LEGACY BUILDING SOLUTIONS

WHITE PAPER

EFFECTIVE BUILDING CONSTRUCTION + PLANNING FOR SLED ENTITIES

Simplifying the government buying process

OVERVIEW

State, local and educational (SLED) entities are tasked with providing the best value for constituents on a daily basis – including on building and infrastructure projects. By choosing a delivery and construction method designed for efficiency, the entity maximizes the time and money spent on the investment.

This white paper will define and procurement and delivery methods and explore the benefits of each. Readers will also learn tips to ensure a smooth construction process and for writing an accurate spec at the earliest phases of the project.

CO-OPERATIVE PURCHASING AGREEMENTS

INTRODUCTION TO CO-OPERATIVE PURCHASING AGREEMENTS

Co-operative purchasing agreements allow SLED entities to directly purchase needed items – from frequent purchases like coffee and cleaning supplies to larger investments like buildings and heavy equipment. These agreements generally work through a third-party contract vehicle such as National IPA, Sourcewell, and Government's Saving Agency, who provides a catalog of goods and services to the public sector.

By joining a co-operative purchasing contract, even the smallest city can get the purchasing power of larger entities. Pricing in co-operative purchasing contracts is transparent and non-negotiable, providing the best value on goods and services without soliciting bids for every single purchase.

Co-operative purchasing contracts are designed to minimize the amount of red tape on a project, and to make it easier for the entity purchasing the new building to ultimately get the product they want.

BENEFITS OF CO-OPERATIVE PURCHASING AGREEMENTS

There are numerous benefits to co-operative purchasing agreements.

The primary benefit is that the entity can get the product or solution best suited for their needs without leaving it to chance on an open spec. Many open-source bids are awarded based on lowest price – but there's a difference between the cheapest option and the best value, particularly in large investments like building construction. Specifying the building you want, and working with the co-op to find that building, will give you the best results before, during and after construction.

By procuring through a co-op, the design engineers and product supplier partner together from the very earliest phases of the project through completion. This is especially important in construction – by partnering with one supplier, the design engineers are involved before the plan drawings are even created. This gives them the opportunity to plan and prepare for the specific project, eliminating many of the potential risks and pitfalls that can happen during major projects. This is much harder to do when a "like" product is chosen at the last minute – for example, amendments to construction plans that are required to meet new vendor standards or layouts may impact other areas of the project, causing delays to construction that must be factored in as soon as possible.

Co-operative purchasing agreements also provide the building owner with a direct link to the supplier. This saves time, money and hassle, and it also facilitates smooth communication throughout construction. The supplier is ultimately responsible for the success of the project, resolving many of the scheduling challenges and breaks in communication that can take place during major infrastructure projects.

During smaller projects where the entity will be self-performing a lot of the work, purchasing through a co-op will save the time and money that would have been spent on bid solicitation.

In co-operative purchasing agreements, the posted price is the final price. That price is not vulnerable to the mark-ups added by general contractors during standard bid solicitation. The entity and the taxpayers know how much the project will cost before it is contracted.

Perhaps the biggest benefit of using a co-operative purchasing agreement is the ability to shop like a consumer. Freed from the restrictions of shopping bids and weighing design alternatives, the municipality is free to specify exactly the building needed, including the required features and materials. Consumers in the private sector are used to comparison shopping apples to apples, and with a co-operative purchasing agreement, government entities have that same freedom.

DISADVANTAGES OF CO-OPERATIVE PURCHASING AGREEMENTS

Of course, there are disadvantages to purchasing contracts as well, including a fee for using the purchasing contract. This fee, in the instance of purchasing a building, is a percentage of the building cost. This administrative fee is comparable to the overhead associated with purchasing directly from a contractor or using another purchasing method.

There is a learning curve inherent in using any new process, including co-operative purchasing. While this curve can be mastered the first time the entity uses a co-operative purchasing agreement, it does take some time and energy to learn a new process and get buy-in from everyone

involved. The representative from the purchasing agreement will provide guidance to help navigate through the system, and subsequent projects will get easier.

Purchasing through a co-op is a more hands-on transaction, and communication is critical from the planning phase through completion. Though prior construction experience isn't necessary, understanding local code and permitting requirements will be necessary to ensure a successful project.

For larger projects that include other work being performed on the site, or for entities unfamiliar with the construction process, a consulting engineer, architect or principal engineer can, and still should, be involved in the co-operative purchasing project.

