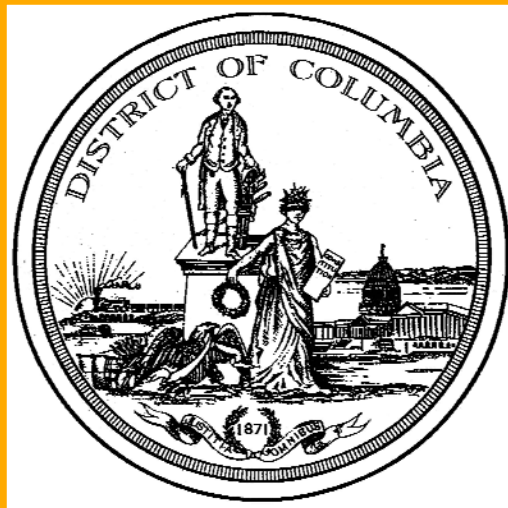


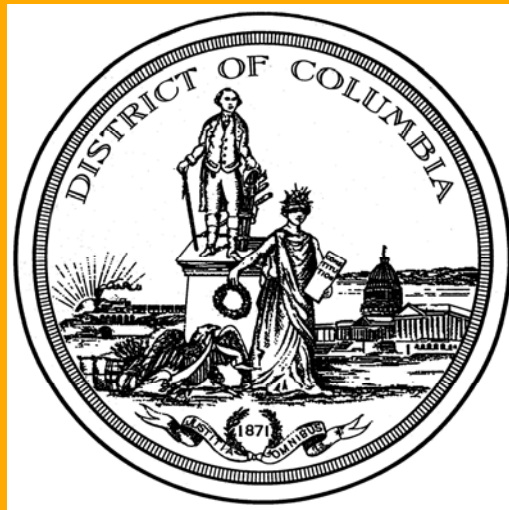
**DISTRICT OF COLUMBIA**  
**DEPARTMENT OF TRANSPORTATION**



**DESIGN BUILD MANUAL**

May 2014

**DISTRICT OF COLUMBIA**  
**DEPARTMENT OF TRANSPORTATION**



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# Design-Build Manual

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## 1.0 Overview

### 1.1. Introduction

The District of Columbia – Department of Transportation (DDOT) Design-Build Manual describes the Department’s procedures for evaluating and selecting a project delivery method. The manual also provides guidance for administering a competitive sealed proposals procurement using alternative value added delivery methods.

This manual defines the policies, procedures and requirements for the benefit of all parties to effectively and successfully procure and administer DDOT projects using the Design-Build project delivery process. The objectives of this manual are to:

- Ensure selection of an appropriate project procurement method
- Comply with applicable procurement regulations
- Maximize the potential advantage of alternative procurement methods
- Provide guidance on interpretation of other DDOT manuals with respect to Design-Build projects

The Contracting Officer provides oversight for all phases of the selection and administration of procurement for DDOT.

### 1.2. Authority and Applicability

This manual will be the main source of information and guidance for Design-Build contracting for DDOT. The legal authority basis for the procurement procedures contained herein is contained in Title 27 of the District of Columbia Municipal Regulations (February 1, 2013) and by virtue of sections 204 and 1106 of the Procurement Practices Reform Act of 2010, effective April 8, 2011 (D.C. Law 18-371; D.C. Official Code §§ 2-352.04 and 2-361.06) (2011 Repl.) (Act). CFR 636 also applies for Federal Aid Projects.

### 1.3. Future Changes and Revisions

This manual may be periodically updated as necessary to provide additional clarity, to reflect changes generally recognized as best practices, or to reflect changes in law. DDOT will be responsible for amendments and revisions.

## 2.0 Project Delivery Methods

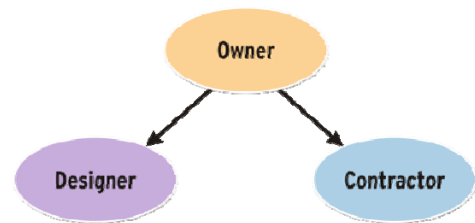
The Procurement Practices Reform Act of 2010, Section 601 governs the project delivery methods that are available for construction projects and related management services in the District. The authorized project delivery methods are:

- Architectural and Engineering Services (A&E)
- Construction Management (CM)
- Construction Management at Risk (CMAR)
- Design Bid Build (D-B-B)
- Design-Build (D-B)
- Design-Build Finance Operate Maintain (D-B-F-O-M)
- Design-Build Operate Maintain (D-B-O-M)
- Operations and Maintenance (O&M)

Chapter 4 of this manual provides guidance on selecting a project delivery method from the D-B-B, D-B, D-B-O-M, D-B-F-O-M and CMAR delivery methods. Each of these methods is described in greater detail below. A&E, CM, and O&M contract types are not integrated project delivery methods and therefore are not discussed further in this manual.

### 2.1. Design Bid Build

D-B-B is the traditional project delivery method for transportation infrastructure whereby DDOT manages the sequential design, procurement and construction of a project. D-B-B is performed in accordance with the requirements of DCMR Title 27, Chapter 15, Procurement by Competitive Sealed Bidding.



DDOT contracts with a design firm using a qualifications based selection process or uses in house resources. DDOT and designer work collaboratively to produce design criteria, plans and specifications that fully define the project. The plans and specifications progress through a series of plan reviews at 30%, 60%, 90% and 100% design completion.

DDOT and designer develop construction cost estimates using the design plans and parametric estimating. These cost estimates are refined as the design progresses and are used in development of the project financial plan.

DDOT establishes both the design and construction durations, accommodating the specific permit, coordination, design, construction, and cash flow needs of the project.

DDOT solicits and reviews bids for the construction contract and awards to the lowest responsive and responsible bidder.

With the D-B-B delivery method, DDOT provides construction inspections, ensuring that the construction materials and methods match the plans and specifications. DDOT is responsible for approving progress payments and negotiating contract changes.

### Advantages of D-B-B

- Traditional Method, therefore 'familiar' to everyone
- High degree of DDOT control – Traditional relationship with designer and contractor
- Well suited to the competitive bidding process (low bid)
- Well established rules, regulations & processes

### Disadvantages of D-B-B

- No collaboration between engineer and contractor during design
- Actual construction cost known late in the process
- DDOT must resolve disputes between designer and contractor
- DDOT carries the risk associated with design.

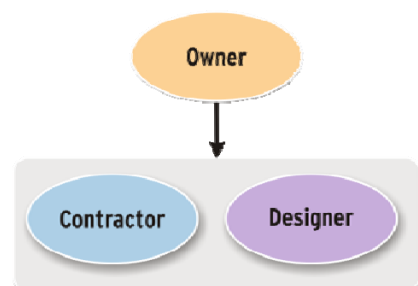
### Primary Reasons to Use D-B-B

- Low cost is the primary project goal
- High degree of DDOT control required
- Simple project with few risks or challenges

## 2.2. Design-Build

The D-B delivery method places the responsibility for design and construction of the project into a single contract. The Design-Build delivery method is performed in accordance with Title 27, Chapter 16, Procurement by Competitive Sealed Proposals.

DDOT uses a design firm (qualifications based selection) or internal engineering capability to define the project requirements using 10%



to 30% complete design plans, design criteria and performance specifications. After award of the contract, the Design-Build team completes the project design, obtains some or all permits, and constructs the project in accordance with the contract requirements.

DDOT develops a construction cost estimate which includes contingency due to the conceptual level of the plans and the project risks.

DDOT establishes the overall project durations, including notice to proceed and completion dates. The Design-Build team is responsible for developing the detailed design, permitting and construction schedules. Schedule and completion time can be part of the competitive bidding process if a best value selection process is used.

The procurement process for Design-Build may be performed in one or two steps. The two step process is recommended for most Design-Build procurements. The Request for Qualifications results in no more than 5 teams being shortlisted. The shortlisted teams then submit proposals based on the Request for Proposals. Using a best value approach, proposals are evaluated, ranked, and awarded based on a combination of technical and price factors. This approach awards the contract to the team that best meets the criteria given in the RFP rather than automatically selecting the lowest bidder. The procurement can also award the contract based on price alone, but this can negate some of the advantages inherent in the Design-Build process. The procurement process for a D-B project is typically longer than the procurement process for a D-B-B project.

With the D-B delivery method, DDOT provides Independent Assurance/Independent Verification during the design and construction process. This ensures that the design and construction meet the contract requirements. This effort is typically less intense than the effort required on a D-B-B project as some responsibility for quality is transferred to the D-B team. DDOT is responsible for approving progress payments and negotiating contract changes.

### **Advantages of D-B**

- Single entity responsible for design and construction.
- Accelerated project delivery
- Early knowledge of project cost
- Increased ability to manage risks
- Increased flexibility
- Innovation

### Disadvantages of D-B

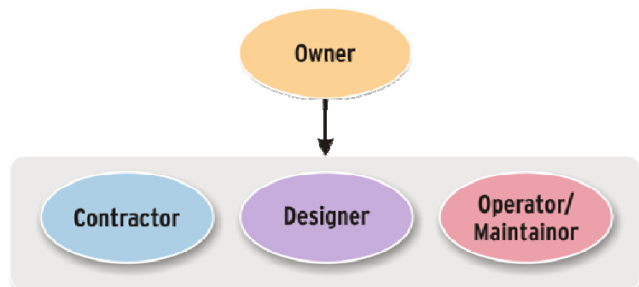
- Learning curve for this 'new' method
- DDOT must make decisions earlier and quicker
- Scope must be well defined
- Reduced DDOT control of design
- Potential for quality to be compromised

### Primary Reasons to Use D-B

- Single point of responsibility for design and construction
- Best Value is more appropriate than low bid
- Early cost commitment
- Schedule/delivery acceleration/risk sharing

### 2.3. Design-Build Operate Maintain

The D-B-O-M method combines the design and construction responsibilities of the D-B method with a performance based operations and maintenance contract for a specified period of time, typically at least 10 to 15 years. This delivery method is performed in accordance with Title 27, Chapter 16, Procurement by Competitive Sealed Proposals.



The procurement process for D-B-O-M contracts is similar to D-B, with additional consideration given to the O&M. The added O&M elements make the contract negotiation and award process longer than the typical D-B project. Operations and maintenance responsibility may be performed by a single entity or may be divided among multiple entities; these entities may or may not include the contractor who performed the initial construction.

With the D-B-O-M delivery method, DDOT provides quality assurance oversight for the design and construction processes similar to D-B. DDOT continues to provide oversight during the O&M period, ensuring that contract requirements for operations and maintenance are met. DDOT is also responsible for approving construction progress payments, O&M payments, and negotiating contract changes as

necessary. At the completion of the O&M period, DDOT assumes responsibility for operating, maintaining, replacing, and rehabilitating the project assets.

### Advantages of D-B-O-M

- Same as D-B
- Integration of O&M helps achieve lowest life-cycle cost

### Disadvantages of D-B-O-M

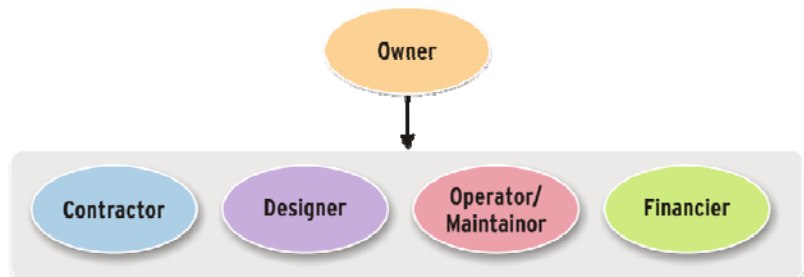
- DDOT is locked into one contract for a long duration
- Not suitable for many typical infrastructure projects

### Primary Reasons to Use D-B-O-M

- Desire to consider total life-cycle cost rather than just lowest upfront cost
- Desire to outsource operations and maintenance

## 2.4. Design-Build Finance Operate Maintain

The D-B-F-O-M, sometimes called Public Private Partnership (P3), method is similar to D-B-O-M but adds project financing to the responsibilities of the P3 team. P3 contracts are typically at least 30 years in length. This delivery method is performed in accordance with Title 27, Chapter 16, Procurement by Competitive Sealed Proposals.



The process for D-B-F-O-M/P3 procurement is more intense and lengthy than other delivery methods. Contract negotiation and award is typically the lengthiest of all the delivery methods discussed. A value-for-money analysis is typically required during project planning to determine if the D-B-F-O-M/P3 method is financially viable. The introduction of private sector debt and equity requires financing entities to carefully evaluate project costs (capital, finance, operations and maintenance) and risks to ensure a high degree of confidence in the expected returns on their investment.

Similar to D-B-O-M, DDOT provides quality assurance oversight for the design and construction processes similar to D-B. However, D-B-F-O-M/P3 brings additional oversight by equity and debt

providers to ensure the project is capable of reliable performance, therefore protecting the private equity investment and expected rate of return.

As with the D-B-O-M method, the P3 method transfers responsibility for operations and maintenance activities to the contractor. Due to the length of the O&M provision, P3 teams are particularly cognizant of life-cycle costs during design and construction.

**Advantages of D-B-F-O-M**

- Same as D-B-O-M
- Participation of equity interest should enhance the contractor’s focus on life-cycle considerations
- Provides financing for project

**Disadvantages of D-B-F-O-M**

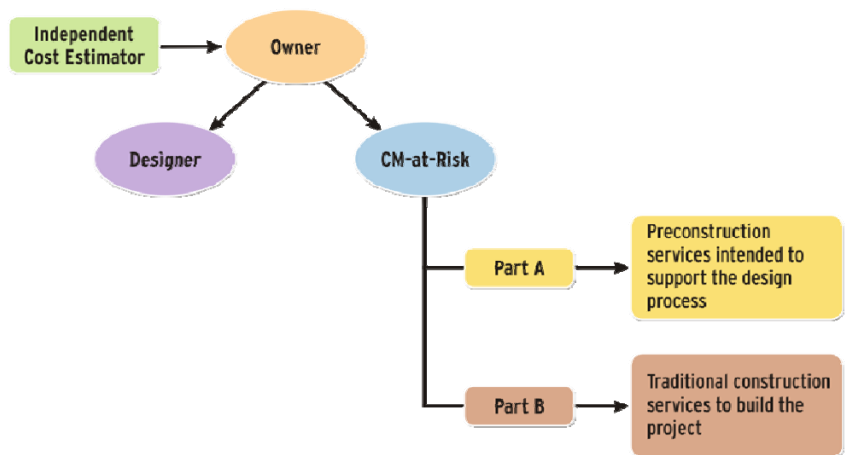
- Same as D-B-O-M
- Requires a long term source of income (tolls, fares, yearly appropriates, etc.) to repay financing

**Primary Reasons to Use D-B-F-O-M**

- Desire to consider total life-cycle cost rather than just lowest upfront cost
- Insufficient project funding

**2.5. Construction Manager at Risk**

Traditionally used in vertical construction, CM at Risk has more recently been introduced for transportation infrastructure with the support of FHWA’s Everyday Counts program (though FHWA refers to the delivery method as Construction Management / General Contractor). Using this approach, DDOT contracts separately but concurrently with a design firm, a CM at Risk, and an independent cost estimator early in the project development process.



