



What is the key to successful design coordination of complex development projects?

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Project managers responsible for the coordination of complex development projects experience numerous challenges that affect their team's ability to deliver a successful project completion. Construction budgets are tighter than ever. Development projects contend with extended time frames for municipal approvals and entitlements. And as projects grow in complexity, multiple design teams are often involved.

These challenges greatly impact the team's ability to execute projects on time and within budget. In my experience, however, the design team can withstand these obstacles by implementing effective communication throughout the design phase.

Excluding front end consultants, the core design team is typically comprised of a site civil engineer, an architect, a geotechnical engineer, a structural engineer and an MEP engineer. The type of real estate deal, the municipal entitlements and approvals needed, and the geographic location of the project will dictate variations of the team.

Here's a complex project to consider. A landlord subdivides a 35-acre site into two separate parcels and hires a design team to make the necessary site improvements. At the same time, the tenant engages a separate team for its own design needs. Because the tenant's architect and engineers are located out of state, local firms are added to the team to assist with the design and permitting process. A construction manager is brought on to monitor the construction budget.

As an added obstacle, the tenant's schedule to occupy the new space warrants that the tenant's design phase run concurrently with the landlord's entitlement process. Now the two design teams must accomplish their separate tasks while simultaneously coordinating with each other to be sure that these tasks adhere to schedule. Without question, the project's success lies in the design teams' ability to effectively communicate with each other.

Even with less complex landlord-tenant projects where entitlements are in hand and the tenant design work consists of a basic fit-out, design team communication is critical. In most cases, these deals are formulated on projected opening dates. These types of projects also have tighter construction budgets with a smaller margin for inaccuracies.

Regardless of the project scope or size, communication is the key to effective design team coordination. And this begins with the client. The scope of deliverables must be clear from the project's commencement. These goals are best communicated by sharing the land or lease exhibits of the deal with the design team. Sharing exhibits as the deal progresses enables the design team to predict potential design complications. By discussing draft design schedules and construction budgets, the design team contributes valuable insight and voices concern as needed.

Additional communication methods include maintaining constant communication between the

project's architects and engineers. Their continual coordination will ensure that construction proceeds on schedule and costs remain within budget. As a civil engineer, I stress the importance of providing the geotechnical report to the design team for review. The site's grading plans should be coordinated with the architect and structural engineer, as these plans will affect their designs. Similarly, the sanitary sewer, storm water and site utility piping and lighting design should be coordinated with the MEP engineer as well as the landlord's engineer when there is an obligation to obtain entitlements and bring utilities to the site.

This coordination must begin in the early stages of the design phase and should be reflected in the bid documents. Any design changes encountered must be communicated to the entire design team. Specifically for web-based postings, announce the posting of revised drawings. Biweekly or monthly project design meetings are essential for the comprehensive review of the design for schedule and budgetary ramifications.

Ultimately, effective communication between the design team is the key to minimizing complications during construction and in turn, preserves the construction budget and allows for an uninterrupted schedule for completion.

Chuck Miller is a senior project manager at Bohler Engineering, Ronkonkoma, N.Y.

New York Real Estate Journal - 17 Accord Park Drive #207, Norwell MA 02061 - (781) 878-4540