WEST VIRGINIA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS

ALTERNATE PROJECT DELIVERY MANUAL

Electronic copies of this book can be obtained via the Internet at
www.Transportation.wv.gov

Prepared with assistance from:
HNTB

Contents

1 Project Identification (Concept to Selection)

1.1 Purpose

The Alternate Project Delivery (APD) Manual developed in collaboration with the West Virginia Division of Highways, a Division of the West Virginia Department of Transportation, and industry partners provides guidelines for identifying, selecting, procuring, and administering projects under an APD. The purpose of this manual is to:

Describe APD methods of procurement, evaluation, and award processes.

Guide WVDOH management, engineering, and construction delivery staff through an APD project.

Define roles and responsibilities for all involved in APD projects.

The guidelines in this manual shall be used in conjunction with other WVDOH manuals. The intent of this manual is to supplement current manuals, directives, and practices – it is not intended to replace or supersede current documents or practices. This manual is not to be considered a contract document for APD, but a reference document to assist the WVDOH, design-build teams and industry to navigate through the development and process of projects other than traditional design-bid-build.

Updates will occur to capture enhancements or modifications to processes resulting from evolving methods, lessons learned or updates to local, state, federal laws, policies, and regulations.

1.2 References & Authority

Alternate Project Delivery methods are governed by WVDOH Policies and Procedures. Limits are regulated by applicable State and Federal Codes.

1.2.1 WVDOH Policies and Procedures

WVDOH may use, where determined appropriate by the Commissioner of Highways (Commissioner), the Design-Build (DB) Method of Project Delivery. When DB is used, WVDOH shall enter a contract with a single Design-Build Team (DBT) to provide both engineering/design services and construction services. The DB method may be determined by the individual needs and merits of the project.

A DB project may be contracted only in accordance with the Commissioner's established policies and procedures concerning DB projects.

1.2.2 West Virginia Code

WV Code §5-22A – DESIGN-BUILD PROCUREMENT ACT

WV Code §17-2D – HIGHWAY DESIGN-BUILD PILOT PROGRAM

1.2.3 FHWA 23 CFR 636

FHWA 23 CFR 636

1.3 Alternate-Project Delivery

Alternate Project Delivery (APD) is the process of procuring services, contracting and product delivery by means other than traditional Design-Bid-Build (DBB) processes. These processes include but are not limited to: Design-Build (DB), Public-Private-Partnership (PPP), or A+B bidding.

These procurement and delivery methods, as well as other alternate methods, allow for improved administration and flexibility in program management. The correct project delivery method will result in overall improvements in project cost, time, risk reallocation, and resource availability. Every individual project will have a delivery method best suited to that project. Proper delivery method evaluation and selection will increase overall program performance.

1.3.1 Public-Private Partnerships (PPP)

Public-Private Partnership (PPP) is a cooperative arrangement between a Private entity and WVDOT. It allows WVDOT and private industry partners to collaborate on complex transportation improvements. PPP can allow the owner and the private entity to benefit from the project. Advantages include the utilization of private funding sources, tolling opportunities, shifting maintenance costs, and system expansion. PPP projects typically utilize design-build functions as detailed in this manual for project delivery.

1.3.2 Design-Build (DB)

The Design-Build (DB) project delivery method combines preconstruction and construction services into a single contract allowing a DBT to participate in the project's design effort as well as construction.

Traditional Design-Bid-Build (DBB) projects separate preconstruction activities, including project design and procurement, from construction. Shifting a part of the preconstruction activities to a DBT allows concurrent work activities and potential significant project savings in time and dollars. Careful project evaluation and delivery method selection are critical to realize the benefits. DB project evaluation is described in more detail in Section 1.5.

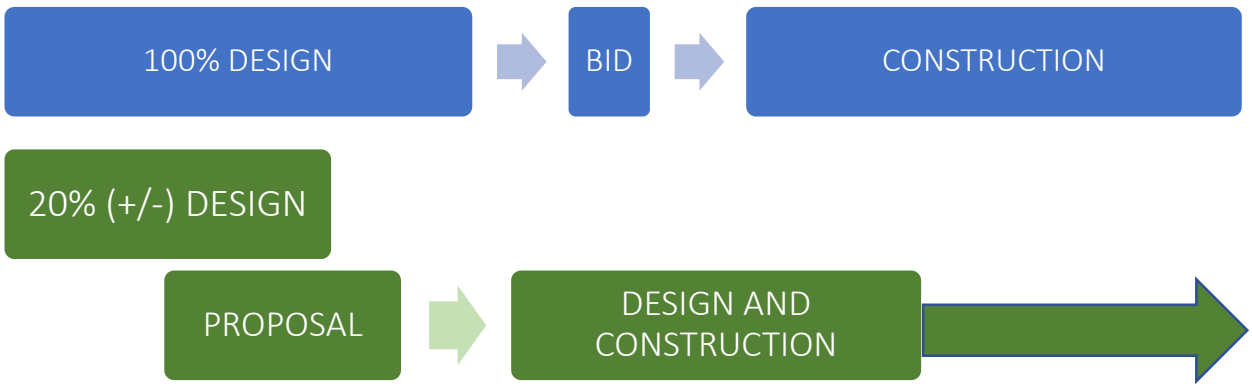


Figure 1:Time spent on DBB versus DB

1.3.3 General APD Attributes

The following list of project attributes may indicate a project would benefit from an APD method:

- The project requires a streamlined project delivery process.
- The project requires innovative and unique technical solutions.
- The project is an emergency or high-need deliverable requiring fast delivery.
- The project involves complex constructability and/or traffic phasing.
- The project needs to capitalize on advanced or specific funding opportunities.
- The project utilizes rapidly-changing technologies.

1.3.4 General APD Goals

The APD method can benefit projects with specific schedule, cost, quality, or function goals. The following list of project goals may indicate a project would benefit from a APD method:

➢ SCHEDULE

- Minimize project delivery time
- Complete the project on schedule
- Accelerate start of project revenue

➢ COST

- Minimize project cost
- Maximize project budget
- Complete the project on budget
- Maximize the project scope and improvement

➢ QUALITY

- Meet or exceed project requirements
- Provide a high-quality design and RFP
- Provide an aesthetically pleasing project
- Select the best team through the Best Value Procurement method

➢ FUNCTION

- Maximize the lifecycle performance of the project
- Maximize capacity and mobility improvements
- Provide an aesthetically pleasing project
- Select the best team through the Best Value Procurement method

1.3.5 General APD Constraints

All APD projects will have constraints or limitations that will dictate the overall objective or goal of the project. Listed below are the most common constraints:

➢ SCHEDULE

- Utilize funding obligations
- Project completion schedule
- Timing of specific items of work (ex. weather, existing structure condition, etc.)

COST

- Risk reduction - Design is the responsibility of DBT
- Project expected cash flow can be established early in a longer duration project

FUNCTION

- Traveling public must not be disrupted during construction
- Mitigation to safety hazards
- Maintain existing area surrounding project

THIRD-PARTY RISK REALLOCATION

- Risk can be transferred to the DBT for third-party issues that are time consuming to resolve
- DBT can incorporate these issues into concurrent activities
- Permitting
- NEPA
- Right-of-Way
- Utility relocations – including Railroad Coordination

AVAILABLE RESOURCES

- Specialized or unique construction and engineering
- Availability to meet schedule obligations with current resources

1.4 Project Selection

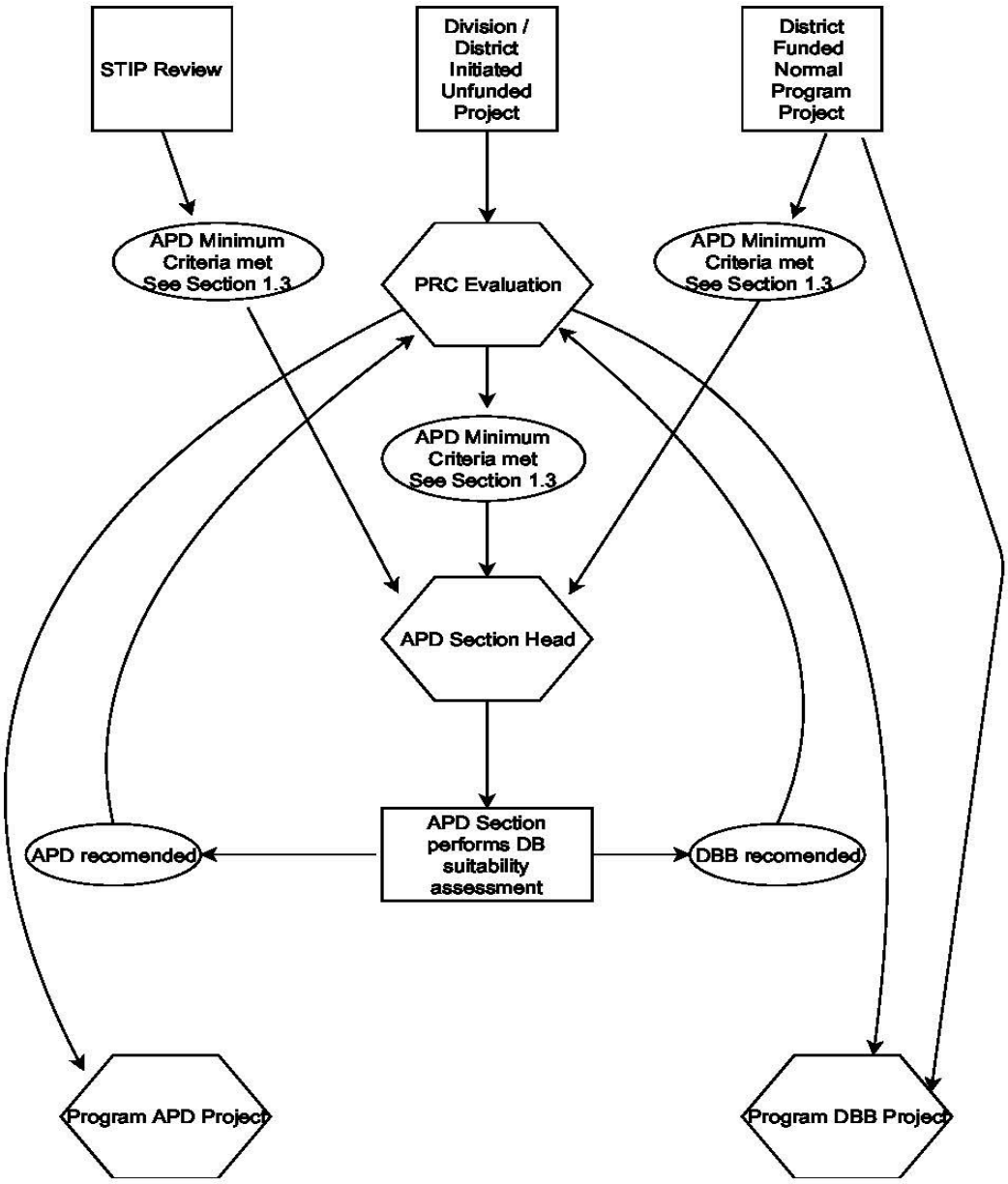
For maximum effectiveness of development, all project procurement methods should be identified and selected as early as possible in the project development process. It is recommended that all Districts and Divisions consider projects for APD during project conception.

Normal Program District funded projects are typically not ideal candidates for APD, but in certain cases it should be considered. Bridge replacements and minor roadway improvement projects with unique preconstruction requirements or critical timeframes are examples of possible APD projects. In general, APD should be considered a specialty tool available to Districts when programming projects. Early in project discovery and initiation, District designers should coordinate with Alternate Project Delivery-Section Head (APD-SH) to determine if an APD method is a logical choice.

Unfunded projects initiated from the Districts and Divisions that go to the Program Review Committee (PRC) for review should be considered for evaluation for APD. Projects recommended for APD assessment by the PRC will be forwarded to the APD-SH. The APD-SH will maintain a standing committee and process for APD selection. The committee will consist of senior technical staff and advisors. The committee is independent of the TRC, but members may serve on both. The process for APD evaluation will be decided by the APD-SH and follow current industry standards including available online project evaluation resources.

The WVDOH STIP should be reviewed periodically for projects that due to scope changes, schedule changes, third party involvement, funding or other project constraints make it beneficial to review the project delivery method.