DDOT contracts with the design firm and independent cost estimator using a qualifications based selection processes. DDOT simultaneously contracts with a CM at Risk using a qualifications based selection process that may include a price component. This contract typically consists of two phases – the first phase covers the pre-construction participation on the project team, while the second optional phase covers the actual construction.

DDOT, designer and CM at Risk work collaboratively to produce design criteria, plans and specifications that fully define the project. The plans and specifications progress through a series of agreed upon reviews leading to design completion. Advance construction packages may be started before design is complete provided that the advance packages are severable in case the CM at Risk is ultimately not awarded the construction phase of the project.

DDOT in collaboration with the designer and CM at Risk establishes both the design and construction schedules, accommodating the specific permit, coordination, design, construction, and cash flow needs of the project.

The designer, CM at Risk and independent cost estimator develop independent construction cost estimates at several phases of project development. These cost estimates are used to adjust the scope of the project to stay within the project budget. Between 50% and 70% plan completion the three cost estimates are used to develop final project pricing with the CM at Risk. If DDOT is able to successfully negotiate a price with the CM at Risk, the construction phase of the contract is awarded. If the price cannot be successfully negotiated, the 100% plans, estimates and specifications can be used for a traditional D-B-B procurement.

With the CM at Risk delivery method, DDOT provides quality assurance oversight during the design and construction process. This ensures that the design and construction meet the contract requirements. This effort is typically less intense than the effort required on a D-B-B project as some responsibility for quality is transferred to the CM team. DDOT is responsible for approving progress payments and negotiating contract changes.

### **Advantages of CM at Risk**

- Collaboration between DDOT, Design and Contractor early in design process
- High Level of DDOT involvement
- Accelerated project delivery



- Ability of DDOT to manage project to budget
- Maximizes ability to distribute risks in an effective manner

#### **Disadvantages of CM at Risk**

- DDOT must manage two contracts & resolve disputes
- Requires high level of DDOT involvement
- DDOT shares risk of errors and omissions
- DDOT could be tempted to agree/negotiate LS too early in design when scope is not well defined

#### **Primary Reasons to Use CM at Risk**

- Highly complex projects requiring significant DDOT involvement
- Requirement for cost threshold or strict budget management

## 3.0 Selecting a Project Delivery Method

In accordance with DCMR Title 27, Section 1600 the decision between competitive sealed bidding (D-B-B) and competitive sealed proposals (D-B, D-B-F-O-M, D-B-O-M and CM at Risk) is made by the contracting officer. For competitive sealed proposals to be used the contracting officer's determination must find that competitive sealed bidding is not practicable or advantageous to the District. This chapter outlines the methodology required to provide a project delivery recommendation to the contracting officer by the project team.

### 3.1. Timing

In order to realize the maximum benefit of the available project delivery methods, the project delivery method should be considered throughout project planning and project programming (see Chapter 2 of the DDOT Design and Engineering Manual). Final selection of a project delivery method most appropriately takes place before the preliminary design process (30% plans) draws to a close. Early selection of Design-Build allows engineering costs to be minimized and development of the RFP to be integrated into the 30% plan production effort. At this level, sufficient detail is typically available to fully define the project, including scope of work, project risks, post-NEPA environmental coordination, utility involvement, community involvement, preliminary cost estimates and right of way requirements. Proceeding beyond the preliminary design phase before making a delivery method decision may lead to unnecessary engineering expense if D-B is ultimately selected.

A project may be considered for alternate contracting methods at any phase from inception to near 100% complete plans depending on the particular needs of the project. Special consideration will need to be given to the status of the project, permits, design effort already expended, scope definition, political factors, and any other pressing issues that could influence successful project delivery.

When identifying a project as a Design-Build project, DDOT must consider that development of a Design-Build RFP requires more effort and a different skill set than continuing design development for a Design-Bid-Build contract. Contracts and task orders with A/E firms working on the project may need to be modified. A management plan for the Design-Build project is required and the need for continued consultant services should be considered.

DDOT should also consider that A/E firms working on certain aspects of a Design-Build project become ineligible to pursue the work as part of a Design-Build team, and may prefer not to continue work. See Part 6.1, Conflict of Interest Statement, for more information. Design-Build

### 3.2. Factors to be considered

Four fundamental sets of factors must be defined to develop a project delivery method recommendation:

**Goals and Objectives.** Typically well defined at the preliminary design levels, the goals and objectives are the basic tenets of the project that need to be achieved for the project to be considered a success. For projects with a NEPA document, the purpose and need are often good starting points for defining the goals and objectives. Goals and objectives typically relate to the following:

**Performance** – Many transportation projects have a root goal of improving the level of service for various modes of transportation. These goals are often levels that can be calculated or measured in a quantitative fashion.

**Aesthetics** – Depending on the project environment, aesthetics can prove to be a major factor in the success of a project.

**Function** – Sometimes considered a subset of performance, project function is a more qualitative view of the infrastructure improvements.

**Budget** – While budget is usually a major consideration, it typically only rises to the level of project goal or objective when a significant gap exists between the anticipated project cost and the level of funding. Using Value Engineering early in the project is still a major consideration.

**Schedule** – The most common advantage of Design-Build and CM at Risk is that they allow for final project delivery in a reduced timeframe compared to D-B-B. Design and construction are allowed to proceed concurrently as a collaborative effort between the contractor and designer. Projects tend to proceed more predictably through construction due to the risk of delays being placed on the Design-Build team.

**Quality** – Provided that the specifications and the staffing levels are appropriate, design and construction quality can be high using any project delivery method.

**Risk.** Risks are often a subset of the goals and objectives, but care should be taken to avoid overlapping the two when possible. Risks are specific occurrences that would prevent a successful project through delay, budget, or technical problems. Examples of project risks include:

**Geotechnical conditions** – Undercutting, settlement, foundations, etc. must be carefully considered and risks assigned to the party best able to manage them.

**Systems integration** – Integration of new works both internal to the project as well as with existing systems is a critical risk for many projects.

**Constructability of complex structures** – Contractors are typically more skilled than engineers at understanding and developing construction means and methods for complex or unique elements.

**Utility coordination / scheduling** – Integration of utility work, the ability of utility companies to perform on time, and the potential for advance utility relocations must be considered.

**Coordination with other construction contracts** – The need to coordinate with adjacent construction contracts often leads to time and/or cost uncertainty.

**Coordination with Third Parties** – The need to coordinate with municipalities, counties, railroads, communities, and business districts may lead to delays or scope changes.

**Claims experience** – Design build projects typically experience less claims after award than Design-Bid-Build.

**Bidding competition** – A careful analysis of the construction market is required to determine if sufficient capacity exists for the type of work involved in the project. Depending on conditions and types of work, D-B or D-B-B may be best able to produce sufficient bidding competition.

**Constraints.** These are DDOT or third party imposed requirements that are common to all project delivery methods. The ability to mitigate the impacts of the constraint will vary between project delivery methods.

**DDOT cash flow / budget** – Design build results in greater cost certainty early in the project. D-BFOM includes financing to cover funding shortfalls for peak construction years. CMAR has the greatest ability to adjust scope and manage to a known budget.

**Permitting / third party approvals** – Approval requirements from third parties such as WMATA, DC Water, Railroads, AOC, NPS and other governmental agencies may require design to be progressed to a high level of completion before ‘approval’ of the project. Written agreements, such as MOA’s, are necessary to mitigate this risk if D-B is selected.

**Time of day restrictions / lane closures** – The contractor is the most familiar with the construction phasing, time and cost. As such, the contractor is able to create MOT plans reflecting both the project restrictions and the desired means and methods for construction.

**Right of Way** – The identification and purchase of right of way is time consuming, expensive and disruptive to property owners. The D-B-B contract must be more conservative than a D-B contract since means and methods are unknown. However, as most ROW is typically purchased by DDOT based on preliminary plans, the timing of purchases rather than the location/size often becomes the controlling constraint. Right of Way must be considered on a project by project basis to determine the most beneficial project delivery method.

**Desire for innovation** – D-B can be very advantageous to the DDOT if the project offers opportunities for innovation and creativity related to engineering, construction means and methods, scheduling or phasing. This may be especially true for complex projects.

**Flexibility** – If DDOT desires a single solution, adopts very prescriptive requirements, or construction means and methods are tightly controlled by DDOT or stakeholder requirements, the project may not realize the full benefit of Design-Build.

**Intangibles.** These factors are related to overall business, political and technical environment in which the project will be delivered. The importance of intangible factors must not be underestimated. Often times a delivery method that appears advantageous using all of the above technical factors is ultimately not acceptable because of the intangible factors.

**Availability & capability of DDOT staff** - DDOT must have sufficient staff available that is trained and capable of operating in the environment produced by the selected delivery method. Each delivery method will place different demands on DDOT's staff.

**Availability & capability of design & construction firms** – Similar to DDOT's staff, designers and constructors should have proven experience with the selected procurement method. The capacity of the design and construction industry should be reviewed to ensure that suitable firms will be interested in completing the project.

**DDOT's ability to make decisions & obtain stakeholder decisions** – For Design-Build DDOT must have the ability to make, or obtain from other stakeholders, decisions in a rapid manner. Delays in decision making on a Design-Build project can quickly translate to construction delays.

**Political environment** – The level and sophistication of political involvement on a project may drive the decision to or away from a D-B project delivery method. This must be analyzed on a project by project basis.

**Labor & union influence** – Labor availability and union interests should be evaluated for each project to determine if special considerations are merited. There are a variety of methods for accommodating labor needs (Project Labor Agreements, etc.) in any type of contract, for which FHWA approval will be required if Federal-aid funds are included in the project.

All members of the DDOT team and stakeholders should be consulted during the development of the above factors. The team should seek to develop a comprehensive list rather than focusing only on major factors. While the major factors often drive the selection of a delivery method, it is also important that all of the minor factors inform the decision.

### 3.3. Risk Identification and Assessment

A systematic approach to project risk identification and assessment is necessary to achieve project goals, reduce initial and total contract price, enhance the final product and avoid contract disputes. Risk analysis is a crucial part of both identifying the appropriate project delivery method and developing the procurement documents once a method is selected.

Project risks should be identified and assessed using the procedures below:

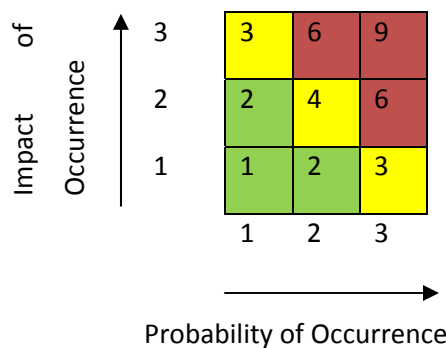
**Step 1** – Identify and define the risks. The list should include those risks that may affect successful implementation of the project, regardless of when the risks might occur. Risks should be considered independent of the delivery method. The extent to which various delivery methods can be used to mitigate the risks will be discussed in a later section.

**Step 2** – Assess the probability that a risk event of the nature listed will occur during the design, procurement, construction or warranty period of the project. The probability is rated from 1 to 3, with 3 representing the highest likelihood of occurrence.

**Step 3** – Assess the degree of severity that the risk would have on the project if it occurred. The severity is rated from 1 to 3, with 3 representing the highest impact.

**Step 4** – The overall risk rating is determined by multiplying the probability of occurrence rating by the impact of occurrence rating. An overall risk rating of 1 to 2 is considered to be low, 3 to 5 is considered moderate, and 6 to 9 is considered to be high.

**FIGURE 3.1 RISK RATING**



The risk analysis matrix, shown in Table 3.3, is used to determine the overall risk rating for each of the risks identified in Step 1.



**Table 3.3 | Sample Project Risk Rating Matrix**

	Probability of Occurrence	Severity of Occurrence	Risk Rating
<b>Environmental Approvals / Permits</b>			
Erosion and Sediment Control	3	2	6
Tree Removal	3	1	3
Other Public Space Permits	3	1	3
<b>Geotechnical Conditions</b>			
Unexpected soil conditions.	1	2	2
<b>Utilities</b>			
Ability to get signed Utility Agreements and Prior Rights	3	3	9
Ability to get Utility Designs completed and approved by the utility	3	3	9
Unknown utilities discovered during construction. Location of	2	3	6
Inability of Utility Companies to perform on schedule	2	3	6
<b>Design Approvals</b>			
untimely DDOT design approvals	2	2	4
untimely 3rd party design approvals	2	2	4
<b>Right of Way Acquisition</b>			
Acquisitions not sufficient for construction	1	2	2
Acquisitions not timely	2	3	6
<b>Differing Site Conditions</b>			
Unanticipated HAZMAT	1	3	3
<b>Third Party Interfaces (non-utility)</b>			
National Capital Planning Commission	3	2	6
National Park Service	2	2	4
<b>Security</b>			
Homeland Security Coordination and Requirements	2	2	4
<b>Project Schedule</b>			
Force Majeure	2	1	2
Other Project Related Delays	3	2	6
<b>Project Budget</b>			
Construction Costs exceed budget	2	3	6
<b>Unacceptable Construction Impacts</b>			
Vehicle Traffic Impacts	2	2	4
Pedestrian Traffic Impacts	2	2	4
Business Access Impacts	2	3	6
<b>Community</b>			
Political or Community Opposition to Project	2	2	4
<b>Constructability</b>			
Construction Phasing acceptability to Contractor	2	2	4
Design matches Contractor desired means & methods	2	2	4
<b>Scope Changes</b>			
Political and Community Driven	2	2	4
DDOT Driven	2	2	4

### 3.4. Risk Mitigation and Allocation

The risks identified and analyzed in the previous section can be grouped into 3 general categories:

**High Risk:** Risk Rating of 6 to 9. Particular attention should be given to the ability of different project delivery methods to mitigate these risks.

**Moderate Risk:** Risk Rating of 3 to 5. Appropriate attention should be given to these factors.

**Low Risk:** Risk Rating of 1 to 2. These factors have a relatively small individual impact on the project and the amount of time spent on them should be budgeted accordingly. However the cumulative effect of these small risks must not be ignored.

DDOT must then consider how each risk could be mitigated and/or allocated. For high risk or complicated projects, the use of a chart format (see Table 3.4) is recommended to document the findings. Each of the different project delivery methods presents different opportunities to mitigate risk. Risk is generally mitigated in one of 3 different ways:

- A. Completing additional design or investigations to eliminate unknowns
- B. Providing criteria or specifications that fully define elements, thereby reducing risk
- C. Assigning risks that cannot be eliminated to the party best able to manage the risk

**Risk identification, assessment, mitigation and allocation must be completed on a project specific basis for every project. Each project must be reviewed on its own merits and not considered in a generic sense.**

Reassignment of all risk to the contractor is not advisable. When significant risk is transferred to the contractor, and the contractor has no better ability than DDOT to control the risk, the contractor will include money in the bid to cover this risk. If the risk item never occurs, the contractor retains the money. If DDOT held the risk, DDOT would be able to reassign the unused risk funds to other projects. Careful assignment of risk is critical using any procurement method.





