

PROGRESSIVE DESIGN-BUILD

Commonwealth Transportation Board

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VDOT Project Delivery Options

- **Design-Bid-Build**
- **Emergency Force Account**
- **Public Private Transportation Act**
 - **Design-Build-Finance-Operate-Maintain**
 - **Design-Build-Operate-Maintain**
 - **Design-Build-Finance**
- **Design-Build**
 - **Lump Sum**
 - **Fixed Price**
 - **Best Value**
 - **Guaranteed Maximum Price**

VDOT's Design-Build Program

- **VDOT's design-build program has steadily grown since 2004**
 - **Nationally recognized program**
 - VDOT named 2016 Transportation Owner of the Year by Design-Build Institute of America (DBIA)
 - **VDOT D-B Project Awards**
 - 27/244 Interchange – 2016 DBIA Merit Award (Transportation)
 - I-64 Capacity Improvements, Segment I – 2018 DBIA Merit Award (Transportation)
 - I-66/Route 15 Interchange – 2018 DBIA Project of the Year Award (All Sectors)
 - DBIA Mid-Atlantic Chapter – Numerous Awards
- **Next Step**
 - **Add Progressive Design-Build delivery option**

Design-Bid-Build Attributes

- **No contractor involvement during design development**
- **Price is the only consideration for selection**
- **Project is totally defined at time of award**
- **No contractor involvement in ROW acquisition**

Design-Build Attributes (VDOT's Two-Phase Best Value)

- **Some early contractor involvement**
 - **Proprietary meetings**
- **Opportunities for innovation**
 - **Alternative Technical Concepts**
- **Risk transfer in ROW acquisition and Utility Relocation**
- **VDOT selects the most highly qualified teams**

Progressive Design-Build (PDB)

A procurement tool that provides the following benefits on high risk, complex projects:

- **Involvement of most qualified Design-Builder at the earliest point of project development**
- **Collaboration with the Design-Builder on key scope and risk issues**
- **Owner's involvement in the selection of subconsultants, subcontractors, vendors and suppliers (including DBE & SWaM)**
- **Transparency in cost development using open-book pricing**

As a result, PDB reduces project risk for Owner and Design-Builder

PDB Advantages

- **Design-Builder becomes a strategic partner in planning and project definition**
- **Allows involvement of public and private stakeholders throughout design development**
- **Single point responsibility avoids Spearin liability (errors and omissions) as there is no design “handoff”**
- **Potential cost & schedule savings**
 - **Preliminary Engineering - No duplication of effort as bridging documents are not required**
 - **Use of early work packages (R/W acquisition and utility relocation)**
- **Expedited procurement**

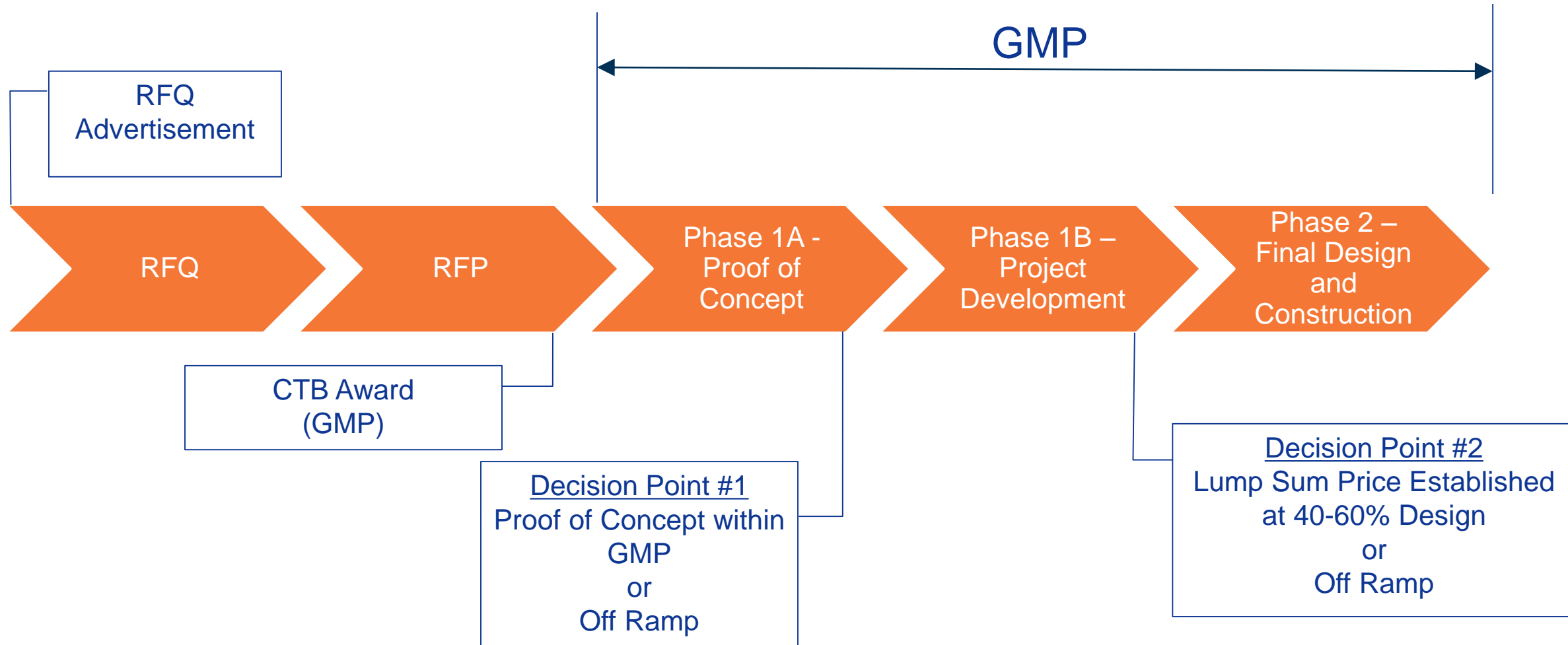
When to use PDB

- **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



PDB – Open Book Pricing

- **Collaborative effort between Owner and Design-Builder**
- **Ongoing and transparent cost estimating process**
 - **Goal is to stay below established GMP**
- **Similar to existing escrow information**
 - **Real time quotes from Design-Builder, subcontractors and subconsultants**
 - Quantity take-offs
 - Crew size and shifts
 - Equipment
 - Direct labor
 - Indirect costs
 - Bond rates
 - Insurance costs
 - Mark-up and contingency
- **Better understanding of risk**
- **High confidence in price throughout process**

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**

Next Steps

- **CTB Policy Change is Required**
 - **Amendment to Design-Build Objective Criteria**
 - Expedited Schedule
 - Established Budget
 - Well Defined Scope
 - Risk Analysis
 - Pre-Qualification of Design-Build Firm
 - Competitive Bidding Process Basis for Award
 - Lump Sum
 - Fixed Price
 - Best Value
 - **Guaranteed Maximum Price**