



Design-Build:

# An Alternative Construction System

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Design-build is a construction delivery method that is relatively new to state and local government. Seventeen statutes have been enacted since 1993 authorizing its limited use by the state and local agencies. In this report, we look at the experience of these agencies and examine the advantages and disadvantages of the design-build method compared to the traditional design-bid-build method. We find that design-build can be a useful option for some public construction projects. We make recommendations for statutory changes to provide that option while preserving the public's confidence in the procurement process, quality control, and access for small contractors to public contracts. ■

**Acknowledgments**

This report was prepared by Paul Guyer, and reviewed by Dana Curry. The Legislative Analyst's Office (LAO) is a nonpartisan office which provides fiscal and policy information and advice to the Legislature.

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## DESIGN-BUILD: AN ALTERNATIVE CONSTRUCTION SYSTEM

For most of the last century the state—like all sectors of government across the nation—accomplished construction work using a system called “design-bid-build.” The state used this approach almost exclusively to build its roads and freeways, public buildings, correctional institutions, universities, hospitals, and water and natural resources infrastructure. Similarly, local governments have used mainly design-bid-build to construct public projects.

In the 1990s, the state began to experiment with awarding and managing construction contracts using the “design-build” system. Figure 1 (see next page) summarizes the various legislation authorizing state and local entities to use design-build under specified circumstances.

Seven of the laws require local entities that use the process to report on their projects to the Legislative Analyst’s Office (LAO) at various times between December 2004 and January 2007. Three of the laws (Chapters 594 of 2000, 637 of 2002, and 976 of 2002) require the LAO to report on these implementations of design-build. This report contains the LAO’s consolidated findings on design-build to date. Specifically, the report describes the differences between the primary construction delivery and procurement processes, and discusses their advantages and disadvantages. The report then reviews public sector experience using design-build in California, and makes recommendations regarding design-build authority for state and local agencies.

## CONSTRUCTION DELIVERY AND PROCUREMENT

### CONSTRUCTION DELIVERY

There are two primary *construction delivery* systems used in the public and private sectors. These are (1) the traditional design-bid-build and (2) the increasingly common design-build approaches. The construction delivery system defines the contractual and reporting relationship among the principal participants in the construction project and the methods and procedures used to complete construction. Figure 2 (see page 5) shows these relationships in simplified form. While there are variations to these approaches, most construction delivery systems fall into one or the other.

### Design-Bid-Build

Under the design-bid-build system, the public agency first awards an architect/engineer contract to design the project based on subjective criteria of qualifications and experience of the architect/engineer. This contract generally accounts for a relatively small portion of the project’s total costs—about 5 percent to 10 percent. After detailed project plans and drawings are completed, a contractor is selected to perform the construction work, which accounts for 90 percent to 95 percent of the project’s costs. In almost all cases, contracts for construction work are awarded objectively based on competitive bidding.

## Design-Build

With design-build, the public agency contracts with a general contractor to both design and build the project. The agency does not

separately contract with an architect/engineer for design. That is the responsibility of the general contractor. The general contractor in turn subcontracts, through competitive bidding

