



PROJECT
MANAGEMENT

K-12 EDUCATION

A strategic approach to successful project
outcomes for K-12 Education environments

CBRE | **HEERY**

K-12 EDUCATION PROJECT MANAGEMENT

Our portfolio spans the spectrum of K-12 programs including Pre-K, elementary, middle and high schools as well as new construction, building and campus renovation, historic renovation, facade renovation, co-located buildings, replacement buildings, and temporary facilities used for swing space.

CBRE | Heery provides a customized approach to managing school construction and renovation projects and programs. From groundbreaking to ribbon cutting, our expert team of K-12 project management professionals is keenly focused on ensuring our clients receive quality schools that stand the test of time, honor the community, and reflect next-generation learning.

CBRE'S EXPERIENCE INCLUDES:

- Flexibility in learning environments to allow for a variety of teaching and learning styles
- Development and use of high-tech learning environments
- Design of career and technical education centers
- Sustainability and energy-conscious design
- Safety and security factors - use of CPTED (Crime Prevention Through Environmental Design) principles
- Schools as community centers
- Creative use of furniture and equipment to facilitate learning styles

Principles of next-generation learning environments and advancements in technology are driving change in educational spaces. Schools have the ability to inspire curiosity, encourage inquiry and facilitate the transfer of knowledge.

CBRE PROJECT MANAGEMENT ADVANTAGE

K-12 EDUCATION EXPERTISE

Our depth of experience in K-12 education projects, together with our proven process and market knowledge, provides us with a unique ability to successfully manage school projects and programs. Successful projects begin with solid teams. We understand this dynamic and can help you select the very best design and construction partners.

TRANSPARENT APPROACH

We enable an auditable process of informed decision-making. Our industry-leading processes and tools provide the transparency, control and governance needed for clients to make informed decisions, enable stakeholder consultation, and manage organizational change. We recognize the great responsibility of being careful stewards of education funds. We deliver proactive cost management, thereby optimizing financial planning and control.

TRUSTED ADVISOR

We create lasting value for our clients.

As a third-party representative, we protect your interests from a financial, contract and risk perspective while creating lasting value through informed decisions at all project phases. We lead teams and create cost savings to deliver progressive learning environments.



PROJECT MANAGEMENT PROCESS

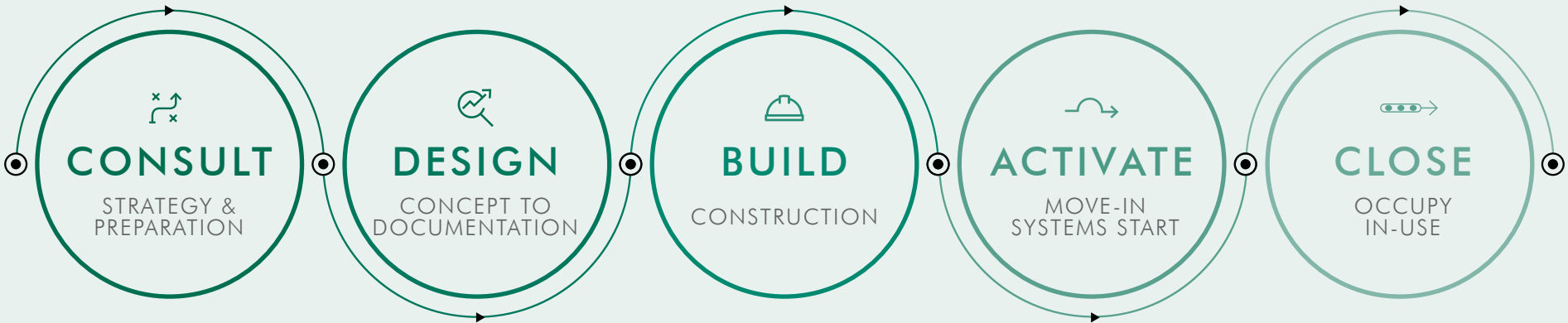
We provide our clients with a completely integrated end-to-end solution ranging from assessing a client’s real estate needs, through site search and options analysis, business case support, budget and schedule development, design and consulting team assembly, design oversight, construction oversight, and move management.