CASE STUDY

BETHEL PARK, PENNSYLVANIA, SALT STORAGE BUILDING

When updated state regulations called for road salt to be kept under cover, the city of Bethel Park, Pennsylvania, needed to add a storage building for 4,000 tons of reserve salt. The facility needed to be corrosion resistant and accommodate difficult site topography, a narrow parcel and a restrictive access road.

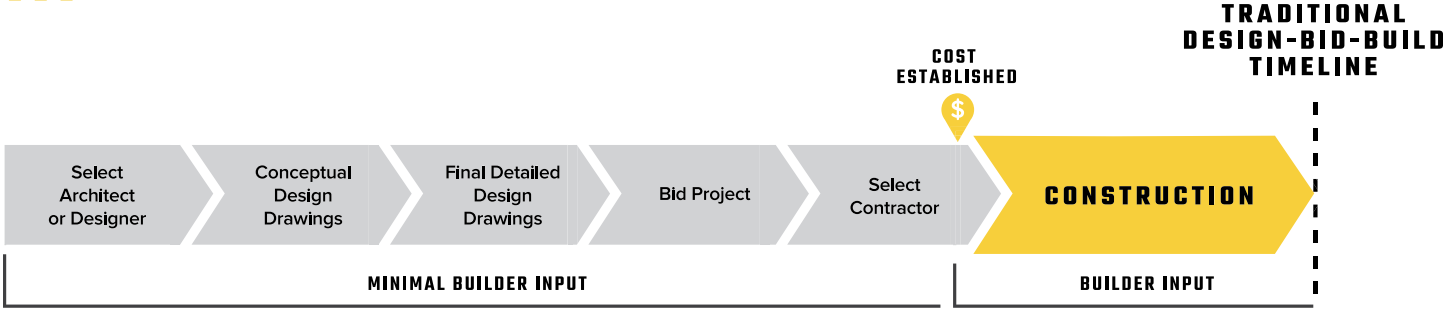
Bethel Park was undertaking a larger construction project, and there was room in the budget to add the building during the current fiscal year and in time for the upcoming winter. Building design, manufacturing and construction needed to move quickly to accommodate the city's aggressive timeline. The city engaged EPM Architecture, who determined the need for a custom building and contacted Legacy Building Solutions. Legacy, the municipality and the architect worked together to design the future facility, which the municipality purchased through the state of Pennsylvania's co-operative purchasing contract vehicle, COSTARS. Bethel Park solicited the installation as a separate contract, ultimately awarding Legacy to assure the building was installed according to manufacturer and warranty standards.

Using the co-operative purchasing agreement allowed the city to get the building constructed on budget and on time for the rapidly approaching winter season.

OTHER DELIVERY METHODS

Various delivery methods are available for private and public construction projects. Some states and jurisdictions have a stated preference for a particular construction method. Understanding each method, along with the pros and cons of each, helps ensure matched expectations, clear communication and an ultimately successful project.

DESIGN-BID-BUILD



Outside of using a co-operative purchasing contract, the most common method of SLED construction is design-bid-build, sometimes called DBB. In DBB construction, the entity engages an architect to create a spec manual and plan, which are then posted for public bid.

While this is a familiar method, it also has pros and cons – including, in many cases, the requirement to go with the cheapest bid, rather than the best solution for long-term needs. It is beneficial for the daily users of the facility – particularly municipal workers and city planners – to have input and feedback in the building specification and construction, and that's often limited with the design-bid-build method.

A significant drawback of the design-bid-build process is that it rewards the lowest initial price over other value-added considerations. Buildings and infrastructure are long-term investments, designed to pay out over years or decades – not a period of a few weeks or months. A building that requires frequent maintenance or replacement will have significant ongoing costs in terms of tools and equipment, hours and lost usage that can make a so-called "bargain" building anything but.

CASE STUDY

REGIONAL WATER RESOURCE AGENCY, DAVIESS COUNTY, KENTUCKY, WATER TREATMENT FACILITY

When the Regional Water Resource Agency of Owensboro, Kentucky, invested in new water treatment equipment, they needed a cover system to help the system run more efficiently. The architectural firm engaged by the city created a specification for several coverage alternatives, including a tension fabric structure.

Bidding prime contractors acquired multiple bids from subcontractors and vendors for the related section of the project, using a tailored specification for the fabric structure's design basis. When the bid submittals were reviewed and awarded, the end-user chose a pavilion-type system designed by Legacy. Legacy was then notified by the awarded prime contractor to proceed with developing submittals and drawings based on the project specs and plans.