**Figure 1**  
**Recent State Laws Authorizing Design-Build**

State		
Authorization	Facilities	Comments
Ch 429/93 (AB 896 Brown)	Junipero Serra (Los Angeles) and Civic Center (San Francisco) buildings.	
Ch 430/93 (SB 772, Petris)	Elihu Harris (Oakland) building.	
Ch 761/97 (SB 1270, Johnston)	East End Project (Sacramento).	
Ch 252/98 (SB 776, Johannessen)	Permits Department of General Services to use design-build on at least five projects authorized by Legislature.	<ul style="list-style-type: none"> <li>• Used for CalTrans District 7 building (Los Angeles).</li> <li>• Expires 1/1/06.</li> </ul>
Ch 782/98 (SB 1934, Johnston)	Department of Corrections headquarters (Sacramento).	<ul style="list-style-type: none"> <li>• Not used.</li> </ul>
Ch 733/99 (AB 290, Steinberg) <sup>a</sup>	Department of Parks and Recreation, Stanford Mansion restoration (Sacramento).	
Ch 672/01 (SB 809, Ortiz)	West End Project (Sacramento).	<ul style="list-style-type: none"> <li>• In planning stages.</li> </ul>
Local		
Authorization	Facilities	Comments
Ch 663/95 (AB 1717, Cortese)	Four specified counties.	<ul style="list-style-type: none"> <li>• Projects not exceeding \$50 million.</li> <li>• Expired 1/1/01.</li> </ul>
Ch 1040/96 (AB 2660, Aguiar)	Authorized local agencies to enter into agreements for private funding and development of revenue producing facilities.	
Ch 258/99 (AB 755, Corbett)	Alameda County, juvenile justice facility.	
Ch 541/00 (AB 958, Scott) <sup>a</sup>	Transit operators.	<ul style="list-style-type: none"> <li>• Projects exceeding \$10 million.</li> <li>• Expired 1/1/05.</li> </ul>
Ch 594/00 (AB 2296, Dutra) <sup>ab</sup>	Seven specified counties.	<ul style="list-style-type: none"> <li>• Projects exceeding \$10 million.</li> <li>• Expires 1/1/06.</li> </ul>
Ch 767/00 (SB 1144, Johannessen) <sup>a</sup>	Two specified cities.	<ul style="list-style-type: none"> <li>• Projects not exceeding \$50 million.</li> </ul>
Ch 421/01 (AB 1402, Simitian) <sup>a</sup>	School districts.	<ul style="list-style-type: none"> <li>• Projects exceeding \$10 million.</li> <li>• Expires 1/1/07.</li> </ul>
Ch 637/02 (AB 1000, Simitian) <sup>ab</sup>	Three specified community college districts, and five additional as selected by the community colleges Chancellor.	<ul style="list-style-type: none"> <li>• Expires 1/1/08.</li> </ul>
Ch 976/02 (SB 1759, Johannessen) <sup>ab</sup>	Four specified cities.	<ul style="list-style-type: none"> <li>• Projects exceeding \$5 million.</li> <li>• Expires 1/1/06.</li> </ul>
Ch 196/04 (SB 1130, Scott)	Transit districts.	<ul style="list-style-type: none"> <li>• Revised Ch. 541/00.</li> <li>• Expires 1/1/07.</li> </ul>

<sup>a</sup> Required to report information to Legislature.

