

# HOW TO MANAGE A HEALTHCARE CONSTRUCTION PROJECT FROM START TO FINISH



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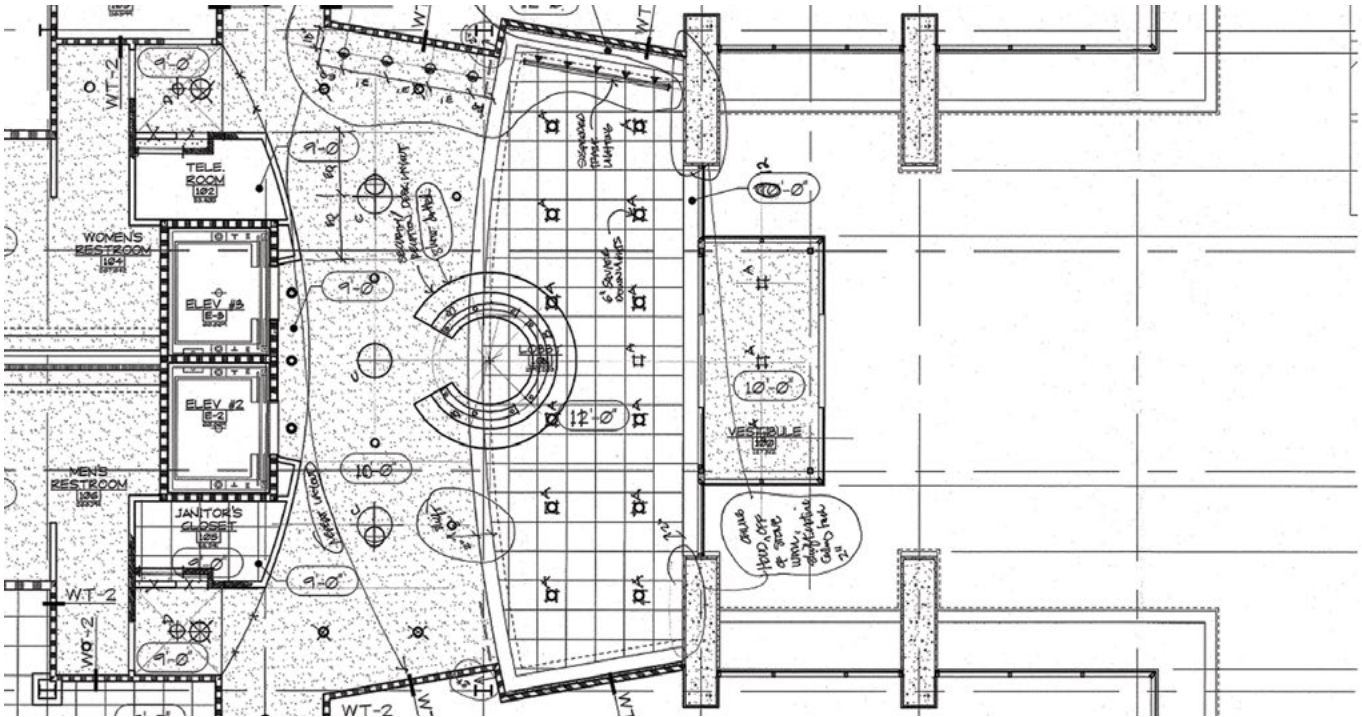


For much of our 60-plus years in business, we've led the way in healthcare construction. Since our first [Design-Build](#) healthcare project, we've focused on building [innovative medical facilities](#) that drive value for owners and enhance patient care.

Much has changed since we first started delivering healthcare construction projects. But what has always stayed the same is the importance of diligent planning and open communication. Long before the hammer hits the nail or the shovel breaks ground, there's a lot of homework to do.

Throughout this guide, we'll share how a healthcare builder should manage a project from start to finish. There's a little of our "secret sauce" in here—and we're okay with that. After all, we're confident it's just what the doctor ordered.





## IT STARTS WITH THE MASTER PLAN

Successful healthcare organizations usually have—and stick to—a Master Plan. These detailed roadmaps guide the way an organization enhances the services it provides over time. Master Plans cover a considerable amount of important information, including:

- A community's changing demographics and needs.
- The organization's projected patient load over time (and corresponding projected staffing needs).
- The overall fiscal health of the organization, including projected revenues and expenses as well as long-term strategies to ensure the organization's fiscal health.
- The organization's capital improvement plans, such as new construction, expansion or renovation of facilities.