**Table 3.4 |** Project Risk Mitigation and Allocation Matrix

	Risk Mitigation and Allocation Strategy		
	Design Bid Build	Design-Build	CM at Risk
Environmental Approvals / Permits			
Geotechnical Conditions			
Utilities			
Design Approvals			
Right of Way Acquisition			
Differing Site Conditions			
Third Party Interfaces (non-utility)			
Security			
Project Schedule			
Project Budget			
Unacceptable Construction Impacts			
Community			
Constructability			
Scope Changes			

### 3.5. Selection of Delivery Method

The identified project goals, constraints, intangibles and risks should be summarized using a table similar to Table 3.5. The project team should then evaluate the likelihood of success of the three different project delivery methods. The knowledge gained from the risk analysis mitigation and allocation exercise should be incorporated into evaluation of project delivery methods. Most projects can be delivered using any delivery method; this evaluation is attempting to identify which delivery method would be most beneficial to DDOT.

After completion of the table, the results should be analyzed for trends. It is unlikely that the table will clearly indicate a strong preference for any one method. However, by examining the overall trends and the most beneficial project delivery method for several key factors, a recommendation can be made.

A written memorandum of project delivery method selection should be presented to the Chief Engineer, who will coordinate with the Contracting Officer to make a final decision and implement the selected procurement method. Tables 3.3, 3.4 and 3.5 should be included in the recommendations, along with sufficient background information to fully describe the project.

The Contracting Officer must determine that competitive sealed bidding (D-B-B) is not practicable or advantageous to the District before determining which competitive sealed proposal (D-B, D-B-O-M, D-B-F-O-M or CM at Risk) method to use.

After final selection of the project delivery method, Table 3.5 should be reexamined to identify any factors that were not favorable for the selected project delivery method. Minimizing risk for these factors will require special attention during the preparation of the procurement documents.



**Table 3.5 |** Sample Project Delivery Method Evaluation Table

	Likelihood of Successful Project		
	Design Bid Build	Design-Build	CM at Risk
<b>Goals</b>			
Efficient travel for all transportation modes	✓	✓	✓
Eliminate roadway infrastructure deficiencies	✓	✓	✓
Construction a “Green Street”	✓	✓	✓
Accommodate future streetcar operations within the transitway	✓	✓	✓
Avoid impacts to 4(f) properties	✓	✓	✓
Avoid right of way acquisition		✓	✓
Result in no adverse effect to historic properties	✓	✓	✓
Minimize impacts to users during construction		✓	✓
Minimize impacts to adjacent businesses during construction		✓	✓
<b>Risks</b>			
<b>High Risk Items</b>			
Environmental Approvals and Permits	✓		✓
Utilities	✓		✓
Differing Site Conditions		✓	✓
Project Budget			✓
<b>Moderate Risk Items</b>			
Unacceptable Construction Impacts		✓	✓
Design Approvals	✓		✓
Right of Way Acquisition		✓	
Security		✓	✓
Third Party Interfaces		✓	
Project Schedule		✓	
Community Opposition	✓		✓
Constructability		✓	✓
Scope Changes	✓		✓
<b>Low Risk Items</b>			
Geotechnical Conditions		✓	✓

## 4.0 Project Development for Design-Build

This section of the manual is intended to provide general guidance with respect to the development of Design-Build projects in preparation for the release of a Request for Proposals. Project Development for Design-Build will follow the project development guidelines in DDOT's Design and Engineering Manual, with modifications as necessary to accommodate Design-Build. The project manager will be required to use engineering judgment to ensure that the project is developed for Design-Build in a responsible, cost effective manner that will properly allocate the design and construction risk among all parties.

### 4.1. Project Management for Design-Build

#### 4.1.1. Capital Improvement Program

The Project Manager should work with the Ward Program Manager to prepare the initial scope of work and cost estimate and make the request to the budget office for inclusion in the 5-year Capital Improvement Program (CIP). When developing the CIP estimate, it should be noted that the construction portion of the budget may include those design costs that will be borne by the Design-Build team if the D-B delivery method is preferred. If DDOT plans to employ a consultant or General Engineering Consultant (GEC) to oversee the project, those costs may remain under the design portion of the CIP.

Consideration should also be given to the timing of expenditures shown in the CIP. For Design-Build, it is likely that the right of way acquisition, design, and construction budgets may be expended simultaneously.

#### 4.1.2. Project Scope

The Project Manager must fix the project scope earlier than is necessary with most traditional delivery projects, requiring coordination with other DDOT offices, District Agencies, and third parties to be accelerated. The requirements of these stakeholders must also be determined without the use of well developed plans, which may prove an impediment to the Design-Build process.

#### 4.1.3. Project Cost Estimates

All costs associated with the project must be accounted for. The detailed Design-Build cost estimate will include elements not typically required for a design-bid-project. Typical components of a Design-Build cost estimate include, but are not limited to:

- Planning/Engineering to functional (30%) plan level

- Development of the Design-Build documents (RFQ, RFP)
- Evaluation of SOQ and Proposals
- Right of Way Acquisition Cost
- Environmental Documents/Coordination/Mitigation Cost
- Utility Cost
- Other Third Party Costs (Railroad, WMATA, etc)
- Design-Build Team Cost
  - Engineering from 30% to final plans, including verification of plans provided by DDOT
  - Construction
  - Design and Construction Quality Control
  - Design and Construction Quality Assurance
- GEC, DDOT or Consultant project oversight
- DDOT plan reviews as required
- Independent Verification

If significant risk is being transferred to the Design-Builder, the Design-Build cost should be increased accordingly.

#### **4.1.4. Design Exceptions and Waivers**

Design elements of the Project that do not meet relevant standards must be identified by the Project Manager during development of the Functional Plans.

Design Exceptions are required for any work on the NHS regardless of funding source when design values are used that do not meet FHWA established minimum criteria.

Design Waivers are required on any work outside the NHS when design values are used that do not meet Federal, DDOT or project specific minimum criteria.

Each potential Design Exception or Waiver must be resolved in one of the following manners:

- Additional engineering is performed to eliminate the design exception or waiver in the Functional Plans.
- DDOT obtains a design exception or waiver before advertisement of the RFP.
- DDOT identifies the potential design exceptions or waivers in the RFP and requires the Design-Builder to eliminate them. This method shall only be used when DDOT believes with certainty

that the design exception or waiver can be resolved within the scope of work provided for in the contract.

- DDOT identifies the potential design exceptions or waivers in the RFP and requires the Design-Builder to make all reasonable efforts to eliminate them. If the Design-Builder cannot eliminate them, the Design-Builder prepares documentation supporting the need for the design exception or waiver.

All design exceptions and waivers shall be approved by the Chief Engineer. In addition, all design exceptions must be approved by FHWA.

Design exception and waiver documentation shall include justification for the design exception or waiver and mitigation measures where field conditions, lack of ROW, utility and railroad clearance, etc. require the construction of facilities which do not meet minimum standards.

Both Design Exceptions and Design Waivers are indicated only for a specific and unique circumstance. If the exception or waiver applies to the entire project (for example, eliminating bike compatibility) and is identified after award a change order and equitable price adjustment is necessary.

#### **4.1.5. Value Engineering**

FHWA requires that Value Engineering be used on all projects on the Federal-aid system with an estimated cost of \$25 million or more, and on all bridge projects with an estimated cost of \$20 million or more. Value engineering may be used on other projects at the discretion of the Chief Engineer. While the Design-Build process enhances innovation and creativity in meeting project requirements, the Design-Builder is often limited in innovation by the cost effectiveness, right of way availability, and risks associated with changes to permits. The value engineering process can be used by DDOT during the development of the functional plans to ensure that potential cost savings measures are incorporated into the project requirements. The decision on whether to pursue value engineering before advertisement should be made on a case-by-case basis.

## **4.2. Project Development for Design-Build**

### **4.2.1. Plan Development**

The plans included in the RFP for a Design-Build project are referred to as the Functional Plans. The appropriate level of plan completeness and information to provide will vary based on the project, but in general the functional plans are equivalent to the 30% level of completion as described in the

Engineering and Design Manual. The following factors should be considered when determining what information to include in the Design-Build procurement:

- Ability to describe the desired project outcome
- Ability to reduce risk
- Availability of information
- Accuracy of information
- Potential to enhance or stifle innovation

#### **4.2.2. Project Permitting / Environmental Design**

As part of the planning and development of functional design plans, DDOT will typically delineate all wetlands, waters of the United States, forested areas, significant trees, and other natural, historic or archeological resources that may be impacted by the project. DDOT should coordinate with the appropriate agencies with regard to the anticipated impacts, avoidance and minimization of impacts, mitigation, special protection measures and permits required.

By necessity, permits will be a shared responsibility between DDOT and the Design-Builder. DDOT must inform the agencies of the decision to use Design-Build, which will impact the manner in which permit applications are processed. The Project Manager must carefully consider the risks of retaining permitting responsibility with DDOT vs. assigning the responsibility to the Design-Builder. To ensure permit authorizations are issued in advance of the RFP, the typical assignment of responsibility and process for obtaining each authorization is listed below:

- NEPA Classification – DDOT
- Route location approval – DDOT
- Section 4(f) – DDOT
- Section 106 – Historic Clearances – DDOT
- Historic Bridges – DDOT
- Archaeology / Paleontology – DDOT
- 404 Wetland/Waterway Permit Requirements – DDOT, with modifications by Design-Builder
- 401 Water Quality Certification-DDOE – DDOT, with modifications by Design-Builder
- Floodplains-DDOE – DDOT, with modifications by Design-Builder
- Special Status Species Issues-US Fish and Wildlife Issues/DDOE – DDOT
- Threatened and Endangered Species coordination - DDOT
- Hazardous Waste and Materials – Initial analysis by DDOT, Design-Builder verifies findings

- Noise Analysis – Initial analysis by DDOT. Design-Builder verifies findings
- Air Quality – DDOT.
- NPDES Permit Requirements – DDOT, with modifications by Design-Builder
- Erosion Control Permits – Design-Builder
- Adverse Human Health and Environmental effects on minority, low income, LEP and disabled populations – DDOT
- Storm Water Quality, BMP, LID – Design-Builder
- NPS Access – DDOT
- WMATA Real Estate - DDOT

The project requirements must clearly spell out the requirements of these agencies to allow the Design-Build team to price and implement them as part of the contract. A matrix should be provided clearly indicating responsibility for all permits. Responsibility for preparing wetland, forest and other resource impacts and permits shall be clearly stated in the RFP. **If final design cannot be completed within the authorized boundaries or if the Design-Builder desires to make revisions, the Design-Builder is required to modify the permits at the Design-Builder's time and expense.**

Responsibility for mitigation measures must be clearly defined by DDOT in the RFP. Mitigation that is located at the project site is typically the responsibility of the Design-Builder, including in-kind mitigation for stream impacts and restoration for temporary wetland or floodplain impacts. Off-site mitigation may be performed by the Design-Builder, but is often performed under separate contract by DDOT.

#### 4.2.3. Field Survey and Mapping

Topographic surveys should be acquired by DDOT during conceptual design and planning in accordance with the DDOT Design and Engineering Manual. All such information should be used in the functional design and be provided to the Design-Builder in native format. The Design-Builder is responsible for independently verifying the accuracy and suitability of the provided data and performing any new survey that may be required. This must be clearly defined by DDOT in the RFP for D-B.

If DDOT knowingly provides survey that is not of sufficient accuracy to perform final design this fact should be stated in the RFP and the survey data provided as reference data to eliminate the risk of a claim. In this case the Design-Builder shall be required to develop their own survey data.

Whenever surveys are performed by the Design-Builder they must be performed in accordance with DDOT standards unless otherwise stated in the RFP.



#### 4.2.4. Utilities

DDOT should obtain existing utility information, compile utility maps, and prepare composite utility drawings in accordance with the DDOT Design and Engineering Manual. Potential utility conflicts should be identified based on the functional plans. Where utility impacts are judged to be unavoidable and the functional design is unlikely to change significantly, performing test pits will serve to reduce the risk to the Design-Builder.

For all identified conflicts, DDOT should coordinate with each utility owner to develop solutions and agreements for resolving the conflicts. Potential solutions include:

- Require the project to be redesigned to avoid or reduce impacts to the utility. DDOT must prove this is feasible and the cost is reasonable within the context of the project. Either DDOT or the Design-Builder can be made responsible for performing the redesign.
- Utility owner to provide utility relocation design & construction based on Design-Builder plans. This solution is not desirable in Design-Build as it places the utility owner on the critical path for both design and construction unless the work can be completed in advance of the Design-Build contract.
- Design builder to provide utility relocation design & construction. This solution is the desired process for Design-Build. This allows the Design-Builder to control the critical path of both design and construction. The utility owner approves the design and may provide inspection during construction. Construction is typically required to be performed by a utility owner pre-approved subcontractor. Certain construction functions, such as final splicing of wires, may still be performed by the utility owner. The utility agreements must specify the process for reimbursing DDOT and/or the Design-Builder for utility relocation costs that are the responsibility of the utility owner.

DDOT will obtain utility agreements with the impacted utilities in accordance with the DDOT Design and Engineering Manual. At a minimum, the agreements must include relocation requirements, design or review timeframes, construction timeframes, inspection requirements, scheduling requirement, cost responsibility, required betterments and cost responsibility for betterments, pre-approved contractor lists, utility owner contact information, and reference the technical requirements for design and construction of the utility.

DDOT will provide all utility information developed during the planning process to the Design-Builder. Careful consideration must be given to placing the information in the appropriate categories of

engineering data depending on the reliability of the information. Typically the following assignments are made:

- As-Built utility plans: reference data
- Utility Designations: reference data
- Test Pits: engineering data
- Utility Agreements: include in the Special Provisions

The risk of discovering unknown utilities, or known utilities that differ from the plan location, is held by DDOT. This risk should be mitigated for the known utilities by defining in the contract an acceptable deviation from the plan location before the variation is considered a differing condition.

#### **4.2.5. Geotechnical**

DDOT should perform geotechnical borings, groundwater readings, and laboratory tests in accordance with the DDOT Design and Engineering Manual. This information is typically provided to the Design-Builder as reference data. If DDOT performs geotechnical analyses and recommendations this information is to be supplied as reference data only with notification that the Design-Builder is required to complete their own supporting analysis. Potential Design-Builders may not perform their own geotechnical investigations during the procurement process. Upon request from bidders, DDOT may consider conducting additional geotechnical investigations during the procurement process. Any such additional investigation by DDOT must be provided to all bidders.

#### **4.2.6. Pavement**

In most cases, DDOT will specify the minimum pavement section(s) to be used on the project. The Design-Builder shall be responsible for verifying that the provided pavement section is suitable given the actual geotechnical conditions discovered during construction. If geotechnical conditions discovered in the field do not support the given pavement section, or if individual design solutions proposed by the Design-Builder result in significant traffic variation, the Design-Builder shall be responsible for providing revised pavement design for DDOT review and approval. Whenever the Design-Builder is required or reasonably expected to perform pavement design, DDOT shall provide performance specifications identifying the required pavement design procedures and the minimum acceptable pavement section by roadway classification/type.

### 4.2.7. Roadway

Horizontal alignments, vertical profiles and typical sections developed during the planning process and included in the functional plans are used by DDOT to establish the conceptual scope of the improvements. The Design-Builder can be required to utilize the functional alignments in one of several ways:

- The Design-Builder does not have to use the functional alignment but instead must construct the project within the defined project limit of disturbance or right of way.
- The Design-Builder may adjust the functional alignments within defined tolerances. For example, the Design-Builder may be allowed to adjust the alignments by 10' horizontally and 5' vertically. DDOT may identify multiple tolerances within a project when specific areas of the project are more sensitive to alignment revisions.
- The Design-Builder is required to use the functional alignments. This solution is recommended only in limited cases, as it reduces flexibility/innovation and exposes DDOT to risk if the functional alignment is flawed.