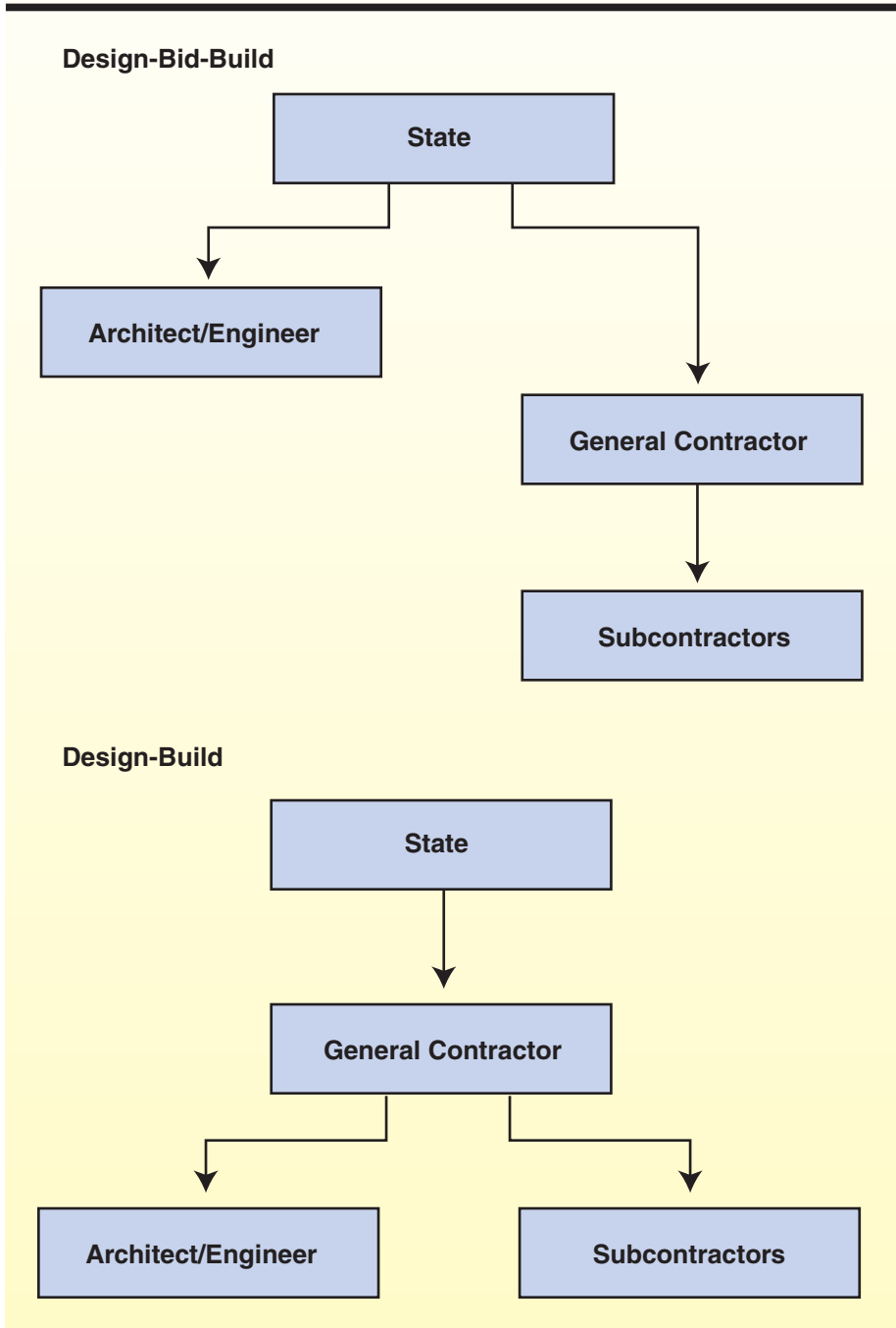
<sup>b</sup> The LAO is required to report on local implementation.

or otherwise, for an architect/engineer and various construction trade work. Design-build delivery methods have a number of variations,

but most can be placed in one of two categories—*stipulated price* and *construction management*.

Figure 2

**Comparison of Two Primary Construction Delivery Systems**



**Stipulated Price.** With *stipulated price design-build* a public agency specifies how much it will pay for construction of a particular building. For example, the agency might provide only a programmatic description of the building it wants by specifying the size of the building, types of spaces, and perhaps some acceptable construction materials. The agency then asks competing firms to present proposals that illustrate a conceptual design and provide specifications for materials and building systems that it is willing to construct for the price stipulated by the agency.

**Construction Management.** With *construction management design-build* the public agency awards a contract to a “construction manager” (frequently a construction firm, but sometimes an architect/engineer firm)

on the basis of a fee. The construction manager designs the project and solicits bids from sub-contractors and suppliers. The total of these bids plus the construction manager's fee determine the total price the agency pays for the building.

## CONSTRUCTION PROCUREMENT

There are two principal *construction procurement* systems. These are: (1) procurement by *competitive bidding*; and (2) procurement based on *experience, qualifications, and best value*. The construction procurement system defines the process used to select and award contracts for construction projects.

### Competitive Bidding

Procurement by competitive bidding means a public agency awards contracts for construction or construction-related work objectively, based on bids. Bids are offers to perform the work for a specific price, with the contract going

to the lowest bidder. This is the way construction contracts are awarded under design-bid-build. Competitive bidding also is used to procure most of the construction work when construction management design-build is used. Competitive bidding may or may not be used when stipulated price design-build is used.

### Experience, Qualifications, Best Value

Procurement based on the experience and qualifications of competitors, or a judgment that a competitor will provide best value to the project, is subjective. It is used to award most design-build contracts, as well as architect/engineer contracts in design-bid-build. Although these are subjective criteria and bidding is not used, this procurement system has competitive elements because contractors compete to show they have the most experience and are best qualified.