1.4.1.1 PROJECT DELIVERY METHOD SELECTION FLOWCHART



1.5 Evaluation of Design-Build Candidate Projects

Candidate APD projects are received by APD section from Districts, Divisions and PRC. The organization requesting the evaluation should include as much detailed information as possible. At minimum, all original planning documents, relevant project correspondence, and any prior management direction should be forwarded to the APD section.

1.5.1 Design Build Suitability Assessment

The APD-SH will maintain a standing committee and process for the assessing and evaluating candidate APD projects. Appendix A outlines a template suitability assessment. FHWA and other online resources are available to aid in current industry assessment standards. The APD-SH will determine the standard to use for each project.

Assessment factors include the project delivery schedule, innovation opportunities, level of design completed, cost, market conditions, and staff experience and availability.

Candidates will be ranked from poor to excellent in terms of DB suitability. The results of the assessment will be presented to the PRC for concurrence and addition or modification of the STIP.

1.6 Technical Review Committee

The WVDOH Technical Review Committee (TRC) evaluates the DBT's Statement of Qualifications (SOQ) in response to the RFQ. They also review technical proposals received in response to a Request for Qualifications (RFP). The APD-PM will recommend the TRC members to APD-SH for concurrence. The TRC should be made up of at least three (3) to five (5) individuals who have relevant subject matter experience related to the project.

The TRC is established according to the following procedures:

1) Prior to advertising the RFQ, the APD-PM will consult with the APD-SH to determine members. Suggested TRC members are as follows:
   a) Participants should include Section Heads or Project Managers, unless otherwise delegated by the responsible WVDOH office. In this case, delegates must be limited to senior project manager-level (or equivalent) positions or higher.
   b) Federal Highway Administration on projects that include federal funds.
   c) The same TRC members for a project should review the SOQs and the technical proposals.
   d) The TRC members should not be responsible for the review of ATCs except for projects that include a highly specialized technology component, in which case WVDOH reserves the right to allow TRC members to also review ATCs.
   e) With concurrence from the Commissioner, the TRC may include non-WVDOH employees, such as city and county representatives, for projects that include significant local participation. In this case, the person(s) should be a licensed engineer or hold a leadership position (e.g., Public Works Director) in a department with significant engineering roles and may not be an elected official.
   f) If the TRC needs to be changed at any time during the Design-Build procurement process, the APD-PM will consult with the APD-SH.

1.7 Procurement Methods

Project evaluations that end in a DB method recommendation will also indicate the recommended procurement method. The level of current project development, complexity of the project, time constraints, and other important issues all play a role in the procurement method selection.

1.7.1 One-Step

DBT's meeting minimum requirements may respond with technical and price proposals. The TRC evaluates the technical proposals to determine responsiveness. The Contract is awarded to the responsive DBT with the lowest total bid price. The use of ATCs or stipend payments may be used if deemed valuable or beneficial to the project.

The One-Step Low-Bid process is typically the quickest and simplest form of Design-Build procurement.

The most effective uses for this process include:

1 WVDOH resources are limited by capacity or specialty
2 Project has very limited (or no) potential for innovation or options
3 Project has limiting timing requirement for contracting or performance
4 Emergency replacement or construction necessary
5 Funding obligations

1.7.2 Two-Step

The Two-Step Low-Bid requires a two-step procurement process.

Step One – RFQ

Step one involves the prequalification of DBT's. The Department issues the RFQ, which sets forth the minimum and desirable requirements and qualifications for the DBT. The DBT submits a Statement of Qualifications (SOQ) as a response to the RFQ. The TRC evaluates the DBT's SOQ. Depending on the RFQ criteria, the result will be a list of all qualified DBTs or a short list of three. Shortlisting serves to reduce both industry and department resources and costs for submitting and reviewing proposals.

Step Two – RFP

The second step is the issuance of the RFP and evaluation of the technical and price proposals from the pre-qualified or short-listed DBTs. The TRC evaluates the proposals based on the criteria in the RFP and typically will follow one of two methods:

1. *Low Bid* – Technical proposals from eligible DBTs are evaluated on a pass/fail basis by the TRC to determine if responsiveness meets the requirements set forth in the RFP. The Contract is awarded to the Proposer with the lowest accepted total bid.
2. *Best Value* – Or Value Based Selection evaluates technical proposals based on criteria set forth in the RFP. Evaluation criteria may be either standardized or project specific tailored to meet specific goals. The Contract is awarded to the DBT that offers the best value to the Department based on a combination of the weighted technical proposal evaluation score and price proposal.

The use of ATCs or stipend payments is recommended and is often valuable or beneficial to the project. The use of stipend payments should be considered and used if deemed beneficial to the project.

1.7.2.1 DESIGN-BUILD PROCURMENT METHOD MATRIX

PROJECT TYPE	ONE-STEP LOW BID	TWO-STEP LOW-BID	TWO-STEP W/SHORTLIST LOW BID	TWO-STEP W/SHORTLIST BEST VALUE
Non-complex with minimal risk	Recommended	Possible		
Defined scope and no innovation opportunity	Possible	Possible		
Minor bridge	Possible	Recommended		
Minimal complexity and risk		Recommended	Possible	
Interchanges		Recommended	Possible	
Minimal innovation, but complex in nature		Possible	Recommended	
Major and/or Complex: ROW acquisition, environmental impacts, utility relocations, railroad or multiple agencies involvement, traffic control, staging, etc.			Recommended	Possible
Minimal WVDOH design with opportunities for innovation			Possible	Recommended
Complex bridge(s)			Possible	Recommended
Technology projects utilizing specific software or rapidly changing technologies				Recommended

1.8 Upcoming Contracts

It is recommended that the APD section maintain a current list of projects and their respective stage of contract development on the WVDOH's website for public notice. This will allow for better knowledge and transparency of this form of project delivery. The website list should include project information:

- Anticipated pertinent dates:
  - Anticipated advertisement date
  - Anticipated bid date
  - Anticipated shortlist, technical scoring, ATCs, etc. if two-step procurement
  - Anticipated project completion date
- Anticipated procurement type and options:
  - One-Step Low Bid
  - Two-Step Low Bid
  - Two-Step Best Value
  - ATC considered

- Stipend consideration

The Public Notice is intended to be an advanced advertisement of an upcoming Design-Build project. The Public Notice includes preliminary information that may include, but is not limited to, the following:

- Tentative scope
- Anticipated schedule
- Anticipated consultant area classification that may be required in the RFQ
- Any unique or special contractor(s) or consultant(s) qualification or experience requirements
- List of contractor(s), consultant(s), or other entity known to have a Conflict of Interest who are therefore ineligible to participate as a Proposer.

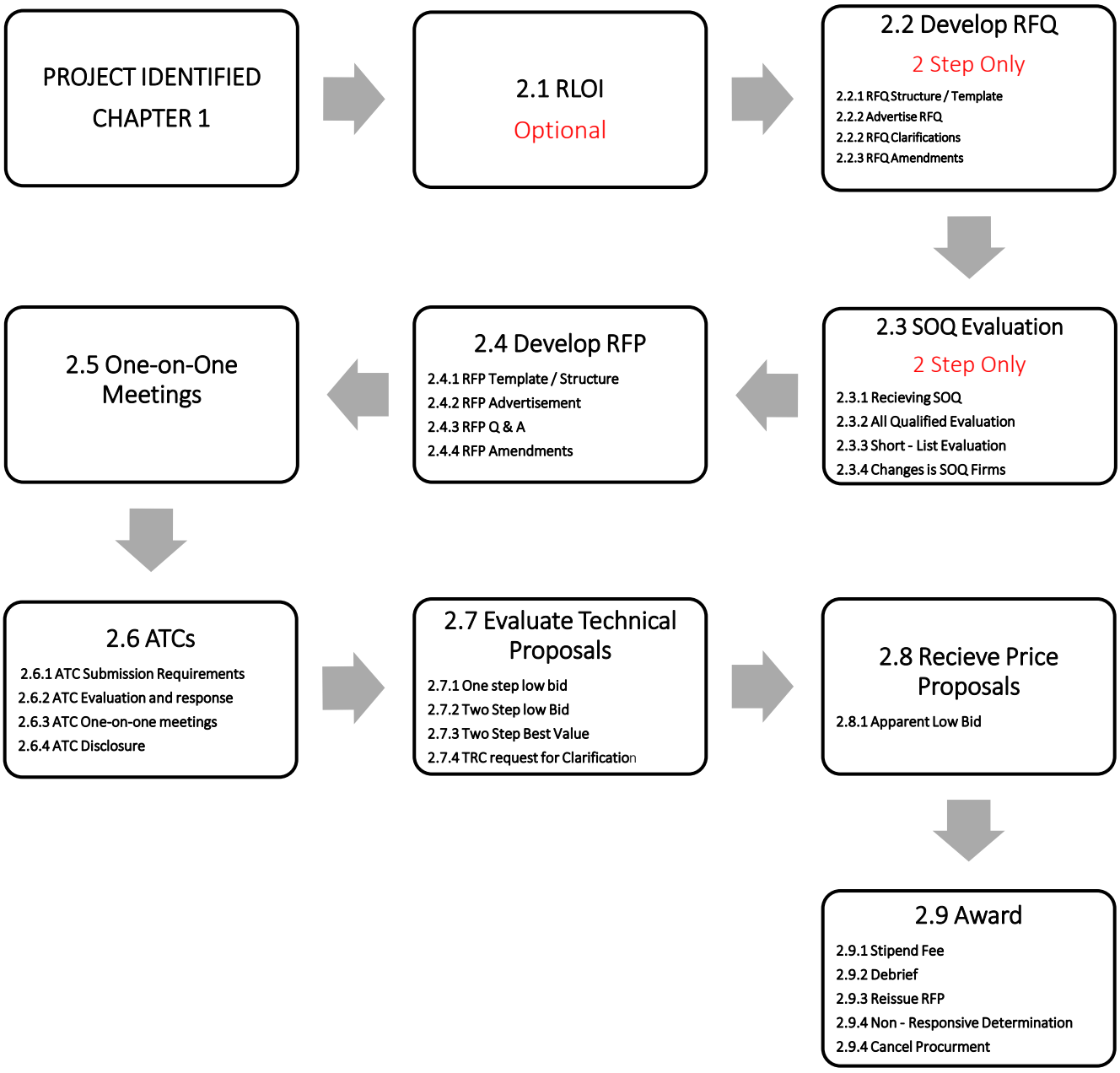
1.9 Suggested Timelines

Although DB can be effectively utilized in urgent cases to meet constraints or obligations such as funding, staffing, structure status, etc., the most effective use of the DB process is when it is implemented as early as possible in the programming and project development stage. This creates project certainty and efficiency in contract and plan development as well as industry certainty. Project timelines will vary based on numerous circumstances including project size, funding and prioritization and current third-party impact to the project.

2 Project Procurement (Selection to Award)

Chapter 2 is intended to provide process overview of Design-Build procurement activities necessary once the DB method is selected. The intent is to be a resource for APD-PM's to aid in assembling bid documents and maintain consistency with processes as they transition from the planning stage to contract award.

PROJECT PROCUREMENT FLOWCHART



2.1 Request Letter of Interest

The Request for Letters of Interest (RLOI) notifies the DB industry that an RFQ or RFP is forthcoming on a project. Responses to the RLOI are used to assist WVDOH with gauging industry interest in the project and can be used to reinforce the decision to use an APD method or be cause for reevaluation. DBTs do not have to respond to the RLOI to be eligible to respond to the RFQ or RFP.

If requests for letter of interest are desired, the following procedures apply:

1 After a project has been identified as a potential DB contract, the APD-PM will draft the RLOI. The RLOI should contain:
   - Location of Project
   - Approximate Project Limits
   - General Project Scope
   - Procurement Method
   - Anticipated Procurement and Construction Schedule
   - PM Contact Information
   - Due Date and Time Of LOI
   - Listing of Any Informational Meetings About the Project
   - Procurement Disclaimer

2 The APD-SH and APD-PM will review the draft RLOI

3 Contract Administration will facilitate advertisement of the final RLOI on Bid Express

2.2 RFQ Development

The Request for Qualifications (RFQ) is used by WVDOH to determine the list of the most highly qualified DBTs for the Two-Step Low-Bid and Two-Step Best Value methods and outlines the minimum and desired qualifications for DBTs. Qualification criteria should be project specific based upon the delivery goals and project risks. DBTs are required to respond to the RFQ with an SOQ.