While that last point is most immediately related to a construction project, capital improvement plans cannot be made without a full understanding of the other points included in the list above. Accordingly, a construction partner's ability to follow the vision laid out in the capital improvement portion of the Master Plan depends on its understanding of everything else in it.



Some Master Plans come with early-stage conceptual drawings of the ways hospitals, clinics or offices change or expand. During our initial involvement in a project, we'll use these as a starting point. If no drawings have been made, that's no problem. The great thing about the versatility of Design-Build is the fact that we're equipped to manage any portion of a project at any stage, and everyone's on the same page from the outset.

The importance of the Master Plan cannot be overstated. The information contained within one represents the educated assumptions of all stakeholders, from executive and operational leaders to board members and even public officials in the case of publicly funded healthcare providers. Project leaders at The Korte Company understand the weight these plans carry—[we've even helped owners write them](#). We'll make sure the preliminary conceptual site plans and architectural drawings developed in this early stage reflect the strategic vision of the organization as determined by the people who know it (and the community it serves) best.







## CASE STUDY: MOORE COUNTY HOSPITAL DISTRICT

We highlight this project because it illustrates how a Design-Build firm can help a healthcare organization meet the goals set out in its Master Plan while also being a good steward of public funds.

Built in Dumas, Texas in 1948 and expanded many times since then, the [Moore County Hospital](#) had become landlocked—it couldn't expand on its current site. To ensure the District could continue meeting the community's needs, a replacement hospital was planned for the outskirts of town. Out there, it would have plenty of room to expand as needed.

The problem? As a government-run entity, the District needed to ask taxpayers to fund construction of the new hospital. Voters were asked twice to authorize bonds for the project. Twice, voters rejected the plan.

The Korte Company joined a national architecture firm to develop an alternate solution: Close and remove the street that had landlocked the original hospital site to make room for a two-story, 63,000-square-foot expansion. This lightened the financial burden on taxpayers, who approved the plan.



## THE BUSINESS ASSESSMENT

Successful healthcare construction requires that builders thoroughly understand the business side of an organization. An organization's Master Plan usually includes this information, which details:

- Revenue and expenses compared to current patient loads.
- Projected revenue and projected expenses compared to anticipated future patient loads.
- The extent to which changes to healthcare policy will impact how the organization does business.
- Healthcare industry best practices as determined by a review of peer facilities.
- How the service offerings of your organization may change or expand over time.
- Anticipated capital needs (such as new construction, renovation or expansion) and the impact these projects may have on the organization's fiscal position.

Often, healthcare facilities have options regarding what (or even whether) to build. Flexibility is the best policy. When it's time to build, we'll work with you to determine which capital improvement strategy makes the most of your investment and preserves the long-term success of the organization.

It's also during this examination that the healthcare builder will brief you on a few things we'll need over the course of the project. This includes a range of documents from current floor plans and schematics to surveys of existing site and soil conditions.



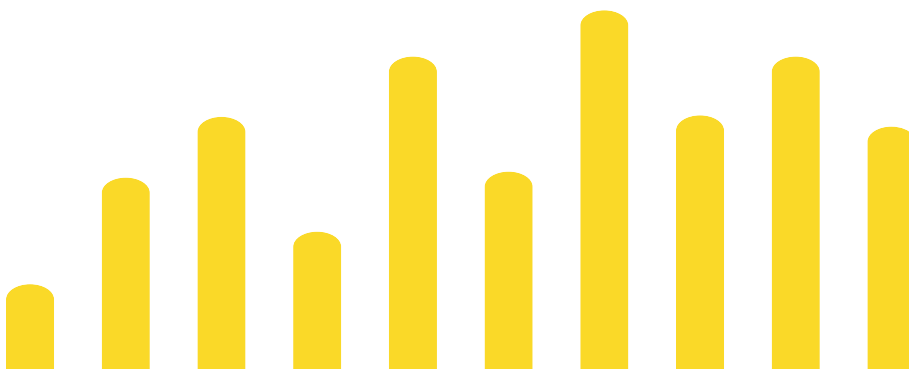
## INITIAL FINANCIAL ASSESSMENT

This assessment is closely related to the business assessment and is probably conducted at the same time. But the purpose of this exploration is strictly focused on dollars and cents.