## CONSTRUCTION DELIVERY PROCESSES: PROS AND CONS

Each of the construction delivery processes has advantages and disadvantages. Figure 3 summarizes the pros and cons of the design-bid-build process versus the design-build (with stipulated price) process.

### DESIGN-BID-BUILD

#### Advantages

***Building Is Fully Defined.*** With design-bid-build, the facility the agency wants is fully defined by detailed working drawings and specifications before bids are solicited. This

means there is little uncertainty about what the agency wants and what the contractor is required to deliver.

***Competitive Bidding Results in Lowest Costs.*** With design-bid-build, the contract is awarded to the bidder who offers to construct the building for the lowest price. This competition motivates bidders to offer the lowest price they can because they know price is the only basis for award of the contract. Also, since the building the agency wants is fully defined by detailed working drawings and specifications, bidders do not need to increase their bids to

cover contingencies that might arise if a building is not fully defined.

**Relative Ease of Assuring Quality Control.**

Quality in a construction project is controlled using detailed working drawings and specifications, which are the *basis of the contract* between the agency and a construction contractor. This allows an agency inspector to compare the materials and workmanship of the project under construction with what are required. If the requirements are not met, provisions of the contract can compel the contractor to correct the work. Without detailed working drawings and specifications, there is little an agency can do to control the quality of the contractor’s work.

**Objective Contract Award.**

Awarding construction work, which represents about 90 percent to 95 percent of the building cost, by competitive bidding, uses an objective criterion of lowest cost. This reduces the opportunity for bias and inappropriate influence to play a part in awarding the construction contract. The smaller architect/engineer contract (representing about

5 percent to 10 percent of the building cost) is awarded based on subjective criteria of experience and qualifications because it is for professional services that cannot be defined in detail before the building is designed.

**Good Access for Small Contractors.**

By awarding contractors based on price, the design-bid-build process provides the best opportunity for qualified small and new contractors to obtain government contracts. Small and newly established contractors may be able to perform work at a lower cost than large competitors because of lower overhead and more efficient operations.

**Disadvantages**

**Agency Gets Involved in Conflicts and Disputes.**

Design and construction of a building is a complex and difficult undertaking. There will always be conflicts and disputes that can lead to time-consuming and expensive legal action, no matter what construction delivery process is used. One major source of conflicts is errors

and omissions in the working drawings and specifications prepared by the architect/engineer. In the design-bid-build process the public agency hires the architect/engineer directly, and the law holds the agency to be the guarantor of the completeness and accuracy of the architect/engineer’s work. This draws the agency into disputes between the

**Figure 3**

**Design-Bid-Build Versus Design-Build Advantages and Disadvantages**

Advantages	Disadvantages
<b>Design-Bid Build</b>	
<ul style="list-style-type: none"> <li>• Building is fully defined.</li> <li>• Competitive bidding results in lowest cost.</li> <li>• Relative ease of assuring quality control.</li> <li>• Objective contract award.</li> <li>• Good access for small contractors.</li> </ul>	<ul style="list-style-type: none"> <li>• Agency gets involved in conflicts and disputes.</li> <li>• Builder not involved in design process.</li> <li>• May be slower.</li> <li>• Price not certain until construction bid is received.</li> <li>• Agency may need more technical staff.</li> </ul>
<b>Design-Build (Stipulated Price)</b>	
<ul style="list-style-type: none"> <li>• Price certainty.</li> <li>• Agency may avoid conflicts and disputes.</li> <li>• Builder involved in design process.</li> <li>• Faster project delivery.</li> <li>• Agency needs less technical staff.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited assurance of quality control.</li> <li>• Subjective contract award.</li> <li>• Limited access for small contractors.</li> </ul>



designer and builder and frequently subjects it to significant liability because of its perceived “deep pockets.”

***Builder Not Involved in Design Process.***

With design-bid-build, the builder is not known until after the design work has been completed, bids have been submitted, and a construction contract awarded. This means the design cannot incorporate any input by the construction contractor on construction materials and methods that could improve the building’s design, functionality, and cost.

