
MARCH 2021

The State of Healthcare Construction

ROBINS & MORTON

Building With Purpose®

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Introduction

This inaugural edition of The State of Healthcare Construction began as a series of conversations around the sweeping impact of a global pandemic on our clients, team members, and communities. We realized early that healthcare was entering a period of amplified complexity. We also learned that as a partner with healthcare clients, our services and teams were in for a period of unprecedented changes as well.

The idea behind this report is to share the experiences and perspectives of healthcare construction planners, architects, clients, trade contractors, and Robins & Morton team members as we together respond to new needs and priorities.

One major takeaway from the report's research and interviews is encouraging. The foundational work towards fulfilling a collaborative, integrated team strategy on all projects – and its corresponding adoption of Lean practices – allows our healthcare clients to quickly evaluate and implement their capital construction programs to address changing needs.

We hope that our focus on three key areas of change and knowledge provides helpful guidance and inspires forward thinking. The recent experiences of our design and building partners in prefabrication strategies, infrastructure investments, and collaborative preconstruction represent a promising opportunity for clients.

It is fitting that we introduce this report in our 75th year. This milestone reinforces that our industry is continuously evolving, and that change and success go hand-in-hand.

Lastly, we want to thank our contributors for their invaluable insights.

FROM THE CHAIRMAN & CEO



We can say for certain that none of us ever imagined the immense changes and challenges we all experienced over the past twelve months. The inspired response to these challenges, especially by those involved in delivering and supporting healthcare, is a commendable achievement on every level.

With the idea of sharing lessons learned and developments observed during this time of rapid change, we compiled our inaugural State of Healthcare Construction report. It includes perspectives on the trends, issues, and opportunities seen firsthand by building team partners inside and outside the company. We hope you find it informative.

A handwritten signature in black ink, appearing to read 'B. Morton'.

Bill Morton
Chairman & CEO

02

Investing in Infrastructure

Catalysts Include Efficiency, Expansion, and Resiliency



U.S. healthcare systems spend a combined \$8.8 billion annually on energy.¹

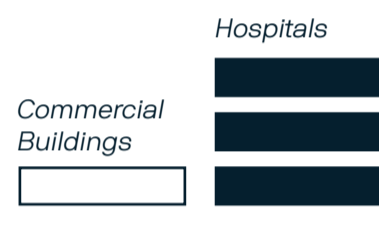
In fact, energy consumption per square foot in a hospital is typically three times higher than other commercial buildings.

“When you consider that hospitals run 24/7/365, and often contain high-demand spaces such as onsite data centers, imaging equipment, and food services, it is easy to see why these buildings are intensive consumers of energy,” said Kate Everett, PE, a mechanical engineer and senior principal with SMRT Architects and Engineers.

That intensity has an upside. Everett reports that in recent months, the conversation on energy is shifting as many health systems face a challenging fiscal climate after scaling back revenue-producing services over the past year or more. Interest in reducing energy costs, cutting carbon use, and improving the efficiency of infrastructure and building systems is rising.

“You have to make the financial case first and foremost, especially since hospital infrastructure is traditionally seen as a fixed-cost item,” Everett explained. “The opportunity is there to extract cost on an ongoing basis and better manage that cost through selective investments and upgrades.”

She cited the energy reduction programs and benchmarking provided by the American Society of Hospital Engineers (ASHE) through their Energy to Care² program. ASHE reports that hospitals and healthcare facilities participating in the program successfully shifted \$400 million in energy savings back into patient care. The premise behind the program is to engage hospital engineers, builders, and consultants who understand the challenges of infrastructure management in healthcare facilities where there is often limited time, staff, and budget to work together on efficiency solutions.



Typical energy consumption per square foot is three times higher than other commercial buildings

¹Commercial Buildings Energy Consumption Survey; U.S. Energy Information Administration

²<https://www.energytocare.org>

PERFORMANCE PROFIT

Jim Ferris, PE, an engineer and chief operating officer with TLC Engineering Solutions, sees the untapped opportunity every day. “We always talk about the potential for energy savings to go direct to the client’s profit line savings,” he said. “When a significant and ongoing expense is reduced or avoided, it amounts to a performance profit.”