As your independent advocate and advisor, our project management team will work to negotiate project costs, mitigate risk, accelerate project delivery and maximize scheduling opportunities on your behalf. We’ll manage your project’s budget, schedule and scope as if it was our own, protecting your interests throughout the entire journey.

80%

of savings result
from decisions made
before construction

FIVE PHASE PROCESS



PROJECT MANAGEMENT TECHNOLOGY

Kahua is our customizable, web-based project management technology solution available on all platforms, including mobile. This project management technology solution supports accurate, real-time reporting and ensures consistent alignment of client goals with delivery performance.

It is the most intuitive, configurable and user-friendly solution on the market, utilizing a multi-layered security strategy to ensure that project data is safely shared with the right people. The user-friendly interface, robust functionality and advanced reporting capability of Kahua improves collaboration between project managers, team members, vendors, clients, and partners.

Kahua enhances the quality of project deliverables and makes it easier and more efficient to manage and track all aspects of project delivery, resulting in greater quality, improved communication, better compliance with regulatory requirements, real-time reporting of project performance details, and greater value for our clients.



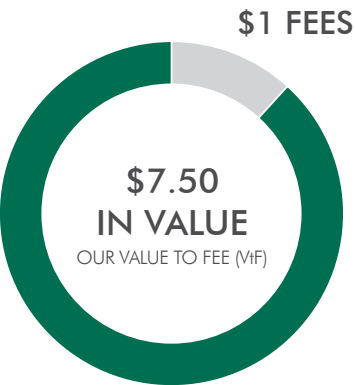
IT'S SIMPLE. WE PAY FOR OURSELVES.

Involving CBRE | Heery Project Management at the earliest stages of a project, where clear visioning and identification of goals leads to prudent design, construction and operations decisions, can realize the greatest impact on cost and schedule.

From the outset, our project managers identify opportunities to reduce risk, assess building condition factors, engage the best design and construction teams, advise on contract matters, and ultimately set the project up for success.

This is the core business of our Project Management team and we are committed to achieving positive outcomes for our clients.

CBRE measures the value delivered to clients through project management. Our Value to Fee (VtF) metric measures the return on investment in our services. For every dollar invested in CBRE Project Management services, our clients receive an average of \$7.50 in value and savings.

