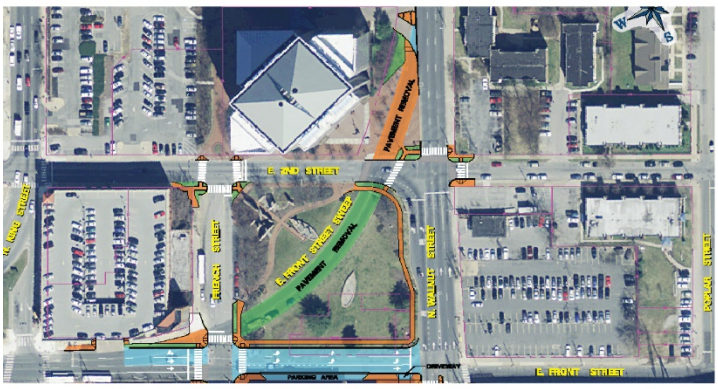
DelDOT

PROJECT DELIVERY
SELECTION PROCESS



INTRODUCTION

This document provides a formal approach for selecting project delivery methods for highway projects. The information below lists the project delivery methods followed by an outline of the process, instructions, and evaluation worksheets for DelDOT staff and project team members to utilize either individually or optimally through a workshop format. By using these forms, a brief Project Delivery Selection Report can be generated for each individual project that is under consideration. The primary objectives of this tool are to:

1. Present a structured approach to assist DelDOT in making project delivery decision
2. Determine if there is a dominant or optimal choice of a delivery method for a project
3. Provide documentation of the selection decision.

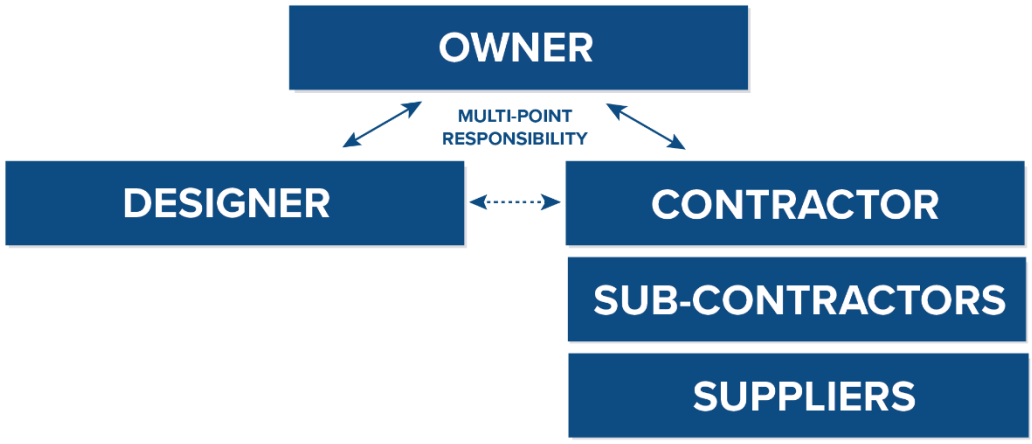
BACKGROUND

The project delivery method is the process by which a construction project is comprehensively designed and constructed including project scope definition, organization of designers, constructors and various consultants, sequencing of design plan development and construction operations, execution of design and construction, start up and closeout. Thus, the different project delivery methods are distinguished by how the agency, designers, and contractors form contracts and the technical relationships that evolve between parties to those contracts. Currently, there are several types of project delivery systems available for publicly funded transportation projects. The most common systems are Design-Bid-Build (DBB), Design-Build (DB), and Construction Manager/General Contractor (CM/GC). No single project delivery method is appropriate for every project. Each project must be examined individually to determine how it aligns with the attributes of each available delivery method.