Drawing on his company’s experience designing mechanical, electrical, fire protection, and hospital systems throughout the U.S., Ferris pointed to energy performance studies his company completed documenting aging and obsolete infrastructure equipment replacement. “When you see that a new facility performs at half the utility consumption than its predecessor, what a competitive advantage that facility. The performance profit makes it easy for them to hire more clinical staff and focus more on patient care.”

HOSPITAL EXPANSION DECISIONS

When capital expansion and renovation projects start the planning and design process, a window of opportunity opens for a holistic, calculated review of what may be possible.

“Healthcare clients have energy management options today that simply did not exist a few years ago,” said Kyle Davis, senior mechanical preconstruction manager with Robins & Morton. “Any expansion or renovation project is our best opportunity to research methods and equipment that can improve operations and reduce cost and risk.”

Improvements can be made at any scale, and the benefit of even incremental upgrading done across phases will add up. Smart control systems, informed by data harnessed through Artificial Intelligence, precisely align output efficiency and coordinate with multiple building systems to optimize energy use.

When everything is connected and interoperable, these new intelligent systems can reduce ongoing operations costs and the need for facility staff intervention.



A typical hospital campus has 26 local – and often unconnected – systems in its infrastructure collection.

CENTRAL ENERGY PLANTS

New patient space and hospital expansion projects completed by Robins & Morton provide a proof point on the tangible savings achieved. A \$70 million bed tower and emergency department expansion for AdventHealth in Lake Country, Florida, is an example of capital projects that generate long-term savings. The hospital owned an aging Central Energy Plant. The original plan within the expansion program called for selective replacement of its failing equipment items – about 25% of what existed.

However, a holistic review of options and long-term savings revealed that a more aggressive replacement and upgrade scenario, including investing in a new control system to optimize efficiency, would yield a far better and more trouble-free future.



The return on investment, created by a projected 35% to 40% improvement in energy plant performance, utility savings, and avoided maintenance costs, allowed the hospital to invest in the upfront cost from project contingency reserves. The savings over time will be placed into patient care.



This icon designates examples of Robins & Morton projects or initiatives that have added value for clients across the country.

RESILIENCE AND RISK MANAGEMENT

The vulnerability of hospital assets – its systems and equipment for heating, cooling, power, data, and telecommunications for example – is a significant concern for healthcare administrators. More frequent and increasingly powerful weather events inflict power interruptions, wind damage, flooding, and water supply issues. Consequently, initiatives to achieve greater resiliency through flood control and system redundancy are in place within many health systems.

In addition to climate-related risk, a new and less visible threat is becoming an important factor in planning and building communications and network infrastructure.

Cyber security provider VMware Carbon Black recently released 2020 data that illustrates this emerging menace for healthcare organizations. Researchers found that 239.4 million attempted cyberattacks targeted healthcare facilities in 2020³.

As clinicians and patients rely more on telehealth, virtual visits, and centralized communication platforms, the prospect of identity and records theft and the disruption to hospital systems – including infrastructure – will require a new vigilance on the part of healthcare teams in 2021 and beyond.

³Security Magazine

KEY POINTS

- Drivers for action include infrastructure obsolescence, opportunity for measurable energy savings, expansion-based energy demand, and a desire to enhance the resiliency of crucial systems - power, data, heating, cooling and telecommunications.
- Expansion and renovation projects present a high level of cost reduction and energy efficiency opportunity; the new systems' resulting savings can generate a net savings in project financing.
- Taking a holistic approach to infrastructure investments – a trend underway prior to the pandemic's outbreak – continues to provide opportunities to reduce energy and utility costs and direct these recurring savings for patient care use. New technology and equipment supports more favorable ROIs.
- Factors driving investment include infrastructure obsolescence, opportunity for energy savings, expansion-based energy demand, and a desire to enhance the resilience of crucial systems such as power, data, heating, cooling and telecommunications.