***May Be Slower.*** The design-bid-build process is usually slower than the design-build process, mainly because of the sequential nature of the process. In contrast, under design-build, design and construction work may be undertaken concurrently. (This difference, however, may not be significant in the case of larger projects because procurement using subjective criteria of experience, qualifications, and best value often requires substantial time to allow competitors to prepare proposals and agency officials to evaluate them.)

***Price Not Certain Until Construction Bid Is Received.*** With design-bid-build, the architect/engineer firm prepares cost estimates as the design work progresses, typically when the working drawings and specifications are about 10 percent, 35 percent, and 100 percent complete. While this gives the agency an early indication of the project’s cost, there is no cost certainty until design is completed and construction bids have been received.

***Agency May Need More Technical Staff.*** Design-bid-build requires the completion of detailed working drawings and specifications before bids are solicited, and then a substantial inspection and quality control effort during

construction. This may require an agency to employ a substantial number of technical staff to manage larger design-bid-build projects.

## **DESIGN-BUILD— USING STIPULATED PRICE**

### **Advantages**

***Price Certainty.*** With the “stipulated price” method of implementing design-build, an agency has the best certainty of the cost of the building at the outset of the project. This is because the agency specifies what it is willing to pay for a building before it solicits proposals from design-build contractors for the configuration, features, and materials they are willing to provide for the specified price. The risk with this approach is that the agency may not get the best quality building for the price it pays.

***Agency May Avoid Conflicts and Disputes.*** Because the designer and builder are part of the same design-build entity, and the public agency is not the guarantor of the completeness and accuracy of the work of the architect/engineer, the agency may avoid conflicts and disputes that can arise between the architect/engineer and construction contractor.

***Builder Involved in Design Process.*** The construction contractor is involved in the design process from the beginning and can provide helpful insights on construction materials and methods that can make the design more efficient and less costly to construct.

***Faster Project Delivery.*** By overlapping design and construction to some extent, and by potentially reducing conflicts between designer and builder, design-build can usually deliver a project faster than the design-bid-build approach. With large projects, however, this may be less of



an advantage because of the extra time needed for competitors to prepare their statements of qualifications and technical proposals.

**Agency Needs Less Technical Staff.** Under design-build, the public agency does not have to review the accuracy and completeness of the architect/engineer's work. Thus, the agency may have less need for in-house technical staff to manage projects.

### Disadvantages

**Limited Assurance of Quality Control.** Because the building the agency wants is not defined in detail at the time it enters into a contract with a design-build contractor, there is limited basis for enforcing a contract and the agency may have little control over the quality of the construction work.

**Subjective Contract Award.** With design-build, the design and construction work generally is awarded based on subjective criteria such as experience, qualifications, and best value. Agencies have established contractor evaluation and selection processes and policies to try to mitigate the risks of subjective judgments, but drawbacks still exist, such as:

- **Public Managers Have Discretion in Awarding "Points."** Agencies frequently use a points system. The number of points public officials award to competing firms on various criteria is arrived at subjectively. There is no objective way to determine the correct number of points to award a competitor on a given criterion. For example, there is no objective way to determine that one contractor's "waste management plan" warrants "43" points and another's only "40."

- **Criteria Do Not Relate Directly to Specific Building Being Procured.**

While evaluating contractors based on qualifications and experience provides a measure of contractors' competence, it is not a guarantee on the project outcome. This is because under design-build a specifically designed building is not the "deliverable."

- **Comparison of Alternative Proposals for "Added Value" Difficult.** It is difficult to make a reasoned comparison of alternative added value proposals. For example, it is impossible to directly compare the benefit from higher quality plumbing piping proposed by one contractor with the benefit from an enhanced electrical distribution system proposed by another. In addition, many of the benefits can only be realized over time—often after the building has been completed, adding to the difficulty of comparing alternative proposals.

#### **Limited Access for Small Contractors.**

Because design-build contracts mostly are awarded based on qualification and experience, this method may tend to work against small, newly established contractors, who do not have the range of experience of large, long-established firms. As a result, access to design-build contracts, especially the large contracts, may be limited for these contractors.

