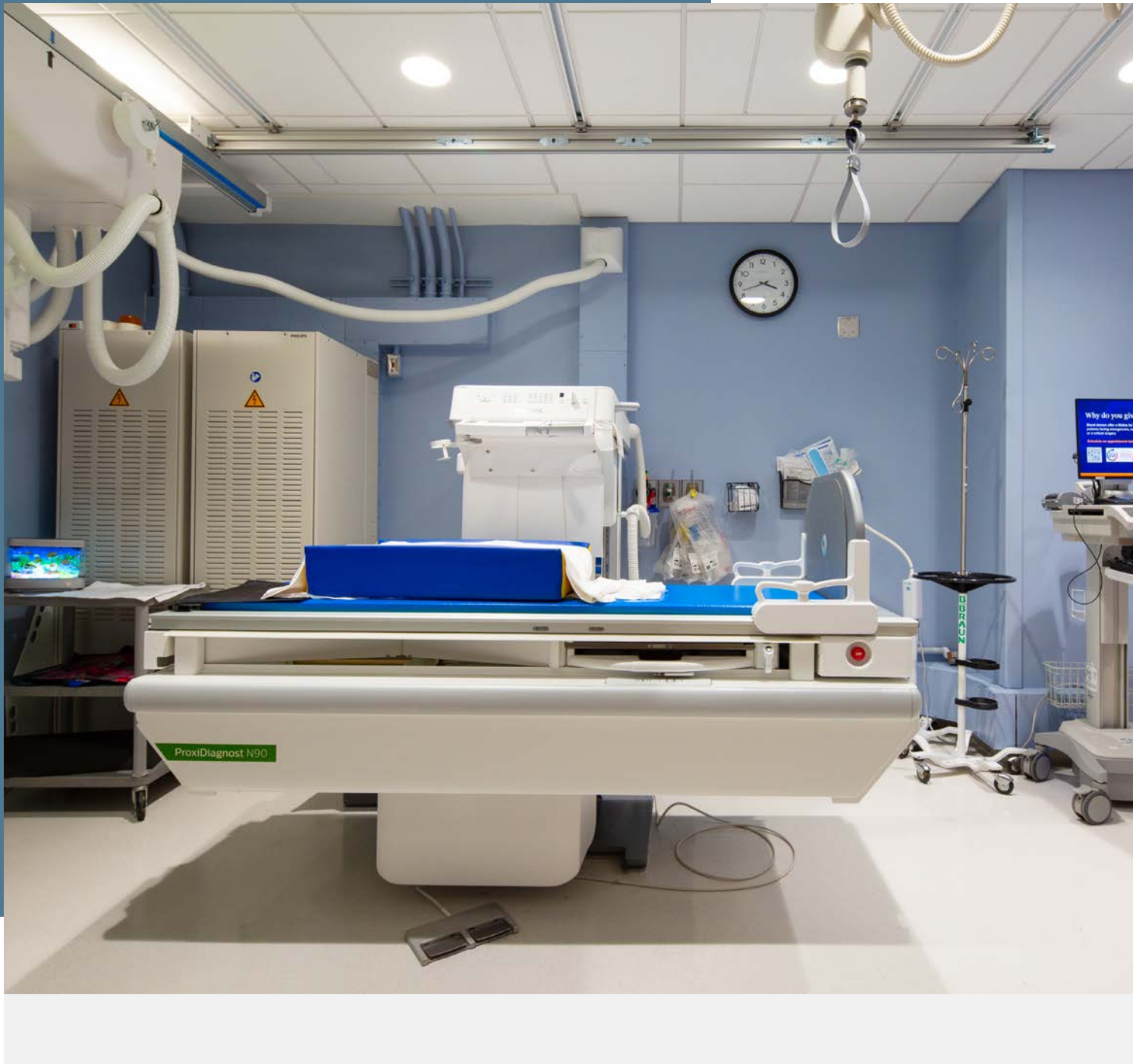


# bkm



## Summary of Qualifications Healthcare 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

**57**

Years of Providing  
Healthcare Design

**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



We tailor our mechanical designs to meet the requirements of every project with a focus on indoor environmental quality, efficiency, maintainability, and flexibility. Our engineers recommend systems that will best serve the function of the space and provide the best possible environment for its occupants.

