



# Progressive Design-Build Overview

*Valley Transportation Authority BART Silicon Valley Phase II*

# Progressive Design-Build

## Agenda

- What is Progressive Design-Build?
- Why use Progressive Design-Build?
- Where is PDB used in the Industry?
- Owner's Perspective
- Contractor's Perspective
- Legal Perspective
- Closing Thoughts
- Q&A

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# What is Progressive Design-Build?

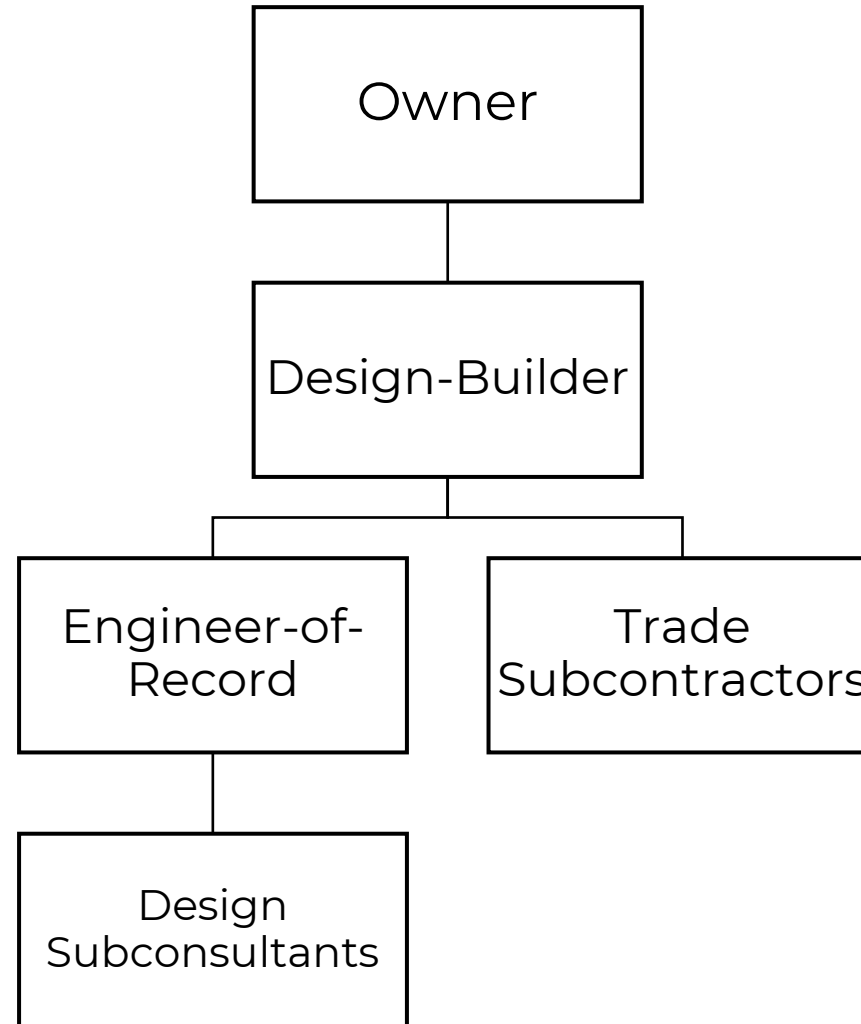
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# What is Progressive Design-Build?

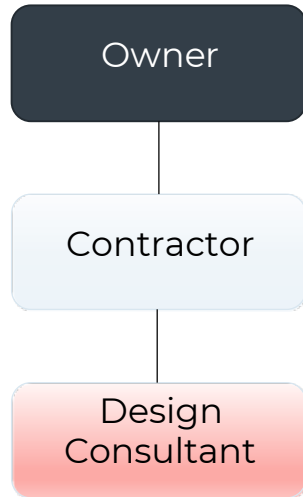
## Project Delivery Method: DB & PDB Organization

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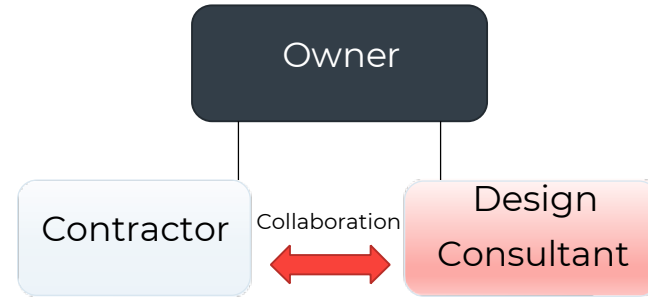
## Traditional DB vs. CM/GC vs. PDB

