

Delivering a Largest Most Complex School Project Using Integrated Project Delivery

In the late 1990's and early 2000's Dorchester County Public Schools (DCPS) began a global, transparent planning process that looked at Education Adequacy, Deferred Maintenance, Development in the County, Capital Needs and Community Input. The result was a 10 year Capital Improvement Plan (CIP) that mapped out the future for schools across the county. Three replacement schools and a school renovation were completed using the typical linear process (program, design, bid then build delivery models). At the time, replacing our Career and Technology Education (CTE) facility, the Dorchester Career and Technology Center (DCTC) was the top priority.

The decision and commitment to replace DCTC was no small matter. This was the most expensive project ever presented to the Board or County Council. It represented a bright future instructionally, but represented inherent and very substantial risk to our local funding authority and leadership during the most trying of economic times. The project represented the opportunity to create a new part of our local/regional economic development engine as well as to provide an unsurpassed platform for the delivery of instruction.

Because of the inherent uniqueness of this type of facility, district staff began investigating how to deliver such a program and project such that success - instructional, project design, delivery and management, budget, methods of procurement, etc. - would be virtually guaranteed. From the experience of others who had recently built new CTE facilities across the region, we recognized that:

CTE Facilities are Unique

In design, construction and function vs. typical classroom building construction. Typically, school districts get one chance to get this right and therefore take the time to understand all of the proposed instructional programming and what makes each program unique. By visiting many facilities across the region, we came to understand that we were building a "custom" facility to meet the unique needs of our area.

CTE Facilities are Equipment and Technology Intensive

Every space and program has its own unique requirements for equipment, power and other utilities, technology, etc. that most often is outside of our normal school business expertise. Having trade allies and other resources is helpful to understand how to prioritize what could and should go into a space. Also, the budget for equipment for this facility is unlike any other in school outfitting. It is very expensive to equip a CTE facility.

CTE Facilities are Complex

Because of the array of technical instructional programs and the unique equipment specific to each program, the design and execution logistics are very complex. For example: each space tends to have multiple different power supplies and other utilities for equipment, different HVAC requirements, different safety concerns, different preferred adjacencies, etc.

Successful CTE Facility Projects are Delivered by Teams

Find program and building delivery partners who have done this before and hire the team with the largest and most recent amount of experience. The Architectural and Engineer team selection process focused around recent experience in the region on CTE projects; especially, experience in the new programs that would be introduced only after the new building was complete. The build

team selection process was similar with respect to CTE facility construction, but also to include experience in our region with complex, occupied-site, school replacement projects. Having the build team on board during design was invaluable to providing quality control and coordination from almost the start of the project.

Having all of the needed expertise at the table from the start is very different from our past experiences. To have a design and build team working collaboratively from start to finish avoided the typical adversarial relationship from the conventional design-bid, build approach. All stakeholders were working towards the same goal with no cross purposes.

The design team came in the form of a typical architect lead and engineering specialty sub-consultants hierarchy. The build team came on board at completion of education specifications in the form of a construction manager at risk who was incentivized to control cost by a share of certain saved costs. Both teams had extensive experience at this type of project and K-12 construction in our region. This made the designer and builder as equally invested as the owner in the design from day one. This lowered the risk of unknowns related to poor documents, team chemistry or other pragmatic pitfalls that can hinder a typical project delivery system.

Additionally, this project had a multiyear funding schedule. By having all parties involved from the start, the project could be programmed, packaged and bid to accommodate the cash flow from local and state funding authorities. This removed the financial risk of packaging a project with an aggressive schedule and then finding out that the cash flow cannot meet the schedule.

Any district with a Capital Program should consider how best to deliver each individual project based on the unique attributes, needs and objectives involved. The project was delivered over \$2.1 million dollars under budget and on time. Every program was fully equipped as requested by the instructor or in excess of basic programmatic need. Relationships with individual program suppliers were leveraged to ensure the right equipment was purchased at fair prices. All equipment was bid locally (in addition to regionally or nationally) to allow for local participation

This project supports student achievement by providing the highest quality facility platform, equipment and technology possible. Students now know they will be exposed to the best, industry standard equipment and technologies available. This breeds excitement and engages student interest. Furthermore, the discipline the entire team showed in carefully managing costs meant that no extra dollars were spent on capital needs. This allowed the County to maximize its ability to fund operations and other critical aspects of education, thereby further ensuring the highest possible "investment" in the education of the County's students.

The guidelines for criteria include how the idea or practice:

- promotes and enhances the overall operation of the school system or the profession
- is innovative for the school system or the profession
- can be implemented or effectively utilized by the profession or another school system
- enhances or has a positive effect on student achievement.