

SCOPE YOUR WAY TO BETTER BUDGETS



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SCOPE OF WORK: THE BASIS OF AN ACCURATE BUDGET ESTIMATE

For building owners and their representatives, one of the most frustrating parts of the preconstruction process is budget estimate creation. There is never enough data on hand. The work itself is time-consuming and tedious. And the stakes are incredibly high. If a budget comes in too high, one risks having his competence questioned and potentially tying up funds that could have been put to good use. More commonly, the budget estimate is much lower than contractor bids. This is an especially harrowing situation that forces the owner to choose between two painful options: Cut project scope or ask for more money. Deduct from the building users' experience or hurt the bottom line—this is a choice no one likes making.



HERE'S THE GOOD NEWS:

Owners can avoid the choice between cutting scope and going over budget. The answer lies in creating more accurate budget estimates, beginning with a comprehensive Scope of Work (SOW). This eBook explains what building owners need to know about creating a Scope of Work that will get your estimate off to a winning start.



WHAT IS SCOPE OF WORK?

Let's start with the basics. A Scope of Work is a detailed statement explaining exactly what is expected of a team completing a particular construction contract. A well-written scope defines the who, what, when, where and how of a project. The contractor and construction manager will look to the scope for everything—from required materials and equipment to project milestones and deliverables—so it is of the utmost importance that the SOW be precise, clear and complete.

TYPES OF SCOPE

Unfortunately, many projects run into trouble because the scope is incomplete, leaving ambiguity for the construction team. The SOW is not finished until all the following scope types have been accounted for.

1

ARCHITECT-ENGINEER SCOPE:

When most people think of scope, they think of AE scope. These are the bread-and-butter items, the plans and specs. The AE scope describes the work to be done and the people to complete it. It's the bare minimum and where most pre-construction teams stop at their own peril.

2

CONTEXT SCOPE:

Context scope covers the field conditions, up-to and including the physical location of the site, the weather, the facility's existing operations and security concerns. To some degree, the AE scope assumes the ideal situation, whereas the Context scope describes the imperfect realities of the build. Failure to consider the context of a project can lead to serious consequences—namely lost time and lost money.

3

CONSTRUCTION PROCESS SCOPE:

Sometimes called an Execution scope, this describes how the work will get done. This scope should describe equipment needs, safety requirements and staging.

BELL ROCK LIGHTHOUSE: A LESSON IN CONTEXT SCOPE

Here's a paraphrase of a story Rory Woolsey, a CEP with 40+ years of construction industry experience, likes to tell. In the early 1800s, construction of the Bell Rock Lighthouse was commissioned in Scotland. The AE scope defined everything it needed to define—plans for all five floors, composition of the walls, etc.—all the things an architect would like to know. But the context added a degree of difficulty to the lighthouse project. The AE scope failed to note the base of the lighthouse was underwater most of the year, with brutal coastal shores reducing the construction window to five months. Not to mention a shortage of granite, a necessary material for the project, and a lack of labor as a war was on. The project cost 50 percent more than was budgeted all because no one built a Context scope.

"GOOD ESTIMATORS ARE MADE GREAT THROUGH THEIR KNOWLEDGE OF CONSTRUCTION AND THEIR ABILITY TO MENTALLY BUILD THE PROJECT MULTIPLE TIMES BEFORE THE PROJECT IS ACTUALLY BUILT. THINK LIKE A CONTRACTOR AND SCOPE BEYOND PLANS AND SPECIFICATIONS."

RORY WOOLSEY, CEP



WHAT'S IN A SCOPE OF WORK?

Now that we've established what a SOW communicates from a high level, it's time to get down to the nuts and bolts and discuss the details found inside an effective scope.



Purpose statement. This explains the intended function of the structure being built.

Contractor responsibilities. In addition to project and subcontractor management, this often includes advising on and accepting design documentation.

Owner responsibilities. Generally, this concerns approving plans and how to communicate disputed items.

Project execution requirements. This includes standards, regulations and special requirements.

The quality, quantity and means of execution. A contractor should have enough details to estimate labor costs.

Project timeline. This includes milestones.

Payment and reporting schedules. Everyone needs to be aware of the schedule in order to meet due dates.

Related tasks and duties. These tasks and duties are required to obtain expected results in accordance with the project goal.

Contractor performance evaluation. The evaluation methods and metrics used for complete transparency and agreement.

