

HOW TO PDB WITH VDOT

A Progressive Design-Build Overview

VDOT-VTCA Webinar

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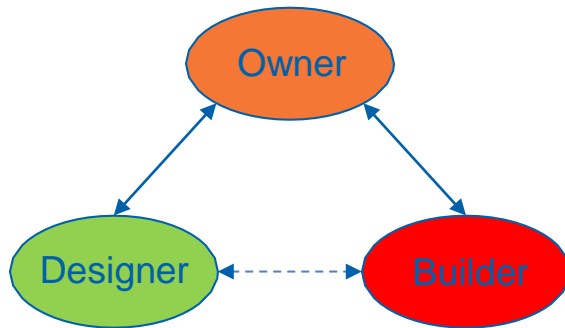
What is Progressive Design-Build (PDB)

- **Phased design-build procurement approach**
- **Design-Builder engaged before significant design is performed**
- **Design-Builder selected primarily based on qualifications**
- **Initial phase of the Design-Build contract is for Preliminary Design only**
- **Owner and Design-Builder collaborate to:**
 - **Develop the conceptual design and scope of work**
 - **Address concerns of 3rd-party stakeholders**
 - **Assess the cost impact of preliminary design changes through transparent open-book pricing**
 - **Minimize risk and need for contingencies**
- **Design-builder commits to lump sum price and schedule after design progresses to an acceptable level (Usually 40% to 60%).**

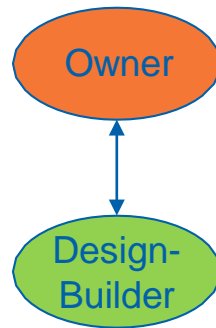
Project Delivery Options

Traditional Delivery

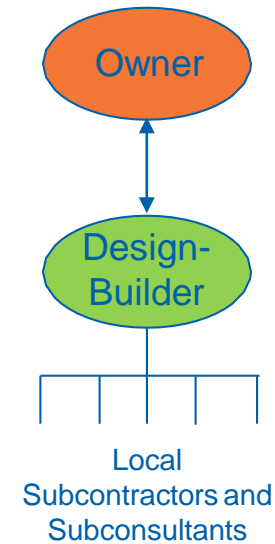
Design-Bid-Build (DBB)



Design-Build - Lump Sum (LS)

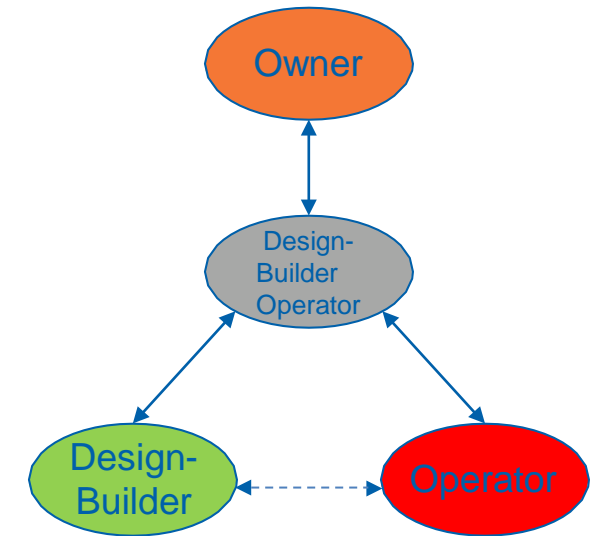


Design-Build - Progressive (GMP)



Alternative Delivery

Design-Build-Operate/Finance, etc.



PDB Advantages

- **Design-Builder becomes a strategic partner in planning and project definition**
- **Allows involvement of public and private stakeholders throughout design development**
- **Engagement of Design-Builder at start of design eliminates Spearin liability (Owner errors and omissions)**
- **Potential cost & schedule savings**
 - **Preliminary Engineering - No duplication of effort as bridging documents are not required**
 - **Design-Builder's innovation not limited by prescriptive RFP Design elements**
 - **Use of early work packages (R/W acquisition and utility relocation)**
- **Owner involvement in selection of subs and suppliers (including DBE and SWaM)**
- **Expedited procurement**