In each case the Design-Builder is responsible for ensuring that the selected alignments meet the design criteria established in the performance specifications and special provisions.

DDOT will determine which elements of the typical section are required (such as lane widths, sidewalk widths, median widths, cross slopes, etc.) and which are merely instructive and should be further determined by the Design-Builder using the performance specifications and special provisions.

Preliminary cross sections are typically developed by DDOT to establish grading limits, drainage patterns, and determine any project right of way requirements.

All alignment information, CADD files, and cross sections will be provided to the Design-Builder as reference data.

The Design-Builder is required to analyze roadside safety within the project limits of work and provide safety grading, guardrail, crash cushions and other safety related items as required. DDOT should specify if the Project includes replacing and/or upgrading all existing guardrail and barriers within the project limits to meet current standards.

### 4.2.8. Structural

DDOT will typically complete structural designs to the Type, Size & Location level for all bridge structures. The conceptual need for all other structures (culverts, sign structures, retaining walls, etc.)

shall be identified in the plans and specification but detailed design is typically left for the Design-Builder to perform.

In order to best define the scope of work, DDOT should complete Hydraulic Study and Hydraulic Analysis Report for bridges crossing water and for major culverts.

The Design-Builder will be responsible for completing structural designs in accordance with technical requirements given in the performance specifications / special provisions. DDOT shall use the special provisions to limit the types of structures (foundations, substructures, superstructures, etc.) whenever the department has determined that limitations are in the best interest of the project. Otherwise, the Design-Builder is permitted to use any type of design allowed by the various DDOT standards and manuals.

Required architectural and/or aesthetic treatments for bridges are difficult to specify via performance specifications. In most cases, the required treatments should be specified by DDOT; however the means and methods for constructing the required treatment can be determined by the Design-Builder. Plans and renderings are often useful in describing aesthetic goals for a Project.

DDOT should provide the Design-Builder with any preliminary noise analysis or reports completed by the District. The Design-Builder is responsible for updating the report based on final design, and designing and constructing any noise barriers required.

#### **4.2.9. Traffic**

Traffic signing, pavement markings, signalization, and lighting is not typically designed by DDOT as part of the functional plans. The Design-Builder will be required to complete this design in accordance with the performance specifications and special provisions. At a minimum, the project specifications must provide the information listed in 5.1 of DDOT's Design and Engineering manual. Additional information developed during the project planning process should also be supplied as either engineering data or reference data, as appropriate.

Before advertisement DDOT should carefully consider the potential outcomes of following standard procedures and provide further guidance if specific outcomes are desired. For example, the Design-Builder will use traffic analysis to determine the locations and configurations of traffic signals. If specific locations and/or lane configurations are desired, DDOT must specify these in the RFP.

When bicycle and pedestrian requirements are not clearly defined and enforceable based on DDOT standard manuals, the RFP should give specific requirements. For example, the RFP should clearly state

the minimum sidewalk width, shared or dedicated bike lanes, required pedestrian overpasses/underpasses, etc.

#### **4.2.10. Drainage and Storm Water Management**

DDOT should perform preliminary storm sewer design only to the extent necessary to establish a preliminary drainage layout and storm water management footprint. This layout must be sufficient to determine anticipated utility impacts, proposed drainage patterns, tie-ins to existing facilities, right-of-way needs, and necessary environmental permits. DDOT will coordinate with DCWATER to determine any project specific requirements that must be included in the RFP.

Culverts carrying waters of the US or with impoundments that may affect right of way needs should be designed by DDOT to the preliminary level and coordinated with the permitting agency and right of way needs assessed accordingly. The Design-Builder will be responsible for the final design and permitting of drainage and culverts.

Preliminary storm drain designs are not provided to the Design-Builder. Preliminary culvert designs are provided to the Design-Builder as reference data only for locations where permit coordination was begun by DDOT.

DDOT should complete a conceptual storm water management plan to demonstrate to DDOE that all requirements can be met within the proposed right of way. The Design-Builder will then be responsible for completing the stormwater management design, all necessary agency coordination and obtaining of permits. The conceptual storm water management plan will be provided to the Design-Builder as reference material as necessary to document the preliminary coordination with the permitting agency.

#### **4.2.11. Erosion and Sediment Control**

The Design-Build team is responsible for preparing phased erosion and sediment control design and all associated permitting in accordance with DDOE requirements.

DDOT should consider erosion and sediment control during the functional plan development only to the extent that it impacts the project right of way. Suitable offset from the top of cut/toe of fill to allow for erosion and sediment control devices must be assumed when developing limits of disturbance and right of way.

#### **4.2.12. Maintenance of Traffic and Construction Phasing**

DDOT should provide specific work hour restrictions, lane restrictions and phasing requirements in the RFP. These requirements should include vehicular, bicycle, transit and pedestrian traffic and must

consider access to surrounding residential and business parcels. For more complicated projects with significant variations from existing traffic patterns, DDOT may consider specifying required levels of service during construction rather than specific lane closure requirements.

If temporary pavement or detours are likely to be necessary, DDOT should identify and include impacts and land acquisition for these temporary works in the project. If the Design-Builder determines that additional right of way is necessary, the request should be considered in accordance with the Right of Way section of this manual.

The Design-Builder must provide any required traffic management plans and detailed maintenance of traffic plans as required to construct the project. The Design-Builder may request approval of alternate MOT restrictions based on the project final design. DDOT should consider if the request is in the best interested of the project and traveling public, but is under no obligation to approve such requests.

#### **4.2.13. Aesthetics and Landscaping**

DDOT must carefully consider how to specify the desired aesthetics of the project using either the performance specifications, special provisions, or a project specific aesthetics plan. Except in the case where DDOT desires competition regarding the project aesthetics, the requirements of the contract should be explicit and measurable with respect to aesthetics. Detailed specifications for specific features (median treatments, sidewalk treatments, railings, pilasters, street trees, etc.) should be included in the RFP.

DDOT will specify coordination that has been initiated or completed with the various agencies that review aesthetics in the District. Responsibility for completion of this coordination shall be clearly stated, and is typically assigned to the Design-Builder with support from DDOT as necessary.

The Design-Builder will be responsible for developing final landscaping plans. One method typically used to ensure acceptability of the final design is for DDOT to provide a required “palette” of material to be utilized at generalized locations (ex. Roadside plantings, screening plantings, reforestation, street trees, etc.). DDOT may also elect to utilize a sample landscape plan to demonstrate the requirement. DDOT should specify minimum plant sizes and densities as well as any warranties and maintenance requirements such as plant replacements, watering and weeding.

#### **4.2.14. Communications and ITS**

DDOT typically will not complete design for communications and ITS. The project requirements for these elements should be clearly communicated in the RFP, including training requirements, and the Design-Builder should be responsible for designing and constructing these features. DDOT must provide such

assistance as might be necessary for integrating new elements into the existing communications and ITS systems.

#### **4.2.15. Right of Way**

DDOT is responsible for identifying and obtaining all necessary project right of way in accordance with DDOT's Design and Engineering Manual and applicable District and Federal law. The functional plans prepared for the planning and procurement process should be the basis for acquiring the right of way.

DDOT may request an exception from the FHWA ROW (including utility and railroad) certification and advertise the project before acquisition of all right of way is complete if deemed in the best interest of the project. If all right of way is not acquired before NTP, DDOT may elect to have the contractor provide a desired sequence of acquisition for DDOT's consideration.

If the selected Design-Builder identifies changes to the right of way, the Design-Builder will be responsible for providing justification and revised plats to DDOT. DDOT will determine if revising the acquisition is in the best interest of the project. If so determined, DDOT will obtain the required right of way. Any increase in Right of Way cost, including but not limited to property costs, relocation costs, DDOT costs, environmental assessments, haz-mat mitigation, will accrue to the Design-Builder. Any decrease in right of way cost will accrue to DDOT. The Design-Builder is typically made responsible for all schedule risk.

When performing advance property acquisitions, DDOT must have a plan for maintaining the purchased property. When the property is to be held for some time before the Design-Build contract is executed, DDOT may consider demolishing existing structures to avoid maintenance issues. At DDOT's option and if so noted in the RFP, the Design-Builder may be made responsible for demolition of existing structures on acquired property.

#### **4.2.16. Permitting**

DDOT will make a determination during project development regarding which party will obtain each required permit and this information shall be included in the RFP. The NEPA process is typically completed by DDOT before the Design-Build contract is awarded.

The Design-Builder will be responsible for complying with the terms of any permits and approvals acquired by DDOT and for acquiring any additional permits or approvals necessary to complete the project. DDOT will provide support as necessary for obtaining permits.

If the Design-Builder modifies the conceptual plans developed by DDOT it will be the Design-Builder's sole responsibility to obtain, at their expense, approved permit modifications. The contractor shall bear sole responsibility for any and all schedule risk associated with obtaining a permit modification, with the exception of a DDOT directed change.

#### **4.2.17. Hazardous Waste and Materials/Contaminated Soils**

DDOT should complete the Environmental Site Assessment before advertisement of the Design-Build contract. Remedial action, when necessary, may be completed under separate contract or as part of the Design-Build contract. In either case the ESA shall be provided to the Design-Builder. DDOT will typically retain responsibility for hazardous waste discovered after award of the Design-Build contract; however this decision should be made on a project specific basis based on the project risk assessment. The generator for pre-existing conditions should be specified.

#### **4.2.18. Noise Analysis**

The initial noise analysis is conducted as part of the NEPA process by DDOT and should be provided to the Design-Builder as reference data. After award of the Design-Build contract, the Design-Builder is required to complete noise analysis in accordance with DDOT requirements for the Design-Builder's final design. Any resulting noise walls or other noise abatement solutions will be the responsibility of the Design-Builder.

#### **4.2.19. Third Party Requirements**

DDOT should endeavor to coordinate with, determine and document via written agreements the requirements of all third parties before advertising the Design-Build project. The Design-Builder shall be responsible for carrying out the commitments made in the third party agreements. The agreements will clearly state the responsibilities of DDOT, the 3<sup>rd</sup> Party, and the Design-Builder with the goal of eliminating time and scope risk from the project. Coordination that is expected to continue through the Design-Build phase should be clearly spelled out. Limitations placed on the timing and scope of such coordination shall be included such that a Design-Builder can reasonably bid the work.

#### **4.2.20. Community Involvement**

DDOT typically retains responsibility for and leadership of the required community involvement program throughout the life of the project. The RFP should specify which tasks DDOT is delegating to the Design-Builder and the level of support that is expected from the Design-Builder.

In all cases DDOT shall act as the official spokesperson for the project for purposes of any media contact.



## 5.0 Design-Build Procurement Process

### 5.1. Elements of Design-Build Procurement

#### 5.1.1. Request for Information (RFI)

A request for information is not a formal part of the procurement process and is seldom used except on large, unique or very specialized projects when information necessary for planning purposes cannot be obtained from more economical and less formal means. The information obtained from potential future offerors via an RFI should be used to aid DDOT in developing the project and/or procurement method. A typical RFI should contain the following elements:

- A. A description of the information to be furnished in the response.
- B. An indication of whether the notice will be followed by a conference and a formal solicitation.
- C. A request that parties interested in the contemplated procurement respond by a specified date.
- D. Limitations on the types of firms requested to respond.
- E. Sufficient description of the potential project to allow more targeted responses to the RFI questions.
- F. Directions on the format for submittals.
- G. Procedures for asking clarifying questions during the RFI period.
- H. Limitations regarding conflicts of interest.
- I. Disclosures regarding future use of the responses and confidentiality.
- J. Any other information deemed beneficial to the District.

Potential offerors are not required to respond to an RFI.

#### 5.1.2. Pre-Solicitation Notices and Conference

An industry forum or conference may be held before the solicitation is released, and is intended to generate interest and inform the construction community about the project. The industry forum is not part of the procurement process, typically takes place at least 45 days before the RFQ or RFP is issued and is conducted similar to a public meeting. The Pre-Solicitation Notice and Conference may or may not be associated with an RFI process.

DDOT may use presolicitation notices and conferences as preliminary steps in a Design-Build procurement in order to accomplish the following:

- A. Develop or identify interested participants.
- B. Request preliminary information based on a general description of the goods or services involved.
- C. Obtain comments on a draft request for proposals.
- D. Explain complicated specifications and requirements to interested sources.
- E. Aid prospective offerors in later submitting proposals without undue expenditure of effort, time and money.

Presolicitation conferences are less formal than the pre-proposal conferences, but generally follow the same requirements of furnishing identical information to all participants and keeping a record of the meeting.

### 5.1.3. One Step vs. Two Step Procurement Process

#### 5.1.3.1. One Step Process (Request for Proposal (RFP) Only)

DDOT may elect to use a one step process that consists of an RFP only. A one step process is most commonly used for low bid procurement of small, uncomplicated projects with a high level of plan definition. The low bid procurement allows an unlimited numbers of bidders, which can generate a high level of competition. However, there is minimal ability to filter out unqualified engineers and/or contractors.

The one step process does not lend itself well to best value procurements because DDOT has no ability to limit the number of proposals that must be evaluated. Design builders are also less likely to participate in a one step best value because the level of time and effort required to respond is substantial and the likelihood of success is low due to the high number of bidders.

The one step process typically requires at least an 8 weeks for the preparation of proposals by the Design-Build teams.

#### 5.1.3.2. Two Step Process (Request for Qualifications (RFQ) and RFP)

A request for qualifications may be issued before the RFP when DDOT determines that the RFQ process will be advantageous to the District. This process will allow the District to determine which Design-Build teams are most qualified to receive the RFP based on financial and professional responsibility criteria established in the RFQ. The RFP is then issued to a minimum of the three most qualified Design-Build teams, often referred to as the shortlist.

The RFQ should attempt to identify firms that have the expertise, ability and entrepreneurship to:

- A. Assemble the labor and capital necessary for the completion of the project.
- B. Manage all components of the project.
- C. Complete the project in a timely manner while serving the District's stated policy objectives.

At a minimum, the RFQ issued by DDOT should provide the following information:

- A. A detailed description of the work.
- B. The intent of the project.
- C. The process, schedule and criteria that the District will use to identify qualified Design-Build teams.
- D. The submission requirements and evaluation criteria that will be used to determine if each prospective Design-Build team is qualified.
- E. The schedule for submission of information.
- F. A statement of how many teams will be shortlisted.
- G. Detailed information on submittal format.
- H. Information regarding stipends for shortlisted teams.

RFQ's shall not request project specific solutions, engineering details or plans.

The typical RFQ process provides 4 to 8 weeks for the Design-Build teams to submit the Statement of Qualifications (SOQ). An additional 4 weeks is typically necessary for DDOT to evaluate the SOQs and determine the shortlist. The shortlist typically results in 3 to 5 shortlisted teams.

DDOT should weigh the appropriate amount of information required to qualify and rank prospective offerors with the size, complexity and risk of the project when determining the submission requirements. DDOT should also consider that the number of potential offerors is unlimited and the review time may be substantial.

