

03. Proposed Solution

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Introduction

Skanska's approach to providing construction estimating services will be to focus on the challenge of developing estimates and budgets in today's pricing environment, which is being significantly impacted by both supply chain disruptions and other macroeconomic forces. These highly-unique circumstances will make it difficult for pure cost consultants to provide accurate estimates for your projects. Lake County needs a firm that has both direct connections to the Central Florida construction marketplace and a broad understanding of national/global pricing trends. Skanska is that company. We will be a partner and trusted advocate for Lake County and will leverage our skills and expertise to reduce your cost risks to an absolute minimum.

Staffing and Technical Resources

Skanska has a large in-house staff of architectural, civil, mechanical and electrical estimators. Software that we employ includes BIM Revit Modeling, Assemble Systems, Power BI, On Screen Takeoff (OST), and Metriks (our national construction cost estimating database).

Our estimators have their "fingers on the pulse of the market" in central Florida, and we will develop independent estimates as though we were bidding on the work. We will reach out to selected trade contractors and equipment providers to validate contractor pricing. We are able to do this because we have an extensive network, nationally and locally, that is based on strong, ethical relationships. Subcontractor and vendor confidence in how they will be treated by Skanska will result in open communication and true market trending for Lake County.

This distinguishes us from pure estimating firms that do not build. Their initial budget figures are based on “estimates” from prior assignments.

Having these tools and resources in-house enables us to develop preliminary budgets and estimates that are based upon real-world construction costs; to produce detailed cost estimates at each stage of the design process; to evaluate the cost impact of changes during design; to proposed value engineering solutions that actually add value; and to validate/challenge contractor bid pricing, GMP proposals, and change order requests. We can also assist with budget tracking, evaluating payment applications, and resolving claims.

These capabilities enable us to assist the County in obtaining maximum value for every dollar and to avoid requesting additional funding as projects move into design and construction.

Skanska Metriks - Taking Cost Modeling to the Next Level

We can also use Skanska’s proprietary construction cost database (Metriks) to benchmark the costs of your projects against final construction costs from completed Skanska projects. This provides one more way in which we can provide you with cost certainty. By using Metriks, we can also study various scope options through cost modeling, avoiding unnecessary fee expenditures to develop alternate designs.



Skanska Metriks™ provides greater confidence in budget, schedule and overall project efficiency.

Contingencies

In support of the estimating process, we will also work with you to develop contingencies to hedge against unforeseen cost events. We will establish clear definitions for various contingency types (Design Contingency, Project Contingency, Construction Contingency and Contractor’s Contingency) and work with the County to determine appropriate contingencies ranges at various milestones.

Budget Compliance

If requested, we can also maintain a budget tracking log and issue prompt notification when the budgets of your projects are deviating from original goals. This will provide Lake County with the opportunity to direct design teams either to incorporate “cost items” in a given project or to modify the project scope.

Value Engineering

Skanska’s value engineering process is defined by responsiveness, open dialogue, the timely and efficient input of comments into the cost model, and constructability input. This approach, rather than traditional cost cutting practices, seeks to find the point in the cost curve where maximum value will be provided to the County. For example, systems that facilitate and increase redundancy or provide greater energy efficiency may not necessarily have the lowest initial cost, but it is likely that such systems should be explored in order to achieve your objectives for an efficient and sustainable design with minimum total life cycle costs.

Periodically, and at strategic points in the design phase, the entire project team will assemble for dedicated workshops and planning sessions in which projects will be reviewed from a managed value perspective. Furthermore, in order to obtain additional benefit, similar methodologies and principles will be applied to evaluate the schedule. The active management of these processes will enable timely, detailed, and comprehensive decision making as opposed to the traditional and reactive value engineering process. This approach will have the effect of providing the County with an efficient and comprehensive control mechanism for each of the main drivers necessary for successful construction projects.