By contracting the architect and design team at the beginning of the project, the RWRA had guidance from experts in the industry throughout the bid manual development and bid solicitation process – an important benefit for a complex project that an end user was uncomfortable with self-performing. The design-bid-build method also opened the project up for multiple alternatives, which gave the entity a number of options and alternatives for different areas of the project.

DESIGN-BUILD

Design-build management involves the building owner contracting with one entity, who remains with the job from pre-construction (including design and engineering) through completion of the project. This is in contrast with design-bid-build, where one firm designed the building and then those designs were sent to bid, with another firm ultimately handling construction. Design-build eliminates many of the delays otherwise caused by the bidding/solicitation process.

With design-build construction, the building is planned and designed at the very beginning – accounting for everything from environmental regulations and code requirements to owner specifications. Additionally, since the same firm is designing and constructing the building, there are fewer assumptions and misinterpretations of the building plans. The contractors and the designers are in regular communication to resolve the big and small issues that arise during construction, and everything is built as designed and approved.

Working with a design-build firm also means that the building is designed to suit the specific application, and there are additional tools created to help visualize and share the project before it is completed. A design-build firm will also work with inexperienced stakeholders to make sure the entire process is clear before construction begins.

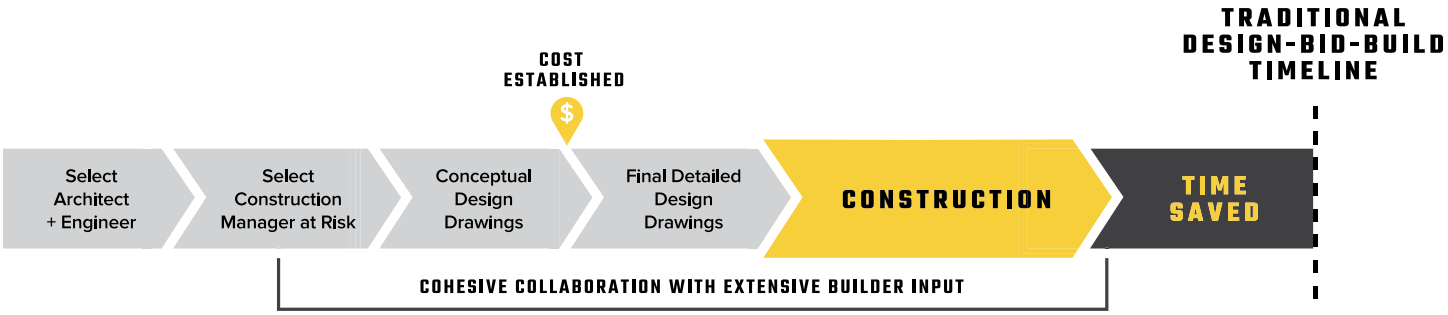
CASE STUDY
IEI BARGE FERTILIZER STORAGE BUILDING

IEI Barge Services was faced with storing 27,000 tons of bulk fertilizer separated into six bins. Poor soil conditions, a limited footprint, constant exposure to corrosives and the need for a covered loading area eliminated many traditional building options.

Legacy created computer-generated models of the piles to be stored. Once the pile models were created, the team designed a steel frame, foundation, and interior transloading equipment. The steel frame of the 77' x 580' building was designed around the pile requirements. A cast-in-place concrete foundation accommodates the steel frame and fabric cladding without placing too much pressure on the soil. Without deviating from their requirements of a building system that could be built on the poor soil and contain 27,000 tons of bulk product in six bins with individual bin lift gates, Legacy added a transloading conveyor system and a separated drive path.

During construction IEI Barge determined new requirements and submitted change orders. True to design-build practices, the team met to discuss the change and determined how it could be best accomplished. The open communication and relationship helped the project meet all requirements while maintaining the project schedule and budget.

CONSTRUCTION MANAGER AT RISK



Another common contracting method is Construction Manager at Risk, sometimes called CMAR. With this method, the purchaser partners with a construction manager and an architect or design team early in the project. Working together, the purchaser draws two contracts; one for the architect and design team, and one for the construction manager. Both these contracted partners work together with the purchaser to set a scope for the project and a mutually agreed-upon maximum price. The construction manager then engages subcontractors and others involved in the project, always working within the established budget parameters.

The advantages of using this method include a strong partnership focused on the user's needs and a guaranteed maximum price. The construction manager at risk is also chosen based on ability to complete the project, rather than simply lowest price. Like design-build, construction manager at risk involves a compressed timeline. The construction manager is more inclined to choose subcontractors based on price and ability, rather than simply price alone. The end user should insist on an open book policy and approval of all major subcontractors to ensure the project is successful for both the user and the construction manager.