Typical Submission requirements include:

- A. Team Structure.
- B. Project Understanding.
- C. Management Approach & Organizational Structure.
- D. Relevant Project Experience (considering D-B, permitting, right of way, etc.).
- E. Manpower and Equipment resources.
- F. DBE and/or CBE plan.
- G. Financial Responsibility Information (Required).

#### H. Professional Responsibility Information (Required).

After shortlisting, DDOT may issue a draft RFP to the shortlisted Design-Build teams for industry review prior to issuing the final RFP. This is considered good industry practice for large or unique projects, and helps DDOT and the shortlisted teams refine the terms of the RFP without having to issue amendments.

Proposing teams typically require a minimum of 12 weeks to prepare the proposal.

#### 5.1.4. Pre-Proposal Conference

DDOT may conduct a pre-proposal conference with all interested parties to brief prospective offerors after the solicitation RFQ and/or RFP has been issued but before SOQ and/or Proposals are submitted. Pre-proposal conferences are considered part of the procurement process.

#### 5.1.5. Alternative Technical Concepts

The RFP may provide for consideration of alternative technical concepts (ATC's) before submission of proposals.

ATCs are concepts that may conflict with the requirements for design and construction of the Project or otherwise require a modification of the Technical Provisions but that may nevertheless be proposed to DDOT confidentially during the procurement process. The process is intended to allow Proposers to incorporate innovation and creativity into the Proposals, in turn allowing DDOT to consider Proposer ATCs in making the selection decision, to avoid delays and potential conflicts in the design associated with deferring of reviews of ATCs to the post-procurement period, and, ultimately, to obtain the best value for the public.

ATCs eligible for consideration should be limited to deviations from the requirements of the RFP that result in performance and quality of the end product that is equal to or better than the performance and quality of the end product absent the deviation, as determined by DDOT. A concept is not eligible for consideration as an ATC if it is premised upon or would require the following:

- A reduction in Project scope, performance or reliability.
- The addition of a separate DDOT Project to the RFP such as expansion of the scope of the Project to include additional roadways.
- An increase in the amount of time required for Substantial Completion of the Work under the RFP.
- Any other restrictions that DDOT deems necessary for a particular project.

ATCs that, if implemented, would require further environmental evaluation of the Project, may be allowed, provided that the D-B Team will bear the schedule and cost risk associated with such additional environmental evaluation. D-B Team must recognize that any such environmental evaluation cannot take place until after award, and will require coordination with DDOT. If the D-B Team is not able to obtain the approvals necessary to implement the ATC, the D-B Team will be obligated to develop the Project in accordance with existing approvals without additional cost or extension of time.

Any ATC that has been pre-approved during the Proposal preparation phase may be included in the Proposal.

The use of ATC's with one-step procurements is not advisable due to the potentially large number of proposers submitting ATC's and the burden of timely, confidential reviews by DDOT.

To allow the use of the ATC's, the RFP must specifically state the requirements and process that will be followed. Otherwise ATC's may not be considered. ATC or stipend agreements should be used to mitigate ownership issues related to the ATC's presented by unsuccessful proposers.

#### **5.1.6. Proprietary / Confidential Meetings**

DDOT may elect to include confidential meetings with proposers prior to submission of proposals.

#### **5.1.7. Amendments to the RFQ and/or RFP**

After issuance of a solicitation, but before receipt of proposals, the contracting officer may make changes in the solicitation. At the time of amendment DDOT shall determine if the closing date and time needs to be changed to allow potential proposers time to consider the amendment.

If proposals have been received but not yet evaluated, DDOT may issue amendments to only the responding offerors; however this practice is not recommended.

Regardless of the state of procurement, if DDOT finds that the desired amendment is so substantial that it warrants complete revision of a solicitation, the solicitation shall be canceled and a new solicitation issued.

#### **5.1.8. Low-Bid vs. Best Value Selection**

##### **5.1.8.1. Low-Bid Selection**

Low bid Design-Build is conducted using Title 27, Competitive Sealed Proposals regulations. Low bid Design-Build is conducted as a competitive sealed proposal using price as the single evaluation factor

and is awarded to the lowest priced offeror that meets the district's minimum requirements stated in the solicitation. Low Bid can be used within both the one step and two step process.

While the use of low bid for Design-Build projects is allowable under DCMR regulations, it is not considered a best practice. Its use should be limited to small, uncomplicated projects with little opportunity for innovation.

#### 5.1.8.2. Best Value

Procurement using best value awards the Design-Build contact to the team with the best combination of price and other factors. While price may be an important or even overriding factor, DDOT may select the offeror whose proposal is more advantageous to the District in terms of technical merit and other factors.

Best value may be used within both the one step and two step process. However, use in a one step process is not advisable due to there being no limit to the number of proposals received and the significant effort required to evaluate the proposals.

When using best value, best practice is to limit the number of potential offerors to between 3 and 5. Given the substantial cost of preparing and reviewing the proposals, shortlisting too many firms may be counterproductive and result in some shortlisted firms deciding not to participate.

The best value process can also be used for a stipulated sum type of procurement, where the scope of work provided for a fixed fee is evaluated.

## 6.0 RFP Development

The Request for Proposals is used to communicate the District's requirements to Design-Build teams (Offerors), and shall contain all information required for the offerors to prepare proposals properly.

The DDOT Project Manager will be responsible for leading the development of the RFP. While many elements of the RFP will be standard, each project must be considered individually and the RFP customized accordingly. This section covers RFP components that typically must be considered individually for each project.

### 6.1. Conflict of Interest Statement

The DDOT Project Manager must develop a list of firms that are disqualified from participation in the Design-Build procurement due to participation in the development of the project. DDOT shall provide in the RFQ and RFP a list of the known conflicted firms.

In general, the following shall disqualify a firm from participating in a Design-Build procurement:

- A. Providing assistance in the development of the RFQ, RFP and/or evaluation plan.
- B. Performing work under a present or former contract to prepare planning, environmental, engineering or technical work product when such work product is not made available to all potential offerors in a timely manner prior to the procurement process.
- C. Any other firm that, in DDOT's sole discretion, has a conflict of interest or a real or perceived competitive advantage that cannot be mitigated.

In general, participation in a report or study that is subsequently used in the preparation of design requirements for a project shall not disqualify a firm from participating as a member of an offeror unless participation would provide the firm with a substantial competitive advantage.

DDOT, in its sole discretion, will make a determination regarding the potential conflict of interest and any ability to mitigate, such a conflict. If a conflict of interest exists and cannot be mitigated then the organization with the conflict shall not be allowed to participate as a Design-Build team member for the project.

Failure of an organization to abide by the above requirements shall result in the Statement of Qualifications or proposal being declared non-responsive.

## 6.2. Determination of Stipend ✓ Best Practice

DDOT may elect to pay a stipend on Design-Build projects to compensate the unsuccessful offerors for a portion of their proposal development costs, the use of information contained in their proposals, and to encourage competition.

The DDOT project manager shall make a recommendation to the Chief Engineer regarding the payment and amount of stipend. The following factors shall be considered:

- Amount of time and work effort required to propose on the project
- Size and difficulty of the project
- Potential for innovation
- Budget availability

As a practical matter, the payment of stipends should only be used on two step procurements where the number of offerors is limited. If used with a one step procurement, DDOT would be responsible for payment of an unknown number of stipends.

Payment of the stipend should stipulate that DDOT retains ownership of proposals and ATC's contained therein.

## 6.3. RFP Schedule

By regulation, A Request for Proposals (RFP) shall be advertised for at least twenty-one (21) days before the date set for the receipt of proposals, unless the Chief Engineer, upon recommendation from the Project manager, determines that it is appropriate to shorten the procurement schedule to not less than fourteen (14) days. However, these time periods are too short for all but the most extreme circumstances. Typically, the Chief Engineer shall consider the following factors in determining the length of the procurement schedule:

- A. The complexity of the procurement.
- B. Subcontracting requirements.
- C. The degree of urgency.
- D. The impact of a shortened notice period on competition.
- E. Any other relevant factors.

For most Design-Build projects, a timeframe of at least 8 to 12 weeks is reasonable between release of the RFP and submission of proposals. This amount of time is required for the Design-Build team to



perform sufficient preliminary design and to prepare bids. Large, complex and best value projects often require significantly more time to prepare bids; 12 to 16 weeks or more is not uncommon.

The inclusion of ATC's, and/or the issuance of numerous amendments may lengthen the period of time required for proposers to prepare their bids and should be considered in the schedule.

The schedule provided in the RFP should also provide the time period during which questions will accepted and responses posted.

#### **6.4. RFP Evaluation Factors**

The DDOT Project Manager in consultation with the project team shall recommend the evaluation factors to the Chief Engineer for approval. These factors are not generic and should be carefully tailored to each procurement such that only factors that will have an impact on selection are included. Sub factors may be used when prudent. Typical factors in procurement include:

- A. Price (required for all proposals).
- B. Understanding of the Work.
- C. Ability to perform the Work.
- D. Qualifications of Key Personnel
- E. Schedule to complete work
- F. Demonstrated Ability and Commitment to meet MBE and Training goals

Each factor and sub factor shall be stated in the RFP; shall include a numerical weight that will be used in the evaluation of proposals; and the factors shall be stated in descending order of importance. Pass/Fail factors may also be used to evaluate bonding, insurance, and other procedural matters.

For best value procurements DDOT must consider price as an evaluation factor but DDOT may select the Offeror whose proposal is more advantageous to DDOT in terms of technical merit and other factors.

#### **6.5. Order of Precedence within the RFP**

All parts of the Contract Documents are intended to be complementary and requirements occurring in one part of the contract are being as though occurring in all. In the event of a conflict among the Contract Documents, the order of precedence must be spelled out in the contract. The order of precedence for DDOT Design-Build contract documents is typically:

- Design-Build Agreement
- Technical Provisions

- Reference Documents. Some of the documents included in the Reference Information Documents (RIDs) are for information only and are not Contract Documents to be relied upon by the D-B Team. Other documents are part of the Contract and may be relied upon. A table must be provided indicating those RIDs that are provided for information only and those RIDs that are part of the Contract. Cross-references in the Contract Documents to the RIDs do not necessarily incorporate the RIDs or portions thereof as Contract Documents or requirements.
- The Proposal. To the extent that the Proposal meets or exceeds the requirements of the other Contract Documents, including the approved Alternative Technical Concepts (ATCs). In other words, if the Proposal includes statements that can reasonably be interpreted as offers to provide higher-quality items than otherwise required by the Contract Documents, or to perform services in addition to those otherwise required or otherwise contain terms that are more advantageous to the District than the requirements of the other Contract Documents, the D-B Team's is obligated to comply with all such statements, offers, and terms.

In addition to these major categories, the performance specification will often reference standard documents that apply to the subject specification. Explicit statements in the performance specifications take precedence over the standard documents. For example, the AASHTO Green Book often contains recommended and minimum values for items like lane widths. The performance specification can specify that recommended values must be used.

In the event of conflicting requirements involving any requirement within a Book or a reference contained within a Book of the Contract Documents, the District has the right to, determine, in its sole discretion, which requirement(s) apply. The D-B Team must request the District's determination respecting the order of precedence among conflicting provisions promptly upon becoming aware of any such conflict. Careful coordination between disciplines and the respective performance specifications is critical to eliminating potential conflicts within the specifications.

## 6.6. Development of Specifications for the RFP

Design build contracts often contain both performance and prescriptive specifications, defined as follows:

- Performance Specification: A specification expressed in terms of an expected outcome.

- **Prescriptive Specifications:** The traditional method of specifying materials or techniques found in Design-Bid-Build documents. The range of acceptable products, manufacturers, and techniques, to be adhered to by the builder is stipulated in detail.

When using Design-Build, the project manager should use performance specifications whenever possible. However the project manager must be aware that specific means and methods or products cannot be contractually enforced with a performance specification – any solution that meets the performance requirement must be accepted by DDOT or a change order will result. If a very specific result is desired, the project manager is advised to use a prescriptive specification.

The Project Manager must carefully consider how the DDOT Standards Specifications for Highways and Structures are included in the project. In order to achieve maximum benefit from the Design-Build process, the means and methods for construction should be determined by the Design-Build team. However, the DDOT Standard Specifications for Highways and Structures often dictates means and methods that have been proven successful by DDOT. The DDOT Project Manager must evaluate the project and determine the course of action that is in the best interest of DDOT. In many cases, this will be a combination of requiring certain sections of the DDOT Standard Specifications for Highways and Structures to be used while allowing the Design-Build team flexibility on the remaining items of work.

Specifications are often subject to interpretation, are for this reason should be written in a consistent and directive manner. Common guidelines for development of technical provisions include the following:

- The Design-Builder “shall” do X,Y and Z. Do not use “must”, “should”, “will”, “consider” or similar terms.
- DDOT “will” do A,B and C. Do not use “shall”. In general specifications should seek to limit the responsibilities explicitly placed on DDOT.
- The singular includes the plural and vice versa.
- References to statutes or regulations include all statutory or regulatory provisions consolidating, amending, or replacing the statute or regulation referred to as of a date established by the RFP.
- Words such as “herein”, “hereof” and “hereunder” refer to the entire document in which they are contained and not to any particular provision or section. However rather than use these terms, the preference is to refer to the “Contract Documents”, which covers all elements of the contract.

- Words not otherwise defined that have well-known technical or construction industry meanings are used in accordance with such recognized meanings. It is not necessary to define industry standard terms.
- References to Persons include their respective permitted successors and assigns and, in the case of Governmental Persons, Persons succeeding to their respective functions and capacities.
- Words which are capitalized are an indication of their significance. Capitalized terms should generally be defined in the definitions for widely used terms, or in the case of less widely used terms within the text of the document.
- Words of any gender used herein include each other gender where appropriate.

The use of cross references within the text of the specifications should be minimized. There are two practical reasons for this:

- The difficulty of tracking and keeping current myriad cross references within long and complicated technical provisions.
- When a singular cross reference is made, the D-B may believe that he must only comply with the singular cross reference, when in fact the entirety of the contract remains in force. This often leads to claim situations.

The D-B has the obligation to review, understand and apply the entire contract document.

## 6.7. Codes, Standards and Criteria

Wherever possible, the RFP should reference codes, standards and criteria rather than restating their requirements within the RFP. References to codes, standards and criteria are to the latest version as of the Proposal Date unless the Contract specifies otherwise. Therefore dates should not be included in the listings unless the intention is to require a code or standard other than the latest.

## 6.8. Plan Requirements for the RFP

Design build contracts often contain two types of plans:

- Contractual. These plans depict the exact required work and the Design-Builder must incorporate the design shown into their final design and construction plans.
- Reference. These plans depict the conceptual intent of the contract, but are not directive in the exact nature or scope of the work.

For most projects DDOT will have developed functional plans depicting the desired improvements and generating the necessary information used to establish the project budget. These plans are typically sufficient to convey the intent of the contract, and should be provided as reference plans.

Contractual plans should be avoided in most cases. However in specific cases it is desirable to provide plans that must be used. Examples typically include required architectural details, right of way limits and required alignments. Careful consideration should be given to including contractual plans, as they effectively eliminate the design aspect of the project. In addition, contractual plans must be carefully quality checked as the information contained on them is subject to claim.

