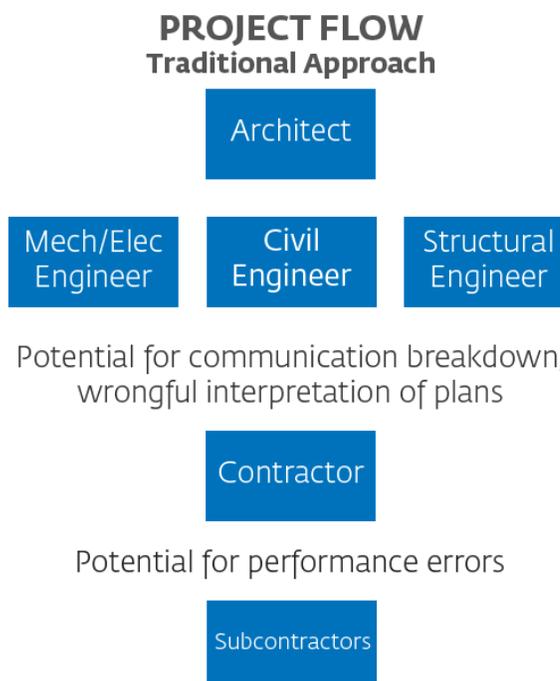


RISK REDUCTION IN DESIGN-BUILD**The Design-Build Process Can Dramatically Reduce The Risk Involved In New Facility Construction**

There is no such thing as a business venture without risk. Expansion, merger, reorganization, and relocation come with no guarantees, which means businesses must wager, if you will, that more will go right than wrong. And the risk is directly proportionate to the time and capital involved in the effort. But businesses must grow to succeed in today's highly competitive business environment. And that requires facilities development – a critical component of growth, but one which can pose substantial financial and legal risk.

In the traditional design-bid-build method, multiple providers are used for the various tasks required. This separate engagement of architect/engineer, contractor, and other parties means there is no single party responsible for overseeing the entire project, and the owner is at risk for nearly all outcomes. Budget overruns can lead to lower return on investment. Missed completion dates can mean costly delays in getting to market. And, since the owner is ultimately responsible, significant legal issues (and costs) can ensue in determining what party should be held accountable for problems that arise.



These bottom-line issues have led growing numbers of businesses to abandon the “cross your fingers and hope for the best” design-bid-build method in favor of a more certain facility construction process – Design-Build. This process is preferred by more businesses because it reduces the risk of performance error and increases quality through the assumption of full responsibility by a single entity. Not only does this simplify the process, it transfers risk from the owner to the Design-Builder.

PROJECT FLOW Design-Build Approach

Contractor

Direct communication, minimized potential for performance errors.

Subcontractors

Financial Risk Is Minimized Through Early Cost Identification

With Design-Build, risk reduction begins at the design stage. Construction specialists are an integral part of the design team, so construction implications are addressed early. The team works together to decide the most cost-effective materials and methods of delivery before a design is finalized, which enables them to provide more accurate costs and better scheduling up front. And because the same group is responsible for both drawings and functional performance, the possibility of expensive surprises in the construction phase is virtually eliminated. Too often with design-bid-build, design impracticalities are discovered during construction, which leads to increased cost, blown schedules, and finger pointing between architect, engineer, and contractor.

The Early Integration Of Design And Construction Virtually Eliminates The Possibility Of Project Delays

In addition to reducing financial risk, the integrated nature of Design-Build also results in decreasing the risk of schedule erosion and project delay. Bidding periods and redesign time are

eliminated. Materials and equipment procurement and construction work can begin earlier – in some cases, before the construction documents are fully completed. Since total design-construction time is reduced, owners enjoy earlier utilization of their completed facility. The chance of late entry to market or production downtime is greatly reduced.

Single-Source Responsibility For The Entire Project Means Risk Is Transferred From The Owner To The Design-Builder

Design-Build presents less risk from a contractual perspective. There is only one contract, so owners look to a single source for performance. This is a major advantage over the design-bid-build process, where the responsibility for any aspect of a project's outcome may be unclear due to language in the various provider contracts. Typical are phrases like, "The owner warrants to the contractor that the drawings and specifications are complete and free from error..." This language places the responsibility for design solely with the owner. If problems are encountered during construction, the contractor can blame the architect who, in turn, may point the finger right back at the contractor. This method relies on audit, inspection, and, all too frequently, the legal system to ensure final project quality. In contrast, the Design-Builder assumes all responsibility by documenting the owner's requirements and expectations in performance terms. "The Design-Builder warrants to the owner that it will produce documents that are complete and free from error..." The Design-Builder essentially guarantees high quality in the finished facility by assuming complete responsibility from design through completion and into operation. As one of the greatest areas of cost for most businesses, there is no room for error in facilities construction. The potential for reducing risk in facilities development is perhaps the greatest advantage of the Design-Build method. Single-source responsibility for quality, cost, and schedule adherence clearly makes this the superior delivery mechanism for new facilities.

Because the Design-Builder is accountable for both design and construction, the risk of cost overruns from design error or poor coordination are transferred from the owner to the Design-Builder.

Design-Build Transfers Facilities Risk Away From Owners

Typical Risk Allocation in Traditional Design-Bid-Build Risk/Responsibility Category			Typical Risk Allocation In Design-Build Risk/Responsibility Category	
Owner:	Designer:	Constructor:	Owner	Design-Builder
Errors or omissions revealed during Construction	Errors or omissions revealed during construction			Errors or omissions revealed during construction
Constructability of design	Constructability of design			Constructability of design
Establishment of project cost				Establishment of project cost
Redesign if over budget	Redesign if over budget			Redesign if over budget
Permits and approvals: obtains overall approvals	Permits & approvals	Obtains most permits	Limited to major approvals	Obtains most approvals & permits
Quality Control & Quality Assurance: significant inspection & testing		QC/QA responsible for quality of workmanship	QC/QA: oversight only	Responsible for QC/QA
Differing subsurface conditions		Subsurface: responsible for quality of workmanship	Subsurface: negotiable, responsible for information given	Subsurface: negotiable, but typically responsible for most conditions
		Construction defects		Construction defects
Strike or labor disputes: may be responsible for some		Strike or labor disputes: may be responsible for some		Strike or labor disputes: usually responsible but negotiable
Weather conditions: may be responsible		Weather conditions: may		Weather conditions: usually responsible but negotiable

for some		be responsible for some		
Catastrophes: fire, flood, earthquake; may be responsible for some		Catastrophes: fire, flood, earthquake; may be responsible for some	Catastrophes: negotiable	Catastrophes: usually responsible but negotiable
Unidentified utilities affecting site			Unidentified utilities affecting site	Unidentified utilities affecting site
Inflation		Inflation		Inflation
Third party litigation		Third party litigation	Third party litigation	Third party litigation
Warranty for facility performance		Performance: typically responsible for materials & workmanship for 1 year	Performance warranty: negotiable	Performance: supplying design & product; warranties negotiable

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