PDB Advantages for Design-Builder

- **Expedited procurement**
- **Low cost to pursue**
 - Primary focus is on qualifications of team
 - No technical proposal design or construction cost estimating
- **Collaborate with the Department early in project development**
 - Greater influence over preliminary design decisions
- **Reduction in risk compared to traditional D-B**
 - Targeted preliminary exploration and studies to mitigate risk
 - Design (at 40% to 60%) is better defined at time of Lump Sum Agreement
- **Resources are aligned with project development**
- **First right to negotiate lump sum price**
- **Payment for developing preliminary design prior to Lump Sum Pricing**

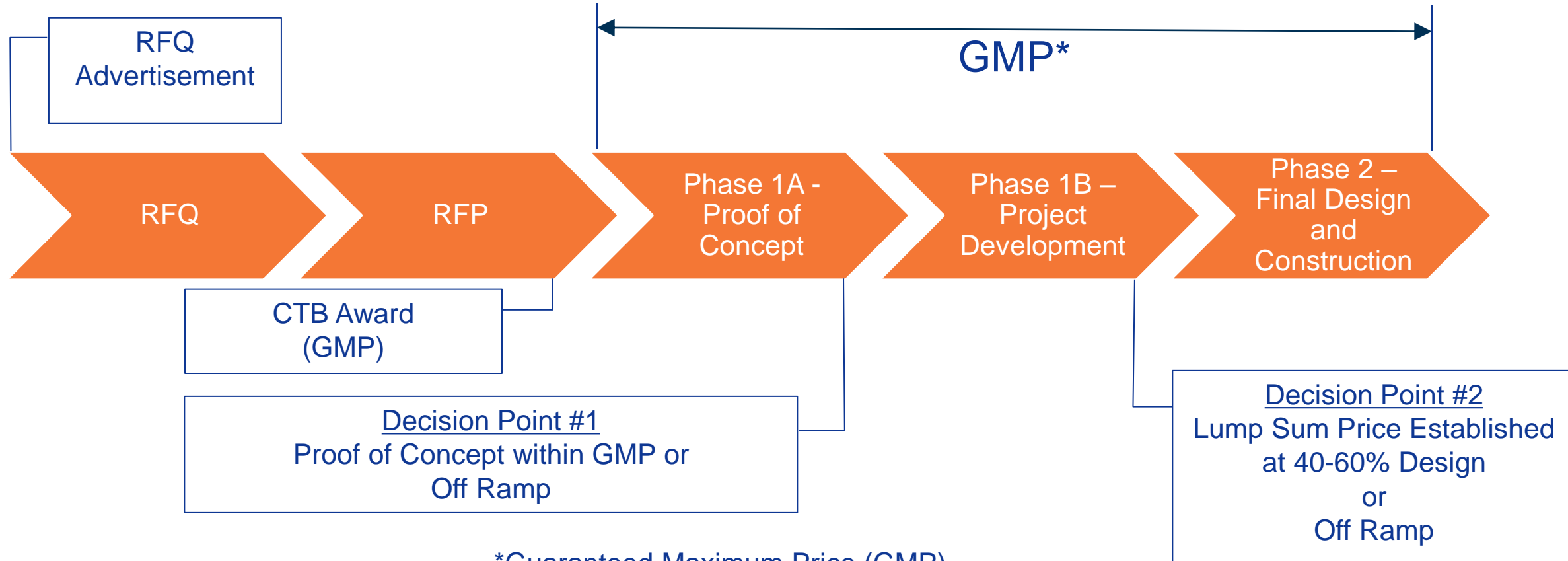
When to use PDB

- **Design and Construction Challenges**
 - Interface with other planned construction
 - Need for early contractor involvement
 - Unproven technology
 - Operational impacts during construction
 - Input on specific performance parameters
 - Urban areas with dense commercial and residential development
- **Environmental Challenges**
 - NEPA
 - Permits
 - 4F Properties
 - HAZMAT
 - USACE

When to use PDB

- **Right of Way Challenges**
 - Large number of parcels impacted
 - Federal and State property
 - Third Parties (railroad and transit authorities)
- **Utility Challenges**
 - High volume
 - Unknown and/or dark utilities
- **Stakeholder Involvement**
 - Extensive input during design development
 - Advisory panels
 - Business entities, developers
 - Military, municipalities, governmental agencies, Homeowners Associations, Architecture Review Boards
 - Public transit and airports

Progressive Design-Build Process



*Guaranteed Maximum Price (GMP)

The budget established by VDOT for the DB contract which the DB firm's lump sum price (Phase 1A+1B+2) will not exceed.