Plans are typically provided electronically as PDF files. When appropriate, the DDOT may elect to provide Roll Plans in electronic format in lieu of traditional plan sheets.

Typical plan content for the RFP will include:

- General Drawings
  - Title Sheet
- Street/Roadway Drawings
  - General Roadway and Bridge Plan
  - Proposed Roadway Typical Sections
  - Roadway Profiles – Centerline
- Bridge Drawings
  - Bridge Plan and Elevation
  - Bridge Deck and Approach Slabs Plan
  - Existing and Proposed Bridge Typical Sections

Plans should be clearly identified as reference or contractual. This is typically accomplished by providing them in separate volumes of the RFP.

## 6.9. Price Requirements

Price for Design-Build is typically submitted as a lump sum. Price submittals should be physically separated from technical submittals. DDOT may require summary line items for logical units of work (for example, bridges, paving, culverts, etc.) sufficient to allow DDOT to evaluate price for reasonableness and for defining payments or reimbursements to third parties.

Use of Design-Bid-Build style line items is not appropriate for Design-Build because the design is not complete at the time of price proposal.

The Design-BUILDER may be required to submit a preliminary cost and resource loaded CPM schedule . The price proposal will include a monthly payment schedule showing the Design-BUILDER's anticipated monthly draw request value.

## 6.10. Schedule Requirements

At a minimum the RFP shall require the contractor to provide milestone dates and final completion dates. Typically, the contractor shall be required to provide a cost loaded summary CPM schedule. DDOT may choose to provide a minimum or maximum number of schedule items in order to better describe the level of scheduling detail required.

The initial and final CPM schedules provided after award by the selected Design-Build team should not differ materially from that submitted as part of the RFP in either time or cost assignment.

## 6.11. Alternative Technical Concept Process

If Alternative Technical Concepts (ATC) are to be allowed, a process must be specified. The process will typically include the elements discussed below.

Proposers may submit ATC's until a date specified by DDOT in the RFP. This date should be at least 4 weeks in advance of the Proposal date to allow time for DDOT to respond and for the proposer to incorporate the work into the proposal. All ATC's must be in writing and clearly designated as ATC's. ATC's should be delivered to the contracting officer using the method and format specified in the RFP.

The RFP should specify the ATC submittal format. The following items are typically required:

- Cover Page clearly identifying the Proposer and the unique ATC number.
- A description and conceptual drawings of the ATC, including operational analysis if applicable.
- The locations where, and an explanation of how, the ATC will be used on the Project.
- Any changes in operations requirements, including ease of operations.
- Any changes in routine maintenance requirements, including ease of maintenance.
- Any changes in the anticipated life of the elements comprising the ATC.
- Reduction in time for design and construction due to ATC.
- Specific reference to Contract Document elements that require revision to allow the ATC and proposed revisions.
- Analysis justifying the use of the ATC and why the deviation from the requirements of the RFP should be allowed.
- A preliminary analysis and quantitative discussion of the potential impacts on traffic, permitting, community, safety, and life cycle cost.

- Any necessary revisions to Right of Way.
- A description of other projects where the ATC has been used.
- A description of added risks to the Proposer, DDOT and third parties.
- An estimate of cost savings or increases to the Proposer, DDOT or third parties.
- An analysis of how the ATC is equal to or better in quality and performance than that specified by the Contract Documents.

DDOT should include a timeframe for review of ATC's in the RFP. The contracting officer will typically rely on review and advice from the Project Manager and other technical leads in determining if the ATC is acceptable to DDOT. DDOT responses are limited to the following:

- The ATC is acceptable for inclusion in the Proposal.
- The ATC is not acceptable for inclusion in the Proposal.
- The ATC is not acceptable in its present form, but may be acceptable upon the satisfaction, in DDOT's sole discretion, of certain identified conditions.
- The submittal does not qualify as an ATC but may be included in the Proposal because it appears to be within the requirements of the RFP.
- The submittal does not qualify as an ATC and may not be included in the Proposal.

ATC that were incorporated by the successful Proposer shall be included in the Contract Documents, as applicable. If DDOT responded to any ATC by stating that it would be acceptable if certain conditions were met, those conditions will become part of the Contract Documents, as applicable. The Contract Documents must be conformed after conditional award, but prior to execution of the Contract, to reflect the ATCs, including any required conditions.

If the Proposer does not comply with one or more DDOT conditions of pre-approval for an ATC or fails to obtain a required third-party approval for an ATC, the Proposer will be required to comply with the original requirements of the RFP without additional cost or extension of time.

All communications regarding ATC's shall remain confidential until after selection of a Proposer. ATCs from unsuccessful Proposers may be presented by DDOT to the selected Design-BUILDER for possible incorporation in the Contract.

## 7.0 RFP Evaluation

Upon its receipt, each proposal shall be time and date stamped but not opened. The proposals shall be stored in a secure location and released by the contracting officer only to those individuals with immediate needs and within a controlled physical environment. Hard copy or electronic reproduction of proposals by evaluators is not allowed. Review materials, notes and findings developed by the evaluators shall be similarly controlled.

The information contained in the proposals, number or identity of the offerors shall not be made public or provided to anyone not required to have access to the information in the performance of job duties.

Only the contracting officer may transmit technical or other information, conduct discussions, clarifications, or engage in any form of contact with potential or actual offerors. District employees and representatives shall refrain from discussing the procurement status or project information with anyone outside the project team for the duration of the procurement process.

Before releasing the Proposals to the evaluation panel, the contracting officer shall conduct a compliance review of the Proposals received. Any Proposal found to be noncompliant shall not be considered by the evaluation panel.

The technical evaluation is typically performed by a panel of technical experts which may include non-District employees subject to the same restrictions placed on District employees.

The technical evaluation prepared by the evaluation group shall contain the following elements:

- A. The basis for the evaluation, which must be in accordance with the solicitation requirements.
- B. An analysis of the technically acceptable and technically unacceptable proposals, including an assessment of each offerors ability to accomplish the technical requirements. This analysis focuses on the technical aspects of the proposal; the contracting officer conducts a compliance review before evaluations begin.
- C. A summary, matrix or quantitative ranking of the technical portion of each proposal in relation to the best rating possible in accordance with the weightings given in the solicitation.
- D. A summary of findings.

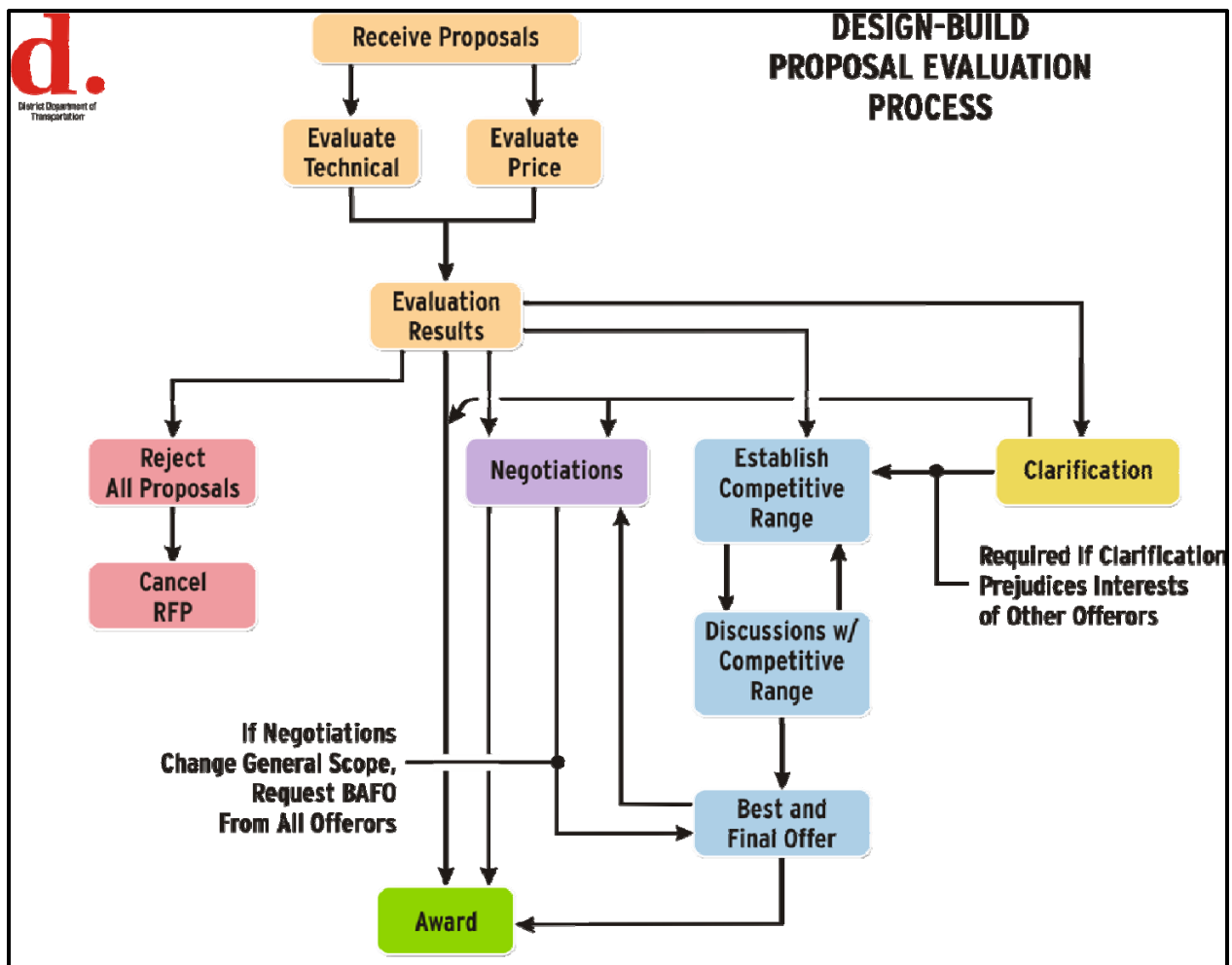
The technical factors shall be evaluated with no knowledge of the costs. This shall be accomplished by assigning a separate team to evaluate cost proposals, or by requiring the evaluation team to finalize the



technical rankings before evaluating costs. Proposers may be required to bind and submit technical and cost proposals separately.

The proposal evaluation process is dictated by DCMR, Chapter 16, Title 27. The information and processes contained in the following sections is derived from these requirements, supplemented by industry recognized best practices as allowed by DCMR. All procurements should be guided by and any conflicts or ambiguities resolved by referring to DCMR.

The following flow chart outlines the major processes and choices in a competitive sealed proposals evaluation process.



### 7.1. Clarifications

Clarifications, or disclosure of mistakes before award, allow the contacting officer to examine all proposals before award for minor informalities or irregularities and apparent clerical mistakes. Limited

communication with offerors is allowed to clarify or resolve the ambiguities, apparent minor mistakes or irregularities. No discussions are permitted.

## 7.2. Rejection of all Proposals

If in the best interest of the District, the contracting officer may prepare a written determination to reject all proposals. The reasons given for rejection may include, but are not limited to, the following:

- A. All otherwise acceptable proposals received are at unreasonable prices.
- B. The proposals were not independently arrived at in open competition.
- C. The proposals were collusive.
- D. The proposals were submitted in bad faith.

## 7.3. Negotiations

The contracting officer may elect to conduct negotiations with the highest ranked offeror after evaluations, clarifications, or Best and Final Offer. Negotiations may address price and/or technical factors within the scope of the RFP.

Negotiations shall begin with the highest ranked offeror. If a satisfactory contract cannot be negotiated, negotiations with the highest ranked offeror shall be terminated and the contracting officer may initiate negotiations with the lower ranked offerors in order of ranking until a satisfactory contract can be awarded. If a contract cannot be negotiated with any offeror, the contracting officer may reopen negotiations with any offeror with whom negotiations were previously terminated.

## 7.4. Discussions

Discussions are not necessary if prices are fixed by law or regulation, or if it can be clearly demonstrated that acceptance of the most advantageous initial proposal without discussions would result in a fair and reasonable price.

If the contracting officer determines that discussions are desirable, the competitive range must first be established and then discussions must be had with all offerors within the competitive range. Discussions may be oral or written.

## 7.5. Determination of the Competitive Range

After receipt and evaluation of proposals, the Competitive Range shall be determined by the contracting officer solely on the basis of the evaluation factors as described in the solicitation, including both technical and price. Offerors must be notified in the solicitation of the possibility that the competitive

range will be limited to permit an efficient competition among the most highly rated proposals. The competitive range may also include all compliant proposals received when appropriate.

## **7.6. Best and Final Offer (BAFO)**

Best and final offers allows the offerors to revise technical and price proposals based on the information gained during discussions upon request from the contracting officer.

The contracting officer shall evaluate the BAFO in accordance with the same procedures used to evaluate the original proposals. After evaluation of the BAFO proposals, the contracting officer may move directly to award or may initiate negotiations with the top ranked offeror.

## **7.7. Substantiating Offered Prices**

The contracting officer may request factual information reasonably available to the offeror to substantiate that the offerors price, or some portion of it, is reasonable if:

- A. The price is not:
  - a. Based on adequate price competition.
  - b. Based on an established catalog or market price.
  - c. Set by law or regulation.
- B. The price or cost exceeds an amount established by law or regulation.

The offeror shall be required to submit the requested factual information at the time and in the manner specified by the contracting officer. If the offeror refuses or fails to supply the requested information, the contracting officer may disqualify the offeror or delay award pending further analysis. The contracting officer shall select whatever price or cost analysis techniques necessary to ensure a fair and reasonable price.

## **7.8. Selection / Award**

The contracting officer shall consider which offeror can perform the contract in a manner most advantageous to the District as determined by evaluation of the proposals (including discussions, best and final offer, and/or negotiations as appropriate) according to the criteria established in the RFP. The contracting officer shall prepare supporting documentation for the selection that shows the relative differences among the proposals and their strengths, weaknesses, and risks in terms of the evaluation factors. The supporting documentation shall include the basis for the selection.

The contracting officer shall provide written notification of award with reasonable promptness to the selected offeror. Promptly after award, the contracting officer shall notify unsuccessful offerors in writing.

## 7.9. Debriefing

For contracts awarded on a basis other than price alone, the contracting officer shall provide debriefings to offerors submitting a written request, unless the Director determines that to do so is not in the best interest of the District.

When held, debriefings shall include, at a minimum, the following information:

- A. The District's evaluation of the significant weak or deficient factors in the unsuccessful offeror's proposal.
- B. The overall evaluated cost or price (including unit prices), the numeric technical rating, if applicable, of the successful offeror and the debriefed offeror, and past performance information on the debriefed offeror.
- C. The overall numeric ranking of all offerors, if any ranking was developed by the District during the evaluation.
- D. A summary of the rationale for award.
- E. Reasonable responses to relevant questions about whether source selection procedures contained in the solicitation, applicable regulations and other applicable authorities were followed.

Debriefings shall not:

- A. Include point by point comparisons of the debriefed offeror's proposal with those of other offerors.
- B. Reveal any information prohibited by disclosure by subsection 417 of the PPRA of 2010 or exempt from release under District of Columbia Freedom of Information Act, including but not limited to:
  - a. Information which has been designated as confidential and proprietary by an offeror.
  - b. Trade secrets or commercial or financial information where disclosure would impair the competitive position of an offeror, including cost breakdowns, profit, indirect cost rates, and similar information.