If your organization follows a Master Plan, you've probably already dug into the financials. It would be impossible to plan the organization's future without an understanding of whether that future is fiscally realistic. This assessment should:

- Identify expected revenue from all sources over time and illustrate how revenue from each source might fluctuate.
- Project the organization's expenses and identify fluctuations.
- Determine how changing healthcare policy might impact revenue and expenses.
- Help owners determine the organization's debt capacity and provide insight into what kind of financing package makes the most sense to complete a construction project.

While this assessment is typically done before a Design-Build partner is sought, the information it provides can be very helpful to builders. For example, recall the Moore County Hospital District case study above. Knowing what we knew about the organization's finances, we helped develop an alternative construction plan that was more appetizing to the taxpayers responsible for footing the bill.





## ARCHITECTURAL, MECHANICAL AND ELECTRICAL SYSTEMS ASSESSMENT

A substantial percentage of healthcare construction projects today are renovations or expansions. A careful investigation of existing systems and infrastructure is critical to ensuring that existing structures and new construction coexist in harmony.

Our goal with this assessment is to understand the current condition of assets and systems, recognize site limitations, understand codes or regulatory concerns and explore potential reuse or recycling of systems or components to save time and money.

However, depending on your goals for a construction project, this assessment can be more than just a fact-finding mission. For more involved projects, it's an opportunity to explore an overhaul of existing systems so that everything—from wiring and water piping to fire protection and building security—meets or exceeds applicable codes and statutes.





It's true that infrastructural upgrades such as these would represent at best an indirect impact on healthcare delivery. And it can be tempting to leave well enough alone—if it isn't broke, don't fix it. But we look at it a bit differently: Why settle for systems that are “good enough” when you can make them great?

There are many ways to improve sustainability through infrastructural upgrades. The benefits are compelling:

- Sustainable systems save money and reduce environmental impact.
- Sustainable facilities can capture additional savings through incentives from governments and utilities, potentially more than making up for the investment.
- Integrating sustainable infrastructure helps build a positive reputation. In today's culture, that alone is close to priceless.

At the end of this assessment, we'll develop a report that our team and yours can then use to develop summaries of potential expenses and the facility's proposed sustainable return on investment (SROI).

For an in-depth discussion on sustainability, SROI and green construction, [read this article](#).



## FIELD ASSESSMENT

Another key pre-construction stage is the field assessment, an in-depth exploration of the site on which a project is planned. This often includes an [ALTA survey](#), which details conditions including topography, other existing structures, site utilities, property lines, easements and more. Learn more about the importance of ALTA surveys [here](#). Additionally, city and/or county zoning and parking ordinances are identified.

The goal in this stage is to define site constraints that your builder must either work within or overcome.