CLARITY IS KEY

A Scope of Work should clearly lead the reader to one specific conclusion, leaving no room for interpretation. Ambiguity is your enemy and the best weapon against it is specificity.

It's important to sweat the small stuff and consider every single task. If an action is mandatory, the statement of work should use the words *shall* or *must*. You may also include photographs, drawings and additional visual aides to create clarity and prevent confusion. It is better to over-explain than to leave open the possibility of a misunderstanding.

DATA POINTS: SOURCING PROJECT SCOPE

A Scope of Work must be clear and complete for a construction project to succeed, and that means gathering a lot of data. But from where? In this section, we explore some sources of information that can help build a strong scope.

PLANS AND SPECS

Existing plans and specifications for identical or similar buildings should be a go-to resource for your next SOW. These documents (which include the scope) are a treasure trove of information including drawings, the materials and products used, installation methods and quality of work. Plans and specs are instrumental in writing the AE scope.

AS-BUILTS

Unexpected things happen on a job site, and contractors must stray from even the best plans and specs from time to time. Studying as-built documents can explain why plans were deviated from and how, so owners can prepare for changes or, better yet, prevent them.

SITE VISITS

For the Context Scope, there is no substitute for visiting a project site. A site visit will help inform challenges to equipment and material delivery, the conditions and operations of the existing facility and even a look at potential security concerns. Walking the project area reveals ground-level knowledge owners can use to **“BUILD IT BEFORE THEY BUILD IT.”**

VENDORS

When developing a scope, it's best to think like a contractor, so why not consult an actual contractor? There is nothing wrong with searching out help and advice from trusted vendors. These professionals have a wealth of experience and see projects through the lens of that experience. This sort of expertise can help ensure scope is useful and complete.

THIRD-PARTY DATA

A construction cost database is typically associated with estimating, but access to verified, impartial data is invaluable for scope development as well. A robust cost database can fill in knowledge gaps and account for details owners may not consider. RSMeans data from Gordian, for example, includes assembly models where construction tasks are grouped together and square foot models that provide an early idea of overall costs. This sort of data includes all the components and labor associated with complex jobs and is invaluable in the early planning stages and for validating estimates.

**"SQUARE FOOT COSTS DATA HAS BEEN VERY HELPFUL
IN VALIDATING INSTITUTIONAL PROJECT COSTS THAT
ARE REQUESTING TAX FUNDS."**

**MIKE WEMHOFF, FACILITIES OFFICER,
NEBRASKA'S COORDINATING COMMISSION FOR POSTSECONDARY EDUCATION**



A scope sets the tone for the whole project, so owners should leave no stone unturned and no question un-asked. There is no such thing as too much data.

BIGGER THAN A BUDGET: OPERATIONAL ADVANTAGES TO CLEARLY DEFINED SCOPES

The benefits of a clear, comprehensive SOW extend beyond the budget estimate and ripple throughout the life of the project. Beginning a project with a well-constructed SOW saves money, saves time and prevents setbacks.

MINIMIZE OVERRUNS

Everyone wants the same thing from a construction project: for it to finish on time and on budget. While that sounds simple and intuitive, those goals are difficult to achieve. Clearly defined scopes allow contractors to create realistic budget estimates and establish explicit benchmarks to keep the project moving. A solid SOW does not guarantee the project will stay on track or finish within cost forecasts, but a bad SOW guarantees it will not.



LESS PAPERWORK

Paperwork is inevitable, but it doesn't have to dominate an owner's time. A clear and complete SOW minimizes the amount of necessary paperwork during the course of a project. By scoping precisely and comprehensively, fewer items are left open to interpretation. This results in fewer emails sent back and forth with the team, a reduction in change orders and more time to devote to revenue-generating activities.

BETTER RELATIONSHIPS

In the building industry, relationships are fraught with tension. In fact, a 2017 SmartMarket Report from Dodge Data & Analytics revealed that 75 percent of building owners and contractors have experienced a dispute or claim in the last three years. In that same report, 90 percent of respondents cited collaboration as a means of limiting exposure to financial risk.