Life Cycle Costing and Operational Costs

We can perform life cycle cost analyses to determine the costs associated with constructing, operating, maintaining, and disposing of a facility or specific building system. What makes us unique is that we can use our construction expertise to confirm that materials and systems selected for your projects are the best choices in terms of initial costs and long-term performance. Our evaluations of materials and systems can sometimes lead to unexpected findings. For instance, in a recent school re-roofing project, we were asked to evaluate the relative life-cycle cost efficiency of different roofing membranes (EPDM, TPO, and PVC) and different fastening methods (fully-adhered vs. mechanically fastened). We reviewed construction efficiency, energy efficiency, durability, warranties, puncture resistance, and serviceability of each membrane type and also reviewed FM Global Insurance Requirements and building codes. On balance,

when all of these factors were considered collectively, no one system stood out as being significantly superior. We found that most roofing failures could be attributed to errors in the installation process. The selection of the roofing contractor, therefore, proved far more important than the selection of the membrane type itself.

Bid Package Development

Ensuring that all project scope is identified and purchased in the bid process is the single most important cost-saving in every project. We will work to ensure that bid packages clearly address all requirements pertaining to subcontract agreements, including commercial terms, scope definition, risk management, and performance expectations relative to safety, cost, schedule, quality, site logistics, close out documentation, submittals, engineering, manufacturing, installation quality, coordination, delivery, and start-up/commissioning.

Construction Schedule Review

Skanska's scheduling capabilities enable us to review and provide recommendations for schedules of individual projects and entire construction programs. We maintain full-time scheduling specialists in house who are trained to prepare, analyze and update all types of schedules including bar graphs and precedence-based CPM schedules. We are very familiar with different types of scheduling software including Primavera P6, SureTrak (a simplified version of Primavera P6), and Microsoft Project and use them on a daily basis.

Upon award of a construction contract, we will analyze the contractor's initial construction schedule and advise the County as to whether we believe the schedule is realistic and

whether the sequence of activities is logical. We will help identify long-lead items such as procurement of mechanical equipment that needs to be reflected in the schedule and will provide feedback on critical path items. As the contractor presents schedule updates or proposals for schedule recovery, we will compare these with the approved baseline schedule and provide the County with reports that identify each and every change and explain how those changes impact the baseline schedule. Throughout the construction phase, our in-house scheduling experts will be available to analyze any proposed change orders with schedule implications (unanticipated disruptions, delay claims, scope changes) and will review submittal schedules to confirm sufficient timing for approval of submittals and ordering of materials for delivery to the project site.

The benefit of hiring Skanska to conduct schedule reviews is that we understand all project delivery methods including design-bid-build, construction management at risk, design/build, and integrated project delivery (IPD). We have successfully completed projects of all sizes through all of these delivery methods and know what it takes from a scheduling perspective to ensure timely completion.

Cash Flow Analysis

We will work with Lake County to coordinate all expenses and within an overall cash flow analysis of individual projects or, if requested, of the County's entire capital improvement program. We will capture expenses and reimbursements and depict this information in a cash flow document. Once preliminary construction schedules are complete, the anticipated monthly expenses for each project will be incorporated into the cash flow document. In so



doing, the cash flow document can display how County funds are being allocated. Our cash flow approach will instantly identify the effects of schedule changes at both the project and program level. As various scheduling strategies are discussed, we will be able to demonstrate the impact of each on monthly and cumulative cash flow. This will be critical in assisting the County in developing project priorities.

Bid/Guaranteed Maximum Price Analysis

We will support Lake County in reviewing bids and GMP proposals to ensure that they reflect actual project complexities and actual effort required. We will review trade costs, markups, fee, general conditions, general requirements, and assumptions and qualifications. Having a strong construction background, Skanska is uniquely qualified to perform this task. Skanska will have the interests and goals of Lake County as the highest priority, and will support the County in negotiating with fairness and in good faith with the GC/CM. A successful outcome is bid pricing and GMP's that are mutually acceptable to the GC/CM and that provide the best possible deal for the County.

Schedule of Values Review and Analysis

We would advise that contractors be required to establish an agreed-upon detailed schedule of values prior to submitting their initial pay applications. The Schedule of Values should contain a description of construction work, the value of completed work, the value of materials stored, and the value of the balance to finish the work. The forms and format for the Schedule of Values would be called out in the project's specifications. Our role would include reviewing the schedule of values and discussing it with Lake County in order to avoid any surprises.