## DESIGN-BUILD—USING CONSTRUCTION MANAGEMENT

The advantages and disadvantages of design-build construction delivery using construction management methods are similar to

those for design-build using a stipulated price, with two main exceptions:

**Price.** The public agency has far less price certainty under this method than if the stipulated price approach is used. Even so, construction management still provides more certainty than design-bid-build, where the total price is not known with reasonable certainty until design is finished and bids have been received. With construction management, a series of trade contracts is bid over time. This provides partial cost information earlier, and allows design

changes to be made in subsequent trade packages to control costs and keep the project within budget.

**Benefit of Competitive Bidding Flows to Agency.** With the construction management approach to design-build delivery, the savings resulting from competitive bidding for subcontracts and supplies benefits the public agency rather than the design-build contractor. This is an important advantage construction management has over stipulated price.

## EXPERIENCE WITH DESIGN-BUILD

### Cities and Counties

The authority for local governments to use design-build was first granted by the state in 1995 and has been extended to various California cities and counties. Figure 4 summarizes how these local governments have used this authority under those statutes that required them to report their design build activities to the Legislature. As the figure shows, of the 13 counties and cities that have been given the design-build option, six—Alameda, Sacramento, and Solano counties, and the cities of Davis, West Sacramento, and Woodland—have used the option to construct one or more capital outlay projects.

**Views on Design-Build Generally Favorable.** The counties and cities that have used design-build generally expressed favorable opinions of the process. Almost all reported that compared to the traditional design-bid-build process, it took less staff time to construct a project and resulted in fewer claims and less litigation. To a substantial degree, this is because the local agency is removed from disputes

between the architect/engineer and the construction contractor. They also indicated that by awarding a fixed price contract, design-build provided more price certainty.

**Lessons Learned.** These local agencies also made various observations about the general usage of design-build:

- **Project Cost Thresholds Not Needed.** Statutory requirements regarding specified maximum and/or minimum project costs prevented agencies from using design-build on certain projects. Local agencies do not see any compelling reason for imposing such cost thresholds.
- **Adding Objectivity in Procurement Process Would Be a Plus for Public Projects.** Many of the officials we talked with acknowledged the benefit of applying some objective criteria in awarding design-build contracts, and not relying solely on subjective assessment of competitors' experience, qualifica-

tions, and proposals of best value. They indicated that this is one means to maintain the public’s confidence in the procurement process. In an effort to provide objectivity, Sacramento, Solano (on the health and social services building project), and Alameda Counties, and the cities of West Sacramento and Davis used a two-step process to select a design-build contractor. Details varied,

but generally they first used subjective criteria such as experience and qualifications to identify a limited group of finalists to compete for the design-build contract. The finalists then submitted design and cost proposals based on county criteria, and the contract was awarded based on the objective criteria of lowest cost. Similarly, for the Solano County administration center and the

**Figure 4**  
**Summary of Design-Build Activities by Authorized Cities and Counties**

Agency	Used Design-Build	Did Not Use Design-Build	Types of Projects
<b>Counties</b>			
<b>Chapter 663, Statutes of 1995</b>			
Solano	X		<ul style="list-style-type: none"> <li>• \$2.3 million juvenile hall expansion.</li> <li>• \$0.4 million county recorder’s office renovation.</li> </ul>
<b>Chapter 594, Statutes of 2000</b>			
Alameda	X		<ul style="list-style-type: none"> <li>• \$15 million county recorder’s office building.</li> <li>• \$135 million juvenile justice center (under construction).</li> </ul>
Contra Costa		X	
Sacramento	X		<ul style="list-style-type: none"> <li>• \$2.5 million branch library.</li> </ul>
Santa Clara		X	
Solano	X		<ul style="list-style-type: none"> <li>• \$18.4 million health and social services building (under construction).</li> <li>• \$80 million county administration center (under construction).</li> </ul>
Sonoma		X	
Tulare		X	
<b>Cities</b>			
<b>Chapter 1040, Statutes of 1996</b>			
Woodland	X		<ul style="list-style-type: none"> <li>• \$14.4 million police station.</li> </ul>
<b>Chapter 767, Statutes of 2000</b>			
Davis	X		<ul style="list-style-type: none"> <li>• \$7.3 million police station.</li> </ul>
West Sacramento	X		<ul style="list-style-type: none"> <li>• \$2.6 million pump station.</li> </ul>
<b>Chapter 976, Statutes of 2002</b>			
Brentwood		X	
Hesperia		X	
Vacaville		X	
Woodland		X	

Woodland police facility, the design-build contracts were based on a mixture of (1) the subjective criteria of experience, qualifications, and proposals of best value, and (2) the objective criterion of cost.