03

Finding the Advantage: Offsite Construction and Prefabrication

Client Needs and Strategy Define What's Possible



The surge in prefabrication, offsite manufacturing, and modular construction is a rare form of revolution – one where all parties are on the same side. When strategically planned, prefabrication can speed project delivery, reduce owner cost, mitigate skilled labor shortages, and advance safety, quality, and environmental responsibility.

Interest in offsite construction accelerated in 2020 when COVID-19 intensified an already tight labor pool and required elevated health protocols, thus complicating workplans for healthcare projects. Instead of a ‘nice to have’ option, the idea of building offsite in a controlled, more easily distanced work environment became a ‘need to have’ conversation among hospital building teams.

NECESSITY FOR A VETTING PROCESS

As with any fast-growing movement, industry standards and best practices for prefabrication evolve a few beats behind its adoption. In the movement to quickly introduce prefabrication, what is often missing is the data to help determine its tangible value. Clients and their teams are challenged to replace conventional approaches without sound benchmarks and evaluation tools.

“Decisions on whether to use prefab and offsite construction need to be strategic, not tactical,” said Robins & Morton’s Bill Stevens, a senior superintendent with more than a decade of experience in utilizing prefabrication. “A lot of decisions to implement go forward, whether sensible or not. We emphasize, based on our work on dozens of these projects, the need for a data-driven system of evaluating what parts of the project, and perhaps the project as a whole, are appropriate for prefab investments. Decisions need to be based on a process of objective review and criteria checks,” he said.



In response to a growing need for vetting and visualizing the prefabrication process, Robins & Morton developed its own holistic approach to prefabrication for clients and their design and building teams. Called SmartFab[®], it offers a project-specific, customizable approach that meets the needs of clients and their teams.

Robert Gambrell, senior vice president at Robins & Morton, described a central dilemma that SmartFab is designed to help clients solve. “Every project and every installation is a candidate for offsite fabrication, but what may be overlooked is answering a fundamental question, ‘Does it add value?’” Gambrell said.

“Is there an opportunity to improve the schedule, to improve the quality, to lower the workforce curve? Prefabrication is an exciting trend, and we want to match the excitement with a sound, practical process of evaluation and vetting.”

MOVING BEYOND SINGLE-TRADE ASSESSMENT

Gambrell cites the example of solving the many unknowns around the integration of trade contractor work scopes. A big advantage of building offsite in a controlled manufacturing environment is bringing different professional trade contractors together and integrating their production.

For instance, if the strategy is to achieve efficiencies by integrating the work scope of the drywall, mechanical, and electrical contractors, it is important to determine if they can work together in an offsite production space to deliver a finished product to the site as a team. “Looking at trades separately and assessing their individual readiness for a modular approach isn’t enough to reveal whether they can integrate their work, their technology, and their people,” Gambrell explained.

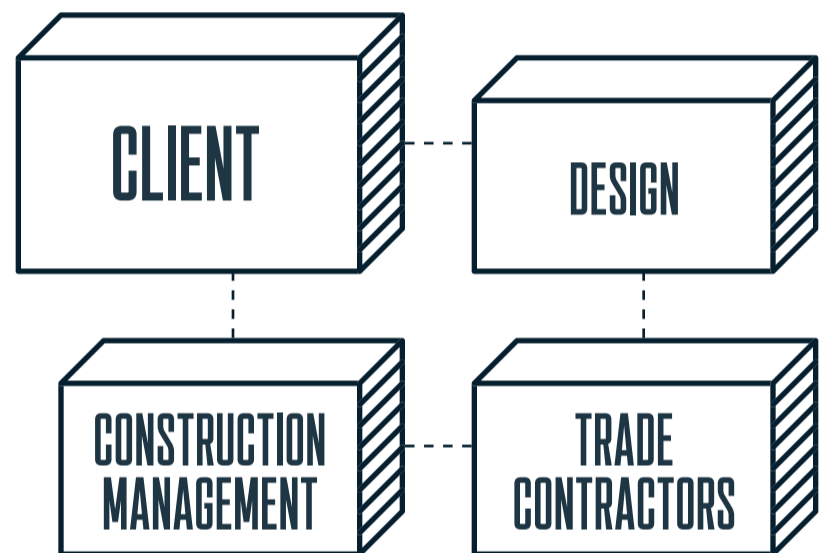
“Bringing all parties, including the client, to the table at the earliest possible opportunity allows a vetting of this question of adding value – or not. If not, then don’t do it,” Gambrell said. “But if the evaluation proves that we affirm all the criteria and the data confirms the value, then certainly pursue it and get it designed to make it the most efficient installation possible.”