Potential drawbacks to CMAR include a limited pool of qualified construction managers, difficulty establishing partners who stay focused on delivering a positive experience to the end user, personality differences between arranged partnerships who aren't familiar with one another, and more time and money spent at the early design phase.

CASE STUDY

MENOMONEE FALLS, WISCONSIN, SALT STORAGE FACILITY

Officials for the village of Menomonee Falls, Wisconsin, needed a facility to store and enclose 12,000 tons of salt. A parcel of land was available, but the village did not know the dimensions required to store the specified tonnage.
A design engineer engaged by the village contacted Legacy Building Solutions to create pile renderings for the stored salt. Once pile renderings were complete, Legacy designed a building to accommodate the piles and stay within the city's height restrictions.

Once building plans were generated, the village met with the project construction manager and design/engineer to determine a project budget. Riley Construction self-performed the concrete foundation and retaining wall work, and engaged Legacy as the subcontractor to design and install the building system.

Riley Construction oversaw and coordinated all aspects of the building installation, providing the village with regular updates as to project status and budget. All construction was completed within six weeks of building design approval.

TIPS FOR CHOOSING A CONSTRUCTION FIRM

An experienced builder or contractor will focus on the individual's needs to help design the best solution. Using their expertise in the field, the builder will make suggestions for features and design changes that can ultimately make the building more efficient and cost-effective. The firm should have case studies and references for similar projects.

Asking questions is one way to ensure the best fit with an architect or representative. Some of the most effective questions include:

- Can you provide a performance summary for the proposed solutions to help us make the best choice?
- What method will you follow when researching solutions?
- How will you go about selecting a material, equipment or technology for a project that you have less experience with?
- Can we, the end user, be involved in designating preferred material and equipment? Will you evaluate our request to make sure it's the best fit for the project?
- Will you recommend an alternative if you've had better experiences with other alts?

TIPS FOR WRITING A SPECIFICATION

Of course, no building is actually designed without a specification. Taking the time at the beginning of the project to write an accurate spec will more than pay off in the end.

Writing an accurate spec has several advantages. The primary one is cost savings. Rewriting the spec takes time, and architects and engineers charge by the hour. Rewriting and rebidding the spec will also delay the project – sometimes by a few days, sometimes by weeks or months. These solicitation postponements can cause missed meetings, deadlines and budget periods – in extreme cases, spelling the cancellation of the entire project. If the project is eventually revived later, the opportunity cost of "making do" without a needed building will have already had a significant impact on the bottom line.

An accurate spec will also cut costs after construction begins. If the plans change, or misinterpretations are discovered during the component manufacturing or construction phases of the project, any progress made up to that point will be lost. The project will be frozen while the change order is written and accepted, and in some cases previously completed work will have to be dismantled and rectified.

The simplest advice for writing a spec is to strive for clear communication between the purchaser's representative and spec provider. Communicate clearly and often with the spec provider, and make sure they are also working to keep communication strong.

A spec provider should have an interest in making sure it's clear what is being proposed and that the spec accurately reflects expectations. If the provider is not communicating well, this may be a sign to reconsider. Allow the provider to review the specs and plans prior to public release, and to assist in providing detailed drawings for plan drawing development.

Don't be shy about asking the providers questions. Not everybody can be an expert for every product, and providers should be happy to assist where they can, and/or provide recommendations on who can help.

Good questions to ask potential spec providers include:

- Will the building you're describing match this example picture?
- What sections of this spec ensure I get the quality I'm expecting?
- What is written so I am sure not to receive an underperforming product?

Your spec provider is committed to the project, but you are the one who will be dealing with the finished product on a daily basis. Don't be afraid to advocate for what you need.

››› CONCLUSION

Although government projects are notoriously complicated, SLED entities can follow a few simple steps to be positioned for a smooth process. Co-operative purchasing agreements, design-build and construction manager at risk allow SLED entities to specify the building best suited for their needs while eliminating much of the red tape and delays that can plague major construction projects.

By writing an accurate spec and communicating clearly throughout the project, state, local and municipal entities will ensure high-quality, cost-effective building projects – saving time and taxpayer money in the process.

Legacy Building Solutions offers custom fabric buildings for a variety of SLED applications – and Legacy Building Solutions partners with SLED entities on building projects with expedited timelines and simplified construction.

CONTACT US TO GET STARTED

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