

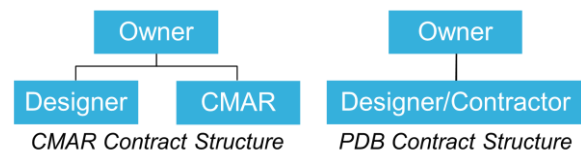
The Progressive Design-Build Process

Overview of Progressive Design-Build

Progressive Design Build (PDB), authorized for use in Louisiana by LA Rev Stat §48:250.3.1, is an alternative delivery method that uses a qualifications-based selection process to select a Design-Builder. Once selected DOTD and the Design-Builder advance project development and progress towards an agreed upon design and construction price (thus the term “progressive”). PDB delivery allows for:

- Early selection and involvement of a Design-Builder to ensure that design and construction related decisions are informed by cost, schedule, risk, and other input from the Design-Builder.
- Project cost and schedule development and refinement during the Pre-Construction Services Phase.
- Design advancement and risk mitigation before a construction price is agreed to, which improve cost and schedule accuracy.
- Participation of an independent cost estimator (ICE). The role of the ICE is to develop independent cost estimates for the project that validate the costs submitted by the Design-Builder at pricing milestones. The ICE’s role in a PDB project is similar to their role in a Construction Management at Risk (CMAR) project.
- Incremental progression of the project over two subphases (Pre-Construction Services Phase and Construction Services Phase) with an option for DOTD or the Design-Builder to terminate, i.e., “off-ramp”, if the project is not progressing to the mutual satisfaction of the parties.

Unlike the CMAR delivery method that utilizes separate designer and contractor contracts, PDB is comprised of a single contract between the Owner and the Design-Builder (modeling a Design-Build (DB) contract structure).



PDB Terminology

The following represents a list of industry-accepted terminology. Variations to meet Owner preferences are possible. Note that terms are provided in alphabetical order and not in the order of project progression.

- **Construction Services Phase** – The second and final project implementation step that includes all work necessary to construct the project. Construction work may include final design.
- **Opinion of Probable Construction Cost (OPCC)** – An estimate prepared by the Design-Builder that reflects the Design-Builder’s opinion as to the probable costs that a “prudent” contractor would include in its bid to construct the defined facilities.
- **Pre-Construction Services Phase** – The initial project implementation step that includes all work necessary to progress development of the project or a portion of the project to a point where a Work Package Guaranteed Maximum Price (GMP) can be determined, and construction may begin. Pre-Construction work can include preliminary engineering, right-of-way acquisition, utility coordination, railroad coordination, permitting, public involvement, and construction sequencing/scheduling. Progression of the Pre-Construction Services Scope, Schedule, and compensation limit may need to be refined or amended as the preliminary engineering advances. As a result, more than one Pre-Construction Services Amendment may be utilized on the project.
- **Pre-Construction Services Amendment** – A document that updates the PDB Contract, including the Pre-Construction Services Scope, the anticipated completion date for the Pre-

Construction Services work, and the Pre-Construction Services Fee, hourly rates, distribution of hours, and any allowable direct costs. To manage progression of the project, DOTD is anticipated to advance the Pre-Construction activities through multiple Pre-Construction Services Amendments.

- **Pre-Construction Services Fee** – The maximum amount due to the Design-Builder for Pre-Construction work. The initial Pre-Construction Services Fee is incorporated into the PDB Contract at execution. The Pre-Construction Services Fee may be revised through a Pre-Construction Services Amendment.
- **Pre-Construction Services Scope** – The Pre-Construction Services Scope identifies activities and deliverables to be performed during the Pre-Construction Services Phase. The initial Pre-Construction Services Scope is incorporated into the PDB Contract at execution.
- **Provisional Risk** – A type of risk where the actual price or quantity related to the risk is unknown at the time of agreement on a Work Package GMP.
- **Provisional Sum** – A fixed sum associated with a Provisional Risk that is included as an allowance amount in a Work Package Total Price upon agreement by the Design-Builder and DOTD. Where agreed as reflected in the Risk Register, Provisional Sums may include a designation of unit pricing and the estimated number of units making up the Provisional Sums.
- **Request for Qualifications (RFQ)** – A document used to solicit information from potential Design-Builders about their qualifications, experience, and ability to perform a specific project or service.
- **Risk Events** – Events or occurrences that may occur during construction that entitle the Design-Builder to some form of relief, either schedule or payment.
- **Risk Register** – A contract document that identifies Risk Events and includes the type of risk, what event triggers the risk resulting in relief, the type of relief, payment requirements, and mitigation requirements related to the Risk Event.
- **Risk Reserve** – The sum of the Provisional Sums included in the Risk Register and applicable to a Work Package.
- **Statement of Qualifications (SOQ)** – A document submitted by potential Design-Builders in response to an RFQ that demonstrates the entity's ability to perform a scope of work.
- **Total Construction Price** – The sum of all Work Package Total Prices.
- **Work Package** – A specific portion of construction work, the exact scope of which will be determined by DOTD and the Design-Builder. A project may have one or more Work Packages, depending on project-specific circumstances.
- **Work Package Amendment** – A contract document modification establishing the commencement of the construction for a Work Package and satisfying the requirements set forth in the contract.
- **Work Package Guaranteed Maximum Price (GMP)** – The maximum amount of compensation due to the Design-Builder to construct a Work Package. Once agreed upon, the only method for increasing the GMP is the occurrence of a Risk Event or a Relief Event that is defined in the contract.
- **Work Package Total Price** – The amount determined by summing the value of the Work Package GMP and the Risk Reserve.