**CLIENT
SUPPORT AND
PARTICIPATION A
KEY**

The client’s presence at the table, together with design, construction management, and trade contractors, is crucial for these early decisions. Mike Thompson, Robins & Morton’s vice president of operational support and planning, points out how prefabrication strategy decisions hinge on fulfilling the client’s vision and needs. “The strategy and planning begin with addressing the client’s most important concerns,” he said. “What does success look like for their organization? Is it speed and a streamlined schedule, cost efficiency, community involvement? Everyone on the project team should know what drives success and come together to achieve it.”

Early engagement and dialogue inform a collaborative process that leads to effective decisions on the appropriate role of prefabrication, Thompson emphasized. “To be smart and intentional about this, decisions on what will

be built offsite need to be made together before design documents are developed. Once the design is determined, there is far less opportunity to create impactful outcomes through prefabrication.”



REDIRECTING TRADITIONS

What gets in the way of effective prefabrication, even when all parties are interested and at the table? Kyle Davis of Robins & Morton believes traditions in the construction process are slow to change. “We’ve all been building the same way for so long that it is deeply ingrained. We do the same thing every day, absent any force for change. We have our own processes. The most difficult thing in my opinion comes when we are seeking a big change in tradition, where we are trying to maximize modular opportunities on the front end and encourage prefabrication with our trade contractors,” Davis observed. “We all need to figure out a guiding strategy that the builder, the client, the design team, and the trade contractors can adopt on how to integrate our processes differently. It means we need to share resources, to share ideas, and to approach things from a like-minded point of view.”

As prefabrication knowledge and experience advance over time, Davis believes that the lessons learned and the enthusiasm gained among all team members will lead to even greater outcomes ahead. “We all learn from our direct experiences. If you are a young engineer, a young architect, or a young builder, and you work on your first prefab project, you apply that knowledge and enthusiasm for what’s possible to the next one.”

KEY POINTS

- When strategically identified early in the project, prefabrication initiatives with specific, quantifiable goals can speed project delivery, reduce cost, mitigate skilled labor shortages, and advance safety, quality, and environmental responsibility.
- This process works best when design and construction partners work collaboratively early in the process to assess opportunities in prefabrication and modular construction.
- Not every project is suited to modular and prefabrication. Decisions need to be based on a process of objective review and criteria checks to benefit from an informed evaluation of the appropriate strategy and scope of a prefab approach.

SMARTFAB® CASE STUDY

In 2019, Carilion Clinic awarded Robins & Morton a \$350 million expansion to their Roanoke, Virginia, hospital campus – Carilion Roanoke Memorial Hospital. The expansion includes a 507,000-square-foot patient tower.

The project was identified as an ideal candidate to apply the SmartFab® approach because of its size, incredibly tight site, challenging logistics and downtown location adjacent to major thoroughfares. Because the SmartFab® approach is customized based on project needs, establishing this project's participation in the design phase was essential as it encouraged the entire project delivery team to begin collaborating from the onset.



The idea behind SmartFab® is to maximize the value of each definable feature of a project through identifying and systematically implementing modular system and prefabricated solutions while eliminating waste and redundancy. To accomplish this, the SmartFab® approach also integrates quality, productivity, and logistics (QPL) planning.

