

Project Execution in Life Sciences Through COVID-19

Undergoing a construction project of any size adjacent to daily operations can put stress on a company, an operational group, a project team, and the science team. Compound that with a global pandemic, and it can cripple the project's efficient and effective planning, execution, and closeout. The good news is there are ways to alleviate pressure through the project process—on the front end, through construction, and once handed over to third-party commissioning agents or client operations.

Integrated Team Approach

Due to the complexity of these projects, working as a unified team throughout is essential in helping identify potential risks of working in an existing building, from critical utility routing and existing conditions to constructability review, control budgets, and permitting. The construction management team can work in conjunction with the design team and the client to develop a project approach for BIM and MEP coordination, pre-purchasing, and planning for in-field execution.

The Role of Virtual Construction

Once the design team has developed a basis of design set, the construction team can begin identifying the proper sequence for installing and routing critical utilities. Typically, Structure Tone's Advanced Coordination Team (ACT) will begin this phase internally prior to engaging subcontractors, allowing long-lead equipment and materials to be identified, properly located, and ordered. As the drawings are further defined, our team is able to bid the remainder of the scope for planning and execution in the field.

Coordinated Models: Structure Tone's ACT group works directly with the design team to develop a coordinated BIM model and communicate any trouble spots—well ahead of the construction phase. By working collaboratively before any elements of the project have even gone out to bid, the team can identify potential challenges early and solve them proactively together. This approach also avoids the rounds of clash detection in a typical BIM coordination process, which saves everyone time.

Pre-Purchasing

As projects are being designed and defined, we have found that an integrated approach of working with the design team to pre-purchase long-lead equipment and materials (LLEM) can help reduce the length of time in the field. This means releasing select items at the completion of the design development phase. Typically, Structure Tone sees the following items released early based on the following lead times:

Item	Lead Time
Custom Air Handlers	18 - 20 weeks
Lighting	10 - 12 weeks
Lab Casework	10 - 12 weeks
Flooring	6 - 8 weeks
Exhaust Fan	8 - 12 weeks
Glass & Glazing	8 - 10 weeks
Generators	16 - 24 weeks

We've noticed that some of these lead times have increased since COVID and during COVID-related operations. Typically, these LLEM would be critical to the success of the project, regardless of when the project would be executed. In addition, releasing these items allows remaining bidding to be competitive between multiple subcontractors. The construction team can then begin MEP coordination and equipment layout with the selected equipment without subcontractors.

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Site Management

With preconstruction well underway and design documents finalized, our team can begin bidding the design documents with the subcontractors with a clear and concise scope of work approved by the design team and client. This scope of work can specifically call out the requirements for prefabrication once MEP coordination has been signed off, further reducing the head count on-site. Additionally, this prefabrication allows for a quicker installation, which translates into a reduced schedule.

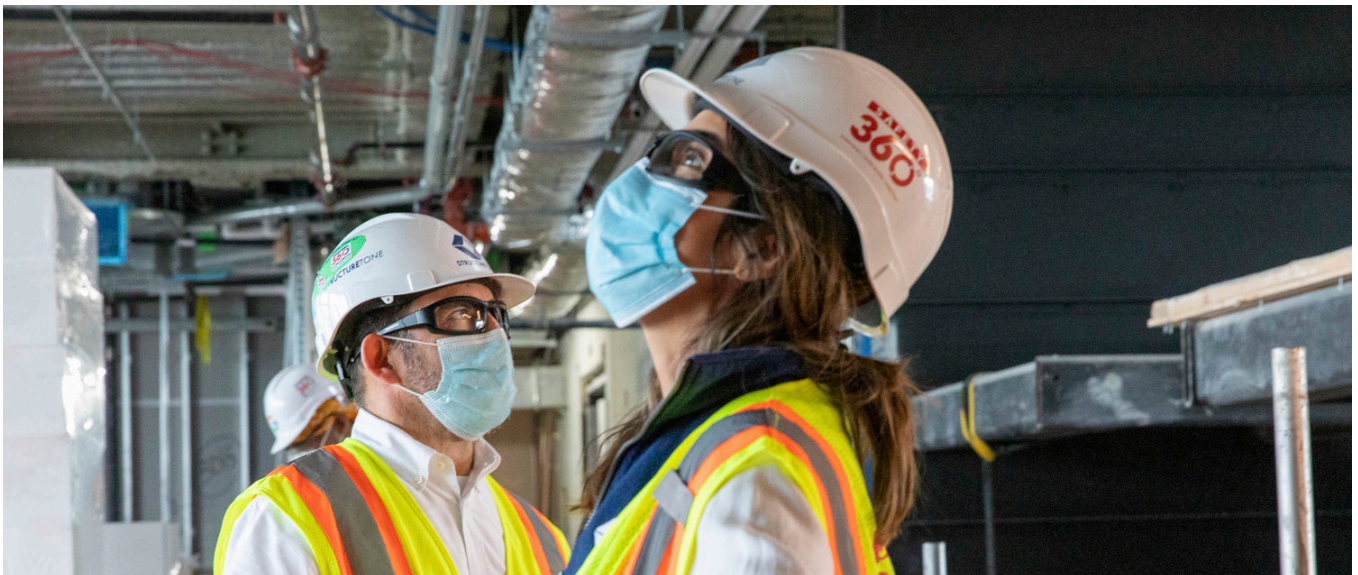
Schedule Management

Most Life Science projects are time sensitive. As we award subcontractors, we're also asking our subs to confirm they can provide the necessary manpower to complete the project on time. Along with pre-fabrication, Structure Tone considers what sequence of installation will ensure a consistent installation team is on-site with minimal dissimilar subcontractor interaction.

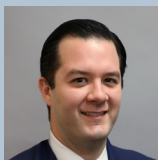
Safety First

COVID-related challenges also pose risks of disrupting a project's progress. Since the early days of the pandemic, we have developed a robust set of jobsite protocols to help keep our workers as safe and healthy as we possibly can. From daily temperature checks and stringent PPE requirements to a thorough questionnaire before anyone sets foot on site, we and our subcontractor partners stay healthy, protect each other, and protect the jobsite. We're also using a variety of cloud-based and 3D capture technologies to keep clients and the design team informed on project progress and to help them make decisions without having to physically visit the site.

The pandemic has certainly thrown a wrench into design and construction, but no other industry may be as prepared to navigate it safely than Life Science. We're right here to help you through it.



**Have questions?
Reach out to our team!**



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