### Traditional DB



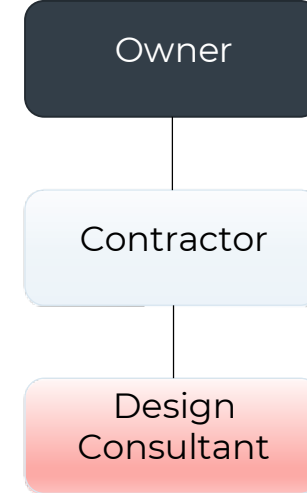
**ONE CONTRACT**  
Design +  
Construction

### CM/GC



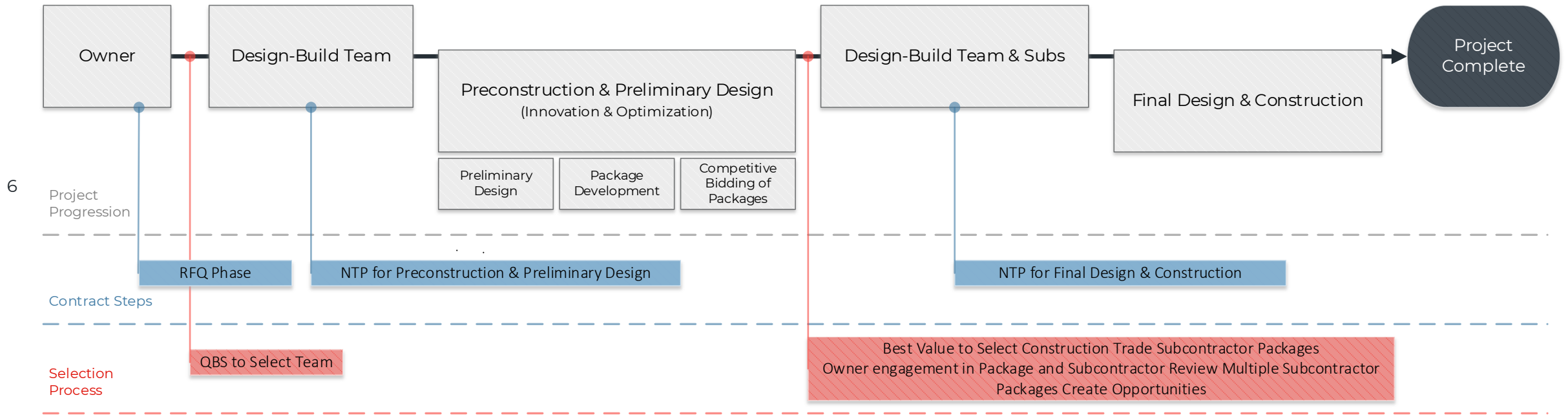
**TWO CONTRACTS:**  
Phase 1: Preconstruction contract  
Phase 2: Construction Contract (Conditional)