As a part of the holistic approach, Robins & Morton held multi-hour SmartFab® sessions with each incoming trade contractor and will continue this process as the final design materializes.

Since the work at Carilion Roanoke Memorial Hospital will not conclude until 2025, the largest initiatives to date are in their early phases. For example, one of the most critical pieces to the SmartFab® strategy is the offsite prefabrication warehouse that will serve as a hub for the foundations and underground mechanical, electrical and plumbing (MEP) systems. In addition to encouraging collaboration among the trades in maximizing prefabrication opportunities, it also provides a controlled environment to boost quality, improve productivity, and mitigate the challenges associated with material laydown on a tight site, providing a central location to consolidate materials for just-in-time deliveries.

SMARTFAB® CASE STUDY

Aside from identifying modular and prefabrication options, the sessions led to additional solutions:

- Resequencing door frame installations to ensure they will not be damaged during construction
- Using concrete truck drivers with advanced American Concrete Institute (ACI) certifications to help manage the quality of the particularly difficult concrete installation
- Single sourcing onsite rental equipment, realizing \$1 million in savings and improving safety and quality
- Using a Telescopic Handler instead of a tower crane, resulting in budget, safety and quality improvements
- Pre-coring each foundation to locate bedrock, reduce contingency, improve production and minimize unforeseen delays, which could result in an estimated \$1,000,000 in savings
- Virtual Reality (VR) mock-ups of patient rooms and other spaces saved another \$500,000 over conventional mock-ups; Carilion Clinic will also use these VR mock-ups in their simulation lab for testing, education and performance studies



04

Changing the Course of Healthcare Construction



Client-preferred methods in project delivery show us a gradual, 40-year evolution from an era defined by hard-bid, siloed, and sometimes-contentious relationships to contemporary practices where **clients, designers, and builders work together** in an integrated, technology-and-Lean-informed approach. The steady arc of progress toward collaboration accelerated in the past twelve months as teams confronted the unimaginable urgencies of COVID-19. The pace of change and innovation, already quickening before March 2020, is reshaping future best practices for the construction industry.



For Robins & Morton, the company's collaborative approach was put to the test in April 2020, when the U.S. Army Corps of Engineers selected Robins & Morton and RLF Architects to convert the Miami Beach Convention Center into a 450-bed field hospital. Racing against time, 20 trade contractors were onboarded, and a peak of 250 people worked around the clock in alternating shifts to complete the project in under two weeks.



Among the building team, the most important lesson learned from this crisis-driven experience was the reinforcement that collaboration and integration, when based on trust and a shared objective, solves complex problems with a remarkable efficiency.

“Turning a convention center into a working hospital in such a short time seemed impossible on the surface,” said Robins & Morton senior project manager Johnathan Peavy. “But we quickly came to rely on and integrate the collective experience drawn from multiple disciplines, all of us striving towards the same goal.”

Romano Nickerson, an architect, Lean coach, and principal with Boulder Associates Architects, describes the strength of a team dynamic.

“What is so special about an integrated form of project delivery is that when you break away from the traditional silos, you form these connections where you care about the success of other team partners, and not just the professional work product they put out there,” he said.

CREATING SPONTANEOUS VALUE

“That is the point where the team can do some pretty magical things, and where you get these wonderful success stories from driving all kinds of value into the project. To me, that is the important transformation taking place,” said Nickerson.

Cross-discipline collaboration also inspires unplanned advantages for the client and the project team. “If people respect each other and educate each other on how to create a safer and more healthy environment, there are tangible benefits that come with that mindset,” said Jennifer Lacy, Lean practice leader at Robins & Morton. “The advantage shows up in safety measurements and in low unplanned change orders when people know that others across the board have their back. If you do the work upfront together and build trust, so many other good things occur naturally.”

SHIFTING CLIENT NEEDS AND WANTS

Nickerson, Lacy and others working in healthcare construction reveal how a new set of client needs and expectations is pushing the transformation forward. As health systems around the world plan their rebounds from the financial consequences of the pandemic and repurpose their built environment as part of that planning, the pace and urgency of decision-making increases.

