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Easing the Pain

Jan 1, 1999 12:00 PM, Gene McGovern

"Is this work ever going to get done?" This is a question often heard during construction on occupied school campuses. Because construction work inevitably causes disruption, it is essential that it be done in the quickest possible way while maintaining safety standards, ensuring quality workmanship and preventing budget overruns.

When planning a building program, it is vital that school administrators and facility managers develop a fairly clear idea of what lies ahead. This ensures that everyone in the school community is prepared for the disruption and displacement, and that they are equipped with the knowledge necessary to make the kinds of decisions that will help move the process along.

There are many points to consider when getting ready for a construction project. While private- and public-school districts, as well as colleges and universities, have different concerns, many overlap. Therefore, one of the best ways for administrators to learn what to expect is to talk with colleagues at other schools that recently have undergone building programs.

Preconstruction services One of the wisest decisions a school can make when planning new construction or significant renovation is to retain a consultant to provide preconstruction services. While some architectural firms can offer guidance on matters such as scheduling, estimating and so on, not all can. Therefore, in many cases, it makes good sense to let an experienced construction manager (CM) perform a detailed evaluation of the program and architectural plans before developing bid documents.

A CM can help to gain a comprehensive understanding of the full scope of the work-the only way of making sure that the project actually will achieve what the institution wants. This overall perspective will be enhanced greatly if all construction documents are in as complete a form as possible before the bid package is drawn up.

Moreover, the CM can be of enormous help in developing an appropriate plan for phasing the work. To ensure that phasing will, in fact, succeed-especially in cases where buildings will be partially occupied before all the work is done-the CM will, among other things, evaluate the fire-alarm, and mechanical and electrical systems to ascertain whether they are engineered in such a way that they can be brought on-line, sector by sector, as work is completed. The CM also might suggest ways to phase a complex, long-term project so that it matches the school's funding cycles. There is nothing more disheartening, for all concerned, than a too-ambitious project in which portions must be left incomplete for long periods of time while funding catches up with reality.

Relying on a CM's expertise can save time and money in numerous ways. For example, an experienced construction manager will know whether any of the specified building materials are long-lead items. Ascertaining this well in advance of construction will enable the schedule to be designed to accommodate the extra time needed for these materials' delivery. Similarly, a CM can value engineer a project, providing information on the range of alternative building materials available and suggesting substitutions that may save money without sacrificing quality.

Choosing a general contractor Besides developing bid documents, a CM also can assist the administration in putting together a select bidding list of general contractors capable of handling the work-and serve a critical role in evaluating those bids once they come in. Once a contractor has been selected, the CM can provide additional guidance that may help ward off trouble later on.

For example, the willingness of building-trades subcontractors to respect safety, scheduling and noise-control requirements is a precious commodity on school construction projects. A CM with solid industry background will know something about various subcontractors' track records in these areas-and can help the general contractor identify contractors who should be kept off the project.

On schedule Scheduling work so that it interferes as little as possible with ongoing activities is one of the most complex

aspects of school construction. Contractors will strive to perform major exterior work-the work that creates the greatest amount of noise and dust, and that has the greatest potential to disrupt traffic patterns-during summer vacation and other holiday periods when a campus is occupied only by staff. To get the timing right, the scheduler will need complete information on campuses, including any special group activities.

School administrators also must work with the preconstruction consultant and general contractor to develop rules that protect the school community-and ensure that the learning process can go on-while enabling contractors to get their work done. Writing such guidelines, which might specify the distance of work or heavy equipment from occupied classrooms or restrict the hours during which work can go on, often requires compromise.

Once construction is underway, administrators must weigh any desire to make a change or enhancement to the original program against the reality that changes inevitably have an impact on the schedule-and budget. Frequent communication among the school's decisionmakers, the architect and engineer, and the CM and general contractor-especially through regularly scheduled project meetings-is necessary to make sure that all changes are thoroughly evaluated in a timely way.

Better safe than sorry The entire school community has the right to expect that the CM and general contractor be absolutely frank about any and all hazards a construction project might pose. Barricades should be erected, portions of the campus isolated and ordinary traffic patterns reorganized. It is a situation that no one will be adjusted to, so it is incumbent on administrators-working with the CM and the contractor-to explain to the school community why such precautions are necessary.

Safety measures are not limited to the erection of physical barricades. School administrators also have every right to expect that all the construction personnel coming onto the campus abide by the security rules the school establishes. This includes limiting access to certain hours, for example, or mandating that all workers carry IDs at all times.