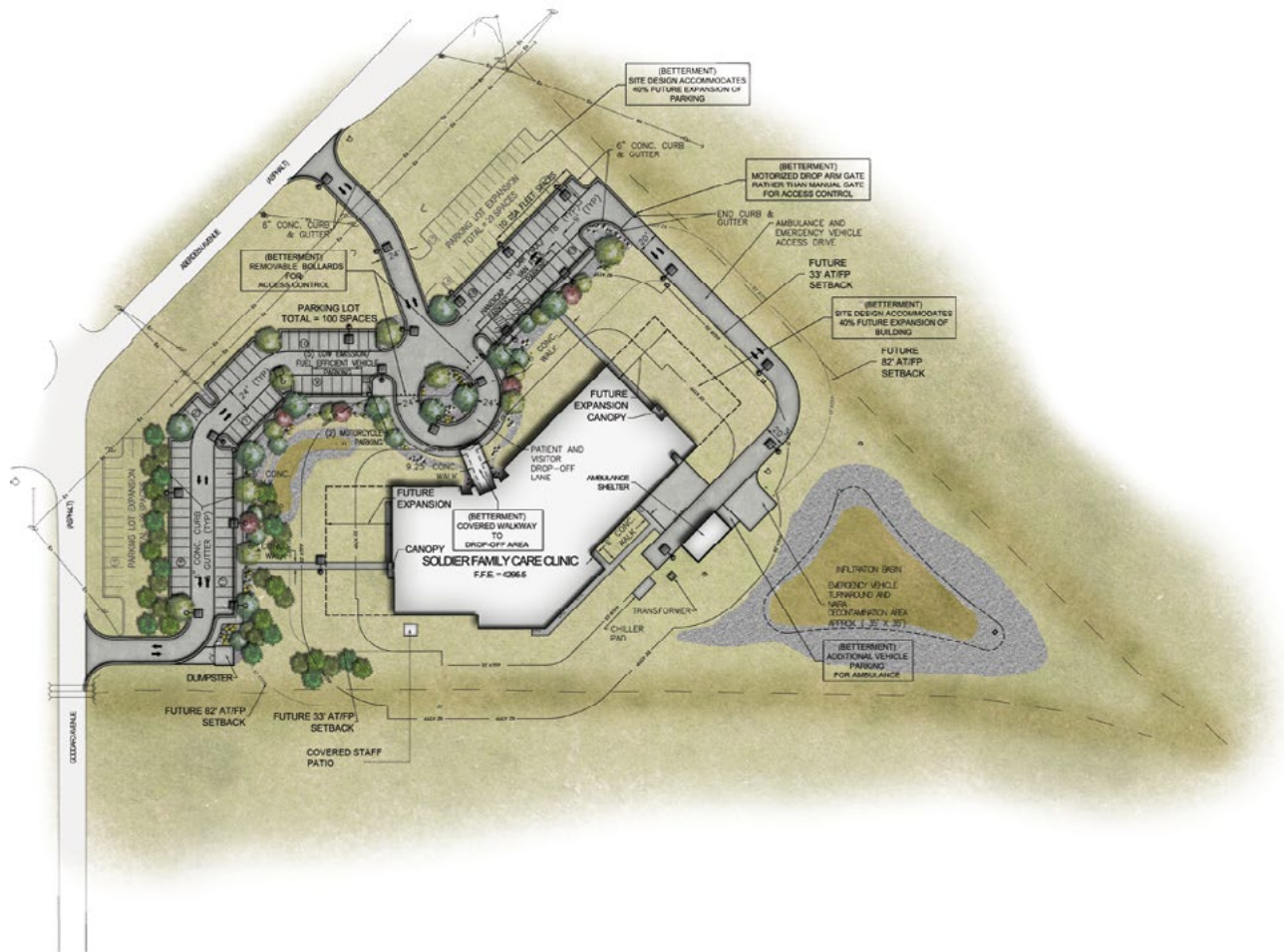
## CASE STUDY: ALTON MEMORIAL HOSPITAL

Our construction of a medical office building on an existing hospital campus is a great example of identifying and overcoming site constraints.

Located in Alton, Illinois, the Memorial Hospital campus features main hospital buildings at the center of the property with medical office buildings on the outskirts. When the hospital recognized the need to add to its medical office capacity, they decided an expansion to [Medical Office Building B](#) was the best course of action.

Site assessments revealed that an adjacent parking lot on the east side of the existing building was the best place to locate the two-story, 42,166-square-foot addition. Plans were solidified once the hospital confirmed removing that parking lot would not negatively impact campus operations.





## SCHEMATIC DESIGN AND DESIGN DEVELOPMENT

With initial assessments out of the way, it's time to move into schematic design and design development. In this stage, the way a project will look and what it will cost emerges in greater detail. At this stage in the healthcare construction process and medical facility construction planning, it's important to have full involvement from the team. That includes the healthcare planner, the project developer and the design team.

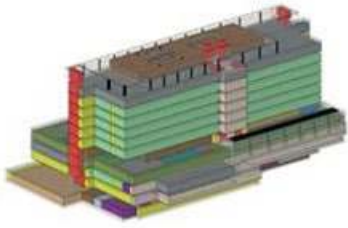
The project developer is responsible for constructability, estimating, phasing and scheduling, and the design team often includes the architects, engineers and any consultants.



But we think the most important people brought in on this stage of a project are the doctors, nurses, administrators and other key support staff who will work in the new, renovated or expanded space every day. Gathering input from these individuals via walkthroughs and design meetings will result in a facility layout that:

- Emphasizes evidence-based design principles shown to improve patient outcomes.
- Promotes efficient movement of all users, including healthcare providers, patients, staff and visitors.
- Allows in-house security, local police and firefighters to better protect everyone in an emergency.