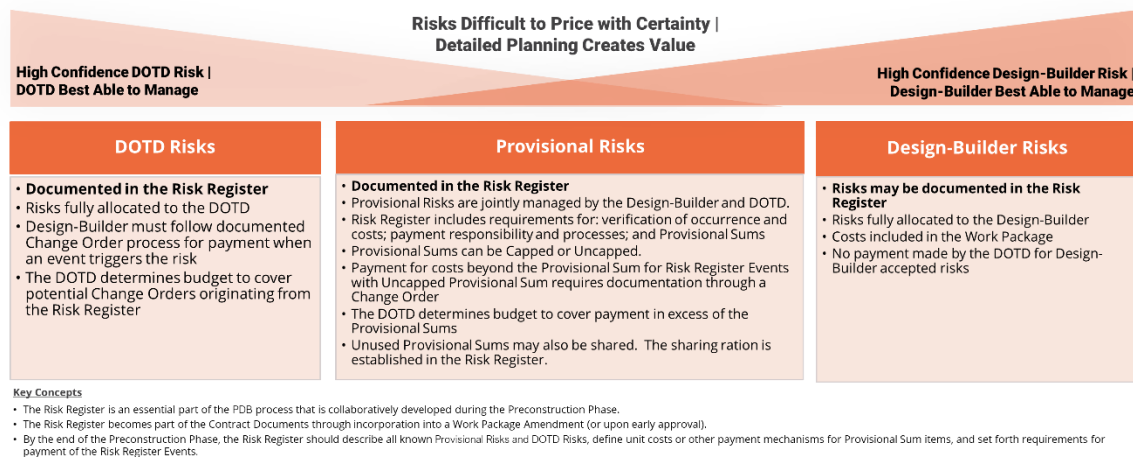
Risk Management for PDB Projects

One of the primary differences between DB and PDB is the role of the Risk Register in PDB. PDB allows design and risk mitigation activities to be advanced before a fixed project price (or GMP) is established. The goal is to avoid significant contingencies being embedded within the Work Package GMP by optimizing risk allocation and risk mitigation strategies. This delivery method also allows for pricing of risks to be reviewed separately from raw costs during price development and accelerates reaching an agreement on the construction price.

PDB projects benefit from initiating and maintaining a robust Risk Register. Unlike traditional DB delivery, PDB uses all or portions of the Risk Register as a contractual element. The Risk Register is often more granular and provides clear direction on how a risk will be addressed (including potential compensation or schedule adjustment), if realized, during project implementation.

Additionally, a PDB Risk Register is used as a collaborative project management tool that requires input from the Design-Builder. If the Design-Builder does not identify a particular risk, that risk will default to the Design-Builder, and they will not be entitled to relief, which incentivizes the Design-Builder to think proactively about project risks.

The figure below provides an overview of the role of the PDB Risk Register that has been adopted by other Departments of Transportation (DOTs).



Risk Register development prior to and during procurement focuses on predicting probabilities of occurrence/severity without contractor input on means and methods and pricing. Typically, assumptions during this time are made by DOTD with the intent to allocate and manage risk in a manner that will optimize price with an ultimate goal to achieve on-time, on-budget project delivery. PDB is focused on developing a framework to manage risk during the Pre-Construction Services Phase (which occurs after procurement) that is informed by the Design-Builder. Risk management options and associated cost/schedule impacts for those options can be priced on a near real-time basis, which allows risks to be allocated, shared, priced, and structured to optimize price. When a risk is realized on a PDB project, the Risk Register will incorporate contractual terms associated with the risk and describe in detail how the project team will advance the project while addressing the risk. The terms included in the Risk Register may include definition of payment considerations, such as use of unit prices or lump sum for each risk, which essentially pre-negotiates the change process to make administration more efficient and avoid disputes.