Our experience is that the commonly-used forms and even AIA documents are missing key components necessary to determine with reliability the actual status and values of the completed and remaining work. There may or may not be supporting documentation containing the information required to make the assessment. When this occurs, the process of determining the actual and remaining values becomes a highly subjective process. One approach that we have used is to engage in an Earned Value Analysis in order to compare the planned amount of work with what has actually been completed and to determine if cost, schedule, and work accomplished are progressing as planned. Because it reveals schedule and budget variances, Earned Value Analysis also provides an early warning as to oncoming problems, enabling the project team to identify and control problems before they become insurmountable.

Our role will also include reviewing payment application for accuracy, which will ensure that the County will not be paying more than is due for services rendered.

Change Order Evaluation

Our approach focuses on the beneficial aspects of desirable changes while minimizing the detrimental aspects of unanticipated or unavoidable changes. When a proposed change is transmitted from a contractor, every effort will be made to provide full disclosure of the facts and costs of the change to Lake County. We will accurately record and report all potential change order items during construction that will affect your projects' final costs and budgets.

Whether a change order is proposed by Lake County or by a contractor, it will be evaluated by us to ensure that the proposed change is in the best interests of the County. Our approach to change order management means that you will have a better understanding of each project's shifting needs, costs and schedules at all times.

Auditing and Claims Analysis

We will facilitate the successful and timely resolution of construction claims. Although we have full auditing and claims analysis capabilities, our preferred approach is to detect and head off issues that might result in claims. Claims avoidance measures can include: "claim digger" analyses to identify potential conflicts, out-of-sequence work, potential stacking of trades, and other potential sources of claims; diligent oversight of contractors and their adherence to the schedule; and using project controls systems to ensure that



issues are addressed immediately and project participants are held accountable for their performance. If a claim becomes unavoidable, the level of documentation afforded by the use of a project controls system would place Lake County in a strong position to defend itself. In addition, by analyzing the construction contract and the contractor's performance, we can identify liability, quantify damages, and assist in resolving the dispute in a timely and cost-effective manner.

Early involvement of our team will facilitate the prompt and fair settlement of claims. This, in turn, will help to minimize any delays in project completion and any resulting financial consequences.

Should a dispute arise, we can draw upon our CPM scheduling expertise to identify and quantify schedule delays, impacts, accelerations, and disruptions on construction projects.

Expert Witness Services or Testimony

In the event of any litigation, members of our scheduling team can be available if called upon by the courts to provide testimony related to delay claims.



Facilities Condition Assessments with Budgetary Cost Estimates

Our facilities conditions assessments both identify the nature and extent of systems deficiencies and also provide a prioritized list of necessary upgrades with order of magnitude cost estimates. The method employed to establish prioritization would be developed in conjunction with you. A possible option is to assign four levels of priority. Items considered to be "critical" (Priority One) would be those that immediately affect health and safety. Examples of critical deficiencies would include life safety systems such as emergency lighting or fire alarms. The second priority level might include items that are in need of imminent repair or replacement but are not threats to human safety and well-being. The lowest level might include "minor" deficiencies that have no immediate effect on the building. Such deficiencies might include aesthetic elements like peeling paint or worn carpet. Once priorities are established, a series of strategic maintenance options can then be generated for a variety of short-term and long-term maintenance replacement/repair projects, such as roof repairs and MEP, fire alarm and security system upgrades.

Cost Estimating Associated with Disaster Related Facilities Damages

Skanska is well-positioned to assist with developing cost estimates for disaster recovery projects. In Bay County, Florida, Skanska has recently provided construction project management services for FEMA-funded disaster recovery efforts in the aftermath of Hurricane Michael. Our services have included damage assessments, re-construction estimating, bid package preparation, and construction and budget oversight. Projects have included repairs, renovations, and building systems upgrades at a courthouse, a jail, a library, a fire station, a wastewater treatment facility, a dental clinic, and other county facilities. Projects have also included the reconstruction of school facilities and housing units.

Conclusion

Cost estimating is more challenging than ever due to the unique economic and supply chain circumstances that are impacting materials and labor pricing. The depth of Skanska's internal estimating resources, in combination with our construction marketplace intelligence, enables us to provide Lake County with both cost certainty on proposed projects and negotiating leverage on current projects. The result will be cost certainty, maximum return on investment, and a substantial reduction in risk on the County's capital projects.