### PDB

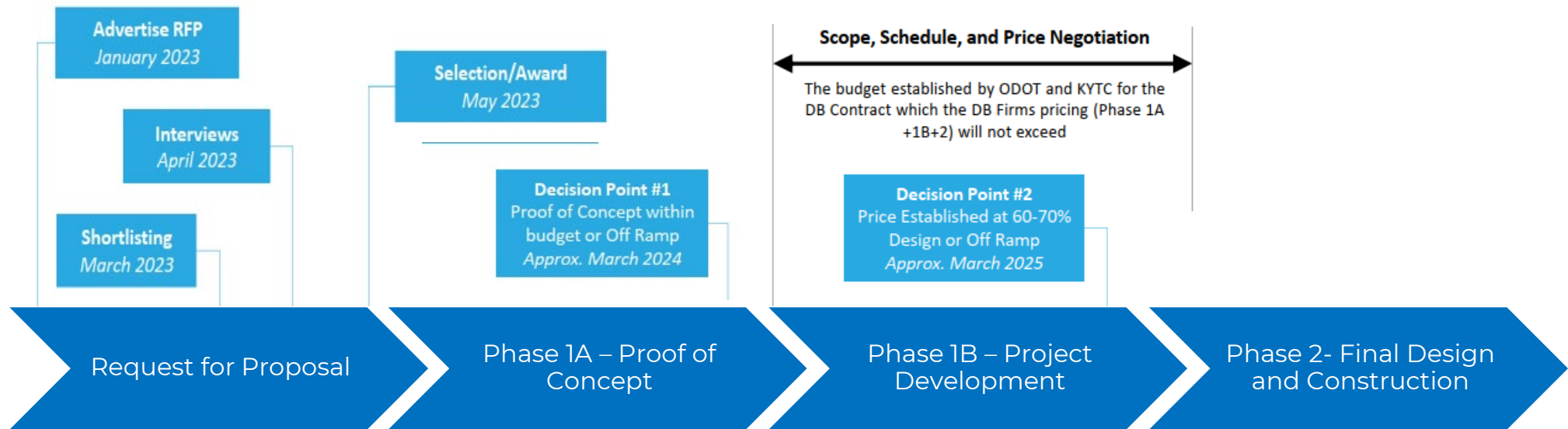


# Potential Progressive Design-Build RFQ Requirements

*Progressive Design-Build is an alternative project delivery method that maximizes collaboration, flexibility, and management of risk through a phased, transparent, contracting approach enabling expedited schedules and early cost certainty.*



# Progressive Design-Build Procurement Process Example



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## RFP Process

SEP 14 Approval  
 Advertise RFP  
 One-on-one Meetings (1 recommended)  
 Receive Proposals  
 BSMT Evaluation/Shortlist  
 Interview  
 Selection/Award

### Proposal Evaluation Criteria

1. Design Build Team Organization & Key Personnel
2. Design Build Team Experience & Capabilities
3. Project Understanding and Approach
4. Competitive Bidding Element
5. Ability to Contract (pass/fail)
6. Bonding Capacity (pass/fail)

## Phase 1A – Proof of Concept

DBT collaborates with the BSMT to create or confirm the project's basis of design and then advances that design. Design and other project decisions are based on cost, schedule, quality, operability, life cycle and other considerations, with the DBT providing ongoing, transparent cost estimates to ensure that the Owner's budgetary requirements can be achieved.

BSMT and DBT jointly identify early work packages.

## Phase 1B – Project Development

Design is advanced to a level of definition that aligns with the Owner's requirements and the DBT will provide a formal proposal (including pricing) for the Final Design and Construction Phase (Phase 2).

The proposal is established when the design is approximately 60 to 70 percent complete.

The pricing will be established based on open book methodology using the margin percentage submitted with the Technical Proposal. Upon review with the ICE and BSMT, the price may be converted to Lump Sum.

Begin construction of early work packages once negotiated.

## Phase 2 – Final Design & Construction

After the Owner and DBT have agreed upon terms (including the project's scope, price and schedule), the DBT completes the design and construction of the facility in accordance with those terms.

If the parties cannot reach agreement on the Phase 2 terms, or if the Project fails to achieve the necessary environmental clearance, then the owner may exercise an "off-ramp" at the end of Phase 1A or Phase 1B, where the Owner has the right to abandon the procurement or use the design and other work products prepared by the DBT and move forward with procurement using a different delivery model.

# Why use Progressive Design-Build?

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# Why use Progressive Design-Build?