“Clients are making big decisions and seeking to stretch their budgets as much as possible now,” said Scott Bullock, preconstruction division manager at Robins & Morton. “Trust is front and center, as is speed in many cases. Clients are expressing the need to mobilize the right mix of outside expertise to help them find and implement solutions on the fly – people they can count on to help solve issues their folks never had to deal with before.”

MATERIALS AND LABOR COST

Another top-of-mind priority is controlling cost. Volatility, supply chain issues, and steady price increases for steel, lumber, metal panel systems, and other primary construction materials, have surged as much as 20% to 25% in many regions of the country. January's Producer Price Index shows an increase of 73% in softwood lumber over a 12-month window. Iron and steel scrap surged 50.8% in the same period, including a 25.8% rise from November to December. Labor costs, while avoiding the volatility of materials markets, are also on the rise in many regions.

MATERIAL	% CHANGE DEC. 2020 TO JAN. 2021	% CHANGE JAN. 2020 TO JAN. 2021
Fabricated structural metal products	0.5%	3.2%
Iron and steel	8.2%	15.6%
Steel mill products	5.2%	7.4%
Softwood lumber	14%	73%

SOURCE: Associated Builders and Contractors analysis of BLS data



Supply chain disruptions due to COVID-19 impacts at the manufacturing level and throughout the global distribution channels are impacting pricing volatility. The availability of construction labor, particularly in specialty trades such as HVAC and low voltage, continues to affect cost estimating.

SPEEDING UP NEEDED PROJECTS; FUTUREPROOFING ASSETS

The urgency to adapt existing spaces and, in some cases, construct new facilities to accommodate projected demand for outpatient procedures or longer-term surge space, as well as making up for lost time, are placing many client programs on a fast track. “We are definitely seeing the pressure of speed-to-market issue ramping up desired timelines,” said Ellen Belknap, a healthcare architect and president of SMRT Architects and Engineers. “The reasons around speeding up may differ of course, with some of the work related to COVID-19 changes. But some of what we see is due to a lot of projects placed on pause in 2020. Once everyone agrees on going forward, the project is already a year behind.”

Healthcare system leaders are also evaluating ways to integrate more resilient and adaptive readiness programs for any future patient surges. “No one anticipated the capacity challenges seen when pandemic hospitalizations surged,” said Robins & Morton’s Bullock. “Yet everyone now realizes there could be a future pandemic or other public health crisis or local disaster that will test patient space capacity in the future. Hospital executives are balancing the need to provide excess bed space with their need to generate revenue.

“Flexibility and futureproofing are the new catchwords.”

**ADAPTABLE,
FUTUREPROOF
OUTCOMES NEEDED**

Accomplishing client flexibility objectives and moving along a fast track will require team members with experience in planning and building adaptable, future-ready spaces. “This adaptability will be a fundamental characteristic of every future renovation or newly built project,” Bullock predicted. “We need to develop a pathway for every client to do this creatively, and to accomplish it within a targeted construction cost.”

Prefabrication and offsite construction offer an important step on that pathway, as described in the previous section of this report. When combined with an early, cross-discipline project approach, the need for heightened cost economy, speed of schedule, and quality, prefabrication is a crucial strategy, explained Kyle Davis. “If we can identify the most opportune elements for prefabrication during design development and have the right people at the table, everyone benefits,” he said.

**CREATING BROADER,
MORE DIVERSE
COLLABORATION
- A NEW
PRECONSTRUCTION
FRONTIER**

Achieving success starts early as team members encounter the complex, fast-evolving needs in healthcare design and construction together. “The pandemic experience, combined with what we, as an industry, have learned about creating value for clients, is ushering in a new consensus about project delivery,” said Mike Thompson, vice president of operational support and planning at Robins & Morton.