- c. Inter-Agency or Intra-Agency memoranda or letters which would not be available by law to a party other than an agency in litigation with the agency, including the names and written comments of the members of the evaluation panel.
- d. Information of a personal nature where the public disclosure thereof would constitute a clearly unwarranted invasion of personal privacy, including offerors' employee names, resumes, contact information, the names of offerors' partners and the names of individuals providing reference information about an offerors' past performance.
- e. Federal Tax identification numbers or other information specifically exempted from disclosure by statute.

## 8.0 Administration of Design-Build Projects

### 8.1. Roles and Responsibilities

The Design-Build team has the primary responsibility for controlling and managing the work, including design and construction. The Design-Build team is responsible for providing the design plans, specifications, working plans, shop drawings and any investigations, engineering or other efforts necessary to complete the required work.

DDOT's role on the project is to ensure that the project is designed and constructed in accordance with the contract requirements. The Design-Build team shall be responsible for design and construction quality control and quality assurance. DDOT shall provide Independent Assurance/Verification.

FHWA remains involved on non-exempt (Full Oversight) projects in accordance with FHWA's defined procedures for Design-Build projects. DDOT is the liaison between the project and FHWA.

DDOT should establish procedures for the Design-Builder to transmit all work packages, submittals, or other communications to the DDOT Construction Manager. The DDOT Construction Manager or designee shall be responsible for logging in the transmittal and determining the parties responsible for review, action required, and the required response timeframe.

The DDOT Construction Manager or designee should establish a matrix of review responsibilities, including third parties, for both the Design and Construction phases of the Design-Build project. Reviewers should be selected based on project knowledge, expertise, experience, and capacity to perform the reviews within the required timeframe. Reviewers do not need to be registered professional engineers as the Design-Builder retains Engineer of Record status for all plans and submittals.

The DDOT Construction Manager or designee should track the review process, actions required, and return the responses to the Design-Builder within the contractually allowed timeframes.

### 8.2. Design

#### 8.2.1. QA/QC

Before design work on the contract may begin, the Design-Builder must prepare and submit a Design Quality Management Plan (DQMP) for approval by DDOT. At a minimum, the DQMP must address all of

the requirements of the DDOT Design and Engineering Manual. The Design-Builder shall be responsible for design QC and QA. The DQMP must be approved before submission of any plans to DDOT for review.

DDOT shall audit the design quality process. Any review or audits conducted by DDOT do not relieve the Design-Builder of responsibility for design quality.

### **8.2.2. Work Package Reviews**

DDOT is required to review the Design-Build team plans or work packages to ensure conformance with the contract requirements. These reviews should consist of both informal ‘over the shoulder’ reviews and formal submittals. The RFP must specify the minimum number of formal submittals required for each work package. Work packages shall include relevant calculations. Depending on the level of design flexibility provided and extent of RFP plans developed, a minimum of two or three formal submittals (preliminary, semi-final and final) are required. Additional reviews may be required by permitting agencies or other third parties. After all required reviews are complete and DDOT has verified that all non-conformances have been addressed, the Design-Builder will issue Release for Construction (RFC) drawings.

The Design-Builder may request additional reviews particularly for elements that were not well developed as part of the RFP package. DDOT will determine if the reviews are in the best interest of the when determining whether to grant the request. DDOT will not be entitled to any compensation for performing additional reviews.

The Design-Builder should be required to maintain and provide to DDOT a regularly updated schedule of design packages and formal submittals. DDOT will use the schedule to ensure that sufficient resources are available to review work packages in a timely manner.

The Design-Builder shall provide 10 working days, or the number of days required in the RFP, advance written notice to DDOT of all formal submittals. Formal submittals will be take the form of electronic or hard copies in the number and format specified by the RFP submitted by the Design-Builder to DDOT, and shall be accompanied by supporting documentation and/or calculations as necessary to review the work package. The RFP should specify that all formal submittals shall contain certification signed by the Design Quality Manager that the DQMP has been followed. Submittals received without this certification will be returned by DDOT without review.

Unless stated otherwise in the specifications, DDOT will take no more than 15 working days, or the number of days stated in the RFP, to review the work package. Varying time periods may be specified for different types of work or review by the various DDOT offices. The review period shall begin the work

day after the package is received from the Design-Builder. Work packages received after 12 noon eastern standard time or on non-work days shall be considered received on the next working day.

The DDOT Project Manager must carefully manage the review and ensure sufficient resources are available to perform the reviews. Reviews that are not completed by DDOT on time may constitute a delay to the Design-Build team.

For larger, complicated projects DDOT may elect to use an electronic means (such as Dr. Checks) of tracking and compiling comments. On smaller projects, it may be most efficient to use standard forms or spreadsheets.

### **8.2.3. Acceptance Criteria**

DDOT's work package review shall consist of spot checks of critical components, random checks, and a general review of conformance with the contract requirements. The Design-Builder remains responsible for the quality of the design. The goal of a work package review is not to produce a list of comments; rather the goal is to note the specific contract requirements checked and identify their status as:

Conformance (C) – the item checked meets the contract requirements.

Nonconformance (NC) – the item checked does not meet the contract requirement. Specific guidance should be provided on why the requirement has not been met.

In all cases the specific contract requirement that was checked must be referenced. This allows all parties to quickly review and resolve comments and ensures that all findings have a contractual basis.

If DDOT reviewers identify the need for revisions to the contract requirements, the desired revisions may not be considered during the work package review. Instead, the need for a revision must be presented to the DDOT Project Manager, who will determine if a change order will be issued.

DDOT shall provide the work package review results to the Design-Builder no later than 5pm on the last day of the review period. *Failure to provide review results by the end of the review may constitute a delay to the Design-Builder.*

All items identified as a nonconformance must be resolved to the satisfaction of DDOT before the next submittal and before the Design-Builder releases the plans for construction. DDOT reserves the right to require the Design-Builder to take corrective actions regarding the root cause of nonconformances.



In all cases where approvals, acceptances, or consents are required to be provided by DDOT such approvals, acceptances, or consents cannot be withheld unreasonably. In cases where sole discretion is specified, the decision is not subject to dispute resolution.

### **8.3. Construction**

Each of the sections below is intended to aid in the interpretation or supplement the DDOT Construction Management Manual (CMM) when used on Design-Build projects. Where conflicts exist, this document shall take precedence.

#### **8.3.1. Bid Procedures**

DDOT's construction staff must be more involved in the bid process for a Design-Build project relative to Design-Bid-Build. This is especially true for best value projects, where the construction staff should be involved with establishing evaluation criteria and evaluating proposals.

Construction staff should also be involved in pre-advertisement construction reviews, preliminary price estimates, and final bid document reviews. Because the plans are typically only at functional design level these reviews will have a significant focus on the specifications.

Pre-proposal conferences are held in accordance with the CMM and this manual. The conference should address in detail the procurement process.

#### **8.3.2. Award Procedures**

Procedures for the procurement and award of Design-Build projects shall be in accordance with the CCM and the requirements of the RFP. Design build proposals are not opened publically.

When developing the construction management budget, DDOT must coordinate with and consider the needs of the design review management. Design management for Design-Build projects can require significant and sometimes dedicated resources in order to provide timely review and acceptance of Design-Builder produced plans. Sources of funding and budgets for both construction and design management must be determined.

Contract document execution and pre-construction conferences are conducted in accordance with the CMM or as stipulated in the RFP document. The pre-construction conference addresses both the design and construction phases of the project. DDOT must be cognizant of the fact that some Design-Builders will choose to proceed with design work at risk prior to contract execution, and hence may already be fully engaged in the project prior to the preconstruction meeting. On many projects the design will proceed for some number of months before construction permits are obtained. In this circumstance,

DDOT should consider a second pre-construction meeting once permits are received and construction is ready to begin.

### **8.3.3. Construction Start-Up**

DDOT should carefully consider the organization, management and staffing plans in light of the fact that some responsibilities have been shifted to the contractor. DDOT must also incorporate the needs of the design management staff into the overall plan.

Project files require special consideration on Design-Build projects. The volume of correspondence and plan transmittals increases exponentially with the inclusion of design in the contract. The Design-Build contract typically provides requirements regarding the use of an electronic storage and/or transmittal system to be utilized by the Design-Builder. If systems are shared with the Design-Builder, appropriate firewalls and controls are necessary to protect privileged information.

The RFP shall specify which project wide plans or programs must be submitted by the Design-Builder and approved by DDOT before construction may commence.

### **8.3.4. Communications Control**

Because of the increased interaction between the Design-Builder and design personnel, communications control is a challenge on Design-Build projects. At kick-off meetings and progress meetings, all personnel should be reminded that verbal communications are unofficial and are not considered official direction. Claims or changes based on verbal direction will not be considered valid. Any communication from either DDOT or the Design-Builder that could be construed to modify, request modification, or clarify the contract must be in writing and must be under the signature of a team member authorized by the contract to provide direction. Per DDOT requirements, only the Contracting Officer is authorized to change the contract on behalf of DDOT.

### **8.3.5. Drawing and Specifications Control**

The Design-Builder shall be responsible for all drawing and specification version control. The Design-Builder shall maintain current and conformed released for construction plans and specifications and make them readily accessible at all times for use by DDOT. The Design-Builder shall also be responsible for reproduction and distribution, whether electronic or hard copy, of these plans as required to obtain reviews, approvals, permits, construct and to facilitate inspection of the work. The conformed plans and specification shall include all released for construction drawings, including NDC and FDC revisions.

The Design-Builder shall also be responsible for maintaining a current and conformed set of plans that are still under development but have not been released for construction. These plans shall be provided to DDOT upon request.

All released for construction plans, or modifications thereof, shall be signed and sealed by the DC Registered Professional Engineer responsible for the work shown on the plan. All released for construction plans shall be accompanied by a signed design QA/QC certification as required by the DQMP.

### **Requests for Information (RFI)**

When the Design-Builder requires from DDOT to clarify the contract documents or requires additional information, the Design-Builder shall issue an RFI to the DDOT Construction Manager. The RFI's are logged and processed in accordance with the CCM.

### **Requests for Clarification (RC)**

When the Design-Builder requires information to clarify plans and specifications produced by the Design-Builder that have already been released for construction, the contractor shall issue an RC to the Design-Build team's Design Manager. The DDOT Construction Manager shall be provided with a copy of the request and response when received. The RC's shall be logged in the same manner as RFI's. If the response to the RC requires changes to the plans, an appropriate NDC shall be issued and referenced in the response to the RC. The DDOT Construction Manager shall promptly notify the Design-Build team if the contents of an RC contain elements that do not comply with the requirements of the contract.

### **Notice of Design Change (NDC)**

When the Design-Builder desires to change plans previously released for construction, an NDC shall be issued. This shall take similar form to a redline revision, with changes noted on the plan view and a written narrative of the changes. NDC's shall be logged in the same manner as RFI's. NDC's shall require concurrence by the DDOT Contract Manager before being released for construction. The DDOT Construction Manager shall coordinate with the DDOT Design Manager and they shall have sole discretion to determine the degree of design or other review that is necessary before an NDC may be released for construction by the Design-Builder.

### **Field Design Change (FDC)**

When the Design-Builder desires to make minor field revisions to previously released for construction plans, the Design-Builder shall issue an FDC. The Design-Builder shall note changes on the plan view and provide a written narrative of the changes. The Design-Builder shall coordinate with the DDOT Construction Manager to determine whether a field revision may be made using an FDC or requires an NDC. In case of disagreement, an NDC shall be used. FDC's shall be logged in the same manner as RFI's.

### **As Built Documents**

The Design-Builder is responsible for producing the final as-built set of plans. This set shall be fully conformed, indexed and numbered, and shall include all NDC and FDC revisions. A hand-drawn as-built set will be maintained on the project at all times and will be available for review by DDOT upon request. For the final as-built set of plans all plans shall be in conformance with the required CADD standards; hand markups are not acceptable. Plans shall be provided in native CADD format and PDF format. The final as-built set will serve as the basis for final acceptance of the project, and shall be signed and sealed by a DC Licensed Professional Engineer on the Design-Build team.

### **8.3.6. Schedule Controls**

A concept schedule should be developed by DDOT during development of the Design-Build procurement documents. This schedule is used to set any required milestone dates and the target contract completion date.

The Design-Builder is required to develop a cost and resource loaded Critical Path Method (CPM) project schedule including both the design phase and the construction phase. Definitions based on the Design-Build contract requirements should be included for what constitutes a utility delay (if any) or a statement that 3<sup>rd</sup> party delays are not compensable, who owns the float, early completion, and requirements for time impact analysis.

Design milestones as required by the contract document and as desired by the Design-Builder should be established. The schedule shall include all review time required by DDOT and/or 3<sup>rd</sup> parties as specified in the contract, or if not specified as would normally and customarily be expected.

The Design-Builder should incorporate hold points and approvals required by the RFP in the schedule.

The Design-Build contract should establish what is considered being behind schedule, what actions are necessary on the part of the Design-Builder to address this situation, and what penalties can be incurred for non-compliance.

The construction portion of the Design-Build schedule shall include submittal and approval dates of shop and working drawings and samples, appropriate calendars for weather sensitive activities, and long lead time items where delays could severely impact the schedule.

The CPM schedule activities shall show interdependencies with sequential and parallel activities. The schedule must clearly indicate the completion date and any contractual milestone dates. The DDOT CM shall review the schedule to establish a logical sequence of activities, that the durations for activities are sensible and achievable based on the known or reasonably expected resources available, and that the format meets all contractual requirements. The review is not expected to comment on means, methods, techniques or practices except where such are required or prohibited by contract or where they deviate from good and usual construction practices.

The DDOT CM and field staff should be available to meet with the Contractor and offer technical advice on the development of the Design-Build schedule. The DDOT CM staff's comments should be limited to potential areas of concern with logic that could affect the completion of activities. The Contractor is responsible for the development and submittal of the Design-Build schedule. It is beneficial to all parties if the DDOT CM staff can work with the Contractor, any comments or advice do not relieve the Contractor of his responsibility to comply with the contract requirements.

It is essential that the CPM Design-Build schedule be developed and completed early and that no delay to submittal and acceptance of the schedule be permitted beyond the contractually mandated periods. An initial CPM Design-Build schedule may be submitted within 20 calendar days after Notice to Proceed (NTP) to allow early work activities to commence. A final CPM Design-Build schedule shall be submitted within 60 days of NTP. The Design-Builder is advised that no payment will be made for work completed before the CPM Design-Build schedule is accepted by DDOT. The DDOT CM should give full attention to this matter since the establishment of a sensible, achievable schedule is critical to the installation of the work and the avoidance of delay claims.

On all but the smallest projects, 2-3 week look-ahead schedules should be required by the Design-Build contract.

All Design-Build schedules shall be cost loaded to allow payment.

### **8.3.7. Cost Controls**

Payment for Design-Build contracts shall be made in accordance with the Design-Build CPM cost loaded schedule developed by the Design-Builder and accepted by DDOT. Payment shall be made on completed

work items only after QA has certified and DDOT has determined that the work item was completed in accordance with the project QA/QC procedures.

The Design-Build contract shall specify a minimum and maximum number of work items to be paid. The number of items paid shall be approximate to the scope and scale of the project. Under no circumstance shall the payments made exceed the actual completed value of the work.