## Benefits of Progressive Design-Build

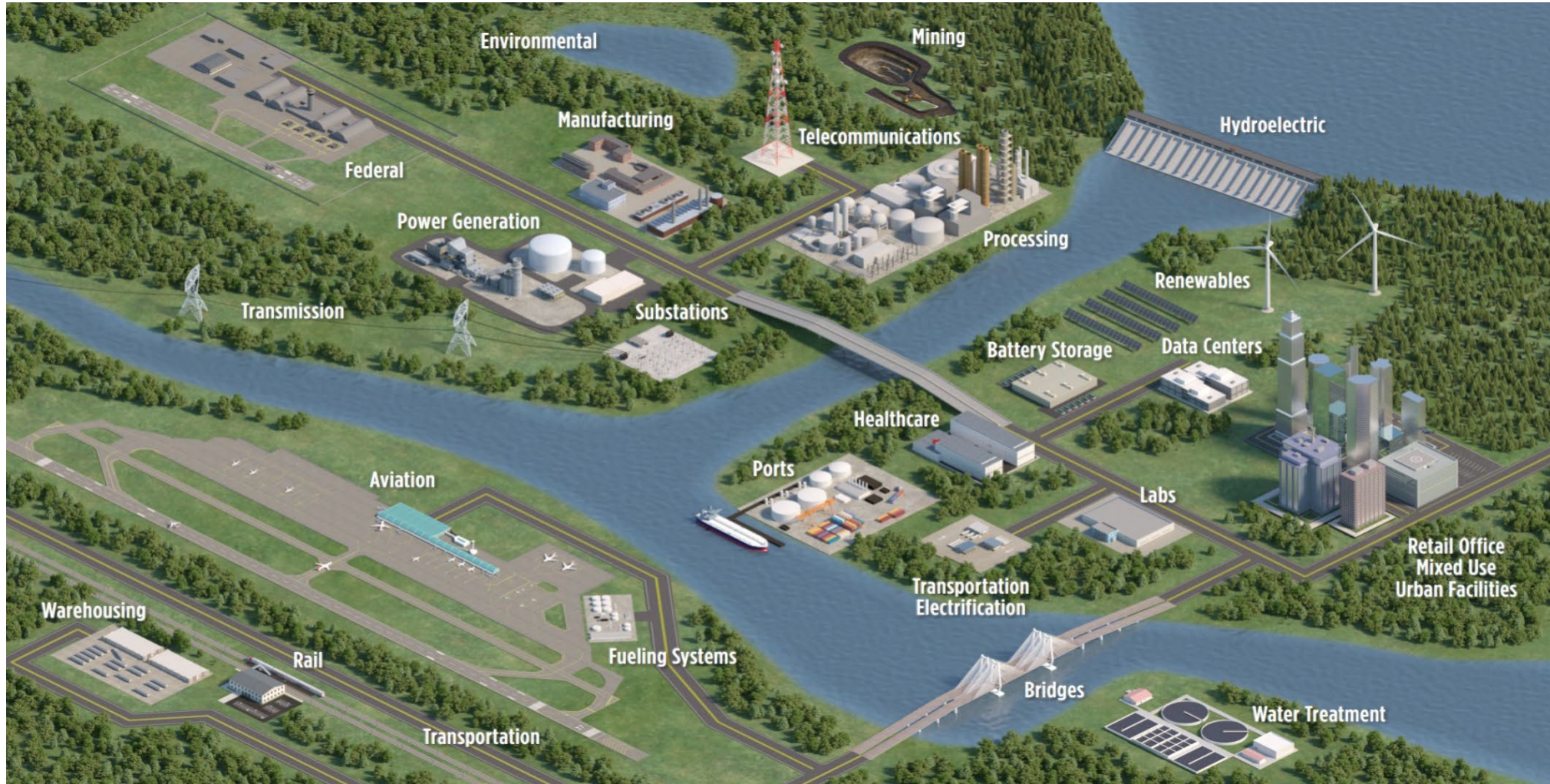


# Where is PDB used in the Industry?

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# What are Industry Practices for PDB Delivery?