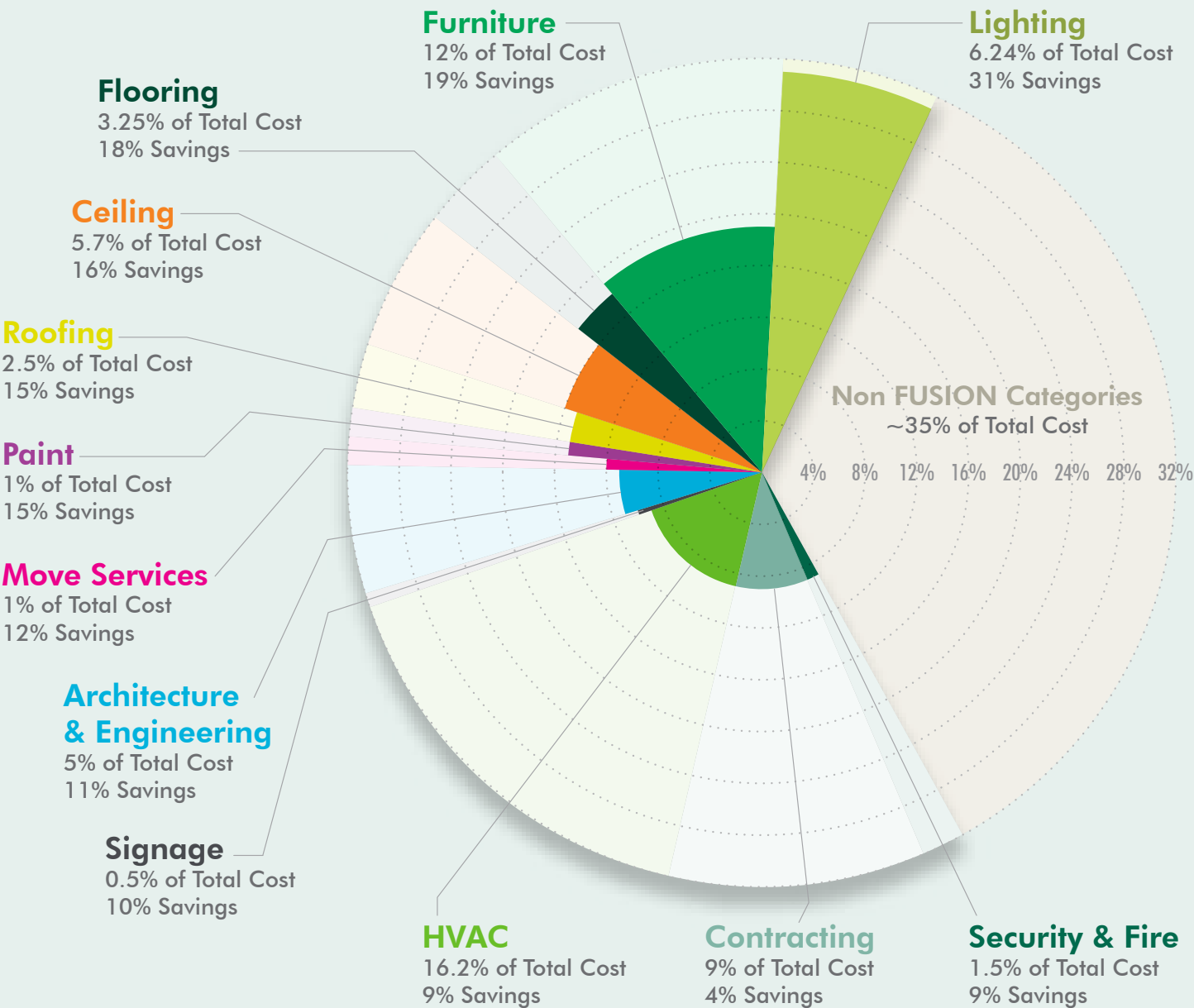


In the earliest stages of a project is where CBRE's expertise in the local market, the industry, and education projects has tremendous impact on cost avoidance by significantly reducing the likelihood of costly change orders at later stages of design and construction.

OUR PURCHASING POWER SAVES YOU MONEY.

With over \$57 billion in managed capital spend, CBRE's Fusion supply chain creates a distinct advantage for clients by leveraging our purchasing power with some of the most prominent suppliers of building systems, products and services. The Fusion supply chain drives savings across approximately 65% of typical project cost categories and increases speed-to-market delivery.


Fusion is a true value-add service for our Project Management clients with no additional fees. Clients have access to preferred pricing, exclusive offerings, and select complimentary support services from Fusion partners, among other benefits.



OUR SERVICE LIST

CBRE Project Management partners with clients to deliver projects from “concept to completion” by implementing a full-suite of customized services for the built environment that optimize projects, minimize client risks, and drive long-term value.

Ambulatory Network Planning • Brand Enhancement • Capital Planning • Cost Consulting • Decommissioning • Document Control • Energy • Engineering • Environmental & Feasibility • Facility Condition Assessments • Furniture Advisory • Health & Safety • Interior Design • Master Planning • Move Management • Occupancy Planning & Management • Principal Delivery • Program Management • Project Management Office • Sustainability • Tenant Coordination • Testing & Commissioning • Workplace Consulting • Workplace Technology Project Management



PROJECT CASE STUDIES



CBRE IS THE WORLD LEADER

With over 100,000 professionals working in over 111 countries worldwide, CBRE's global platform provides distinct advantages for every client we serve. We turn scale into strength, expense into performance, and property into prosperity.