1) The APD-SH develops and maintains the RFQ minimum standards, approves any project specific deviations and ensures it meets the minimum requirements of applicable WV Code.
2) The APD-PM assembles exhibits and contract components of the RFQ. The APD-PM serves as the coordinator with appropriate district/divisions and sections, including Engineering, Construction, Environmental, ROW, Materials and Utilities.
3) APD-PM drafts the RFQ based on the current minimum standard and project specific information.
4) APD-PM provides a draft RFQ to the APD-SH for review, approval, and processing.

2.2.1 RFQ Structure / Template

Components of the RFQ are assembled by the APD-PM. RFQ advertisements contain required DBT qualifications and the subjective weighted scoring system to be used in qualifying and/or shortlisting DBTs. The amount of technical information provided in the RFQ will vary based on the amount of initial engineering performed. Enough technical information should be included in the advertisement to allow project-specific SOQ responses.

Typical RFQ components include:

I.			Purpose of Request	Narrative of scope, purpose, and general terms of the proposal
II.			Overview of Project	Detailed description of work to be included in the proposal
	exhibit	A.	Preliminary ROW plans	Provide current ROW status and plans. Right-of-way shall be acquired per WVDOH standard procedures. The acquisition of ROW and easements is traditionally the responsibility of the WVDOH. The design build team is often responsible for any necessary construction easements. It is not necessary to have all of the ROW acquired before the RFP is advertised. The ROW status report will be provided to the APD PM by the Department-assigned ROW agent and included as an exhibit in the RFP. ROW plans will be included as an exhibit in the RFP. WVDOH may delegate responsibility for ROW acquisition to the design build team.
	exhibit	B.	Preliminary Engineering	
	exhibit	C.		
	exhibit	D.	Design Study	Provide work products from Initial Engineering, design study. DD-205 for guidance.
	exhibit	E.	Environmental Documentation	Provide status of CE/EA/EIS clearances and reports
	exhibit	F.	Survey Information	Provide all available survey information
	exhibit	G.	Geotechnical Information	Provide all available geotechnical information
	exhibit	H.	Site Assessment	Provide all information available for site assessment
	exhibit	I.	Bridge Matrix Information	
	exhibit	J.		
	exhibit	K.		
	exhibit	L.		
	exhibit	M.	MicroStation Files	Provide all available CADD or MicroStation files
III.			Scope	Provide Scope of work to be contracted to DBT
IV.			Submittal Format	Provide submittal formatting requirements
V.			Management Team Approach	List DBT personnel requirements
VI.			Experience of Key Individuals	
VII.			Past Performance	
VIII.			Quality Control Plan	
IX.			Financial Condition	

X.			Location and Local Knowledge	
XI.			Conflict of Interest	
XII.			Qualifications Evaluation	
XIII.			Financial Condition	
XIV.			General Information	
XV.			Milestone Schedule	

2.2.2 Advertise RFQ

APD-PM will coordinate with Contract Administration to publicly advertise the RFQ document utilizing the Bid Express system or other acceptable public advertisement system. The RFQ is only utilized in the Two-Step Low-Bid or Two-Step Best Value selection methods. The outcome of the RFQ is the Proposer's SOQ.

2.2.3 RFQ Clarifications

The clarification process allows WVDOH to respond to DBT questions during the RFQ advertisement period. DBTs will submit questions to the APD-PM through Bid Express in accordance with the requirements set forth in the RFQ. WVDOH-issued responses to clarification questions will be posted on Bid Express and should be carefully drafted for consistency to ensure fair competition. Clarification responses are meant to clarify the RFQ but should not make material changes. Material changes to the RFQ should be with the amendment process.

2.2.4 RFQ Amendments

RFQ amendments are generated by WVDOH to modify the contents of the RFQ. Such amendments may be prompted by clarification questions submitted by DBTs but may also be initiated by WVDOH. RFQ amendments are prepared by the APD-PM and posted on Bid Express or other advertisement systems. The issuance and information included in the amendment will be the responsibility of the APD-SH and APD-PM. Amendments will be issued in accordance with DBB amendment procedures.

2.3 SOQ Evaluation

When the RFQ is issued, interested DBTs submit an SOQ per the requirements set forth. Each DBT's SOQ is evaluated by the TRC. The RFQ phase is an opportunity for the WVDOH to select the qualified or most qualified DBTs to respond to the RFP.

2.3.1 The Two-Step-Low-Bid (Minimum Qualifications Met)

TRC evaluates each DBT's SOQ to determine if minimum qualifications are met. The intent of this option is to allow all qualified DBTs to respond to the RFP.

Upon completion of TRC review, a list of all qualified DBTs will be prepared by the APD-SH for Contract Administration to publicly announce on Bid Express or another system.

2.3.2 The Two-Step-Low-Bid (Shortlist) and Two-Step -Best Value

TRC evaluates each DBT's SOQ to determine a shortlist of the three most qualified. It is particularly important to understand that the goal of the RFQ is to shortlist the most qualified DBTs to respond to the RFP.

Upon completion of the TRC review, a list of short-listed DBTs will be prepared by the APD-SH for Contract Administration to publicly announce on Bid Express or another system.

2.3.3 Receipt of SOQ

The APD-PM will receive all SOQs. The APD-SH will send an e-mail to the DBT's single point of contact acknowledging receipt of the SOQ.

2.3.4 Personnel Changes in SOQ Firms

During the procurement process, DBTs may request changes in personnel or firms listed within their SOQ. The requests often occur due to employees leaving the firm, additional RFP requirements, or other organizational changes.

The DBT's team is required to obtain written approval from the Commissioner when requesting a change in personnel or firms listed in the SOQ. Since DBTs are short-listed based on qualifications listed in the SOQ, changes in key personnel will be carefully evaluated. This requirement applies to all firms and individuals committed in the SOQ.

2.4 RFP Development

The RFP outlines the contract requirements, project scope, project standards and instructions for responding. The RFP is required on all DB projects and is advertised for the One-Step Low- Bid, Two-Step Low-Bid, and Two-Step Best Value selection methods.

WVDOH aims for the RFP to be complete, thorough, and universally understood. WVDOH's intent is to maintain consistency with the RFP between projects and will maintain current RFP templates in WVDOH's APD section. Although some content of the RFP will change based on the project-specific scope and risks, the RFP is generally structured to maintain consistency.

The development of the RFP requires an accumulation of information gathered or created during preliminary engineering and other pre-advertisement activities. The RFP should be developed using the standard RFP template as a starting point and the following procedure:

1. The APD-SH will maintain authority of the RFP document and exhibits.
2. The APD-PM will be responsible for managing the development of the RFP, including all project-specific requirements.
3. Contract Administration will maintain standard contract terms and conditions, prevailing wage requirements, DBE/EEO/OJT, warranty clauses, special provisions to standard specifications and advertisement.

The APD-PM will collaborate with WVDOH divisions and external agencies to update applicable portions of the RFP based on the project and the Design-Build selection method. The APD-PM will:

1. Ensure the Submittals section of the RFP is tailored to both the project specific Design-Build requirements and WVDOH review times based on the complexity of the project.

2. Engage all WVDOH Divisions, including appropriate District personnel, and FHWA during the development of the RFP.
3. Coordinate with the EEO Division to obtain the project-specific DBE goal.
4. Ensure that the various risks, as well as the entity responsible for the risk, are clearly defined in the RFP.
5. Ensure scope clarity.
6. If applicable, include information in reference to Alternative Technical Concepts (ATC) and Stipends.

2.4.1 RFP Structure / Template

TABLE WITH MINIMUM STANDARD REQUIREMENTS:

			DESCRIPTION	MINIMUM TECHNICAL REQUIREMENTS
I.			Purpose of Request	Narrative of scope, purpose, and general terms of the proposal
II.			Overview	
II.A.			Project Description	Detailed description of work to be included in the proposal
II.B.			Project Information Package	Includes information that has been performed or will be performed by the DOH prior to entering into contract
	exhibit	A.	Agreement	
	exhibit	A.1	Scope of Work	
	exhibit	A.2	Project Criteria	
	exhibit	A.3	Escrow Release	
	exhibit	A.4	Engineering Division Memos	
	exhibit	A.5	Warranty Bond	
	exhibit	B.	Bridge Inspection Reports	
	exhibit	C.	Utility Status and Right-of-Way Certificate	
	exhibit	D.	Existing Right-of-Way Plans	
	exhibit	E.	Environmental Documentation	
	exhibit	F.	Special Details and Notes	
	exhibit	G.	Geotechnical Information	
	exhibit	H.	Hydraulic Information	
	exhibit	I.	Roadway Pavement Information	
	exhibit	J.		
	exhibit	K.	Map of Project Limits and Bridge Locations	
	exhibit	L.		
	exhibit	M.	MicroStation and Inroads Files	
	exhibit	N.	Survey Information	
	exhibit	O.	Other Additional Project-Specific Information	
	exhibit	P.	Permit Information	

II.C.			Environmental Documentation	Narrative of environmental status and instructions to proposer
II.D.			Right-of-Way	Narrative of ROW status and instructions to proposer
II.E.			Permits	Narrative of permit status and instructions to proposer
II.F.			Utilities	
II.G.			RFP Submittal	Contract terms, reference to agreements, bond specifications, and other Instructions to proposer
III.			General Instructions	Contains general administration instructions for the proposer
III.A.			Questions	Instructions to the proposers on how to ask questions and request clarifications
III.B.			Proposal Submittal	Instructions for delivering the proposals
IV.			Project Scope	Scope of services to be included in the proposal
V.			One-on-One Meetings	
VI.			Proprietary and Confidential Information	
VII.			Proposal Development	
VII.A.			Technical Proposal	
VII.B.			Cost Proposal	
VII.C.			Confidentiality of Proposals	
VII.D.			Stipend	
VIII.			Evaluation of Technical Proposals	
VIII.A.			Technical Proposal Review Committee	
VIII.B.			Technical Proposal Review	
IX.			Opening of Proposals / Selection of Contractor	
X.			General Information	
XI.			Milestones	

2.4.2 RFP Advertisement

The RFP for One-Step Low Bid, Two-Step Low Bid and Best Value are facilitated by Contract Administration and advertised on Bid Express. The APD-PM will work coordinate with Contract Administration.

2.4.3 RFP Q&A

The clarification process allows WVDOH to respond to BDT questions during the RFP advertisement period. Responses to clarification questions need to be carefully drafted for consistency and ensure fair competition. Clarification responses are meant to clarify the RFP but should not be used for

material changes to the RFP. Material changes to the RFP should be modified via the addendum process.

RFP Questions:

1. Proposers will submit questions on the Bid Express Q&A system or other means indicated in the RFP.
2. APD-PM will determine the responsible division or section for response.
3. If the determined response is necessary from the APD section, the APD-PM (in concurrence with the APD-SH) will respond to Proposer questions.
4. Response will be provided to Contract Administration for publication of response.

If it is determined that either by a Proposer's question, or additional information, or substantial change of requirements or information, an RFP Addendum should be processed.

2.4.4 RFP Amendments

RFP Amendments are generated by clarification questions, and can also be generated by WVDOH, to modify the contents of the RFP. RFP amendments often have significant impacts to the DBT's price, technical proposals, or project approach. RFP Amendments shall be publicized sufficiently that all DBTs are made aware and acknowledgement of Amendments shall be part of the contract documents.

2.5 One-on-One Meetings

If elected by the WVDOH, one-on-one meetings between WVDOH and Proposers are used to improve communication during the procurement process. The primary purpose of these meetings is to allow DBTs to gain a better understanding of the RFP. This minimizes efforts on both WVDOH and DBTs during the procurement process.

The number and frequency of the one-on-one meetings will depend on the size and complexity of the project. The APD-PM and the APD-SH will jointly determine the number and frequency. Each DBT will be offered the same one-on-one meeting opportunity.

The RFP should clearly indicate one-on-one meeting usage and define requirements and parameters.

2.6 ATCs

Alternative Technical Concepts (ATC) allow for innovation and flexibility during the procurement process. The ATC process allows DBTs to submit "equal or better" alternatives to the RFP requirements during the procurement process.

The ATC process is a highly confidential process. Each ATC submitted by DBTs to the APD-PM during the RFP procurement process shall be kept confidential and will not be shared with the other teams. The ATC process starts after the RFP is issued. ATC can be independent or can be combined with one-on-one meetings with DBTs to discuss potential ATCs.