If construction work will be going on while school is in session, it is advisable to have in place the new, temporary routines that students, faculty and staff will have to follow from the very beginning of the term. Establishing routes that people will have to travel to get from one part of a building or campus to another from the very start of a semester makes for a much easier transition, as opposed to suddenly imposing a whole new set of rules after daily routines have been set.

Community relations Schools can get themselves into trouble if they do not adequately prepare their neighbors for the inconveniences construction may cause-or do not keep them regularly informed as the work progresses. In general, people are willing to endure a fair amount of construction-related disruption, such as noise and rerouted traffic, as long as they know what to expect, and as long as project milestones are met without unreasonable delays. Respecting the neighbors' concerns also will make it easier to secure community support the next time the district begins planning a construction project.

Make sure you prepare for the unexpected. Especially when large-scale renovations are being performed in older buildings, school administrators must prepare themselves for a certain amount of unpredictability in the construction process. No matter how thorough the diagnostic process that precedes design and construction, unanticipated problems will crop up: foundations will reveal unexpected structural flaws; asbestos will turn up in the unlikeliest spaces-and require abatement measures that were not figured into the original budget or schedule. These unexpected delays are best dealt with in a spirit of mutual understanding and assistance.

Raising funds It is no news that building new facilities and renovating old ones requires money-a great deal of it. And, for private schools depending on donors' generosity, fund-raising is a neverending process. Administrators should pay attention to how a careful phasing of the work-completing portions of new facilities or enhancements to existing facilities long before the entire project is done-can be a boon to fund raising. Donors like to see their money at work, and giving them a taste of what they can expect-by holding a fund-raising party in a completed portion of a new facility, for instance-can help the process.

Construction on occupied campuses is never easy, but there are ways to ease the pain and to encourage the spirit of cooperation on which success depends. Among these, the most important is for administrators and, through their leadership, everyone else in the school community, to prepare themselves adequately for the unavoidable inconveniences that lie ahead. The reward-the new facilities that will make your school a better place to live, study, work and play-will make it well worth the trouble.

At first glance, the environments of a city school and a country school seem worlds apart. For instance, Friends Academy is located in a bucolic setting in the upscale Long Island suburb of Locust Valley, where campus buildings are dispersed among woods and open fields. Conversely, Chapin School is located in the dense, urban setting on Manhattan's Upper East Side.

From the contractor's point of view, however, the challenges raised by construction projects at the two schools were surprisingly alike. Of course, school construction projects always present some similar logistical challenges-especially regarding scheduling and safety. The surprise, though, is that both projects required the general contractor to foster innovative solutions to problems concerning materials delivery and traffic flow.

The reasons for the difficulties related to deliveries and traffic at the Chapin School's crowded, busy urban location are self-evident. The Chapin School project involved the addition of a new fifth and sixth story to an existing building, and the original plan called for the street in front of the school to be closed to motor traffic for six weeks to accommodate the large crane needed for structural-steel erection.

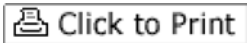
To reduce the time that the street would be blocked off, the project's steel-erection subcontractor changed the procedure. The large crane was used to set the structural steel on the new fifth story in place, after which it hoisted a cherry picker onto this structure. The crane was then taken away-to return briefly to bring the cherry picker back down once it had put up the rest of the steel. Needless to say, local residents were very pleased by the new strategy, which allowed one lane of traffic to be opened after working hours and on weekends during most of this period.

At Friends Academy, an equally daunting set of traffic and delivery challenges arose despite all the ostensibly open space on campus. Because the school is not near public transportation, all access to campus is by car. When construction work was going on while school was in session, motor traffic increased considerably, and the addition of workers' vehicles threatened to overwhelm an already pinched parking situation. Heavy pedestrian traffic on the campus added to the logistical woes and intensified safety concerns. Moreover, many of the open areas on campus are not just empty spaces-they are playing fields heavily used by the school's curricular and extracurricular athletic programs, including a summer camp.

To address these variables, a complex scheduling plan was instituted that, among other things, restricted the hours when workers could arrive at and leave the site. Materials and large-equipment deliveries were restricted similarly. Compromises were made on both sides, with the school relinquishing part of a ball field to serve as an auxiliary parking lot. Pedestrian traffic around campus was carefully rerouted-with "corridors" cordoned off with plastic snow fencing to keep students and other members of the school community clear of construction areas.

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