Reagan Building EV Stations | Washington, DC

BKM provided design services as part of a design/build effort for the installation of EV chargers at the Ronald Reagan Federal Office Building in Washington, DC for both the U.S. Customs and Border Protection (CBP) and U.S. Agency for International Development (USAID).

Eight (8) dual port Level 2 EV chargers were provided within multiple levels of an existing parking garage located in the basement levels of the building. In addition to the equipment replacement, a new system component room was laid out for the CT Scanner.



NAVFAC Washington, Building 2360 HVAC Upgrade | Patuxent River, MD

BKM provided MEP design services to upgrade building controls and replace four rooftop air handlers at Building 2360, Propulsion System Evaluation Facility, at the Patuxent Naval Air Station.

Building 2360 is a single story, 81,000 GSF structure comprised of a laboratories and offices built in the mid 1990's. The mechanical controls upgrade included redesign of building control sequences for 24 air handling units, lab exhaust fans, chilled water, heating water, and process water systems. connecting bridge to provide required staff and patient circulation to the CLC, which is located at a much higher elevation on the campus.

FEDERAL CONTRACTS

- Department of Energy: Architect and Engineering (A-E) Services in support of the Department of Energy (DOE) Headquarters facilities located at Forrestal in Washington, D.C. and Germantown, Maryland.
- US Environmental Protection Agency: Indefinite Delivery, Indefinite Quantity (IDIQ) Contract for Architect-Engineer Services for Regions 1 through 4
- U.S. Army Corps of Engineers Huntsville District: Veteran Affairs Architect & Engineering Services (VAAES) IDC
- AFCEC: MATOC IDIQ for AE Title I, Title II and other AE Services primarily for Dormitory Facilities (AE24DORMS).*
- U.S. Army Corps of Engineers, MICC-Ft. Campbell: Architect and Engineering (A&E) Services in support of the United States Army Enterprise Solution within the Northeast Region of the continental United States (CONUS) *
- NAVFAC Washington: IDIQ for Mechanical, Electrical, Plumbing and Fire Protection (MEF-FP) Architect-Engineering (A-E Services for Medium Projects)*

*Awarded to Mentor Protege: BKM PRIME AE SB JV, LLC

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