DBTs submit ATCs to the APD-PM, in accordance with the requirements set forth in the RFP, prior to submitting the technical proposals.

The concept of the solution being equal to or better than the criteria provided in the RFP allows the DOH to maintain the "level playing field" that is necessary for competitive bidding without the need to issue amended project criteria. An ATC cannot produce cost savings by merely reducing quantities and or quality. The ATC is a deviation from the requirements of the Bid Documents, which provides a solution that is equal to or better than the underlying requirement and shall consider all aspects and not just the contract construction costs. ATC acceptance will be determined by the WVDOH at its sole discretion.

Prior to the advertisement of the RFP, the APD-SH will identify members of the project's ATC review committee. It is important that ATC review committee members understand the importance of confidentiality and a signed non-disclosure form from each member and provide the forms to the APD-PM.

The DBT may submit an ATC for approval of an alternative material, article, product, process, design method or item that meets or exceeds the requirements and intent of the Contract Documents, provided that the material, article, product, process, design method, or item is equal or better in quality, performance, and function, based upon a submitted and referenced documented engineering analysis and as determined by the WVDOH. ATCs are not intended to replace pre-bid questions.

Upon receipt of the DBT's ATC, the APD-PM should indicate receipt of submittal to the DBT and indicate and anticipated response time.

2.6.1 ATC Submission

If applicable, ATC submission requirements should be clearly indicated within the RFP documents. Requirements should address acceptable:

1) Format type – electronic, hard copies, etc.
2) Acceptable deadline for submission
3) Technical requirements that each ATC must include
   a) Impacts to safety, traffic, environmental, right-of-way, etc.
   b) Cost analysis
   c) Schedule impacts
4) Anticipated response time

2.6.2 ATC Evaluation and Response

Acceptance is the sole discretion of the WVDOH and the WVDOH reserves the right to reject any ATC submitted. The WVDOH will attempt to evaluate all ATCs within a specified time indicated in the RFP. Some ATCs that are complex or unusual may take longer for review. An acceptable review time should be identified within the RFP. The WVDOH should not consider any change that would require excessive time or cost for review, evaluation, or investigation.

The WVDOH will review all ATCs and respond with one of the following determinations:

1) The ATC is approved and may be included in the DBT's technical proposal.
2) The ATC is approved subject to conditions. The ATC may be included in the DBT's technical proposal provided that all approval conditions have been met. Failure to clearly demonstrate that all conditions have been met may render the DBT's technical proposal non-responsive.

3) The ATC is not approved in its present form but may be resubmitted for reconsideration. The reconsideration request must address all comments, questions and concerns stated by the WVDOH. Reconsideration requests must meet all ATC submission and content requirements.
4) The ATC is not approved. Inclusion of the ATC in the technical proposal shall render the technical proposal non-responsive.
5) The proposal is not an ATC.

The WVDOH may, at its discretion, request additional information/clarification regarding a proposed ATC. Verbal communications regarding ATC proposals will be considered non-binding and are discouraged. The WVDOH may provide explanation of the ATC rejection at its sole discretion.

Language within the RFP should include:

1) Any explanation shall not be construed as an approval or modification of any Bid Document.
2) Approval of an ATC is an approval of the deviation language, or approval with conditions, and only at the specified locations.
3) Approval of an ATC does not constitute the WVDOH's acceptance of design liability or final viability.
4) ATC approval is specific to the Proposer only.

2.6.3 ATC One-on-One Meetings

ATCs may be discussed during the One-on-One Meetings, if utilized. The DBTs are encouraged to bring appropriate materials to explain their ATCs to their meeting(s). All materials, handouts, CDs, DVDs or USB flash drive will be returned to the Proposer at the conclusion of the meeting. Only materials formally submitted and identified as the ATC, or part of the ATC, shall be retained by the WVDOH and considered. DBTs are allowed, but not required, to formally submit ATCs during, before, or after completion of their one-on-one meeting.

2.6.4 ATC Disclosure

It should be clear in the RFP documentation to the DBTs that the WVDOH may, at its discretion, issue an amendment to correct a deficiency if, during the ATC process or one-on-one discussions, the WVDOH becomes aware of a deficiency in the Bid Documents that would have an impact on the ability of the WVDOH to conduct a fair procurement. Other than as listed in the above paragraph, all conversations related to ATC proposals between the WVDOH and DBTs will be kept confidential during the bidding process. Once a project is awarded, ATC proposals may be made public.

2.7 Evaluate Technical Proposals

Technical proposals are required on all WVDOH Design-Build Projects. The TRC will evaluate DBT's proposals based on RFP criteria and Department polies and procedures.

2.7.1 One-Step Low Bid Evaluation

Based on the timeline provided in the RFP document, the DBT will submit a technical proposal for the project. The technical proposal must include all required information requested in the RFP for TRC evaluation.

2.7.2 Two-Step Low Bid Evaluation

The APD-PM is responsible to collect all submitted technical proposals submitted by eligible DBTs. The APD-PM will assemble and facilitate the TRC review. TRC review the technical proposals will deem DBTs either responsive or non-responsive. This can be viewed as a pass/fail analysis. If the technical proposal is deemed responsive, the DBT's price proposal will be considered. If non-responsive, the DBT's bid price proposal will not be considered. If the TRC requires a clarification for the DBT's technical proposal, see the section below for the applicable process.

2.7.3 Two-Step Best Value Evaluation

The APD-PM is responsible to collect all submitted technical proposals submitted by eligible DBTs. The APD-PM will assemble and facilitate the TRC review of technical proposals. TRC will review the technical proposals for scoring or ranking based on the criteria established in the RFP. If the TRC requires a clarification for the Proposer's technical proposal, see the section below for the applicable process.

2.7.4 TRC request for Clarification

If the TRC requires clarification of any element contained in the DBT's technical proposal, the following procedures apply:

1) The APD-PM will consult with the APD-SH regarding the TRC's need for clarification.
2) The APD-SH will prepare a request for clarification letter to the DBT.
3) The DBT will send a written response to the APD-SH by the deadline included in the request.
4) The APD-SH will notify the APD-PM who will reconvene and facilitate a meeting with the TRC.
5) The TRC may request additional clarification, if necessary, or may determine the Proposer's response is adequate or determine the DBT is non-responsive.

2.8 Receipt of Price Proposal

Proposers will submit price proposals utilizing the Bid Express system, or another specified method indicated in the RFP.

At the date and time specified in the RFP, WVDOH will facilitate a public opening of the price proposal for each DBT. Once all the price proposals have been opened and read aloud, the WVDOH will announce the Apparent Successful DBT.

2.8.1 Apparent Low Bid

The apparent low bidder for the One-Step Low-Bid and the Two-Step Low-Bid will be the final accepted bid. The apparent low bidder for the Two-Step Best Value will be determined by pre-determined combination of bid price and technical proposal score in accordance with the RFP.

2.9 Award

The Project Award will be made utilizing the WVDOH's established methods and process for analysis and award. Design-Build projects should not require any additional evaluation, review, or process.

2.9.1 Stipend Fee

A stipend fee is an amount paid to the responsive, but unsuccessful DBTs that submit technical proposals in response to the RFP. The stipend amount is based on WVDOH analysis performed in the programming phase of the project. The requirements and value must be clearly defined in the RFP document. The stipend fee may be authorized for payment, upon project award and based on the following:

- One-Step Low-Bid – Responsive technical and price proposal (bid) submittal
- Two-Step Low-Bid – Responsive technical and responsive price proposal (bid) submittal
- Two-Step Best Value – Responsive technical and responsive price proposal (bid) submittal

2.9.2 Debrief

A debriefing is intended to provide feedback to a DBT on their SOQ and technical proposal. Specific debriefing instructions should be included in the Project's RFQ and RFP but can follow the standard WVDOH practice for debriefing unless otherwise indicated.

2.9.3 Reissue RFP

The RFP should include information that, if the WVDOH considers unsatisfactory results at the conclusion of the design-build procurement process, or if the Commissioner rejects all proposals, WVDOH has the option to abandon the design-build procurement, re-advertise the RFQ, re-issue the RFP, change the delivery procurement method, or cancel the project. The decision can depend upon the project schedule, modification of the scope, and quality of the short-listed teams.

If the decision is made to abandon the design-build procurement and change delivery methods, the APD-PM will notify the teams. The APD-PM will process any applicable stipends for payment (including the apparent best-value or low-bid).

If re-advertising the RFQ, the APD-SH and APD-PM should follow the preceding RFQ/RFP sections of this manual.

The following lists the procedures and processes for re-issuing the RFP during a two-step procurement and single-step procurement:

1) The APD-PM will consult with the APD-SH, the State Highway Engineer, and district management on whether to re-release the RFP if all bids are rejected.
2) If the decision is made to re-release the RFP, the APD-SH and APD-PM will modify the RFP and establish a reasonable stipend.
3) On single-step low-bid projects, the APD-SH will re-advertise the project per Section 2.4.
4) On two-step projects (low-bid or best-value), the APD-PM will re-issue the RFP per Section 2.2.
5) The APD-PM will consult with the APD-SH on the need for a goal change or for an additional meet and greet.

2.9.4 Non – Responsive Determination

Listed below is a recommended process for a non-responsive technical proposal and should be included, with appropriate timeframes, in the RFP:

1) In the event WVDOH deems a Proposer's technical proposal non-responsive, WVDOH will provide each non-responsive Proposer a written explanation of the reason(s) their technical proposal was deemed non-responsive.
2) Upon receipt of WVDOH's written explanation, the Proposer can request the WVDOH reconsider the non-responsiveness determination if the Proposer feels the determination was made in error. The Proposer's request must be in writing to the WVDOH-SH designated in the RFP. The request should clearly state the reasons the Proposer believes that WVDOH's determination is in error and include supporting documentation as the Proposer deems appropriate.
3) The information will be provided to the State Highway Engineer whose determination will be final and conclusive, for disposition.
4) WVDOH will respond in writing to the request. If WVDOH is unable to respond within the allotted timeframe, the WVDOH will provide the requesting Proposer with an estimated response time.

The timeframes included are approximate and may be modified by WVDOH.

2.9.5 Canceling Procurement

The following steps outline the processes and procedures for cancelling the design-build procurement at any time during the procurement process:

1) The APD-SH and APD-PM will consult with the Chief Engineer, Engineering Director and District management on whether to cancel the procurement of a design-build project.
2) All SOQs and technical proposals received prior to the procurement cancellation are the property of WVDOH and are subject to data practice laws (see Section 2.5).
3) The APD-PM will develop a procurement cancellation letter to send to all the design-build teams notifying them of the cancellation. The procurement cancellation letter must be signed by the State Highway Engineer.

3 Project Administration (Contract Award to Finalization)

Chapter 3 is guidance for the Design-Build contract from contract award to contract completion. Design-Build contract administration involves multiple WVDOH central office divisions, district organizations and FHWA on projects of federal interest. Oversight of roadway design, structural design, right-of-way acquisition, utility relocation, environmental permitting, public relations along with construction quality and project management is required. The level of effort and stakeholders involved in administration is dependent on the amount of preliminary engineering completed during RFP development. Thorough understanding and application of WVDOH design processes is necessary, as well as contract administration policy and procedures. Some flexibility in the standard process, policy and procedure is required to realize the added benefits associated with design-build projects, but quality and completeness of design deliverables and project quality cannot be sacrificed. This chapter is guidance for areas where standard contract administration procedure and policy differs from design-bid-build administration.

3.1 Oversight & Responsibility

A design-build contract is based on the RFP and the contractor's proposal. A list of required deliverables will be included in the RFP. Typically, these will be separated into two groups:

1) Preliminary Engineering
2) Construction/Non-Design

Generally, each design deliverable will be reviewed and approved by the appropriate district/division organization. The APD-PM will coordinate these reviews and serve as the primary point of contact for the Design-Build team and the WVDOH team until all or a portion of the project is "Released for Construction" (RFC).

Contract Administration and/or the District Construction office will administer construction including but not limited to: contract management, QC/QA construction inspections, QA material acceptance and project finalization.

3.2 CPM Schedule

The contractor's Critical Path Method (CPM) schedule is vital to the Design-Build administration and is part of the contract requirements. The CPM schedule will organize key project components, both design and construction, into manageable activities. A comprehensive review by both the APD section and the District Construction organization is required prior to approving the Design-Build teams detailed CPM.