PRIMARY DELIVERY METHODS

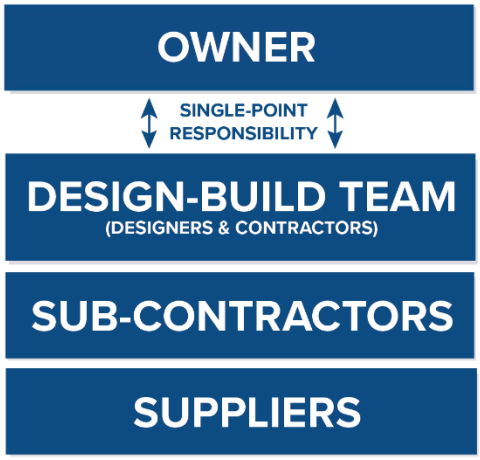
Design-Bid-Build is the traditional project delivery method in which an agency designs or retains a designer to furnish complete 100 % design services/specifications and then advertises and awards a separate construction contract based on the designer's completed construction documents. In DBB, the agency "owns" the details of design during construction and, as a result, is responsible for the cost of any errors or omissions encountered in the Owner's construction documents.

FIGURE 1. Design-Bid-Build Structure



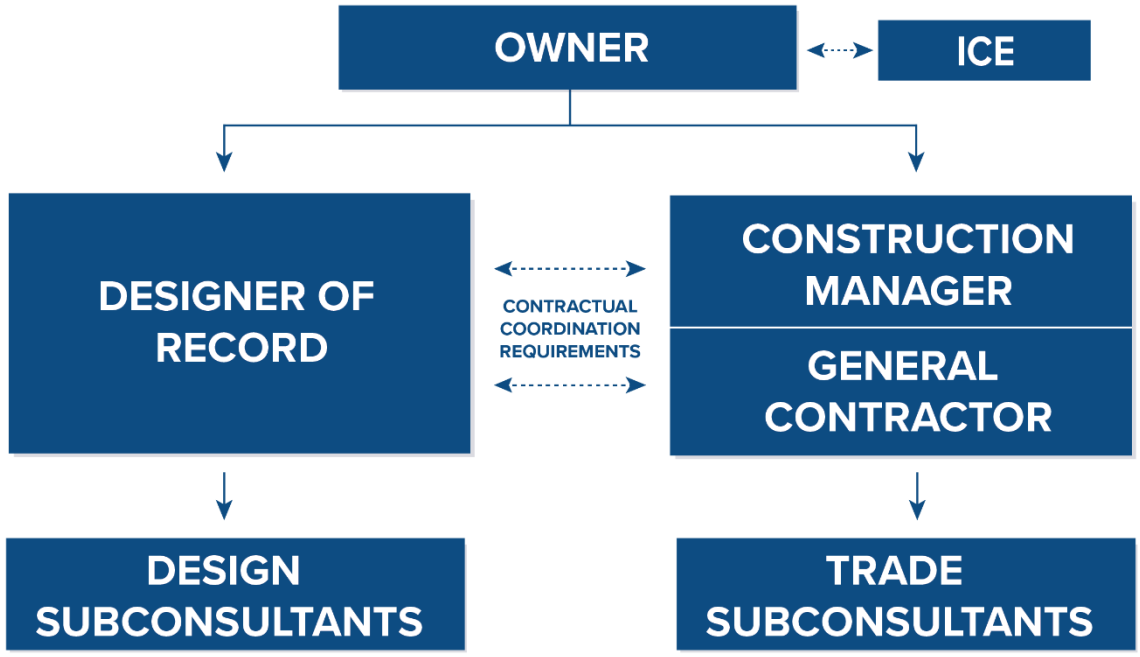
Design-Build is a project delivery method in which the agency procures both design and construction services in the same contract from a single, legal entity referred to as the design-builder. The owner prepares 30 % design plans and then utilizes the Request for Qualifications (RFQ)/Request for Proposals (RFP) procedures to select the design-builder; who now control the details of the final design and is responsible for the cost of any errors or omissions encountered in construction.

FIGURE 2. Design-Build Structure



Construction Manager / General Contractor is a project delivery method in which the agency contracts separately with a designer and a construction manager. The agency can perform the design or contract with an engineering firm supplying the design. The agency selects a construction firm at about 50% design to provide detailed input on materials, constructability review, and phasing coordination. CM/GC brings the builder into the design process at a stage where definitive input can have a positive impact on the project design and delivery. The agency will work with the designer and contractor to build to 100% design and agree to a Proposed Construction Price (PCP). The significant characteristic of this delivery method is a contract between an agency and a construction manager who will be at risk for the final cost and time of construction. Construction experience/Contractor input into the design development and constructability of complex projects are the major reasons an agency would select the CM/GC method. For larger more complex projects and Independent Cost Estimator (ICE) may be brought on by the owner to supply third-party oversight and guidance for evaluating the price components of the process.