## Electrical Design



At BKM, we understand the complexity of power systems and the responsibility owners face to provide service to a large number of users. Maintainability and energy efficiency are key aspects to our electrical system designs. Our engineers design safe, reliable, and efficient power distribution systems.

## Plumbing Design



Our engineers are well versed in plumbing and piping design allowing clients to rest easy in knowing we are looking out for their best interests. As with all other systems, plumbing must suit the client's objectives for sustainability, user convenience, cost constraints, and space limitations.

## Lighting Design



Proper lighting design strikes a careful balance between the artistic vision of a space and the comfort, safety, and aspirations of its occupants. BKM is dedicated to providing an attractive and streamlined lighting design that is fully coordinated, sustainable, and economically attainable for our clients.

## Commissioning



BKM's commissioning process ensures the owner receives the full benefit of their building systems, which include inter-related automation systems to maximize energy efficiency and occupant comfort. Our goal is to provide the building manager with the training and experience to monitor the facility and be comfortable to modifying components to align with the changing needs throughout the building's life-cycle.

## Building Assessments



Because of our thorough understanding of how the MEP systems are interrelated and how they affect decisions in other disciplines, our approach is inherently holistic. 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 System Studies



BKM understands the importance of electrical safety, maintenance, reliability, and asset protection within your facility. Our Power System Engineers specialize in load flow, fault current, coordination, protection, and arc flash studies. Our goal is to minimize your downtime while maximizing protection of your assets and personnel.

# Healthcare Leadership



**Brendon J. Burley, PhD, PE, LEED AP**

Brendon's projects range from laboratory equipment installation detailing to full scale medical centers and include specialty projects related to imaging, containment, and clean rooms.



**David M. Wetzel, PE**

Dave has over three decades of experience in the electrical engineering design including the preparation of construction documents, engineering studies, and equipment design standards.



**Mark A. Flickinger, PE, LEED AP**

Mark has worked extensively with the Department of Veterans Affairs, Johns Hopkins Hospital, and several private medical centers throughout the Mid-Atlantic regions.



**Richard A. Miller, PE, LEED AP**

Rick has over 30 years of experience managing engineering teams and delivering complex electrical designs in education, medical, infrastructure, and government sectors.

# Healthcare Portfolio



Center for Autism and Related Disorders

**BKM provided the MEP design of the renovation of approximately 11,500 SF of an existing facility in Columbia, MD.**

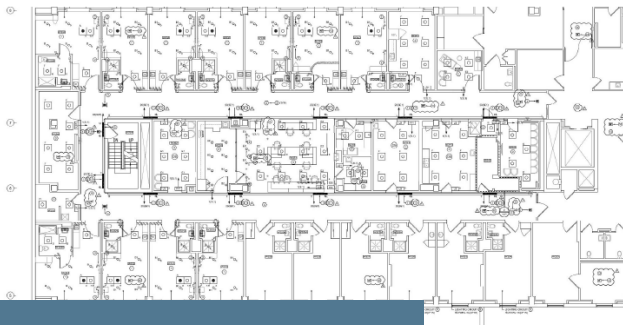
The design of the project included a new combined Admin/Ranger Building, a new High Bay Garage, renovation of the existing maintenance building and a new parking lot. This design was based on recommendations included in the Charrette Report that had been developed by the design team.



Integrative Care Unit 47

**GBMC selected BKM to develop plans for the renovation of an existing 8,000 SF patient ward to accommodate medical/surgical patients with behavioral health diagnosis.**

The project consisted of a preliminary design of NICU spaces to allow renovations to relocate existing patients and following up with the development of a 16 bed patient suite to meet the institutions behavioral health and clinical standards.