CPM schedules for Design-Build projects will be used by the WVDOH PM team to:

1) Identify the Agency/Divisions required to perform necessary submittal reviews
2) Document required WVDOH plan development milestones
3) Plan and establish proper construction inspection staff
4) Establish project Site Manager documentation and file structure
5) Payment values for monthly progress estimates
6) Establish and identify critical activities that could impact the project
7) Document planned durations for work to occur
8) Identify and tracking of impact of added work
9) Evaluate working time and contract time extensions

The contractor's CPM schedule must meet the minimum standard specifications defined in Section 108.3 and any project-specific requirements included in the RFP. Additionally:

1) All deliverables listed in the project criteria and project agreement should be included as a separate activity
2) Preliminary CPM is required within 30 days of the effective date of agreement
3) The detailed cost loaded CPM is required before any payments can be made

The District Construction Engineer (DCE) is responsible for coordinating all CPM schedule reviews and approvals for the final detailed baseline CPM schedule and progress updates, used for progress payments. The APD-PM should review and comment on schedule submittals with a specific focus on the design deliverables and review times included within the schedules. Particular attention should be given if the DBT proposes to utilize a submission process different than outlined in DD-202.

3.3 Project Meetings

Communication between APD section, District Construction, technical advisors, Design-Build team, FHWA on projects with federal interest, and all other identified stakeholders is essential for overall project success. Communication between all entities is crucial to the success of the project and project meetings (especially in the initial phases of the project) is recommended.

3.3.1 Kick-Off Meeting – WVDOH Internal only

It is recommended that a meeting be held prior to the pre-construction meeting with the DB team. This meeting is an opportunity for the APD section, Contract Administration, and District Construction to review the roles and responsibilities of those administering the contract. The contract administration will need to be a joint effort between the APD section of Engineering and the designated Contract Administration Division and/or District Construction. It is recommended this meeting be scheduled as soon as practical after contract award. The meeting should be coordinated and facilitated by the APD-PM. Depending on the project size and complexity, the meeting could include:

1) Contract Administration
2) Division/District Right-of-Way
3) District Construction
4) Division/District Utilities
5) Division/District Traffic
6) Engineering Division
7) District Roadway Design
8) District Bridge Design
9) District Maintenance
10) FHWA
11) Other identified Stakeholder

3.3.2 Pre-Construction Conference

The District construction engineer will coordinate and facilitate the pre-construction conference with the Design-Build team (DBT). This meeting will serve as the hand off point from APD-PM to the District Construction Engineer.

Standard Specification 103.10 and Construction Manual 103.3 list the requirements of a typical design bid build pre-construction conference.

In addition to standard pre-construction topics, identification of point of contacts should be discussed and understood by the Design-Build team, Contract Administration, and the APD section.

The DBT's preliminary CPM schedule, as well as Notice to Proceed (NTP) documentation and Department project expectations, would be primary topics.

The WVDOH's emphasis should be placed on the DBT's submittal and status of:

1) Preliminary CPM schedule
2) List of expected design deliverables - these deliverables will be assigned an activity ID by the design build team in the detailed CPM schedule
3) Alternate design submission certification checklist
4) Submittal log to be used for each deliverable
5) All standard contract documentation required by the Standard specifications

3.3.3 Progress Meetings

Progress meetings are specified in the *Project Agreement*. Minimum requirements (Construction Manual 105.3.3).

3.4 Notice to Proceed

It is recommended that two separate types of NTP be given to the DBT:

Design NTP – Would authorize the DBT to commence the design portion of the project. This can be given fully or conditionally. The design NTP should only be given upon acceptance of the DBT's CPM schedule that clearly identifies anticipated submittal activities that also include adequate agency reviews. The design NTP should be the responsibility of the APD-PM with notification to Contract Administration and/or the District Construction Engineer.

Construction NTP – Can be given upon AFC plans. The DBT should only perform work on the project based on AFC plans. Construction work performed by the DBT without RFC plans should not be performed even if the Builder agrees to work at his own expense and risk.

1) Plans can be developed and provided in any method approved by the APD-PM, including:
   a) Full and complete plans
   b) Portioned plans or work packages – by location, phase, structural units

The issuance of the Construction NTP should be the responsibility of Contract Administration and/or District Construction Engineer upon receipt of RFC plans from the APD section.

3.4.1 Design Reviews

The APD-PM will be the lead role and primary point of contact for the DBT for design and specification submittals. The DBT will submit the APD-PM a copy of the transmittal notice to the Contract Administration and/or District Construction Engineer.

The APD-PM will review and distribute design deliverables to necessary reviewing agencies or divisions. Depending on the level of project development in the RFP, required plan submittals will vary. Required deliverable submittals will be listed in the RFP and tracked by the APD-PM during contract administration. Each submission will follow applicable WVDOH Design Directives, or WVDOH pre-approved alternate method.

Plan submission requirements and WVDOH standard checklists for plan development are included in DD-202. Alternatively, the DBT may submit a revised checklist and submittal log to the APD-PM for approval prior to start of work. The DBT's method of plan submittal must be included in the CPM schedule.

Other project-specific deliverables will be listed in detail in the *Project Criteria* and *Project Agreement* exhibits to RFP. These deliverables may include, but are not limited to:

1) Plans (with applicable plan submission certification)
2) Bridge load rating submission
3) E&S plan
4) SWPPP
5) TMP
6) Drainage notebooks
7) Bridge design calcs
8) Shop drawings
9) Preliminary and final geotechnical reports
10) Final design files
11) Escrow proposal documents
12) Contractors' material certification
13) Construction engineering designs

The APD-PM, in conjunction with the Contract Administration and/or District Construction, will review the resource-loaded CPM schedule for conformance to the RFP and standard specifications. Plan submission milestones should include all standard plan development milestones outlined in WVDOH design directives or an alternate plan development method that is submitted and approved by the PM prior to the work taking place.

3.4.2 Updated or Progress CPM Schedules

The DBT will submit updated CPM schedules based on the progress of the work completed. These updates will be utilized by the WVDOH to analyze the status of the entire project and the progress completed on each activity. The CPM schedule will be utilized for basis of DBT's progress payment.

3.4.3 Released for Construction Package

The RFC package for construction package requirements are similar to PS&E requirements on Design-Bid-Build projects. When design reviews are complete and all or a section of a project is ready for construction, the DBT will submit either the final field review submission checklist or the modified review submission checklist as certification all design requirements have been met for all or a portion of the project. The APD-PM will verify and notify the Regional Design Build Construction Engineer and/or District Construction office and the DBT upon review and acceptance.

3.5 Construction

3.5.1 Construction QC Inspection and Administration

WVDOH Construction administration will follow closely the most current WVDOH policies and procedures for Design-Bid-Build projects.

3.5.2 Project Documentation

Comprehensive and accurate project documentation is an essential element for all WVDOH construction projects. Standard WVDOH guidance was established based on a traditional delivery method of Design-Bid-Build.

Under traditional Design-Bid-Build, items of work, quantities and materials are clearly defined and separated. Design-Build projects are normally awarded as a lump-sum value or a single contract line number and item number for the entire project.

It is recommended that the project item files, daily reporting and material certifications be established based on approved CPM schedule activities and groupings or other acceptable manner.

3.5.3 Item Files

Project construction files should be structured based on the approved CPM schedule activity identification. The Project Engineer/Supervisor can use additional folders as needed within the files to ensure the minimum level of item-specific documentation— including shipping documents, delivery tickets, material testing results and certification, as well as any other documentation specific to that activity.

3.5.4 Daily Reports

Inspectors will utilize the AFC plans to determine WVDOH item numbers for daily work activities. Conformance to applicable WVDOH standard specifications, supplemental specifications, and special provisions included in the contractor's proposal should documented daily for each individual WVDOH item for each CPM activity. All daily report entries will made in the current project record documentation software under the single contract line number, and additionally will include the CPM schedule activity code in the "location" field text box.

Daily construction reporting and control of work guidelines are covered in:

- Construction Manual 105.5.4.2 and Section 111
- Standards and specifications Section 105

3.5.5 Materials

All materials utilized will meet required specifications (Construction Manual 106.1.1)

Materials quantity tables for each CPM schedule work group with minimum evidence of inspection required (Construction Manual 106.1.3) will be submitted by the Contractor and accepted by the WVDOH prior to construction activities.

Material procedures and WVDOH standard specifications materials requirements for each item will be followed. This includes the contractor's quality control plans.

The Project Quality Control construction inspector will record the quantity of the material delivered and placed and document the acceptability of the material in the daily report section of the current project record documentation software. All materials incorporated into the project must meet the minimum evidence of inspection.

When materials incorporated into project fail to meet the minimum specifications, the standard material penalty assessment process will be followed. In cases where contract unit bid prices are the basis of penalty, the statewide average unit bid price at the date of letting will be used.

3.5.6 As-Builts

Contract Administration and/or District Construction should maintain and complete required sets of construction As-Builts. This should not be the responsibility of the DBT.

3.5.7 Change Orders

A significant benefit of Design-Build project delivery is the reduction of change orders. However, change orders cannot be fully eliminated. Without contractually set unit bid prices, change order costs need to be justified based on other methods. These can be historical data, project force account records, contractor cost proposals and are generally negotiated.

Some examples of needed change order requests:

- Differing site conditions
- Change in basic scope (outside RFP requirements)
- Changes in specifications or special provisions
- Contractual penalty or incentive
- Materials deficiency penalty

Upon the decision that a change order is warranted, the established procedure for the contract change order should be followed.

3.5.8 Payments

Contract Payments for Design-Build projects will be as specified in the *Project Agreement*.

If progress payments are based on the project's approved CPM schedule:

3.5.8.1 Design Invoice Review

Periodic progress payment applications for design activities will be submitted to the Construction Engineer by way of an update to the approved detailed cost loaded CPM schedule. The Construction Engineer will review it for conformance to the CPM schedule specifications and forward it to the APD-PM. If the schedule is updated properly, the schedule is forwarded to the APD-PM for verification of the updated status and progress. The APD-PM will notify the District Construction of discrepancies and/or concurrence of the activities progress. The District Construction office will generate a progress payment as a percentage of the contract lump-sum cost.

3.5.8.2 Construction and Non-Design Invoice Review

Periodic progress payment applications for all non-design activities will be submitted to the Construction Engineer as an update to the approved detailed cost loaded CPM schedule. The Construction Engineer will review it for conformance to the CPM schedule specifications and forward it to the Project Engineer/Supervisor for verification of the accuracy of the activities update and progress. The Project Engineer/Supervisor will notify the District Construction Engineer of discrepancies and/or concurrence of the activities progress. The District Construction office will pay the invoice as a percentage of the contract lump-sum cost.

3.5.9 Project Finalization

Final Inspection should include not only the final construction inspection, but also a thorough review of all required design documentation. Any missing design submittals should be added to the contractor's punch list.

Finalization of Design-Build projects will involve both the APD section and the District Construction office.

The APD section will ensure that the Department has received all required design documents and calculations. The APD section will confirm that all required design calculations have been received and are acceptable and that all required CADD files have been received and are in an acceptable format as well.

The District Construction office will certify that the DBT has met all contract, construction, and materials obligations. The project finalization process for Design-Build projects should be identical or very similar to finalization process for Design-Bid-Build projects.

Ultimately the WVDOH should have these completed products at the end of the project:

1. Completed field project built in accordance with contract requirements
2. Completed set of sealed drawings from the Engineer of Record
3. Complete set of as-built drawings

4 Appendix 'A' – Abbreviations and Definitions

ACRONYMS AND DEFINITIONS

Acronym	Description
AASHTO	American Association of State Highway and Transportation Officials
APD	Alternate Project Delivery
APD-PM	Alternative Project Delivery - Program Manager
APD-SH	Alternative Project Delivery – Section Head
ATC	Alternative Technical Concept
CEI	Construction Engineering and Inspection
CFR	Code of Federal Regulations
CPM	Critical Path Method
DBE	Disadvantage Business Enterprise
DBT	Design Build Team
DD	Design Directives
EIS	Environmental Impact Statement
E&S	Erosion and Sediment Control Plans
FHWA	Federal Highway Administration
LOI	Letter of Interest
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NTP	Notice to Proceed
PS&E	Plan, Specifications and Estimate
PPP	Public Private Partnership
PM	Project Manager
POC	Point of Contact
PRC	Project Review Committee
RFC	Release for Construction
RFP	Request for Proposals
RFQ	Request for Qualification
SHPO	State Historic Preservation Office
SOQ	Statement of Qualifications
STIP	Statewide Transportation Improvement Program
TMC	Transportation Management Center
TMP	Transportation Management Plan
TRC	Technical Review Committee
VEP	Value Engineering Proposals

DEFINTIONS

This section includes general definitions used within this manual. These definitions are intended to be for quick reference and are not intended to be an all-inclusive list of terms used in Design-Build contracting. The terms shall have the following definitions unless the context thereof indicates to the contrary.