### **8.3.8. Contract Modifications**

Contract Modifications must be issued by the contracting officer before the work may be paid. All parties must be cognizant of the fact that design revisions are also subject to contract modifications, and that notice of claims for design changes must be made in the same manner as construction changes.

DDOT shall prioritize the processing of change orders such that delays to the Design-Build contract are minimized.

The Design-Builder may elect, but is not required, to begin or continue work that is subject to a change order, prior to formal approval of a Contract Modification, at **no** risk to DDOT, unless specifically directed otherwise by DDOT. The cost and schedule impacts resulting from the change must be agreed upon prior to the Design-Builder beginning work. These agreements must be documented and attached to the approved Contract Modification once executed.

### **8.3.9. Claims**

DDOT must be cognizant of the fact that many designers and design reviewers may not be accustomed to operating under the requirements of a Design-Build contract. Design reviews and comments should be carefully reviewed to ensure direction contrary to the contract is not included. All parties should be reminded of the contract requirements for timely notification of potential claims.

### **8.3.10. Quality Assurance**

The entirety of Section 8 of the DDOT CCM is the responsibility of the Design-Build team. The Design-Build team shall provide a QA/QC plan which must be approved by DDOT before construction may commence. The CQC plan shall also include QA and shall include resumes and certifications for QA/QC staff which shall be approved by DDOT. Any substitutions during construction shall be approved by DDOT. The QA and QC cannot be performed by the same firm. QA staff shall be from an independent firm that has no involvement in construction operations. QA services may be performed by the same firm as the Design-Builders designer provided the other criteria of this section are met. The level of staffing for the QA/QC program shall be commensurate with the total level of QA/QC staff found on

similar DDOT Design-Bid-Build projects. If DDOT determines that QA/QC is not being performed according to the approved QA/QC Plan, DDOT can direct the Design-Builder to replace the firms that are not performing. This will be at no additional cost to DDOT.

In addition to the requirements of Section 8 of the CCM, the Design-Builder is required to submit a Design Quality Control Plan (DQCP) for review and approval by DDOT before design work may commence. The DQCP must be a complete and clear plan to achieve a high quality design, including all related elements and must include all lower tier subcontractors. The Design-Build team must adhere to the approved DQCP throughout the duration of the project. The DQCP must be available for review and discussion at the first partnering meeting. The Design-Build team must follow the DQCP and receive written authorization from DDOT for modification to the plan. The DQCP is subject to audit by DDOT throughout the duration of the project.

DDOT shall be responsible for providing Quality Assurance Oversight (QAO). This program shall be sufficient to ensure that the Design-Build contractor is complying with all contract requirements including all requirements of the CQC and DQCP plans. DDOT may require revisions to the Design-Builders CQC or DQCP plans based on the finding of the QAO program.

#### **8.3.11. Safety and Loss Control**

Both DDOT and the Design-Builder must recognize that many design personnel unaccustomed to field operations may be present on the job site. Safety training and supervision for these personnel is required. Procedures for design related field visits should be established recognizing that design work will be ongoing as construction begins. Safety procedures shall also emphasize safety of the general public.

#### **8.3.12. Public Relations**

The Design-Build contract shall specify the extent to which the Design-Builder will be responsible for public relations. At a minimum, the Design-Builder will be responsible for providing DDOT with appropriate plans, displays, and project information upon request. DDOT shall retain leadership of and responsibility for the project public relations. All media contacts shall be referred to the DDOT spokesperson.

#### **8.3.13. Completion and Closeout**

Procedures in the DDOT CCM for project completion and closeout remain applicable to Design-Build projects.



### **8.3.14. Utilities**

The Design-Build contractor shall be responsible for providing a utility coordinator during design and construction and performing all activities described in Part 13 of the DDOT CCM. The Design-Builders utility coordinator shall provide regular updates to the DDOT CM. The DDOT CM shall engage DDOT resources as may be necessary to facilitate the required utility coordination.



## 9.0 Definitions

All definitions are from Title 27 of the District of Columbia Municipal Regulations (February 1, 2013) and/or sections 204 and 1106 of the Procurement Practices Reform Act of 2010, effective April 8, 2011 (D.C. Law 18-371; D.C. Official Code §§ 2-352.04 and 2-361.06) (2011 Repl.) (Act). Common industry terminology and usage may differ slightly from the meanings prescribed below.

**Architectural and Engineering Services** - Professional services of an architectural or engineering nature:

(A) Which are required to be performed or approved by a person licensed, registered, or certified to provide the services as described in this paragraph; or

(B) Performed by contract that are associated with research, planning, development, design, construction, alteration, or repair of real property.

Or:

Other professional services of an architectural or engineering nature, or incidental services, which members of the architectural and engineering professions (and individuals in their employ) may logically or justifiably perform, including studies, investigations, surveying, mapping, tests, evaluations, consultations, comprehensive planning, program management, conceptual designs, plans and specifications, value engineering, construction phase services, soils engineering, drawing reviews, preparation of operating and maintenance manuals, and other related services. (PPRA Sec 104)

**Change order** - a written order signed by the contracting officer, directing the contractor to make changes which the changes clause of the contract authorizes the contracting officer to order without the consent of the contractor. (PPRA Sec 104)

**Clarification** - communication with an offeror for the sole purpose of eliminating minor irregularities, informalities, or apparent clerical mistakes in the proposal. It is achieved by explanation or substantiation, either in response to District inquiry or as initiated by the offeror. (DCMR 27-1699)

**Competitive sealed proposals** - a process which includes the submission of written technical and price proposals from one or more offerors and a written evaluation of each proposal in accordance with evaluation criteria which consider price, quality of the items, performance, and other relevant factors. (PPRA Sec 104)

**Construction** - the process of building, altering, repairing, improving, or demolishing any public infrastructure facility, including any public structure, public building, or other public improvements of any kind to real property. The term “construction” shall not include the routine operation, routine repair, or routine maintenance of an existing public infrastructure facility, including structures, buildings, or real property. (PPRA Sec 104)

**Construction Management at Risk (CM at Risk)** - a project delivery method in which the purchasing agency awards a construction management services contract for a project to a single firm, based on qualifications, and under which contract the construction manager shall deliver the project within the GMP. (PPRA Sec 104)

**Contract modification** - any written alteration in the specifications, delivery point, rate of delivery, contract period, price, quantity, or other contract provisions of any existing contract, whether accomplished by unilateral action in accordance with a contract provision, or by mutual action of the parties to the contract. (PPRA Sec 104)

**Contracting officer** - the Mayor, the CPO, or the CPO's designee vested with the authority to execute contracts on behalf of the District or otherwise bind the District in compliance with the provisions of this act. (PPRA Sec 104) The contracting officer is responsible for issuing solicitations; conducting and controlling all clarifications, discussions and negotiations concerning cost, technical requirements, and other terms and conditions; and selecting the contractor for award.

**Contractor** - a person that enters into a contract with the District. (PPRA Sec 104)

**Cost analysis** - the review and evaluation of the separate cost elements and proposed profit of an offerors or contractor's cost or pricing data and the judgmental factors applied in projecting from the data to the estimated costs, in order to form an opinion on the degree to which the proposed costs represent what the contract should cost, assuming reasonable economy and efficiency. (DCMR 27-1699)

**Cost or pricing data** - all facts as of the time or price agreement that prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental, and are therefore verifiable. While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred. They also include factors such as vendor quotations; nonrecurring costs; information on changes in production methods or purchasing volume;

data supporting projections of business prospects and objectives and related operational costs; and unit cost trends, such as those associated with labor efficiency, make-or-buy decisions, estimated resources to attain business goals, and information on management decisions that could have a significant bearing on cost. (DCMR 27-1699)

**Deficiency** - any part of a proposal that fails to satisfy the District's requirement. (DCMR 27-1699)

**Design-Bid-Build** - a project delivery method in which the purchasing agency sequentially awards separate contracts, the first for architectural and engineering services to design the project and the second for construction of the project according to the design. (PPRA Sec 104)

**Design-Build** - a project delivery method in which the purchasing agency enters into a single contract for design and construction of an infrastructure facility. (PPRA Sec 104)

**Design-Build-Finance-Operate-Maintain** - a project delivery method in which:

(A) The purchasing agency enters into a single contract for design, construction, finance, maintenance, and operation of an infrastructure facility over a contractually defined period; and

(B) No District funds are appropriated to pay for any part of the services provided by the contractor during the contract period. (PPRA Sec 104)

**Design-Build-Operate-Maintain** - a project delivery method in which:

(A) The purchasing agency enters into a single contract for design, construction, maintenance, and operation of an infrastructure facility over a contractually defined period; and

(B) All or a portion of the funds required to pay for the services provided by the contractor during the contract period are:

(i) Either appropriated by the District prior to award of the contract; or

(ii) Generated by the District through fare, toll, or user charges. (PPRA Sec 104)

**Design requirements** - the written description of the infrastructure facility or service to be procured, including:

(A) Required features, functions, characteristics, qualities, and properties that are required by the District;

(B) The anticipated schedule, including start, duration, and completion; and

(C) Estimated budgets (as applicable to the specific procurement) for design, construction, operation and maintenance.

The written description may, but need not, include drawings and other documents illustrating the scale and relationship of the features, functions, and characteristics of the infrastructure facility or service. (PPRA Sec 104)

**Determinations and findings** - a form of written approval and detailed explanation as a prerequisite to taking certain contract actions, including the rationale for the method of procurement, the selection of contract type, contractor selection, and the basis for contract price. (PPRA Sec 104)

**Discussion** - any oral or written communication between the District and an offeror (other than communications conducted for the purpose of minor clarification) whether or not initiated by the District, that involves information essential for determining the acceptability of a proposal, or provides the offeror an opportunity to revise or modify its proposal. (DCMR 27-1699)

**Evaluated bid price** - the dollar amount of a bid after bid price adjustments are made under objective measurable criteria, set forth in the Invitation for Bid (IFB), which affect the economy and effectiveness in the operation or use of the product, including the reliability, maintainability, useful life, and residual value. (PPRA Sec 104)

**Fixed-price contract** - a contract where the price is not subject to any adjustment on the basis of the contractor's cost experience in the performance of the contract. (PPRA Sec 104)

Fixed-price incentive contract - a contract that:

(A) Provides for adjusting profit; and

(B) Subject to a ceiling, establishes the final contract price by a formula based on the relationship of final negotiated price to total target cost (PPRA Sec 104)

**Invitation for Bids (IFB)** - all documents, including documents attached or incorporated by reference, used for soliciting bids pursuant to section 402. (PPRA Sec 104)

**Lowest evaluated bid price** - the lowest bid price after considering all price related factors. (DCMR 27-1599)

**Minor informality or irregularity** – an immaterial defect in a bid or variation of a bid from the exact requirements of the IFB that can be corrected or waived without being prejudicial to other bidders. The

defect or variation is immaterial when the effect on price, quantity, quality, or delivery is negligible when contrasted with the total cost or scope of the requirement. (DCMR 27-1599)

**Negotiation** - discussions to determine the terms and conditions of a contract or procurement. (PPRA Sec 104)

**Offeror** - any person who submits a technical and price proposal in response to a Request For Proposals or a response to a Request For Qualifications. (PPRA Sec 104)

**Operations and maintenance** - a project delivery method whereby the purchasing agency enters into a single contract for the routine operation, routine repair, and routine maintenance of an infrastructure facility. (PPRA Sec 104)

**Price** - cost plus any fee or profit applicable to the contract type. (DCMR 27-1699)

**Price analysis** - the process of examining and evaluating a proposed price without evaluating its separate cost elements and proposed profit. (DCMR 27-1699)

**Procurement** - buying, purchasing, renting, leasing, or otherwise acquiring any goods, services, or construction. (PPRA Sec 104)

**Proposal development** - documents, drawings, and other design-related documents that are sufficient to fix and describe the size and character of an infrastructure facility as to architectural, structural, mechanical, and electrical systems, materials, and other elements as may be appropriate to the applicable project delivery method. (PPRA Sec 104)

**Public notice** - the distribution or dissemination of information to interested parties using methods that are reasonably available. Methods may include publication in newspapers, electronic or paper mailing lists, and websites designated by the District; provided, that competitive sealed bids pursuant to section 402 and competitive sealed proposals pursuant to section 403 for any solicitation in excess of \$250,000 shall include publication in a newspaper of general circulation and in trade publications considered to be appropriate by the CPO to give adequate public notice. (PPRA Sec 104)

**Public Private Partnership (P3)** – A contractual agreements formed between a public agency and a private sector entity that allows for greater private sector participation in the delivery and financing of transportation projects. (FHWA)

**Quality Assurance (QA)** – The overall process performed independently of the Design-Builder's production forces for the purpose of determining the conformance of the work by examining the QC

data and/or providing objective evidence (independent sampling and testing), to verify the contractor's quality control sampling and testing. The Design-Builder will (organizationally through services independent of production forces) provide the QA inspection normally provided by DDOT or its consultant on a traditional Design-Bid-Build project.

**Quality Assurance Oversight** - Oversight performed by DDOT (or agent) to satisfy DDOT that proper QC and QA management is being performed. This oversight provides an independent assessment of the Design-Builder's implementation of and compliance with the approved Quality Control and Quality Assurance plan.

**Quality Control (QC)** – Performed by the Design-Builder to assess and adjust design, production and construction processes to ensure conformance with contract requirements and to control the level of quality being produced in the project. The purpose of QC is to measure those quality characteristics and to inspect those activities that affect the production at a time when corrective action can be taken to substantially decrease the likelihood that appreciable non-conforming material will be incorporated in the Project.

**Request for Proposals (RFP)** - all documents, whether attached or incorporated by reference, used for soliciting proposals pursuant to section 403. (PPRA Sec 104)

**Request for Qualifications (RFQ)** - a written document inviting prospective contractors to submit a statement of their qualifications to provide certain goods or services. (PPRA Sec 104)

**Responsive Bidder or Offeror** - a person who has submitted a bid or offer which conforms in all material respects to the solicitation. (PPRA Sec 104)

**Responsive bid** - a bid that conforms in all material respects to the Invitation for Bids (IFB). (DCMR 27-1599)

**Solicitation** - request for proposals (RFP), except as provided otherwise in §1603. (DCMR 27-1699)

**Specification** - any description of physical or functional characteristics or of the nature of a good, service, or construction item. The term "specification" includes a description of any requirement for inspecting, testing, or preparing a good, service, or construction item for delivery. (PPRA Sec 104)

**Statement of qualifications** - a written document, submitted to OCP by a prospective contractor wishing to obtain a District government contract, which sets forth the prospective contractor's qualifications as requested by the CPO. (PPRA Sec 104)



**Technical analysis** - the examination and evaluation by personnel having specialized knowledge, skills, experience, or capability in engineering, science, or management of proposed quantities and kinds of materials, labor, processes, special tooling, facilities, and associated factors set forth in a proposal. (DCMR 27-1699)

**Two-step sealed bidding** - a method of contracting designed to obtain the benefits of competitive sealed bidding when adequate specifications are not initially available. (DCMR 27-1599)

**Unsolicited proposal** - a written proposal that is submitted to an agency on the initiative of the submitter for the purpose of obtaining a contract with the District that is not in response to a solicitation. (DCMR 27-1699)