- ***Good Project Definition Is Needed Before Awarding Design-Build Contract.*** Agency officials indicated that it is important to thoroughly specify the building it wants using conceptual drawings, specifications, program statements, and similar documentation so (1) design-build proposers understand what is required and (2) there is documentation to form a basis for the contract between the agency and the design-build contractor.
- ***Best Suited for Straightforward Projects.*** Most agencies seemed to feel design-build was best suited to projects of conventional design and construction, such as office buildings and parking garages. When buildings are more specialized, such as jails and hospitals, there was less certainty that design-build was the best construction delivery process. This is because the user agency often has more unique design preferences it wants accommodated in the building.

***Reasons for Not Using Design-Build.*** Local agencies that did not use design-build provided different reasons for not doing so. For example:

- Contra Costa County indicated it did not use design-build authority granted it because of the high cost threshold for qualifying projects, and the time available to utilize design-build under the

statute was too short to coordinate with the timing of the projects the county needed to build.

- Sonoma County did not use design-build because of the high threshold of project cost set by Chapter 594. County staff also indicated that due to a general lack of public sector experience in using design-build, it is not inclined to use a new delivery system for large projects. Had the cost threshold been lower, the county would have considered using design-build for relatively smaller-scale projects, such as an office building.
- The City of Hesperia indicated it did not use the design-build authority granted under Chapter 976 because the legislation contained a requirement that the city establish a labor force compliance program and contract with a third party for its operation, unless all contractors on the project entered into collective bargaining agreements. The city felt this provision would negate any economic benefit it might gain from the design-build process.
- The Cities of Brentwood and Vacaville did not use their design-build authority because they did not have projects they considered suitable for design-build delivery due to size, complexity, or scheduling considerations.

All of the cities and counties that did not use the design-build authority, however, indicated that they would like to have design-build authority available to them as an alternative construction delivery method.

## The State

The Department of General Services (DGS) has completed several major projects using design-build. Generally, the DGS-managed design-build contracts have been completed on schedule and within budget, although there have been exceptions. For example, the East End project required an \$18 million augmentation and was completed about a year and a half after its original scheduled completion date. The Caltrans District 7 building is currently under construction and has required no augmentations to date. It is currently estimated to be completed about 15 months after its originally scheduled completion date. Nonetheless, DGS has indicated general satisfaction with the design-build approach used on all of these projects, pointing primarily to the advantages of using the process discussed above.

## Federal

Federal agencies have been authorized to use a design-build construction delivery process since 1996, and federal officials have expressed general satisfaction with it as an option. The federal procurement process has two phases. In the first phase, federal officials reduce the number of competitors to no more than five based on subjective criteria of experience and qualifications. In phase two, competitors submit technical and price proposals which are evaluated and a design-build contract is awarded based on a combination of subjective (“best value”) and objective (price) criteria.

## Issues to Address

To date, experience in design-build by state and local agencies in California as well as the federal government has generally been positive.

Nevertheless, the experience has been relatively recent and limited. As such, questions and issues remain in how design-build can best be implemented in the public sector. The key issues include:

- ***How to Ensure Integrity of the Procurement Process.*** Local and state officials we talked with were almost uniformly in favor of the authority to use subjective criteria such as experience, qualifications, and best value as a basis for awarding design-build contracts. However, they also recognize that allowing subjectivity in the award of public contracts may permit inappropriate influence to be brought to bear on the procurement process. There have been incidents in other states where the integrity of the process was compromised.
- ***How to Ensure Cost and Quality Control.*** With design-build, the project an agency wants constructed is inherently only minimally defined at the time the contract is awarded to a contractor. Depending on how the process is implemented and how well defined the project is at the outset, the agency may not get the building it thought it was paying for.
- ***How to Ensure Access for Small and Newly Established Contractors.*** Using criteria such as experience and qualifications to award contracts reduces the likelihood that contracts are awarded to small and newly organized contractors. Over time, this may limit competition for public agency construction contracts.