A+B: Method of rewarding a Design-Build Team for completing a project as quickly as possible. By providing a cost for each working day, the contract combines the cost to perform the work (A component) with the cost of the impact to the public (B component) to provide the lowest cost to the public.

Amendment: An addition, deletion or modification to the provisions of the Request for Qualifications (RFQ) or Request for Proposals (RFP) made during the procurement process.

Alternative Project Delivery (APD): Procurement, contracting and delivery of a project by means other than the traditional design-bid-build process. This may include but is not limited to: A+B method, Design-Build, IDIQ, etc.

Alternative Technical Concept (ATC): A confidential process in which a Design-Build Team can propose changes to WVDOH-supplied basic configurations, project scope, design criteria or construction criteria included in a Request for Proposals (RFP). These changes submitted by Proposers to the WVDOH shall provide a solution that is equal to or better than the requirements in the RFP. ATCs provide flexibility in the design and/or construction of a particular element of the project in order to enhance innovation and achieve efficiency.

Best Value: The selection method whereby award is based on a combination of the Proposers weighted Price Proposal and evaluated technical elements found in the Technical Proposal as described in a Request for Proposals (RFP). The formula for determining the best value proposer shall be specified in the RFP. Under this selection method, WVDOH shall select the proposer who provides the best value for the Project.

Code: Official Code of West Virginia Annotated.

Commissioner: Refers to the Commissioner of the West Virginia of Highways.

Conflict of Interest: A situation where a person or entity who, because of other activities, secondary interests, or relationships with other persons or entities involved: 1) is unable or potentially unable to render impartial assistance or advice to WVDOH; 2) is or might be otherwise impaired in its objectivity in performing the contract work; or 3) has an unfair competitive advantage. Refer to 23 CFR 636.116 regarding Design-Build organization conflict of interest.

Cost Proposal: The price submitted by the Proposer to provide the required design and construction related services.

Department: Refers to the West Virginia Department of Transportation (WVDOT).

Design-Build: Defined as providing responsibility within a single contract for design, construction or alteration of a building or buildings, together with incidental approaches, structures and facilities to be constructed, in which services within the scope of the practice of professional engineering or architecture, as defined by the laws of the State of West Virginia, are performed by an engineer or architect duly licensed in the State of West Virginia and in which services within the scope of construction contracting, as defined by the laws of the State of West Virginia, are performed by a

contractor qualified and licensed under the applicable statutes. The design-build method of construction may not be used for any other construction projects, such as highway, water or sewer projects.

Design-Bid-Build: A project delivery method where design and construction are sequential and separate steps in the project development process.

Design-Build Contract: The contract between an agency and a design-builder to furnish the engineering and related services as required for a given project, and to furnish the labor, materials, and other construction of services for the same project. A design-build contract may be conditional upon subsequent refinements in scope and price and may permit the Department to make changes in the scope of the project without invalidating the design-build contract.

Design Build Team (DBT): The entity, whether person, partnership, joint venture, corporation, professional corporation, business association or other legal entity, that proposes to design and construct any project.

Engineer of Record: A licensed professional engineer on the Design-Build Team who is responsible and liable for the adequacy and safety of the design. This individual will sign and seal the Released for Construction plans, as well as revisions on construction and shop drawings.

Indefinite Delivery – Indefinite Quantity (IDIQ): Contract that provides for an indefinite quantity of supplies or services during a fixed period of time. Individual task orders are issues for specific tasks under a master contract agreement.

Instruction to Proposers (ITP): The documents, including exhibits and forms, included in the Request for Proposals (RFP) that contain directions for the preparation and submittal of information by the proposers in response to the RFP.

Letter of Interest (LOI): Correspondence required in advance of Qualifications Package and Price Proposal for One Step Low Bid projects.

Letting: The day on which Price Proposals are publicly opened, and the Apparent Successful Proposer is identified.

Low Bid: The selection method whereby WVDOH shall select the Lowest Responsive Proposer.

National Environmental Policy Act (NEPA): The National Environmental Policy Act (NEPA) [42 U.S.C. 4321 et seq.] is a United States environmental law that established a U.S. national policy promoting the enhancement of the environment. NEPA sets up procedural requirements for all federal government agencies to prepare the three levels of environmental documentation that include Categorical Exclusion (CE), Environmental Assessment (EA)/Finding of No Significant Impact (FONSI), and an Environmental Impact Statement (EIS)/Record of Decision (ROD).

Non-Responsive: Designation by WVDOH of a Proposer's failure to provide all required information identified in the Request for Qualifications (RFQ) or Request for Proposals (RFP).

One-on-One Meeting: A meeting between WVDOH and a Proposer conducted during the Request for Proposals (RFP) phase to discuss the RFP, scope of work and potential ATCs. If one-on-one meetings are to be conducted on a project, then the Instruction to Proposers (ITP) section of the RFP will include one-on-one meeting instructions.

One-Step, Low Bid: The selection method whereby Proposers submit to WVDOH a Price Proposal and Technical Proposal (which includes a Proposer's qualifications package) in response to the Request for Proposals (RFP). Under this selection method, WVDOH shall select the lowest qualified bidder.

Point of Contact: A designated WVDOH person or representative who is responsible for an activity.

Project Review Committee: Chaired by the Commissioner (or designated representative) and includes selected top-level staff. Meets periodically to review programs and/or individual projects for inclusion in the program. Also considers and acts on requested major revisions, as well as other matters that may have a financial impact or an effect on production.

Preliminary Design: The general project location and design concepts, including but not limited to preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the environmental review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the environmental review process.

Prequalification: The process for determining whether a professional consultant or contractor is fundamentally qualified to perform a certain class of work or project. All consultants and contractors must be prequalified by WVDOH to pursue a project. Prequalification may be based on financial, management and other types of qualitative data.

Procurement: Buying, purchasing, renting, leasing, leasing with an option to purchase, or otherwise acquiring any supplies, service, or construction. It also includes functions that pertain to the obtaining of any supply, service, or construction, including the description of requirements, selection and solicitation of sources, preparation and award of a contract, and all phases of contract administration.

Proposer: A Design-Build Team that responds to a WVDOH -issued Design-Build solicitation. An announcement by WVDOH of a Design-Build project. The collection of information, data and documents included as part of the Request for Proposals (RFP), including but not limited to preliminary design, planning documents, studies, reports and design files for the Project.

Request for Proposals (RFP): All documents, whether attached or incorporated by reference, utilized for soliciting proposals. The RFP is the only solicitation utilized by WVDOH in the One-Step Low Bid selection method. The RFP is the second phase utilized by WVDOH for the Two-Step Low Bid and Best Value selection methods.

Released for Construction Plans and Documents: Documentation that is prepared by the Design-Build Team, accepted by WVDOH, is in compliance with the executed contract, and is used by the Design-Build Team to build the project. Changes made by the Design-Build Team after WVDOH issues a designated date of acceptance shall be reviewed by WVDOH.

Request for Qualifications (RFQ): All documents, whether attached or incorporated by reference, utilized by WVDOH for soliciting interested Proposers to apply for Prequalification, including instruction for submitting an SOQ, evaluation criteria and minimum qualifications required of a Design-Build Team. The RFQ is the first step of two utilized by WVDOH for the Two-Step Low Bid and Best Value selection methods.

Responsive Bidder or Proposer: An entity or person who has submitted a bid or proposal which conforms in all material respects to the invitation for bids on Request for Proposals.

Responsive Proposal: A proposal that meets minimum requirements set forth in the RFP.

Right-of-Way (ROW): All land under the jurisdiction of and whose use is controlled by WVDOH.

Shortlist: The narrowing of the field of Proposers through ranking the most highly qualified Proposers who have responded to an RFQ. Only Shortlisted Proposers will be invited to submit a Technical and Price Proposal in response to a Request for Proposals (RFP). Utilized in the Two-Step Low Bid and Best Value selection methods.

Stipend: A monetary amount paid to the responsive, but unsuccessful Proposers who submit Technical Proposals in response to the Request for Proposals (RFP). In consideration for paying the Stipulated Fee as a payment for work product, WVDOH may use any ideas or information contained in the Technical Proposals in connection with the contract awarded for the Project, or in connection with a subsequent procurement on the Project or on any other WVDOH project without obligation to pay any additional compensation to the unsuccessful Proposers.

Statement of Qualifications (SOQ): Descriptive information that meets the requirements set forth in the Request for Qualifications (RFQ), which is submitted by Proposers and evaluated by WVDOH in order to identify qualified Proposers for the Project. For each consultant and contractor, the SOQ must include, at a minimum, documentation that the Proposer is capable of satisfying the scope of services of the project, as well as a copy of the WVDOH issued Certificate of Qualification.

Technical Proposal: A document provided by Proposers, as required per the Request for Proposals (RFP), which contains design solutions and other qualitative factors that are provided in response to the RFP document.

Technical Review Committee (TRC): The group of individuals who have education and experience in the design, construction, operation, administration, and finance requirements of the project and users of the project selected by the agency to review, evaluate and score the statement of qualifications and invitation for proposal.

Two-Step Low Bid (All Qualified): The selection method whereby the first phase consists of selecting qualified Proposers who submit a responsive SOQ in response to the RFQ. The RFQ sets the minimum standard and then allows anyone that passes the standard to compete for the project. The second phase consists of Proposers submitting a Price Proposal and Technical Proposal in response to the RFP. Under this selection method, WVDOH shall select the Apparent Successful Proposer.

Two-Step Low Bid (Shortlist): The selection method whereby the first phase consists of selecting qualified Proposers who submit a responsive SOQ in response to the Request for RFQ. The TRC evaluates each Proposer's SOQ to determine a Shortlist of up to five (5) of the most qualified Proposers. The second phase consists of Proposers submitting a responsive Price Proposal and Technical Proposal in response to the RFP. Under this selection method, WVDOH shall select the Apparent Successful Proposer.

Two-Step Low Bid Best Value (Value-based): A procurement method where Project Specific evaluation Criteria are outlined in the RFP and evaluated along with price in the selection process.

5 Appendix ‘B’ – Design-Build Suitability Assessment

WVDOH
Design-Build Suitability Assessment
FOR:

Project Name:	
District:	
County:	
Route:	
Date:	

[Insert Location Map, if available]

Design-Build Suitability Assessment – Contents and Directions

Pages 1-3 General Project Information, Assessment Results and Findings

- Page 1- Cover Sheet
- Page 2- Summary of Findings of Suitability Assessment and Results of Analysis
- Page 3- General Project Information – as much general project information as possible to be compiled before performing Design Build Suitability assessment

Page 4 – Specify Project Goals, Determine if "deal breaker" issues exist and Overview of SWOT analysis.

Pages 5-11 – SWOT analysis – Score each of 7 factors in five separate areas.

Page 12 - SWOT summary - Enter the project specific relative importance to the WVDOH for each 7 factors assessed.

Page 13 – 17 – Initial Risk Identification – **IF** project is determined to be candidate for Design-Build delivery, complete the initial risk identification and allocation summary.