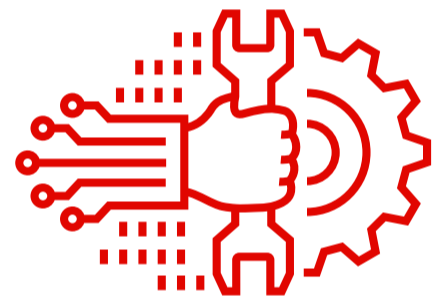
“I think the focus today needs to be on the environment you can build on a project that allows everybody to be successful. And I think what we have learned, through hundreds of collaborative projects and partnering approaches, is that the best way to reach the best possible result is when we work in a purposeful collaboration. Unless you have a healthy team culture and an inclusive, cross-discipline environment where everybody can participate, it is difficult to deliver the highest value to the client.”

SMRT’s Belknap concurs. “The industry and our clients are moving toward earlier engagement of the contractors, trade subcontractors, and the designers in the evolution their projects. In the first half of my career, early teaming was not something we did very often. And now, it is becoming the standard practice and we engage it on 85% of our projects. We feel there’s something wrong if the right people are not at our side,” she said.

The trend towards a planned, early team strategy is seen in the current wave of project Request for Proposals, reports the Robins & Morton marketing team. “While not yet a universal standard, many clients are shifting to integrated-inspired contract methods after seeing the results and endorsements of their peers,” said Robert Gambrell, senior vice president of Robins & Morton.

“I think some of them readily see the value of bringing a construction manager on board early and putting a process in place for a collaborative preconstruction phase,” Gambrell said. “Together, we can develop a process that brings key trade [contractors] in early. The earlier we get their brainpower involved in preconstruction decisions the better the outcome for everyone involved.”

Gambrell describes the shift in perception and definition of preconstruction. “It certainly is changing fast. It used to be that preconstruction was just estimating. Today, it also



means logistics, design assist, prefabrication, safety, and cost, essential elements in any effective project delivery.”

Patrick Duke, managing director for CBRE Healthcare, corroborates the value created by establishing trusted partnerships during preconstruction. “So much of the great work done during COVID-19 would never have happened without the increased collaboration we see today,” he said. “When you understand the impacts of construction in a COVID environment and in a post-COVID project, you instinctively know why responsible decision making requires a diverse range of perspectives and knowledge.”

An additional value point of a broader, more diverse collaboration in design and construction projects is the opportunity to include the local community as a participant.

“To create healthcare experiences that truly work for patients and their families, we need to know the cultural, community, and wellness perspectives of the people we serve, said Jacob Nagib, director of facility operations for Halifax Health in Daytona Beach, Florida.

“What we learn from our engagement in the community is how we can reflect their values and overcome existing barriers to their positive experiences in healthcare. It’s all part of the collaborative spirit we aim for when we problem solve as single, unified team.”

KEY POINTS

- The need for a collaborative preconstruction strategy and an integrated team working earlier together is more urgent as health systems plan projects to help rebound from the financial consequences of the pandemic.
- The definition and Lean practices of collaborative preconstruction now encompass project logistics, design assist, prefabrication, estimating, safety, and community engagement.
- The pace and urgency to adapt existing spaces or construct new facilities means designers and builders are on a faster schedule to meet speed to market requirements. Clients seek to stretch their budgets and shorten the schedule on current and planned projects.
- Hospital executives are balancing the need to ensure available bed space with their need to generate revenue. These leaders are also evaluating ways to integrate more resilient and adaptive readiness programs for any future patient surges. Flexibility and futureproofing are the new catchwords.

05

Meet the Contributors



ELLEN BELKNAP,
AIA, ACHA, LEED AP
President
SMRT Architects and Engineers

SMRT practices nationwide in healthcare, science / technology / manufacturing, education, justice and government. Ellen's clients regard her as a trusted business partner ready to engage in meaningful, positive change. Ellen earned a Master of Architecture from Columbia University Graduate School of Architecture, Planning and Preservation and a BA from Cornell University.



