

Q&A

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What trends do you see influencing the future of healthcare design and construction?

Burns specializes in engineering-led project delivery. Though adoption of this approach generally lags what we see in other sectors, engineering-led delivery is becoming more common for healthcare capital projects.

Having a specialized healthcare engineering firm take the lead on large mechanical, electrical, and plumbing (M/E/P) system projects can streamline project execution. Our experience finds that when projects are led by engineers with intimate familiarity with hospital building systems, this approach can significantly lower infrastructure delivery costs, accelerate speed to market, contain implementation risks, and shorten the length of time necessary to complete design and construction.



Labor shortages continue to delay major construction projects. What creative solutions does Burns recommend?

Prefabricated construction can be a solution for a wide range of high-quality components. Assembling units in a controlled, offsite location can be done with fewer workers and—when

multiple building trades work at the same time—factories can keep production going 24 hours a day. This improves quality and reduces costs. Once on site, prefabricated components are installed through a more streamlined and uniform construction process.

Advanced planning and collaboration are crucial to a prefabricated construction project's success. Prefabricated components have to be identified early. The architect, engineer, and contractor have to work together from the start to identify components most likely benefiting from a modular approach. Delayed discussions often lead to missed opportunities.

What's one critical question your team always asks clients in initial project meetings? Why?

"What's your disaster recovery plan?" Resilience is becoming a buzz word. But many still operate with inadequate infrastructure systems that remain vulnerable in the face of increasingly extreme weather.

Burns develops resilience strategies to anticipate how our clients can maintain uninterrupted operations. This typically involves reviewing facility design standards, emergency power arrangements, maintenance procedures, and infrastructure start-up plans. Burns has

extensive experience designing back-up power and high-efficiency infrastructure solutions, including fully resilient medical communications, independent microgrids, and critical airflow systems.

How is Burns leveraging technology to improve healthcare design?

Building information modeling (BIM) tools are transforming how hospital infrastructure projects are designed, constructed, and maintained. Many know BIM for its capabilities generating walk-through visualizations, but it can do so much more. BIM is a powerful capital planning tool, identifying details on interconnected assets, maintenance histories, and performance records. BIM can improve the quality and constructability of future renovations and lower overall project risks.

Moving forward, BIM can maximize capabilities of Internet of Things (IoT), artificial intelligence, and machine learning software. Many think that these capabilities are achievable only in the distant future. Well, the future of healthcare engineering has arrived. Now's the time to put it into action.

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