Our services include strategic advice and execution for property sales and leasing; corporate services; property, facilities and project management; mortgage banking; appraisal and valuation; development services; investment management; and research and consulting.

Our 7,940+ Project Management professionals manage projects, portfolios and multi-market assignments both as a standalone service and as part of an integrated offering with CBRE's full-suite real estate services.

Regardless of size, industry or geographic location, our project management services can be scaled up or down and tailored to suit any company's unique business objectives.

GLOBAL PROJECT MANAGEMENT BY THE NUMBERS:

7,940+

PROJECT
MANAGEMENT
PERSONNEL

51K+

PROJECTS
MANAGED

\$124B+

CAPITAL
EXPENSES
MANAGED

OUR EXPERIENCE SPEAKS FOR ITSELF

Our extensive K-12 experience involves the completion of over 175,000 classrooms for more than 190 school districts.

\$33B+

in school
construction
completed

“This strategy generated major savings, standardization for the FM mechanics and enabled the district to make life cycle decisions to reduce not only first costs but annual operating and maintenance costs for CCSD.”

William H. Lewis,
Former Chief Operating Officer for Capital Program
Charleston County School District

“The successful outcome of your work was a school that opened on-time and on-budget. Both you and the personnel in your section conducted themselves in a very professional manner that made a very positive impact on the ultimate success of this project.”

William Brown, PhD, former Director, School Design
& Construction, Howard Co. Public Schools

“The three primary goals for most projects, on time, on schedule and a quality product, have been achieved. The savings produced through good management has enabled the Monroe County School District to purchase many upgrades in materials plus an increase in the project scope.”

Ken East, Construction Program Management
Services, Monroe County School District



CASE STUDY: Portland Public Schools

Franklin High School

Key Information:

Location: Portland, OR
Size: 280,000 SF
Cost: \$113M of managed cost

Services Rendered:
Program Management, Construction
Management, Scheduling, Design Review,
CM/GC Consulting, MIS e-Builder Implementation

OUR IMPACT

The modernized Franklin High School is a significant step forward in transforming Portland Public School's facilities into next generation learning environments. The learning spaces have been modernized, reconfigured, and updated with a focus on indoor environmental quality, sustainability, and historic preservation.

The project included:

- A new fine and performing arts center is the beacon of the modernized campus at the intersection of SE Woodward and 52nd Avenue.
- A dynamic, two-story entry lobby in the historic main building provides students and the community a space to gather, work, and learn.
- A 90-degree realignment of the track and field was completed to accommodate the new athletic/gym and educational facility.
- Repurposed the existing auditorium as the new media center to allow this majestic space to continue to serve the Franklin community.
- The 1915 building was seismically reinforced with over 30 shear walls and structural reinforcement steel.
- Entire facility is fully ADA accessible with new elevators and wheelchair lifts.
- All lights are LED for greater energy efficiency.
- New rooftop solar panels are generating power for the school.



"Our new school allows us to provide students with a facility worthy of learning in the 21st Century."

Chris Frazier
FHS Vice Principal

THE CHALLENGE

Franklin High School was built in 1917 historic preservation efforts and the lack of as-built drawings presented challenges to the project.

The school is named after Benjamin Franklin, printer, author, scientist, inventor, musician, and revolutionary. A hand carved wooden figure of Franklin welcomes guests in the Performing Arts lobby.

The 2012 Portland Public Schools Bond was the culmination of

significant community engagement and input. Public Design Workshops provided students and school communities the opportunity to help shape the master and schematic designs. Design Advisory Groups and Master Planning Committees comprised of students and community stakeholders provided feedback for the PPS Design Teams. The support and involvement of the community for the modernization included various stakeholder groups.