RFQ Process

Qualifications of Key Personnel

- Project Manager
- Design Manager
- Construction Manager
- Estimator/ Scheduler– Contractor Employee

Organizational Structure and Narrative

- Team shall remain intact

Past Performance and Experience

- Design and Construction Experience on Similar Projects
- CMGC and/or PDB Experience

Risks

Understanding and Approach to PDB Process

RFP Process

- **Technical Proposal Evaluation Factors**
 - **Design Development and Cost Management Plan**
 - Design Development Plan
 - Early Work Packages
 - Design-to-Budget Control
 - Management/Change Control Process
 - Risk Management

RFP Process

- **Technical Proposal Evaluation Factors (cont.)**
 - **Approach to Subcontracting and Self-Performance Plan**
 - DBE and SWaM
 - **Cost Modeling and Negotiations Approach**
 - Sample Estimate
 - Open Book Pricing
 - **Schedule for Phase 1A and Narrative for Accomplishing Work for Entire Project**
 - **Technical Presentation/Interview**

RFP Best-Value Selection Process

- **Technical Proposal Initial Scoring**
- **Technical Presentation/ Interviews**
 - **Occurs after submission and initial scoring of Technical Proposals**
 - **Objectives and Goals**
 - Tests team collaboration and creativity
 - Opportunity to see teams function
 - Presentation of Qualifications, Project Approach, etc.
 - Follow-up questions/clarifications of Technical Proposal
 - **Final Scoring**
 - Adjustments to initial score if needed
 - Changes will be documented

RFP Best-Value Selection Process

- **Price Proposal (Two-Sealed Envelopes)**
 - **Envelope 1 - Phase 1A Lump Sum Price**
 - Opened at Price Proposal opening
 - **Envelope 2 - Pricing Information and Supporting Documents**
 - Lead Contractor
 - Labor burden
 - Home office overhead
 - Profit
 - Lead Designer
 - Fixed billable rates

Determination of Highest-Ranked Offeror

- **Based on a combined score for SOQ (20%), Technical Proposal & Presentation (70%) and Price Proposal for Phase 1A (10%)**
- **Disproportionate price for Phase 1A efforts can be grounds for disqualification**
 - Provide rational and sufficient detail (man hours and cost) to support proposed compensation



Reasonableness of Pricing Information (Envelope 2)

- Will not be opened until the Highest-Ranked Offeror has been determined
- The Department will open all envelopes and intends to use such information in negotiating fair and reasonable price for the Contract with the Highest-Ranked Offeror
- In the event the Department does not come to an agreement with the Highest-Ranked Offeror during negotiations, the Department will officially in writing terminate the negotiations with such Offeror prior to initiating negotiations with the second Highest-Ranked Offeror

Design-Builder's Execution of Phase 1A

- **Refine scope**
- **Project limits**
- **Proof of Concept design development**
- **Schedule**
- **Estimate**
- **Proposal for Phase 1B services**
- **Preliminary Design Activities Permitted by FHWA**
 - **Surveying, geotechnical or NEPA process may be initiated**
- **Decision Point No. 1**
 - **Proof of Concept Estimate for whole project within GMP?**

PDB Execution - Phase 1B Project Development

- Collaborative design and project decisions based on cost, schedule, operability, life cycle and other factors
- Ongoing and transparent cost estimates to meet Owner's budget (Open Book Pricing and estimating instructions)
- Proposal for Phase 2 services
- Early Work Packages (utility relocation, R/W acquisition...)
 - Cannot begin until NEPA is completed
- Overall contract price often provided when design is 40-60% complete
- Decision Point No. 2
 - Proposed Final Contract Price (Phase 1A+1B+2) at or below GMP?

Owner's Off-Ramp Rights

- **Operates as a termination for convenience**
- **Commercial terms generally include:**
 - **Right to use work product**
 - Design-Builder is paid for services rendered
 - VDOT owns design
 - **Right to contract directly with designer to finish the design**
 - **Right to use any other type of delivery system**

PDB Execution – Phase 2 Final Design and Construction

- **Start when Lump Sum Price has been agreed upon**
- **No changes from traditional Design-Build contract**
- **Final design and construction completion**

Thank You!

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