Risks in PDB are often referred to as Provisional Risks and the approach to administering project activities when a risk is realized may be unique for each risk line item. Provisional Risks may be identified as shared, capped, uncapped, and paid differently on a risk-by-risk basis.

PDB Procurement Process

Unlike traditional DB procurements, the scored elements for PDB do not require significant design development. Each Proposer will be evaluated based on the information submitted in the SOQ. Additionally, an interview with some or all of the Proposers may be used to further support evaluation of the SOQ.

The SOQ requirements and selection criteria are defined in a Request for Qualifications (RFQ), which reduces the level of effort and time required to develop and evaluate SOQs which, in turn, reduces the procurement duration.

Example Statement of Qualifications Content

Proposer Experience	<ul style="list-style-type: none"> • Identification of prior projects that demonstrate their design and construction experience on projects of similar size, scope, and complexity.
Qualifications of Key Personnel	<ul style="list-style-type: none"> • Identification of each Key Personnel's prior experience, training, and qualifications in a manner that demonstrates competency to manage and complete the design and construction of the project.
Other Information	<ul style="list-style-type: none"> • Past Performance on other projects. • Evidence that the Proposer is capable of obtaining all bonding and insurance requirements. • The Proposer's Safety Plan.
Pre-Construction Services Approach	<ul style="list-style-type: none"> • The Proposer's overall approach to delivery of preliminary engineering and other work required during the Pre-Construction Services Phase. • The Proposer's approach to project design in alignment with the project goals, including collaboration with DOTD and integration of the following design considerations. • The Proposer's schedule management approach and methods to optimize the construction schedule with design. Identification of factors that may control the overall project schedule. • The Proposer's approach to identifying potential Work Packages and description of anticipated major design and Work Packages that will be used to optimize project delivery. • The Proposer's approach to pricing and subcontracting, including: <ul style="list-style-type: none"> ○ approach to providing open and transparent pricing; ○ approach to ensure that DOTD receives a fair price for construction, including a description of the major cost components (i.e., cost drivers) for the project and the Proposer's approach to obtaining optimal pricing for the identified major cost components; ○ approach to providing openness and transparency in the subcontracting solicitation and selection process; and ○ approach to identifying and enhancing equal employment opportunities. • The Proposer's approach to risk management including methods used to identify, mitigate, and price risk during the Pre-Construction Services Phase. • The Proposer's approach to quality management.
Construction Services Approach	<ul style="list-style-type: none"> • The Proposer's overall construction management approach in consideration of the project goals, including project control methods. • The Proposer's approach to management of construction phasing. • The scope of work the Proposer intends to self-perform to meet self-performance requirements and the scopes of work that the Proposer intends to subcontract. • The Proposer's procedure to manage subcontracting and subcontractor performance. • The Proposer's approach to tracking, documenting, and ensuring compliance with DBE, OJT, and other equal employment opportunities requirements. • The Proposer's approach to risk management during the Construction Services Phase of the project. • The Proposer's approach to quality management.

SOQ content requirements will be established on a project specific basis in consider of DOTD's goals and objectives for the project.

Interviews

Interviews may be offered to all Proposers or a smaller subset of the Proposers at DOTD's discretion, in accordance with the RFQ. Interviews are typically conducted through in-person meetings. Evaluation of the interviews may be considered using the same evaluation criteria established for the SOQ. Requirements and expectations for interviews and the associated evaluation criteria will be detailed in the RFQ.

PDB Project Progression

Progression through the Pre-Construction Services Phase

Upon selection of a Design-Builder, the initial Pre-Construction Services Scope provided in the RFQ, subject to Owner refinement, will become part of the PDB Contract. The work progresses with an initial goal of developing a defined preliminary design submittal, typically at 30% design. Once design has reached 30%, the Design-Builder estimates the cost of construction (expressed as an Opinion of Probable Construction Costs or OPCC). This pricing exercise is similar to a CMAR Construction Services Cost Proposal, and DOTD engages the ICE to review the OPCC. If the estimate is within a threshold established by DOTD (typically 5-10%), the design work continues to the next defined milestone (typically 60% design). If the estimate is outside of the threshold, the ICE and the Design-Builder will identify the differences in cost principles that drove the different estimates and work to correct those for the next OPCC. The plan will be to have two to three OPCCs, with a GMP determined at the final OPCC.