CASE STUDY: Beverly Middle School

Key Information:

Location: Beverly, MA
Size: 231,000 SF
Cost: Confidential

Services Rendered:
Program Management, Construction Management,
Scheduling, Design Review, CM/GC Consulting,
MIS e-Builder Implementation

OUR IMPACT

The new four-story, 231,000 square foot Beverly Middle School is the largest middle school in the Commonwealth of Massachusetts, serving over 1,400 students in grades 5-8.

The progressive program and building layout are a result of many educational visioning workshops, which included a review of the work of numerous forward-thinking educators and are evidence of how educational programs and environments can be structured to deliver positive educational, social, and emotional outcomes not previously achievable. It included a look at past practices and a thoughtful review of the evolution of education and the way society, economics, education, and technology have evolved to greatly influence the modern educational environment.

The new facility includes maker-space in each of the building's 12 "neighborhoods" which actively support, encourage, and facilitate project-based learning and gives the students numerous opportunities for a variety of cross-discipline collaboration. Significant attention has been given to providing critical special education spaces for autistic spectrum students

for life skills development, as well as special two-story program spaces such as the technology applications and production lab and multi-media and video applications lab. The school contains 39 general classrooms, as well as 12 science laboratories, media center, gymnasium, and auditorium. In addition to interior education spaces, the school campus site design includes an outdoor learning space that has a small amphitheater to support small performances or opportunities for Socratic learning experiences.

The construction phase was completed on time and early construction packages were issued for steel, piles, foundations, and site work which allowed work to continue as the construction documents were completed and resulted in a corresponding savings of about \$3 million.

THE CHALLENGE

The city’s rising student enrollment rate challenged the team to complete the project as soon as possible to minimize the impact of the overcrowding condition.

The subsurface conditions at the site of Beverly Middle School consisted of up to 10 feet of loose fill. Below the crust, the clay was very soft and extended to depths of up to 65 feet beneath the ground surface. This posed a challenge for delivering on an aggressive schedule.



THE SOLUTION

The project manager recommended the Construction Management at Risk delivery method as this would result in completing and opening a new school a year sooner than if the more traditional Design-Bid-Build delivery was used.

Selection of the designer and the CMR were placed on an accelerated timeline which resulted in the CMR being able to contribute to the establishment of the construction budget prior to state funding approval. This is an atypical process but resulted in a construction budget established and “owned” by the entire design and construction team prior to the approval of the schematic design budget. With the CMR engaged early, demolition and site work started 1 year prior to the completion of construction documents.

Working with the builder during preconstruction and being conscious of the construction seasons as to when construction activities would take place, the project manager encouraged the team to select products and systems that were faster to install, had less trade

interfaces, and were less temperature sensitive. These proactive measures reduced schedule risk and greatly contributed to the successful, on-time completion of this project.

To maintain schedule and address geotechnical conditions, wick drains were installed to increase the rate of settlement of existing natural material as the aggressive schedule could not accommodate the more traditional approach of pre-loading the area to induce settlement.





CASE STUDY:
Arlington Public Schools

Discovery Elementary School

OUR IMPACT

CBRE | Heery provided construction management, cost estimating and value engineering services for the new 97,588-SF Discovery Elementary School.

The building consists of a two-story steel frame superstructure with Insulated Concrete Form (ICF) bearing walls. The new school is co-located on the site of the previously existing Williamsburg Middle School in North Arlington. It has the distinction of being the county’s first new elementary in 11 years.

During the design phase, CBRE | Heery provided a full-time project manager along with in-house support personnel for design review and estimating services. CBRE | Heery’s estimating team provided a feasibility study estimate, schematic design and design development estimates, a 90%

construction document estimate, and assisted the Owner and A/E with four successive Value Engineering (VE) and scope reduction studies. The estimators also provided updated construction estimates to accompany each round of VE and scope reduction.