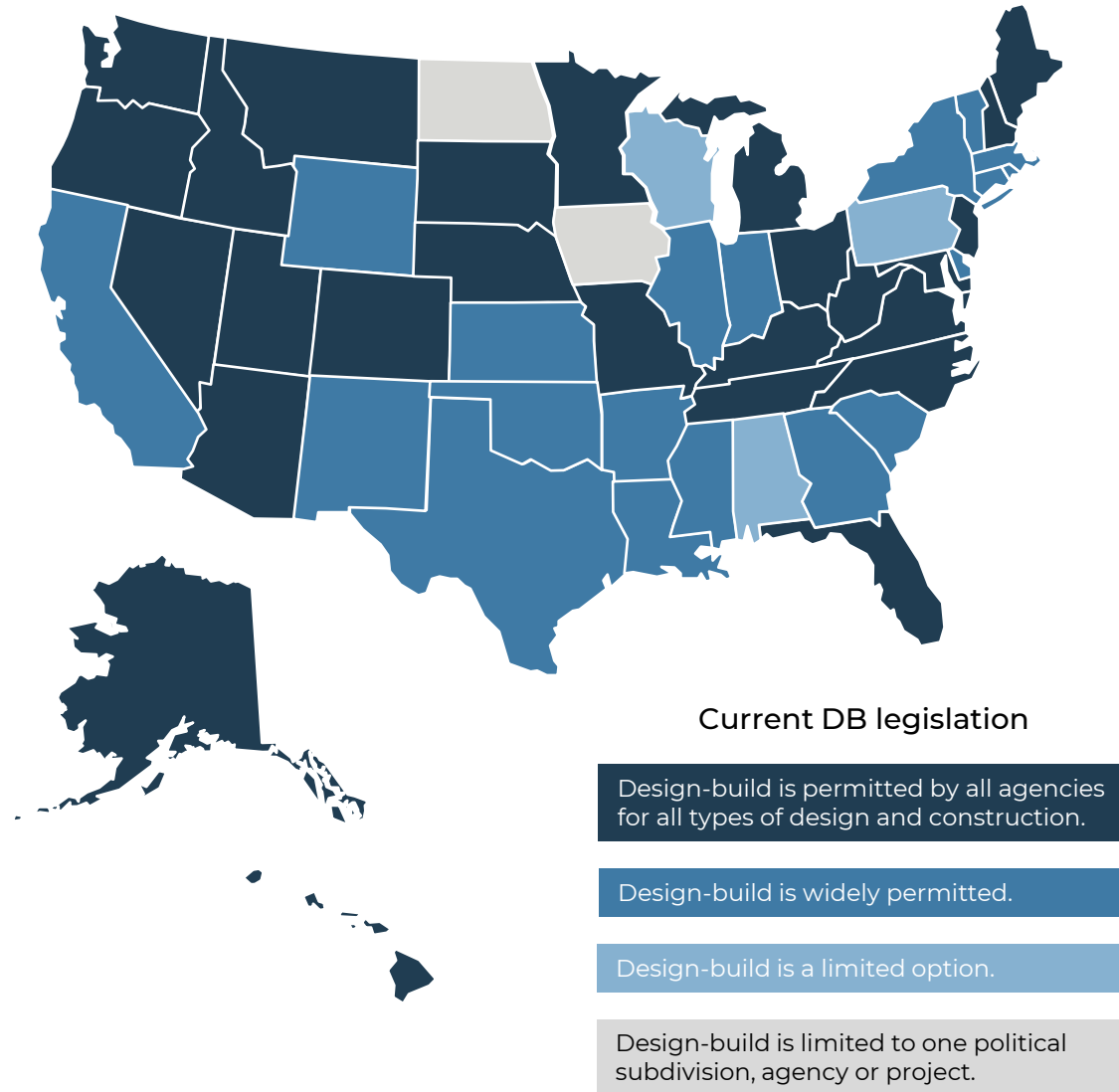
## Industry-Wide Acceptance of Progressive Design-Build



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# What are Industry Practices for PDB Delivery?