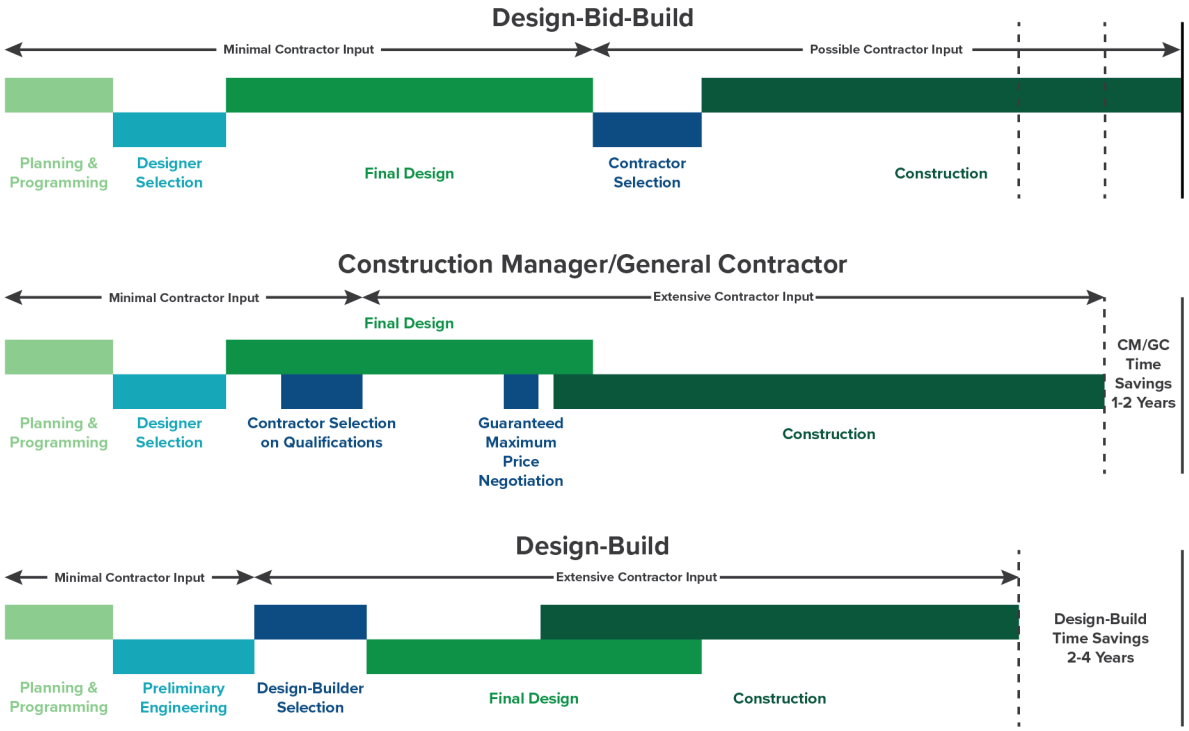
FIGURE 3. CM/GC Structure



Other Delivery Methods that owners sometimes consider include Progressive Design Build, Construction Management -at Risk (CMAR) and Public Private Partnerships (P3). *For the purpose of this document, our analytical focus is on the Primary Delivery Methods.*

On the next page, Figure 4 shows a typical Schedule comparison of the three methodologies:

FIGURE 4. Design-Build Delivery Schedule Comparisons



The times and durations may vary depending in on the complexity of the project and the resources and impacts affected by the project. Nevertheless, the guiding principle is that with Alternative Delivery, the Contractor/Constructability input and creativity is brought into the process much sooner by the selected Contracting Team versus input after bid opening by the Low Bidder.

DELDOT TEAM PARTICIPATION

Using the project delivery selection matrix is only as good as the people who are involved in the selection workshop. Therefore, it is necessary to have a defined collection of individuals to take part in the selection of the delivery method. The selection team should include the PD/Bridge Section project manager, Construction Manager, the project engineer, a representative of the procurement/contracting office, and any other DelDOT staff that have a technical involvement with the project. Other Stakeholders could be included as well such as Federal Highway Administration, MPOs, etc., where appropriate. In addition, the selection team should be educated in the types of project delivery methods that are under consideration; either advanced training or brief education might be warranted. It is important to keep the selection team to a manageable number of participants; otherwise, the delivery selection process can become

delayed and burdensome. Normally, a selection team includes 3-7 people, but this number should be based on the specific project being analyzed.