At the end of this stage, owners should expect to see a comprehensive package of plans. These plans include architectural floor plans that identify existing and new building locations, department and room identification, user flows and even summaries of room finishes and amenities. They also include exterior elevation renderings, a roof plan, utility hookup schematics and a summary of applicable building code concerns and easements.



## DESIGN DEVELOPMENT, GMP AND FINAL DOCUMENTS

As designs develop, more information about actual project cost can be determined. Most of the time, our team works based on a guaranteed maximum price (GMP) that your team has set. This is the stage where we reconcile actual cost projections and the GMP.

A key benefit of choosing the [Design-Build](#) method is that there's less mystery surrounding how we come up with the cost to build.

First of all, when design and construction teams are under the same roof, there's less back-and-forth and no separate sets of documents. If you have a question or want to see plans, you only need to make one call.

Second, we use 5D Macro BIM to help develop designs and costs. This software uses a massive, up-to-date database of costs and materials to show how project costs change based on changes in design. We freely share this information with customers because it helps them determine how to allocate their resources to get the most out of their construction investment. You can learn more about how 5D Macro BIM helps us build smarter [here](#).





Finally, the streamlined nature of the Design-Build method means we can phase projects more aggressively, shortening timelines and lowering costs.

The completion of your final construction documents is the responsibility of the entire Design-Build construction team and is vital to the long-term success of both the project and your new or renovated healthcare facility.

Midway through final documentation, construction documents are reviewed by the project manager, project engineer and project superintendent. At this stage, a constructability drawing review is crucial. Additionally, the estimate should be analyzed for accuracy, and to make certain any changes to the plan have been accounted for. This way, everyone is on the same page.

Once designs and price are agreed upon, the healthcare organization can present its plans for approval if it's required by law. The Korte Company has built medical facilities across the U.S., so we're quite familiar with assisting owners in compiling the necessary documentation state health boards need to see prior to signing off on your plans.





## PROCUREMENT

Next, the medical facility project enters what we call the procurement stage, a very detailed stage consisting of several critical steps.

It's important that your healthcare Design-Builder produce a detailed construction schedule. This ensures that the project is on-time and on-budget. Additionally, it will keep everyone accountable—something that is crucial with any project, especially a large healthcare construction project. At The Korte Company, we do everything in our power to ensure the project is never late or over-budget. Chalk it up to our company-wide commitment to sticking to the schedule.

Your builder should also review and pre-qualify potential local and regional bidders and their bids with you. This is very important, as it's your money and you should know how it's being spent. When possible, we utilize the local labor force. It's just the way we do things, and we recommend you consider insisting your healthcare builder do the same. Your healthcare builder should work to develop a detailed set of bid instructions and solicit full coverage of all major bid packages. This is the next step in qualifying the subcontractors that will be putting their names on the project next to yours.

The old axiom of a chain only being as strong as its weakest link applies here. Your builder should do its due diligence to ensure there is no weakness at all.



## CONSTRUCTION

Let's shift gears and talk about the actual construction. If you work in construction, you'll likely already have a healthcare construction process in place. If you don't, there are a few areas of focus that are key components in the successful delivery of your Design-Build healthcare construction project.

First, make sure that your team is well-versed in establishing clear, precise lines of communication. This is vital to the success of any construction project and is one of the biggest benefits of Design-Build healthcare construction.

Once lines of communication are set, the project should mobilize. And it should run like a well-oiled machine. There should be a thorough preconstruction meeting with the owner and all major subcontractors and vendors. Pre-installation meetings on all major building components are also necessary. And since most healthcare construction projects are expansions and renovations, making sure ongoing operations are not disrupted is vitally important. The Korte Company has mastered this on projects all across the spectrum, from healthcare facilities (including the Office Building B project we mentioned above) to schools to factories and more.