During construction, CBRE | Heery maintained a full-time, on-site presence with five team members at the peak of construction, including a Project Manager, Project Engineer, Architectural/Structural Quality Control Superintendent, MEP QC Superintendent, and Building Envelope Specialist.

“[CBRE | Heery] has provided Discovery with a group of individuals who has repeatedly gone above and beyond. They have educated staff on building functions, collaborated with administration, and built rapport with the wider school community. Individual teachers and custodians have sought help from Heery staff outside the scope of their job descriptions, and Heery has continually cheerfully abided without complaint. I’m sincerely thankful for all that the Heery International has done for the Discovery community.”

Erin Russo, Principal, Discovery Elementary School

Key Information:

Location: Arlington, VA
Size: 97,588 SF
Cost: \$33M of managed cost

Services Rendered:
Program Management, Construction Management,
Cost Estimating, Value Engineering and Scheduling

THE CHALLENGE

CBRE | Heery managed and coordinated many self-performed quality control measures for most of the aforementioned sustainable features; provided a full-time building envelope specialist to inspect installation of the air vapor barrier, curtainwall/storefront assemblies, brick veneer and fiber cement siding; contracted and managed the building envelope commissioning agent that performed full-time inspections of roof installations and periodic inspections on other envelope assemblies to assist the CBRE | Heery building envelope specialist.

CBRE | Heery’s commitment to obtaining the highest level of quality provided for net zero critical systems that were installed in accordance with the contract documents and functioned as designed. Obtaining net zero energy for this facility returns approximately \$120,000 annually to APS’ operating budget while allowing the school community to enjoy the environmental benefits of a fully offset carbon footprint.



THE SOLUTION

In addition to CBRE | Heery’s focus on getting the contractor to the finish line, the team also had to consider the owner’s FF&E deliveries and teacher move-ins in a much more compressed schedule. The team implemented a phased move-in approach that turned over groups of grade-level rooms and support spaces sequentially. The school staff embraced the approach, rallied PTA volunteers and teamed up to work as a village in groups of rooms as they became available. Clear lines of communication and coordination were critical throughout this process as CBRE | Heery managed the move.

The design provided for a 21st Century autonomous elementary school with its own ageappropriate play areas, gymnasium, kitchen/ dining and administration with entry control provisions. The holistic project promoted collaboration, community and connection, emphasizing the next generation of learning environments. This project was completed on time.





CASE STUDY: Houston Independent School District

Sterling Aviation High School

Key Information:

Location: Houston, TX
Cost: \$72.3M of managed cost

Services Rendered:
Overall Planning, Project Management, Design
Review, Bid/Award Phase Services, FF&E, Construction
Management, Move Coordination, Project Closeout
and Warranty Phase Services

OUR IMPACT

HISD's 2012 Bond Program included a replacement of Sterling Aviation High School, a \$72.3 million (\$45.4 million construction value), 1,800 student capacity school to address the growing demand for learning and education in the fields of logistics, global supply and aviation. The project includes a 237,000 sq. ft. two-story building with more than 60 learning centers (classrooms) and multiple wet labs with outdoor access serving grades 9 through 12, and will be LEED Silver certified. This innovative CTE School also has its very own three-story glass airplane hangar (complete with two airplanes), a "learning runway", as well as a control tower that overlooks the adjacent Houston Hobby Airport.

CBRE | Heery coordinated the activities of the architects, various consultants, and construction manager at-risk, with ultimate responsibility for the project being delivered on-time and within budget to HISD's quality standards. CBRE | Heery also provided reports and project control associated with the project budgets, schedules, and quality from inception through facility startup, including presentations to the Board of Trustees and surrounding Community, participation with the Project Advisory Team and District

advisory committees and participation in community meetings involving the design and construction of this new facility. The Project Team is providing overall planning, project management, design review, bid/award phase services, construction management, FF&E, move coordination, project closeout and warranty phase services.



To learn more, reach out to:

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