PREDETERMINED POSITIONS

The best approach for the participants of the workshop is to keep an open mind about the delivery method to choose. However, there might be participants that have a preconceived notion about the delivery method to use on a project. When this occurs, it is best to discuss that person's ideas with the entire selection team at the beginning of the workshop. Putting that person's ideas on the table helps others to understand the choice that person has in mind. Then, it is important to acknowledge this person's ideas, but to remind that person to keep an open mind as the team works through the selection process.

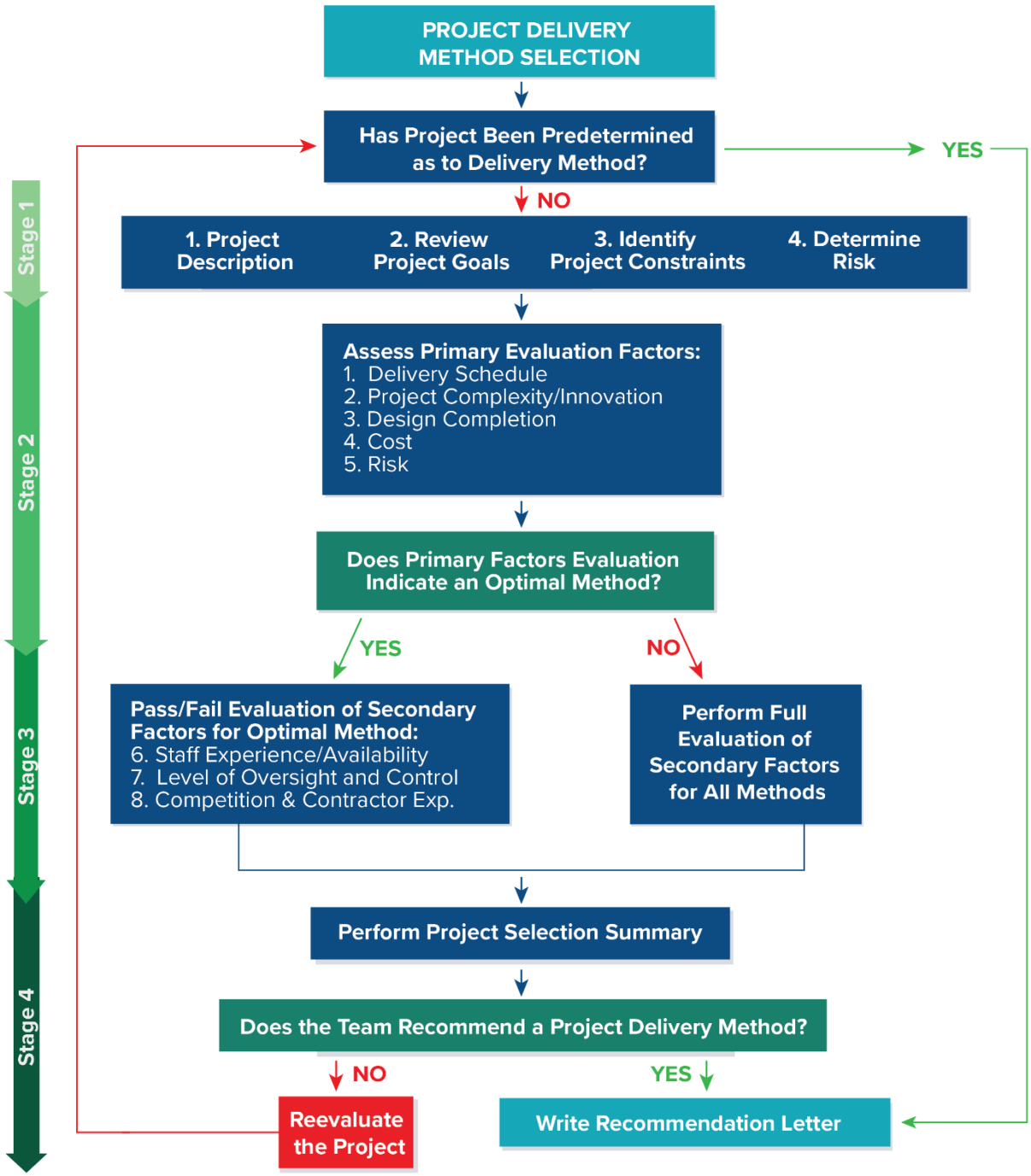
THIRD-PARTY FACILITATION

When using the project delivery selection tool for the first time, it is recommended that a facilitator is brought in for the workshop. The facilitator will help to work through the tool and provide guidance for project discussion and delivery method selection. This individual should be knowledgeable about the process and consistently used. The facilitator can also help answer questions and make sure the process stays on track, moving the team toward a formal selection.

PRE-WORKSHOP TASKS

Before conducting the selection workshop, a few tasks can be completed by the workshop participants. Preparing for the workshop prior to conducting it will result in a much more concise and informative session. It is advised that participants review all known project information, goals, risks, and constraints prior to the workshop. The best approach is to complete the Stage 1 forms (Project Delivery Description, the Project Delivery Goals, and the Project Delivery Constraints) before conducting the workshop. Completing the three worksheets will shorten the time needed to review the project and allows the workshop team to move right into the selection process.

FIGURE 5. Project Delivery Selection Process



Project Delivery Selection Matrix Worksheets and Forms

Stage 1 includes forms to be completed by the Project Manager and Design Team. Stage 2 includes forms and primary evaluation factors for discussion by the Project Delivery Selection Group. Stage 3 includes secondary evaluation factors. Stage 4 includes the summation forms and recommendation for submittal to the Chief Engineer.

Stage 1 forms include:

- Form A: Project Description
- Form B: Project Goals (including example project goals)
