

## **2.0 CONSTRUCTION DELIVERY METHODS AND REQUIREMENTS**

Construction delivery methods are processes including planning, design and construction required to execute and complete a project. Choosing a project delivery method is one of the fundamental decisions owners make while developing their project delivery strategy.

Choosing the best method for any project must start with a good understanding of choices available. In all project delivery methods, there are always a minimum of four parties involved (minimum of three parties if DDOT does not hire a construction management consultant): DDOT as the owner, construction manager, designer and contractor. Project considerations have fundamental impacts on the delivery method selected. These considerations include a realistic budget, a schedule that includes a reasonable performance period, a responsive and quality design process, a risk assessment with allocation of risks to the appropriate parties and recognition of the level of expertise within the owner's organization.

DDOT generally contracts construction projects by the design-bid-build (DBB) project delivery method, which is also known as the low bid method. Some of DDOT construction projects are also delivered by the design-build (DB) project delivery method. Therefore, this manual focuses on two project delivery methods, DBB and DB, which have been used for the Department's construction projects. The other project delivery methods, such as Construction Management at Risk and Public-Private Partnerships (P3) are excluded from this revision of the manual.

### **2.1 DESIGN-BID-BUILD (DBB) PROJECTS**

The DBB project delivery method typically involves three sequential project phases: the design phase, which requires the services of a designer who will be the "Engineer of Record (EOR)" for the project; the bid phase, when a contractor is selected; and a build or construction phase, when the project is built by the selected (typically low bid) contractor. This sequence usually leads to a sealed bid, fixed-price contract. This method is typically a unit priced contract, but it can also include lump-sum items.

This method is widely applicable, well understood, and has well-established and clearly defined roles for the parties involved. This method is presently a very common approach for public owners due to procurement statutes under which they operate. DDOT has a significant amount of responsibility for the success or failure of the end product, particularly since the facility's features are fully determined and

specified prior to selection of the contractor (DDOT “owns” the details of the design). The contractor and designer work directly for DDOT. This process may have a longer duration when compared to other delivery methods since all design work must be completed prior to solicitation of the construction bids.

Construction may not begin until the design and procurement phases are complete. The absence of construction input into the project design may limit the effectiveness and constructability of the design. There is no contractual relationship between the contractor and the designer.

## **2.2 DESIGN-BUILD (DB) PROJECTS**

The DB method of project delivery includes one entity (design-builder) and a single contract with DDOT to provide both architectural/engineering design services and construction. Cost efficiencies can be achieved since the contractor and designer are working together throughout the entire process, resulting in fewer changes, fewer claims, less litigation, and earlier knowledge of firm costs. DB can deliver a project quicker than conventional DBB. DDOT can, and should, specify performance requirements in lieu of prescriptive specifications. DB team qualifications are essential for project success to enhance project coordination and reduce project claims.

## **2.3 THIRD PARTY/DEVELOPER PROJECTS**

The third party/developer projects involve the joint efforts between DDOT and the third party/developer. DDOT’s initial role in these types of projects is to provide planning support by DDOT’s Planning and Sustainability Division (PSD) to review 30 percent preliminary design plans. As the project transitions from planning to design and construction, DDOT’s Infrastructure Project Management Division (IPMD) involvement becomes critical to ensure that DDOT design and construction standards are met. DDOT supports the project with design reviews and construction support services.

DDOT issues public space permits to the developer for the demolition of existing infrastructure and the construction of DDOT-related public infrastructure improvements within the existing public right-of-way (ROW) in accordance with applicable DDOT regulations and permitting procedures. DDOT participates in weekly management team coordination and/or construction coordination meetings with the developer throughout design and construction. DDOT inspects facilities during construction and if required, notifies the developer in writing within two (2) business days that the DDOT facilities are not constructed in accordance with DDOT standards or the approved design as documented.



DDOT participates, upon receipt of written notice, in the substantial completion inspection of the DDOT facilities and, in conjunction with the developer, creates a punch list of remaining items to be completed by the developer's team. DDOT participates, upon receipt of written notice, in the final completion inspection of DDOT facilities. DDOT signs-off and accepts ownership of the new ROW and DDOT facilities in the work area upon the developer's completion of all punch list items, the developer's correction of all non-conforming items, the developer's installation and utility agency acceptance. Unless there is a prior agreement, DDOT is solely responsible for the operation, maintenance, and repair of the DDOT facilities.