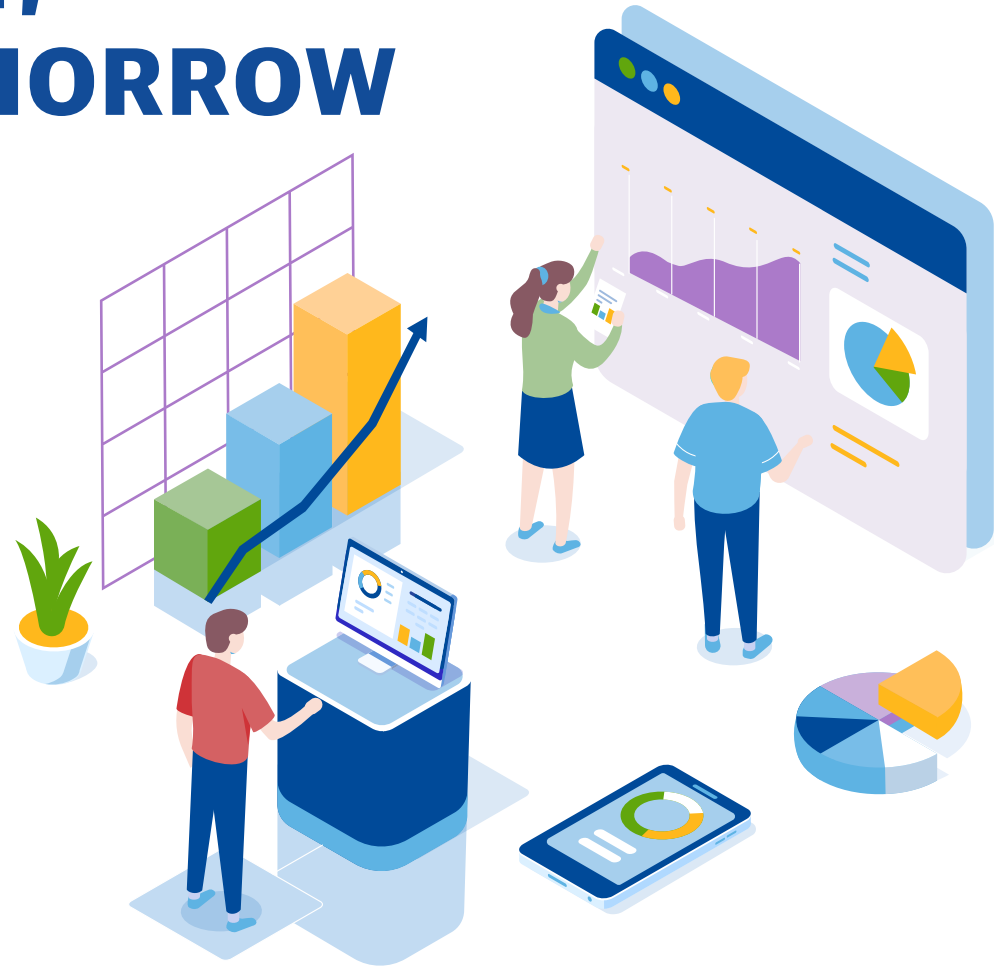
A clear SOW reduces disputes and misunderstandings, resulting in smooth projects and positive relationships between building owners, contractors, sub-contractors and other key stakeholders. Communicating what the project should accomplish in the scope aids in collaboration as well because team members can recommend materials and methods that achieve the same goals with less time and/or less money. This early collaboration goes a long way to establishing good relationships.

There's another constituency who benefits indirectly from a clear scope: building users. All the collaboration and teamwork that happens before a facility is up ultimately results in higher quality work. And higher quality work creates happy occupants.



SCOPE TODAY, SUCCESS TOMORROW

An accurate budget estimate begins with a clear, detailed Scope of Work, yet it's just the first step. There's still a quantity takeoff to complete, and prices to apply and validate before an estimate is ready. But it starts with the scope. By thinking like a contractor and considering every step of the build, writing clearly and using reliable data sources, building owners and their representatives can create accurate budget estimates.



1. <https://www.thebalancesmb.com/must-have-items-on-a-scope-of-work-sow-844916>
2. <http://woolseyestimating.blogspot.com/2012/01/scope-scope-scope.html>
3. <https://www.construction.com/news/new-research-how-collaboration-can-reduce-construction-risk-jan-2017>



ABOUT GORDIAN

Gordian is the world's leading provider of facility and construction cost data, software and services for all phases of the building lifecycle.

A pioneer of Job Order Contracting (JOC), Gordian's solutions also include our proprietary RSMeans data and Sightlines facility benchmarking and analysis. From planning to design, procurement, construction and operations, Gordian's solutions help clients maximize efficiency, optimize cost savings and increase building quality.

For more information, visit [gordian.com](https://www.gordian.com)