- Form C: Project Constraints (including example project constraints)
- Form D: Project Risks (including example project risks)

Stage 2 forms include primary evaluation factors:

- Form E: Delivery Schedule
- Form F: Project Complexity/Innovation
- Form G: Design Completion
- Form H: Costs
- Form I: Risk

Stage 3 forms include secondary evaluation factors:

- Form J: Staff Experience and Availability
- Form K: Oversight and Control Levels
- Form L: Competition and Contractor Experience

Stage 4 forms include the summation and recommendation form:

- Form M: Project Delivery Selection Summary
- Form N: Sample Recommendation Letter to Chief Engineer

RATING KEY — STAGES 2 & 3

All sections in these Stages should utilize a scale from 1—10:

1	← - - - - - - →	10
Evaluations go completely against the delivery method and assessment is discontinued.		The delivery method is the most appropriate for the evaluation factor and there is complete support for its recommendation.

STAGE 1

Project Attributes

Project Description

Project Goals

Project Constraints

Project Risks

Project Description (Form A)

The following items should be considered when describing the project. Other items can be added to the bottom of the form if they influence the project delivery decision. Relevant documents can be included as appendices to the final summary report.

PROJECT ATTRIBUTES
PROJECT NAME:
PROJECT CORRIDOR OR LOCATION:
ESTIMATED BUDGET:
ESTIMATED PROJECT DELIVERY PERIOD:
REQUIRED DELIVERY DATE (IF APPLICABLE):
SOURCE(S) OF PROJECT FUNDING:
MAJOR FEATURES OF WORK – PAVEMENT, BRIDGE, SOUND BARRIERS, ETC.:
MAJOR SCHEDULE MILESTONES:
MAJOR PROJECT STAKEHOLDERS:
MAJOR OBSTACLES (AS APPLICABLE)
LIMITATIONS WITH RIGHT OF WAY, UTILITIES, AND/OR ENVIRONMENTAL APPROVALS:
CRITICAL MILESTONES AND REQUIREMENTS DURING CONSTRUCTION PHASE:
MAIN IDENTIFIED SOURCES OF RISK:
SAFETY ISSUES:
SUSTAINABLE DESIGN AND CONSTRUCTION REQUIREMENTS:

Project Goals (Form B)

An understanding of project goals is essential to selecting an appropriate project delivery method; therefore, project goals should be set prior to using the project delivery selection matrix. Typically, the project goals can be identified in three to five items and should be reviewed here. Example goals are listed below, but the report should include project-specific goals, which should remain consistent over the life of the project.