FORM RESET BUTTON

Design-Build Suitability Ranking Summary:

Opportunities	Relative Importance (%)	Weighted Total
Project Delivery Schedule		0.0
Innovation		0.0
Level of Design		0.0
Project Delivery Cost		0.0
Quality		0.0
Staff Experience		0.0
Marketplace Conditions, Competition and Design Build Team		0.0
Total		0

Design-Build Suitability Range/Assessment		
Risks properly assigned and/or mitigated	**Excellent**	80-100
Some mitigation necessary to ensure successful delivery	**Good**	60-80
Design-Build delivery is risky; another delivery method may be more suitable	**Fair**	40-60
Another delivery method is suitable	**Poor**	Below 40

Notes and recommendations:

- Based on the above score, Design-Build could be a(n) candidate to achieve WVDOH delivery goals. Critical activities for Design-Build procurement/implementation include:

- As part of the RFP package, WVDOH should consider providing the below project specific additional information not required typically required per the APD Design Build Manual, but will provide added benefit to the WVDOH and the project :

- Which selection method(s) would likely achieve Department's goals for this project:

One Step Low Bid	
Two Step Low Bid	
Two Step Best Value	

1. GENERAL PROJECT INFORMATION -

State Project No. ==========>		County ==========>	
District ==========>		Route ==========>	
St/Rt/Br Name ==========>		Beg MP ==========>	
Project Begins ==========>		Miles ==========>	
Project Ends ==========>		ADT (year) ==========>	
FA Sys (IANOX) ==========>		Sch Bus Rt? ==========>	
Func Sys (XTFSDPU) ==========>		Mail Rt? ==========>	
Rural / Urban / Both ==========>		Comm Rt? ==========>	

EXISTING

ROADWAY:	Traveled Way						Shoulders		
	No. of Lanes	Divided?	W (ft)	Surf. Type	Condition	W (ft.)	Surf. Type	Condition	
>									
STRUCTURE:	Bridge No (CO-Rt-MP)		W (ft)	L (ft)	Type	Posted limit	Detour length	Condition	Rating
>									
>									
If Jointly Owned, show Co-owner >									
RR GRADE CROSSING:		Name of RR>				DOT Crossing No>			
		No of Tracks >				Existing Protection >			
OTHER ======>									

PROPOSED PROJECT

ROW

Acquisitions / Easements? ==========>
Encroachments? ==========>
Description ==========>
Businesses Affected ==========>
Residences Affected ==========>

Utilities

Affected / On Exsting ROW? ========>
Affected / Off Existing ROW? =======>
Description==========>
Relocation at Util Expense >
Relocation at DOH Expense>

Environmental

404 Permit Needed?==========>
City Agreement Needed? ==========>
Other-state Agree Needed? ========>
Other Permits / Agree Needed? ======>
4f Involvement? ==========>
Traf Control Devices Needed? ==>
MCS&T Work Needed? ========>
If yes, describe ======>

Type Environmental Action Needed:
Programmatic CE,CE,EA ,EIS ==>

DESCRIPTION OF WORK =>

PHASE	COST ESTIMATE
DESIGN	
ROW	
CONSTRUCTION	

2. **Specify Project Goals:**

Primary Delivery Goals	
Secondary Delivery Goals	

3. **Design -Build Deal Breaker Issues – If ANY are NO -then project is not suitable**

a. Legal & Statutory Requirements: Considering the project characteristics (type and size), does West Virginia current regulation allow for the use of Design Build contracting?

-

b. Agency Resources and Experience: Considering available WVDOH resources and/or WVDOH's access to Design Build consultants, can this project be effectively managed as a Design Build contract?

-

c. Project Funded: Considering WVDOH's funding resources, can this project receive funding in foreseeable future, in order to be delivered using a Design Build contract?

-

d. Leadership Support: Does WVDOH's leadership support the utilization of Design Build contracting for this project?

-

e. Design Build Marketplace Conditions: Considering available Design Build expertise in West Virginia, and WVDOH's potential access to qualified Design Build Teams, can this project be delivered using a Design Build contract?

-

f. **SWOT Analysis**

a. SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is used to determine the appropriateness of Design Build with respect to specific factors. These factors are given scores based on the importance of each factor. SWOT analysis addresses the following issues:
   - Strengths: Characteristics of Design Build that give it an advantage with respect to the issue under consideration
   - Weaknesses (or Limitations): Characteristics of Design Build that create disadvantages with respect to the issue under consideration;
   - Opportunities: Chances to improve performance (e.g. achieve WVDOH's project goals; greater benefits; higher efficiencies) under a Design Build contract;
   - Threats: Elements that could result in for WVDOH with Design Build contracting

b. Strengths and Weakness are scored on a 0-10 scale with Strengths receiving a positive score and Weaknesses a negative score.

c. Opportunities and Threats are scored on a 0-5 scale with Opportunities receiving a positive score and Threats a negative score.

d. The 4 scores are totaled, 15 points are added, and its sum is divided by 30 (range of -15 to 15) to determine the strength of Design-Build delivery for that factor

5. **SWOT Analysis for PROJECT DELIVERY SCHEDULE - the overall project schedule from planning through design phase, construction phase and open to traffic.**

Strengths Score (Scale 0 to 10)	

- The single point of responsibility (i.e., one contract) reduces the procurement time
- Project delivery can be shortened due to concurrent design and construction processes
- The contractor's input into the design process helps the Design-Build (DB) team establish amore realistic project schedule
- The project schedule will be contractually established in DB proposals before detailed designplans are established
- The collaboration and coordination between the designer and the contractor helps the DBteam secure a project schedule before detailed design completion
- It reduces the chances of project delays caused by disputes between WVDOH and the DB Team

Weaknesses Score (Scale 0 to -10)	

- The Request for Proposal (RFP) development process can become lengthy due to the time required to define technical requirements and expectations
- Establishing Quality Assurance Programs for design and construction that are understood and accepted by all stakeholders is time-consuming WVDOH and other stakeholders need to understand and commit to an expeditious review of design

Opportunities Score (Scale 0 to 5)	

- It enables WVDOH to maximize the use of available funds
- It enables WVDOH to issue RFQ and RFP, award the contract and issue NTP with preliminarydesign prior to conclusion of NEPA
- It enables WVDOH to allow the DB team to proceed to final design and construction for anyportion of the project for which NEPA is complete
- It enables WVDOH to shift the schedule risk to the DB team
- It enables WVDOH to fast-track projects that are behind schedule in the PDP
- It enables the contractor to work closely with the designer to procure long-lead items early inthe design process
- It enables the contractor to start work on early construction activities, such as constructionmobilization, before the detailed design completion
- It enables the contractor to start delivery of the project in multiple phases
- It enables the contractor to start construction on portion of the project prior to final Right-of-Way (ROW), and utilities agreements
- If authorized, WVDOH can utilize an A-plus-B contracting method to include the project delivery schedule in selection of the DB team
- It enables use of expedited construction process which minimizes impact on the public
- WVDOH may use the DB team's expertise in ROW acquisition and utility coordinationservices to expedite project delivery

Threats Score (Scale 0 to -5)	

- Undefined events or conditions found afterprocurement, but during design, can impact schedule
- The DB team's internal conflicts can adversely impact the project delivery schedule
- By defining the project scope with clear definitions, requirements and expectations may delay project procurement
- Development of a comprehensive risk management plans (risk identification, assessment, allocation and mitigation) may delayproject procurement

6. **SWOT Analysis for INNOVATION the application of [new] methods, techniques and technologies in order to overcome project complexities, expedite the project delivery, reduce project costs and/or enhance quality.**

Strengths Score (Scale 0 to 10)	

o Collaboration between the designer and the contractor helps the Design-Build team identify and optimize innovative designs and construction methods or techniques

o The single point of responsibility and early team integration enable the DB team to smoothly and effectively implement innovative solutions

o Constructability reviews and Value Engineering (VE) are inherent in process

o Best Value procurement provide opportunity for DB teams to showcase innovation through Technical Proposal and ATCs

Weaknesses Score (Scale 0 to -10)	

o It requires desired solutions to complex projects to be well-defined through technical requirements and expectations

o Qualitative aspects of design (aesthetics) are difficult to define and evaluation in low bid contracting

o Cost and time constraints on the designer inhibits innovation

o Innovation is limited for simple and less complex projects

Opportunities Score (Scale 0 to 5)	

o It enables WVDOH to effectively deliver complex projects such as projects with a number of primary features tightly interrelated and/or closely located, projects with construction staging issues

o It enables WVDOH to benefit from both cost-saving and quality-improving innovative solutions

o It enables WVDOH to use innovative design and construction methods or techniques, in order to minimize the negative impact on the public

o It enables WVDOH to capitalize on the DB Team's access to unconventional mechanisms for the public outreach and engaging the people and other stakeholders in the project

Threats Score (Scale 0 to -5)	

o Innovation can be limited if the contractor does not allow the designer to have a legitimate seat at the table with the owner (i.e., the contractor relegates the designer to a back-office design role only)

o Some innovative solutions may not be implementable with the time and budget limits on the project

o Prescriptive NEPA documents may limit WVDOH's flexibility for accepting innovative design solutions

o The DB team may enhance innovation only from the cost standpoint and not necessarily from the quality standpoint

o Quality Assurance/Quality Control programs for innovative designs and construction methods or techniques are difficult to define in RFPs

o There is a risk that innovative solutions do not perform as anticipated and therefore, delay the project delivery

o Innovation may be limited to the capability and comfort of the DB team selected for the project

7. **SWOT Analysis for LEVEL OF DESIGN - is the percentage of design completion at the time of delivery procurement.**

Strengths Score (Scale 0 to 10)	

- It does not require complete design plans before awarding the project to the Design-Build team. The contractor involvement in early design enhances constructability.
- The detailed design specifications are not required, in order to communicate the design to potential Design-Build teams (e.g., 10-30%complete design is often satisfactory to procure the DB projects)
- The contractor involvement in the early design enhances constructability (e.g., the collaboration and coordination between the designer and the contractor enhances the opportunity to improve the constructability)
- The Design-Build team accepts the liability for design errors/omission
- The continuous execution of design and construction enhances the control and oversight over the final product

Weaknesses Score (Scale 0 to -10)	

- The definitions, requirements, and expectations (including the project scope and performance expectations) should be clearly defined in the RFP since they will be the basis for the contract
- If design is too far advanced, it will limit the advantages of Design-Build
- It is imperative to establish Quality Assurance Programs for design and construction that are understand and accepted by all stakeholders

Opportunities Score (Scale 0 to 5)	

- It enables WVDOH to transfer design risks to the DB team
- Flexibility in the project scope and incomplete design plans allow the DB team to develop of innovative designs
- It enables WVDOH to advance the design only to the level necessary for defining the contract requirements and allocating the risks
- Not fully-developed design plans permit the utilization of ATCs proposed by the DB team
- The continuous execution of design and construction enhances the control and oversight over the project
- The collaboration and coordination between the designer and the contractor enhances the opportunity to reduce the number of changes orders
- The collaboration and coordination between the designer the contractor reduces the possibility of errors and omissions

Threats Score (Scale 0 to -5)	

- WVDOH's requirements and expectations may not be met if they are not adequately defined in the RFP
- By relinquishing the control over design details, WVDOH may not be able to achieve some of its quality objectives
- It can reduce the design standardization across WVDOH's projects
- There is a risk that the design plans are "defective" and cause a delay in the project delivery

8. **SWOT Analysis for PROJECT DELIVERY COST is the overall project cost from planning through design phase, construction phase and open to traffic.**

Strengths Score (Scale 0 to 10)	

- The collaboration between the designer and the contractor helps the DB team identify and optimize cost-efficient solutions to project goals
- The project cost is contractually established in DB proposals before detailed design plans are completed
- The collaboration between the designer and the contractor involvement in early design and constructability reviews moderate the cost
- The single point of responsibility and early team integration create the potential for lower average cost growth
- The single point of responsibility (i.e., one contract) reduces WVDOH's procurement cost Collaboration between the designer and the contractor helps the Design-Build team identify and optimize innovative designs and construction methods or techniques

Weaknesses Score (Scale 0 to -10)	

- It is difficult to accurately estimate the lump sum cost when detailed design plans are not complete
- The DB team may use high contingency when detailed design plans are not 100% complete
- If design is too far advanced, there is limited potential for cost savings
- The project delivery cost increases when stipends are paid to the shortlisted Design-Build teams

Opportunities Score (Scale 0 to 5)	

- The single point of responsibility (i.e., one contract) enables WVDOH to reduce the contract administration costs
- Risk transfer for constructability related to cost increases to the DB team

Threats Score (Scale 0 to -5)	

- Poor risk allocation can result in high contingencies
- The DB team's internal conflicts can adversely impact the project delivery cost
- Increased proposal cost may limit the number of Design-Build teams participating in the bidding process
- The limited number of qualified DB teams in the market place can limit the potential for receiving price competitive proposals
- Cost savings from innovative design and construction methods or technique may not be transferred to WVDOH
- Not selecting the lowest bidder without properly communicating assessment criteria and proposal evaluation process may result in negative outcomes, such as bid protest, public outcry and industry resistance

9. SWOT Analysis for QUALITY is the ability of the delivered project to meet or exceed WVDOH's requirements and performance expectations

Strengths Score (Scale 0 to 10)	