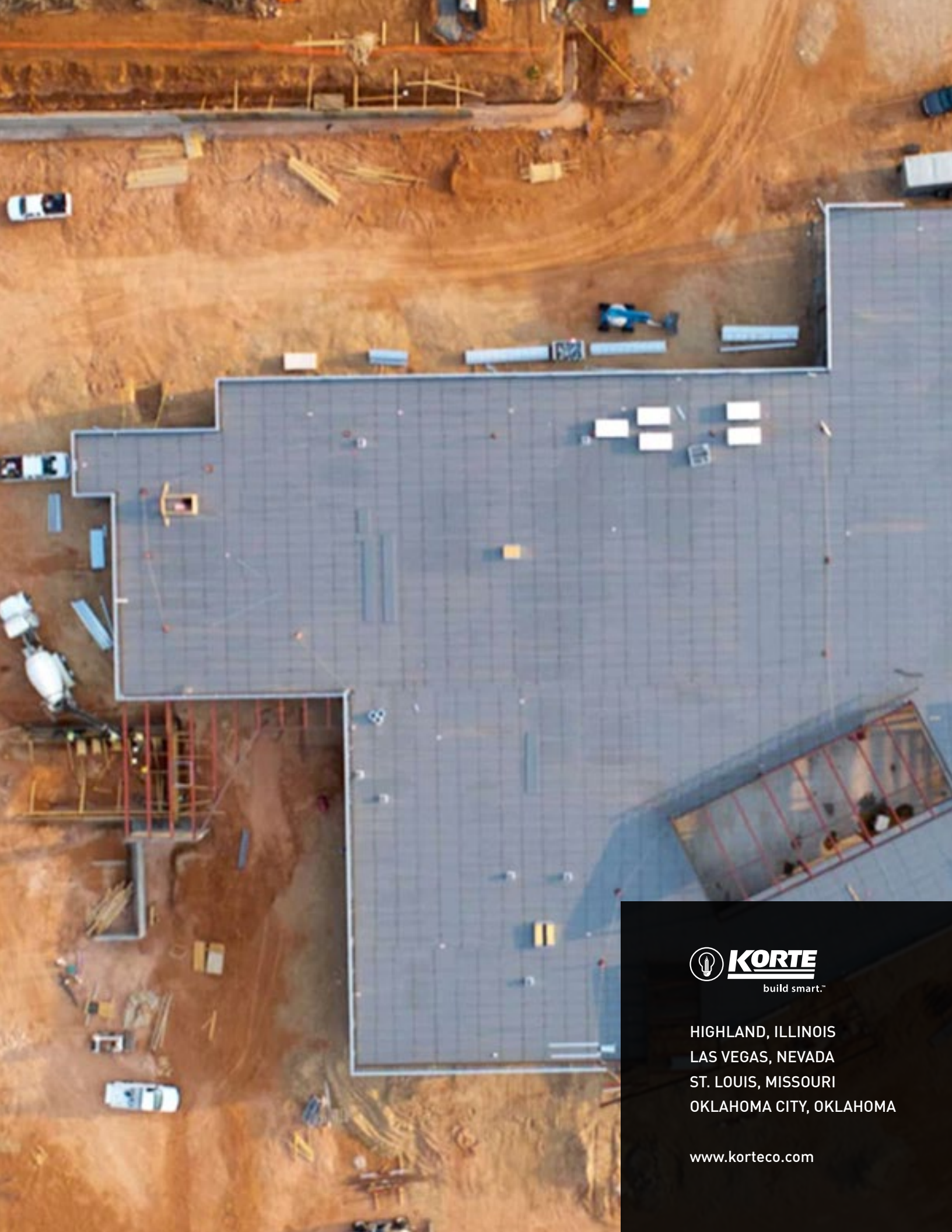
Throughout your healthcare construction project, your healthcare Design-Build construction company must conduct bi-weekly meetings to coordinate construction, monitor progress and maintain accountability. Safety, quality and adherence to plans and documents should be part of every conversation. Remember, if the healthcare construction project was planned properly in the beginning, the end result should be exactly what everyone is expecting. To us, [building smart](#) means making sure there are no surprises.

## COMMISSION, CLOSEOUT AND ONGOING SUPPORT

Finally, it's time for the ribbon cutting. Your facility is open for operation, but that doesn't mean our job is finished. A good healthcare builder should provide as-built drawings, operations manuals, training in use and maintenance of building systems and equipment if necessary and—finally—an 11-month checkup to make sure you got what you paid for.



If you've read this far, and you weren't already aware, healthcare construction projects can be massive undertakings. A lot rides on you and your team. Need a hand? We've been building healthcare facilities since 1963. There are many lessons learned and jobs well done in those 56 years. If you want to discuss your upcoming project and explore a partnership with a leading nationwide healthcare Design-Build firm, [let's talk](#).



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