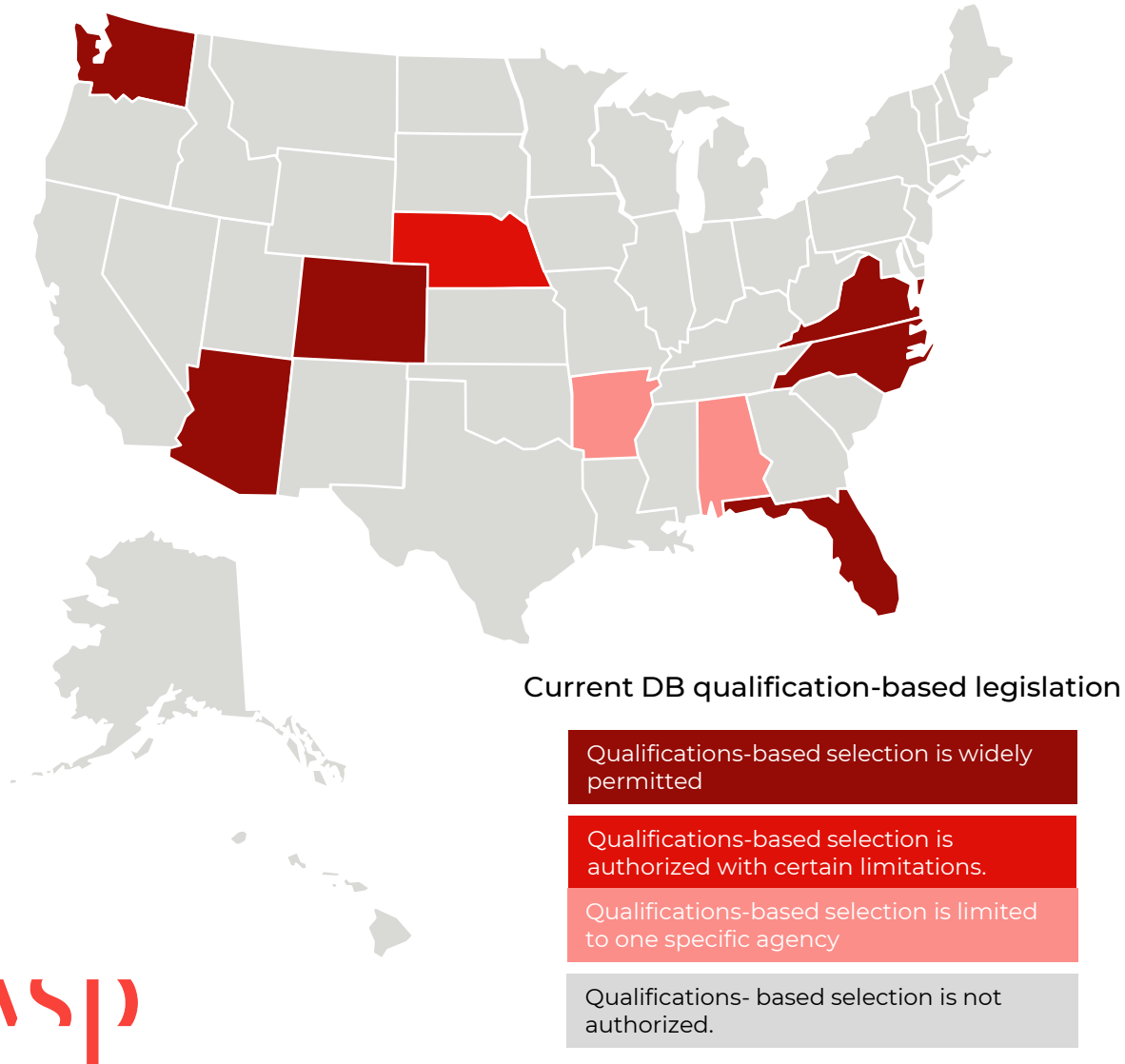
## States with General Design-Build Authorization



# What are Industry Practices for PDB Delivery?

## States with Design-Build Qualifications Based Authorization

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### State need Legislation for PDB. States Considering:

- Northeast
  - ➔ New York – NYC MTA is piloting PDB
    - Other NYC agencies are considering PDB
  - ➔ Massachusetts – MassDOT was looking at PDB but did not get legislation through
  - ➔ Maryland I-495
- Central
  - ➔ Texas
  - ➔ Kansas
- West
  - ➔ Washington
  - ➔ Utah
  - ➔ California – San Francisco
- Southeast
  - ➔ Virginia – VDOT is piloting a PDB project
  - ➔ Florida – Tampa Airport
  - ➔ Louisiana



# What are Industry Practices for PDB Delivery?

## Progressive Design-Build Practices around the US

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	Progressive Design-Build Procurement Approach	Stipend	Planning	Preconstruction	Construction	Min. Self-performance	Subcontracting Approach	Open-book Negotiations	Independent Cost Est.	Bonding
Arkansas - ARDOT	RFP (Quals + Schematics + Preconstruction Rates) followed by Interviews	No	✓	✓	✓	30%	Negotiated	✓	✓	Full
Maryland - MDOT	RFQ followed by RFP	Yes		✓	✓	No	Negotiated		✓	Full
Utah - UDOT	RFP (Quals + Approach) with Interview option	No		✓	✓	No	Negotiated		✓	Phased
Washington - WSDOT	RFQ followed by RFP	No	✓	✓	✓	No	Negotiated		✓	Full
Nashville Airport	RFP (Technical + Rough Order of Magnitude Estimate)	No		✓	✓	No	Bid			Full
Tampa Airport	RFQ followed by Interviews	No	✓	✓	✓	No	Bid			Capped

# Owner's Perspective

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# Owner's Perspective

## Progressive Design-Build Pros and Cons

### Pros

- Selection made on **qualifications**
- Provides greater opportunity for private sector **innovation** in design and construction
- Advancing design with contractor input prior to establishing construction estimate can improve **cost certainty**
- The development phase allows the design to be progressed to > 30% and **reduce project risks**
- Providing price certainty later in the process can result in **fewer claims**
- Allows for **stakeholder engagement** during design development prior to establishing final cost
- Allows for de-risking during Phase 1 by advancing design
- Models are tailored to each project needs.