- o It provides WVDOH with the capability to go beyond their normal level of quality in transportation projects
- o It reduces construction engineer and inspection costs to WVDOH since these quality control activities and risks are transferred to the Design-Build Team
- o Quality Control System is enhanced through the continuous involvement of designer throughout the projects
- o While Quality Control is the Design-Build team's responsibility, Quality acceptance remains WVDOH's responsibility

Weaknesses Score (Scale 0 to -10)	

- o It requires developing extensive systems for design acceptance/approval and construction acceptance (verification)
- o It requires establishing, understand and accepting a Design Quality Assurance Program and a Construction Quality Assurance Program by all stakeholders
- o It strikes at the foundation of the traditional Quality Assurance/Quality Control roles through the combination of engineering and construction

Opportunities Score (Scale 0 to 5)	

- o It provides an opportunity for WVDOH to maintain the same or higher level of quality while reducing the overall project cost and duration
- o It provide an opportunity for WVDOH to evaluate Quality Control Systems for the design and construction, which are described by the Design-Build Teams in their proposals
- o Ability to shortlist allows the Department to only accept bids from more qualified DB teams with a history of high quality performance

Threats Score (Scale 0 to -5)	

- o Contractor may drive designer to reduce costs at risk of quality
- o The Design-Build team may enhance innovation only from the cost standpoint and not necessarily from the quality standpoint
- o Quality Assurance Programs and Quality Control Systems for the design and construction are difficult to define in the RFP
- o Quality Assurance will become problematic if the Design-Build team is assigned the responsibility to perform any acceptance and verification function
- o By relinquishing the control over design details, WVDOH may not be able to achieve its quality objectives
- o Checks and balances in design and construction Quality Assurance Programs may not be performed adequately

10. SWOT Analysis for STAFF EXPERIENCE

Strengths Score (Scale 0 to 10)	

- The single point of responsibility reduces WVDOH's administrative burden on WVDOH staff

Weaknesses Score (Scale 0 to -10)	

- It requires the commitment of WVDOH management and technical resources and expertise at critical points in the process (i.e., RFP development, design review, etc.)
- It requires the concurrent commitment of design and construction resources to administer the procurement and oversee the implementation of the project
- It may require changing roles of the current WVDOH staff
- It may require additional training of the current WVDOH staff
- It may require additional consultant support
- It may require additional staff with Design-Build oversight experience
- It may require experience staff for risk management (identification, assessment, allocation and mitigation)

Opportunities Score (Scale 0 to 5)	

- It provides WVDOH an opportunity to grow by learning/refining the DB delivery process
- It enables WVDOH to collaborate with the DB industry to delivery projects, which require specialty skills for design or construction that may not be available inside WVDOH

Threats Score (Scale 0 to -5)	

- It requires WVDOH willingness to accept the required culture shift for Design-Build project delivery systems
- WVDOH may have to dedicate considerable staff resources during the procurement phase
- If WVDOH staff have limited experiences in similar projects, there will be challenges to administer the procurement and oversee the implementation of the project

11. SWOT Analysis for MARKETPLACE CONDITIONS, COMPETITION and DESIGN BUILD TEAM EXPERIENCE

Strengths Score (Scale 0 to 10)	

- Teaming of the designer and the contractor can result in added technical value

Weaknesses Score (Scale 0 to -10)	

- In turbulent market conditions, early commitment to a price may increase the costs for WVDOH
- The need for Design-Build qualifications may limit the competition
- It may be difficult for WVDOH to find Design-Build teams with adequate experience with similar projects
- WVDOH heavily relies on the selected Design-Build team experience and expertise

Opportunities Score (Scale 0 to 5)	

- Straight forward project can expand potential DB teams and increase participation
- Best Value procurement enables WVDOH to balance qualifications and cost in the Design-Build procurement

Threats Score (Scale 0 to -5)	

- The gap between owner experience and DB team experience can create conflict
- The gap between the designer and the contractor experience can create internal conflict
- The limited number of qualified Design-Build teams in the marketplace can limit the potential for receiving price competitive proposals
- The use of the Low Bid selection method does not necessarily lead to the selection of the best DB team

	Relative Importance			Total Score	Factor Score
Project Delivery Schedule		**Strength (0-10)**	**Weakness (0 to -10)**	0	0.50
		Opportunities (0 to 5)	**Threats (0 to -5)**		
Innovation		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		
Level of Design		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		
Project Delivery Cost		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		
Quality		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		
Staff Experience		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		
Marketplace Conditions, Competition and Design-Build team experience		**Strength (1-10)**	**Weakness (-1 to -10)**	0	0.50
		Opportunities (1 to 5)	**Threats (-1 to -5)**		

Low Risk
Medium Risk
High Risk

Clear Worksheet

Project Risk Assessment for Project:

Federal Project Number:
State Project Number:
Project Name:

12. Initial Risk Identification and Allocation

Risks are present in any project**. IF** this project has been identified as a Good Candidate for Design-Build delivery. A Risk Allocation Matrix is provided below as a preliminary assignment of generic risks to the project. A more detailed risk analysis should be completed prior to Requests for Proposals to properly allocate all known risks at that time. The below template is intended to give a high-level risk allocation assessment and is prepared as a guide to identify risks and opportunities to mitigate. It is based on the general assumption of West Virginia's current lowest qualified bid requirement for Design-Build projects.

Scope Issues		DOH	Shared	DB Team	Comments/Mitigation Strategy
	Define project and scope	☐	☐	☐	
	Establish performance requirement	☐	☐	☐	
	Manage/communicate changes in scope	☐	☐	☐	
	Incorporate flexibility in project scope	☐	☐	☐	

Environmental Issues		DOH	Shared	DB Team	Comments/Mitigation Strategy
	Define initial project environmental impacts	☐	☐	☐	
	Define parameters for impacts	☐	☐	☐	
	Conduct environmental investigation	☐	☐	☐	
	Acquire environmental permits	☐	☐	☐	
	Manage/implement environmental mitigation process	☐	☐	☐	
	Ensure environmental compliance	☐	☐	☐	
	Mitigate known hazardous waste	☐	☐	☐	
	Mitigate unknown/non-defined hazardous waste	☐	☐	☐	
	Obtain environmental approvals – construction related	☐	☐	☐	
	Mitigate wetlands / stream / habitat issues	☐	☐	☐	
	Mitigate permanent noise issues	☐	☐	☐	
	Address archaeological, cultural, historical discoveries	☐	☐	☐	
	NEPA compliance	☐	☐	☐	
	Stream Buffer Variance	☐	☐	☐	
	MS4	☐	☐	☐	

Design Issues		DOH	Shared	DB Team	Comments/Mitigation Strategy
	Conduct preliminary surveys/develop base map	☐	☐	☐	
	Conduct Geotech investigation - initial borings based on costing plans/original bridge layouts	☐	☐	☐	
	Conduct Geotech investigation - initial borings based on proposal	☐	☐	☐	
	Establish/define initial subsurface conditions	☐	☐	☐	
	Perform initial project geotechnical analysis based on preliminary design	☐	☐	☐	
	Develop proposal specific geotechnical analysis/report	☐	☐	☐	
	Hydraulic Report	☐	☐	☐	
	Ensure plan conformance with regulations/guidelines/RFP	☐	☐	☐	

Low Risk
Medium Risk
High Risk

Clear Worksheet

Project Risk Assessment for Project:

Federal Project Number:
State Project Number:
Project Name:

12. Initial Risk Identification and Allocation

Risks are present in any project**. IF** this project has been identified as a Good Candidate for Design-Build delivery. A Risk Allocation Matrix is provided below as a preliminary assignment of generic risks to the project. A more detailed risk analysis should be completed prior to Requests for Proposals to properly allocate all known risks at that time. The below template is intended to give a high-level risk allocation assessment and is prepared as a guide to identify risks and opportunities to mitigate. It is based on the general assumption of West Virginia's current lowest qualified bid requirement for Design-Build projects.

	Ensure plan accuracy	☐	☐	☐	
	Establish design criteria	☐	☐	☐	
	Lighting design	☐	☐	☐	
	Ensure conformance to design criteria	☐	☐	☐	
	Perform design review	☐	☐	☐	
	Conduct design QC	☐	☐	☐	
	Conduct design QA	☐	☐	☐	
	Communicate changes in design criteria	☐	☐	☐	
	Manage hazardous waste site/contaminated materials	☐	☐	☐	
	Conform with changes in design criteria	☐	☐	☐	
	Pavement design	☐	☐	☐	

Right of Way Issues		**DOH**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Establish ROW Limits	☐	☐	☐	
	Acquire ROW	☐	☐	☐	

Local Agency, Utility, Railroad, other Stakeholders Issues		**DOH**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Establish initial utility locations (SUE QL-B / conditions/ MOU)	☐	☐	☐	
	Identify initial utility impacts from preliminary design	☐	☐	☐	
	Define required utility relocations from preliminary design	☐	☐	☐	
	Relocation of utilities included in the contract	☐	☐	☐	
	Modify agreement with privately-owned public utility based on final design	☐	☐	☐	
	Modify agreement with public utility based on final design	☐	☐	☐	
	Mitigate damage to utilities under construction	☐	☐	☐	
	Verify utility locations/conditions	☐	☐	☐	
	Coordinate with utility relocation efforts during contract	☐	☐	☐	
	Address utility owner/third party caused/related delays	☐	☐	☐	
	Railroad coordination (pre-let)	☐	☐	☐	
	Railroad coordination (post-let)	☐	☐	☐	
	Prevent delays caused by utility/third party involvement issues	☐	☐	☐	
	Prevent utility/third party delays resulting from proposal/modified design	☐	☐	☐	
	Obtain third party agreements (fed, local, private, etc.)	☐	☐	☐	

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	Coordinate with third parties under agreement	☐	☐	☐	
	Coordinate with other projects	☐	☐	☐	
	Coordinate with adjacent property owners	☐	☐	☐	
	Identify/obtain local agency impacts/permits/requirements	☐	☐	☐	

Contracting and Procurement Issues		**DOH**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Address issues related to contract language (warranties, bonding, etc.)	☐	☐	☐	
	Prevent delays in ad/bid/award process (addenda, protests, etc.)	☐	☐	☐	
	Ensure competitive procurement	☐	☐	☐	
	Avoid delays in procurement of specialty materials or equipment	☐	☐	☐	
	Procure long lead equipment or items as soon as possible	☐	☐	☐	
	Ensure contractor's compliance with performance expectations	☐	☐	☐	

Construction		**DOH**	**Shared**	**DB Team**	**Comments/Mitigation Strategy**
	Address traffic control and staging issues	☐	☐	☐	
	Acquire construction permits	☐	☐	☐	
	Ensure safety / conduct safety QA	☐	☐	☐	
	Establish/comply with traffic control requirements	☐	☐	☐	
	Address change orders / claim	☐	☐	☐	
	Plan/coordinate construction staging issues	☐	☐	☐	
	Ensure construction quality/workmanship	☐	☐	☐	
	Comply with project schedule	☐	☐	☐	
	Control/ensure materials quality	☐	☐	☐	
	Maintain materials documentation	☐	☐	☐	
	Ensure material availability	☐	☐	☐	
	Develop/comply final construction/materials QC/QA plan	☐	☐	☐	
	Conduct construction/materials QA	☐	☐	☐	
	Conduct construction QC	☐	☐	☐	
	Conduct construction QA/procedural compliance auditing	☐	☐	☐	
	Conduct construction IA testing/inspection	☐	☐	☐	
	Perform construction staking	☐	☐	☐	
	Carry out erosion control	☐	☐	☐	

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	Perform spill prevention	☐	☐	☐	
	Prevent accidents within work zone / liability	☐	☐	☐	
	Avoid third party damages	☐	☐	☐	
	Manage traffic in construction zones	☐	☐	☐	
	Prevent damage to utilities under construction	☐	☐	☐	
	Avoid false work/rework	☐	☐	☐	
	Develop shop drawings	☐	☐	☐	
	Mitigate equipment failure/breakdown	☐	☐	☐	
	Manage community relations	☐	☐	☐	
	Ensure performance of defined mitigation measures	☐	☐	☐	
	Provide warranty	☐	☐	☐	
	Coordinate street/ramp closures	☐	☐	☐	
	Develop construction staging plans	☐	☐	☐	
	Comply with DBE requirements	☐	☐	☐	
	Assume long term ownership/final responsibility	☐	☐	☐	