If design for a certain portion of the construction work has been progressed sufficiently that the Design-Builder is confident in agreeing to a GMP, that construction work may be commenced early through an Early Work Package. Early Work Packages are determined on a project-specific basis and allow for elements of projects to be accelerated. Early Work Packages are typically reserved for schedule critical work which may include acquisition of long-lead time materials or work that is subject to certain periods of time (e.g., tree clearing). For projects with bundled elements such as bridges, it may also be possible to advance certain elements of the bundle as an Early Work Package, if they are not unique, complex designs and do not require right-of-way, utility relocation, or extensive permitting.

As the Pre-Construction Services Phase progresses, the scope of work may change, and tasks may need to be assigned or removed from the Pre-Construction Services Scope. All changes the Pre-Construction Services Scope and Pre-Construction Services Fee are managed through Pre-Construction Services Amendments. DOTD expects the Design-Builder to be comprised of all entities necessary to deliver the services required for the PDB project. In the unique scenario where Key Personnel or subcontractors need to be added to the Design-Builder's team to perform scope items, this will be done though a Pre-Construction Services Amendment and addition of any subcontracts would be subject to approval by DOTD.

The Risk Register will be continually updated during the Pre-Construction Services Phase through Risk Management Workshops where risks can be identified, discussed, and ultimately priced.

Management plans and relevant construction requirements that will be needed to govern work performed for a Work Package will also be developed during the Pre-Construction Services Phase. DOTD will work collaboratively with the Design-Builder to establish these requirements.

Construction Requirement¹ Examples include:

- Construction standards/special provisions;
- Roadway location and design;
- Drainage;
- Maintenance of traffic (MOT);
- Permanent traffic control;
- Structures;
- Geotechnical; and
- Pavement.

Management Plan Examples include:

- Safety Management Plan;
- Transportation Management Plan;
- Permitting and Environmental Mitigation Plan;
- Utility and Third-Party Coordination Plan;
- Project Management Plan;
- Construction Quality Management Plan;
- Construction Schedule Coordination Plan;
- Public Information Plan.

¹ If requirements are already addressed in the applicable standards, additional construction requirement documentation is not needed.

Project Off-Ramps

PDB delivery allows DOTD to terminate the contract for convenience at any point, but also provides checkpoints during the progression towards a construction price where project progression can be evaluated. The main checkpoint is the submission of the GMP by the Design-Builder. If DOTD and the Design-Builder do not reach an agreement on the estimated price for the project or DOTD otherwise elects not to amend the Design-Builder's contract to complete the remaining work, DOTD may solicit proposals to complete the project from firms that submitted SOQ or formally solicit bids or proposals from other entities using any public procurement method available to DOTD. The selected Design-Builder shall be prohibited from bidding on the project.

Any of the OPCC meetings are also logical off-ramps as well. These meetings align with a completed scope item. DOTD may also take advantage of any of the previous options listed above to complete the project.

Prerequisites to the Start of Construction

Once a GMP is agreed upon, the transition to the Construction Services Phase begins. The Construction Services Phase contractually begins with the execution of a Work Package Amendment. Prior to beginning construction, the Design-Builder must provide:

- All performance bonds and insurance policies;
- All Owner-approved Management Plans and required construction requirements;
- A finalized Risk Register for incorporation into the Contract Documents;
- A Schedule of Values and Work Package Schedule developed for the Work Package;
- Released for Construction Design Documents; and
- A description of completion deadlines and agreed upon Liquidated Damages.

Managing the Construction Services Phase

The Construction Services Phase will proceed much like a traditional DB or CMAR project with progress payments issued in accordance with a Schedule of Values. If Risk Register events are triggered during construction, the Design-Builder will be entitled to additional compensation or schedule relief. A PDB contract retains the flexibility to pay for design completed during the Construction Services Phase as a lump sum, on a time and materials basis, or a combination of these approaches.

If construction progresses utilizing more than one Work Package, subsequent Work Packages will be issued and all prerequisites for the start of construction for subsequent Work Packages will be updated, if necessary.

Contact Information

Questions regarding PDB can be directed to the DOTD Innovative Procurement Section. Contact information can be found at the following website:

<https://dotd.louisiana.gov/about/office-of-the-secretary/innovative-procurement/staff-directory/>