### Cons

- **Challenge to include cost factors in procurement** to provide transparency for pricing
- **Lack of competitive pricing** presents challenges to approve pricing
- **Schedule can extend** many months during the negotiation period due to lack of fixed endpoint and lack of competitive tension
- Price certainty occurs later in process, but if agreement is not reached, taking the **off-ramp can increase overall project schedule** if owner needs to reprocur
- Not well tested in the market. **Limited proof of model and claims history**
- Could **limit bidder interest** as not all contractors like the model
- Design development period allows owner to **add scope** to the project which may increase project costs
- Due to fast-paced design development, design can **outpace clearing of third-party agreements**



# Contractor's Perspective

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# Contractor's Perspective

- It is not a CMGC or DB, it is an alternative to DB
- Not for every project - candidate projects for contractors are complex projects
- PDB is not for every contractor
- Feedback from contractors is that reward for the risk is not there: risk shift doesn't make up for limited profit
- Get under contract quicker

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# Contractor's Perspective

## Open Book

- Contractor prepares packages with clear scope and pricing in an open book environment
- Owners see what the PDB contractor is doing, what innovation they have, means and methods, what design progress is made, what contracts/material orders are placed

## Schedule Comparison Analysis

- <sup>19</sup> ➤ Traditional DBB – Concept to construction = 42 months
- DB – Concept to construction = 30 months
- PDB – Concept with early works = 24 months

**Benefit:** 18 months savings over DBB, 6-12 months on DB

# Legal Perspective

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# Collaborative Contract Development



Shared PDB Contract Development Responsibilities

# PDB vs. Traditional DB Contract Documents

Information Only Documents	Generally eliminated 
Warranty	Identical. No Changes
Engineering Data	Improved and shortened. Most incorporated into the actual plans 
Contract Drawings	PE Plans replaced with ACTUAL plans used for bid 
Third Party Agreements	Many draft utility agreements replaced with final agreements 
Special Provisions & Exceptions	Capture more advanced design, reflect PDB team's feedback 
Design and Construction Requirements	Customized to the project, reflect PDB team's feedback 
Quality	Identical. No Changes
General Provisions	Modified for PDB Scenario
Agreement and Definitions	Shortened for single team. Modified for PDB Terms. ATC Section eliminated
ITP	Modified & shortened for single proposer 

DB PDB

# Legal Perspective

## Pros

- Since the team is selected on qualifications and not price, quantity risk is greatly reduced as pricing does not get negotiated until the design is 60 to 100% complete (normally 60%) rather than being priced from preliminary concept plans developed for DB procurements
  - *This is significant for the engineer as most legal claims by Contractors against engineers in the traditional design-build setting are based on preliminary design efforts*
- Lowers delay risk to designer related to Owner review of submittals
- Promotes faster decision-making
- Lowers risks associated with permitting, ROW, third-party reviews, and utilities
- Less costs up front or at risk. Less time/effort expended before selection of the team.
- Fewer claims

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# Legal Perspective

- Reduces the risk associated with Owner-provided information
- More equitable contract terms as they are negotiated with the price based upon risk allocation and are not based on limited information at bid time
- More collaboration with Owner prior to final price negotiation leads to more innovation

## Cons

- 24 ➤ Cheapest price doesn't win!
- State laws can be challenging because many require pricing to be a component of award
- Only as successful as the involvement and competency of the Owner; Owners inexperienced in using PDB or working collaboratively with the contractor take away many of the advantages



# Closing Thoughts

*Progressive Design-Build Overview*



# Closing Thoughts

- “You’ve seen one Progressive DB Model; you’ve seen one Progressive DB Model.”
- PDB facilitates collaboration and partnering to optimize project scope and manage risks which results in more certain pricing
- Qualifications, not price are key in the selection process
- PDB is more prevalent in non-transportation infrastructure sectors, but it is growing rapidly
- <sup>26</sup> ➤ There are no standard contracts for PDB
- Some contractors like one model, others like a different model, some don’t like PDB at all
- Price negotiations are challenging without competitive bidding
- Design development phase can be protracted and costly

Q&A