## WHERE DOES THE STATE GO FROM HERE?

Figure 5 shows that many of the statutes authorizing design-build in California included expiration dates, after which authority to use the design-build process ends. As these statutes expire, the Legislature likely will be asked to extend the authority, either for limited terms or permanently. The Legislature will also likely be requested to provide the authority to a larger number of public entities. Based on our review, we recommend the Legislature provide the design-build authority on an ongoing basis to local agencies and the state—within a framework that protects the integrity of the procurement process, controls the quality of the construction work, and provides access to public contracts for small and newly established contractors. Specifically, we recommend:

- **Inclusive, Uniform Statute.** Instead of separate legislation providing the design-build authority for different time spans for different groups of state and local entities, as currently exist, we recommend that a single statute be adopted that applies to all public entities providing the same authority and limitations, if any. This would provide contractors and public officials with a consistent business environment within which to operate throughout the state.

- **Design-Build Should Be Optional to—And Not Replace—Design-Bid-Build.** Design-build should be an available option for state and local agencies, but not a replacement of design-bid-build. This is because for many projects agencies may want the greater control over the design that they would have with design-bid-build.
- **Contracts for Most of Project Cost Should Be Objectively Awarded Based On Competitive Bidding.** In order to preserve the integrity of public sector procurement and provide prudent stewardship of public funds, we recommend that most of the cost of a project be procured by competitive bidding. As discussed above, one way to do this is by using construction management with competitive bidding of subcontracts. Any savings resulting from competitive bidding would flow to the public agency. Another way is sometimes called the “two-envelope system.” With this system the agency defines its building requirements with conceptual drawings and

**Figure 5**  
**Design-Build Legislation Expiration Dates**

Chapter/Year	Agencies	Expiration Date
541/2000	Transit operators	1/1/05
252/1998	Department of General Services	1/1/06
594/2000	Seven specified counties	1/1/06
976/2002	Four specified cities	1/1/06
421/2001	School districts	1/1/07
196/2004	Transit operators	1/1/07
637/2002	Eight community college districts	1/1/08



specifications, as well as functional requirements. Statements of qualifications are submitted by design-build contractors, and the agency selects a short list based on qualifications and experience—typically three to five firms. The agency then usually pays each of the finalists a modest amount to develop a technical proposal, which is submitted in one envelope, with their price in a second envelope. The agency reviews the technical proposals to see if they satisfy its requirements. For those finalists whose technical proposals are satisfactory, the agency opens the second envelopes and the contract is awarded to the proposal having the lowest cost.

- ***Ensure Access for Greatest Number of Contractors.*** As discussed above, legislation permitting design-build contracts to be awarded based on qualifications and experience may have the practical result over time of restricting contract awards primarily to the biggest

and longest-established firms. To encourage competition and access, we recommend statutory language which provides that design-build contracts be accessible to design-build contractors with experience and qualifications *that are consistent with needs of the project*, rather than limited to the biggest and longest-established firms.

- ***No Cost Limitations.*** We recommend there be no maximum or minimum project cost threshold imposed on the authority.
- ***Buildings Only.*** At this time, we recommend that the Legislature grant design-build authority only to buildings and directly related infrastructure. There are more complex issues associated with other public works projects such as transportation, public transit, and water resources facilities. Evaluation of design-build as a construction delivery option for these other infrastructure facilities is beyond the scope of this report.

## CONCLUSION

Design-build can provide state and local agencies with a useful alternative to the more commonly used design-bid-build process to deliver construction projects. However, to the extent design-build contracts are awarded based solely on subjective criteria, there is an opportunity for compromising the public procurement process. Thus, it is important that statutory

changes that make the design-build process more widely available to state and local agencies also preserve the public's confidence in the procurement process. Using construction management with competitive bidding of subcontracts or a two-envelope system can achieve that.



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