3 West - Pediatrics Inpatient

**BKM provided the MEP design of the renovation of approximately 11,000 SF of an existing patient wing.**

The renovation of the suite included seventeen patient bedrooms each with adjoining private toilet rooms. Additional support areas included a waiting area, a nurses station, a medication room, a treatment room, a children's play area, a nurse office, a staff lounge, and clean and soiled utility rooms



PACU Renovation and Temporary ICU

**BKM provided MEP design services for the renovation of an approximately 3,330 GSF perioperative suite and the renovation of approximately 275 SF of a waiting room to a single patient room with a private bathroom at an existing facility.**

The scope of work included the complete renovation of the perioperative unit and the adjacent cardiology area to create a new 18-bay combined pre-op and PACU unit power distribution was rearranged to meet the renovation's requirements.

# Inova Heart and Vascular Institute Patient Unit Renovation | Inova Health System - Fairfax, VA



## Size

30,000 SF

## Cost

\$7.3 M

## Completion

2023

## Capabilities

Mechanical  
Electrical  
Plumbing

**BKM was selected to provide engineering services to convert two floors, totaling 48 beds, to have private rooms.**

As part of INOVA's Patient Always philosophy renovations to two floors of the Heart Vascular Institute at Fairfax Hospital were undertaken to convert 48 patient rooms with Jack & Jill toilets to private rooms. Because the footprint could not grow it was necessary to modify the casework and headwalls in each of the patient rooms. Another aspect of the project was the conversion of 24 of the existing beds intended for intermediate care were to be upgraded for use as critical care beds, requiring additional power and medical gases.

BKM was selected to provide engineering services for these renovations and was an integral part of the programming process. During the design the clinicians requested that numerous devices be placed on critical power, which exceeded the capacity of the existing critical branch distribution system. In an effort to prevent major infrastructure work BKM held a mock-up session with INOVA staff where all possible equipment was placed into patient room and devices were figuratively 'plugged' in and tagged as requiring emergency power, having a battery back-up, and not requiring emergency power. As a result of this exercise BKM was able to meet the clinician's desire for reliability utilizing the existing distribution systems.

Although the project was initially limited to the patient rooms, the scope was expanded to include upgrades to the nurse's stations for a new patient management system. The final design included modifications to most of the suite, including new LED lighting throughout, repairs and upgrades to each air terminal unit, new patient toilets and hand washing stations with adjust risers, and new integrated patient headwall systems. The result was a new cardiac care patient suite, which is serving as the template for planned renovations on the next floor.



**Center for Advanced Orthopedics**

**BKM worked with Manekin Construction and dbbWorkshop to convert a partitioned Shopper’s grocery store into an orthopedic outpatient center.**

The center itself included eleven exam rooms, two X-Ray rooms, a physical therapy gym and a tenant suite for an independent MRI service provider.



**Physician Pavilion West First Floor Women’s Surgery Center Renovation**

**BKM provided MEP services for a partial renovation of the existing surgical center located in the Physicians Pavilion West at the GBMC campus.**

This renovation included improvements to the locker rooms, staff lounge, waiting and reception areas, and consultation offices as well as the addition of a new pain procedure suite with dedicated prep-recovery rooms.



**Inova Heart and Vascular Institute Catheterization Unit Addition | Inova Health System, Fairfax, VA**

This medical office building provides local residents with additional options for medical care at a single location. This innovative community health center integrated design that will foster all treatment needs. Upon design and construction of this project, various community studies identified Lexington Park as an underserved area in terms of local healthcare needs. This new health center will help keep the surrounding neighborhoods happy and healthy, while also offering local employment opportunities.



**Brendon J. Burley, PhD, PE, LEED AP**  
Senior Associate, Healthcare Practice Leader  
bburley@bkma.com

**bkma.com**

**bk m**