SCOTT BULLOCK
Division Manager of Preconstruction
Robins & Morton

Scott has been a part of many successful healthcare projects, bringing experience in all phases of preconstruction services. Scott earned a BS in Building Construction from Auburn University.



KYLE DAVIS
Senior Mechanical
Preconstruction Manager
Robins & Morton

Kyle brings more than 20 years of experience in the construction industry. In addition to leading mechanical preconstruction, Davis continues his education in Lean construction practices. He also has specific knowledge of prefabrication methods, resulting in his role in developing the SmartFab® approach.



PATRICK DUKE, CRE
Managing Director
CBRE

Patrick Duke, CRE is CBRE's National Healthcare Project Advisory Solutions leader. Patrick has served as a key spokesperson on topics ranging from gender equity in the design and construction industry to collaborative project delivery models. He serves as a Counselor of Real Estate (CRE) and a Board Member at World Pediatric Project (WPP).



**KATHERINE
EVERETT, PE, LEED AP**
Principal and Director of Operations
SMRT Architects and Engineers

Katherine guides both clients in mechanical design systems and SMRT in its business operations. Kate approaches each engineering project as a problem-solving challenge: seamlessly fitting the myriad puzzle pieces of budget, code requirements, sustainability, constructability and operational specifications together. Kate holds a Bachelor of Science degree in mechanical engineering from Union College.



JIM D. FERRIS, PE
Chief Operating Officer
TLC Engineering Solutions

Jim serves as TLC's COO and is technical knowledge in power distribution, power generation and communication and technology systems, as well as the demands and expectations for healthcare facilities has earned him respect in the industry. Jim holds an MS in Electrical Engineering from New York University and a BS in Electrical and Electronics Engineering from SUNY Binghamton University.



ROBERT GAMBRELL
Senior Vice President
Robins & Morton

Robert takes great pleasure in helping project delivery teams achieve a client's vision. He is instrumental in leading Robins & Morton's efforts to implement integrated project delivery concepts that foster collaborative design/construction and efficient use of resources. As a shareholder and executive, he brings ownership and big picture leadership to each project he's involved with. Robert earned a BS in Building Construction from Auburn University.



JACOB NAGIB
*Director of Engineering
and Construction*
Halifax Health

Having attended graduate school at the University of Illinois and graduate studies at the University of Central Florida, Jacob holds a Bachelor's degree in Mechanical Engineering – Power and Production. He has more than 36 years of experience in the healthcare industry, including six years in contract with the State of Florida Agency for Health Care Administration (AHCA) conducting health care building design reviews and operations of facilities.



ROMANO NICKERSON

Principal

Boulder Associates Architects

A self-professed lean nerd and healthcare architect, Romano leads BA/Science, a lean consultancy focused on helping clients identify and solve problems in capital project delivery. He is a member of the Board of Directors of the Lean Construction Institute and is a frequent speaker on all manner of lean topics.



JOHNATHAN PEAVY

Project Director

Robins & Morton

Johnathan is a project director and brings more than 15 years of experience with the firm. He has worked on numerous challenging healthcare projects, remaining committed to working collaboratively and ensuring all project goals are met. Johnathan also has extensive IPD and Lean project experience along with the ability to provide leadership on these methodologies. He earned a BS in Civil Engineering from Auburn University.



MIKE THOMPSON

Vice President of Operational

Support and Planning

Robins & Morton

Mike is known as a leader that builds teams through an open collaborative environment with accountability to performance. Mike communicates the goals or mission to the team and then encourages them to positively work towards that goal based on their experience and competency. Mike has completely changed the environment in preconstruction, IT, and VDC.



BILL STEVENS

Senior Superintendent

Robins & Morton

Bill brings more than 35 years of experience building hospitals from New Mexico to Maine through Indiana and Texas. Throughout his career, Bill has gained extensive preconstruction and project management experience through operations. A highly strategic leader, Bill has taken his passion for Lean construction and applied it to evolving the culture of a large company while also implementing Lean tools and processes on his projects. Bill is a graduate of The University of Florida with a BS in Construction Management.

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