PROJECT-SPECIFIC GOALS
GOAL #1:
GOAL #2:
GOAL #3:
GOAL #4:
GOAL #5:

Typical Project Goals

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 improvements within the project budget

Quality

- Meet or exceed project requirements
- Select the team that brings the best value to the project
- Provide a high-quality design and construction constraints
- Provide an aesthetically pleasing project

Functionality

- Maximize the life cycle performance of the project
- Maximize capacity and mobility improvements
- Minimize inconvenience to the traveling public during construction
- Maximize safety of workers and traveling public during construction

Project Constraints (Form C)

There are potential aspects of a project that can eliminate the need to evaluate one or more of the possible delivery methods. A list of general constraints can be found below the table and should be referred to after completing this worksheet. The first section below is for general constraints and the second section is for constraints specifically tied to project delivery selection.

PROJECT-SPECIFIC CONSTRAINTS
CONSTRAINT #1:
CONSTRAINT #2:
CONSTRAINT #3:
CONSTRAINT #4:
CONSTRAINT #5:

Typical Project Constraints

Schedule

- Utilize federal funding by a certain date
- Complete the project on schedule
- Weather and/or environmental impact

Cost

- Project must not exceed a specific amount
- Minimal changes will be accepted
- Some funding may be utilized for specific type of work (bridges, drainage, etc.)

Quality

- Must adhere to standards proposed by the Agency
- Trying to balance quality design with construction limitations/constraints/abilities
- Adhere to local and federal codes

Functionality

- Minimum number of lanes to be maintained during construction
- Hazardous site where safety is a concern
- Return area surrounding project to existing condition

Project Risks (Form D)

Below is a general risk checklist of items to consider in the development, design, and construction of the project.

ENVIRONMENTAL RISKS	EXTERNAL RISKS
☐ Delay in review of environmental documentation ☐ Challenge in appropriate documentation ☐ Defined and non-defined hazardous waste ☐ Environmental regulation changes ☐ Environmental impact statement (EIS) required ☐ NEPA/ 404 Merger Process required ☐ Environmental analysis on new alignments required	☐ Stakeholders request late changes ☐ Influential stakeholders request additional needs to serve their own commercial purposes ☐ Local communities pose objections ☐ Community relations ☐ Conformance with regulations/guidelines/design criteria ☐ Intergovernmental agreements and jurisdiction
THIRD-PARTY RISKS	**GEOTECHNICAL AND HAZMAT RISKS**
☐ Unforeseen delays from utility owner/third-party ☐ Encounter unexpected utilities during construction ☐ Cost sharing with utilities not as planned ☐ Utility integration with project not as planned ☐ Third-party delays during construction ☐ Coordination with other projects/developers ☐ Coordination with other government agencies	☐ Unexpected geotechnical issues ☐ Surveys late and/or in error ☐ Hazardous waste site analysis incomplete/in error ☐ Inadequate geotechnical investigations ☐ Adverse groundwater conditions ☐ Other general geotechnical risks
RIGHT-OF-WAY/ REAL ESTATE RISKS	**DESIGN RISKS**
☐ Railroad involvement ☐ Objections to ROW appraisal take more time/money ☐ Excessive relocation or demolition ☐ Acquisition ROW problems ☐ Difficult or additional condemnation ☐ Additional ROW purchase due to alignment change	☐ Design is incomplete/ Design exceptions ☐ Scope definition is poor or incomplete ☐ Project purpose and need are poorly defined ☐ Communication breakdown with project team ☐ Pressure to deliver on an accelerated schedule ☐ Constructability of design issues ☐ Project complexity - scope, schedule, objectives, cost, and deliverables - are not clearly understood
ORGANIZATIONAL RISKS	**CONSTRUCTION RISKS**
☐ Inexperienced staff assigned ☐ Losing critical staff at crucial point of the project ☐ Functional units not available or overloaded ☐ No control over staff priorities ☐ Lack of coordination/ communication ☐ Local agency issues ☐ Internal red tape delay approvals, decisions ☐ Too many projects/ new priority projects inserted into program	☐ Pressure to deliver on an accelerated schedule. ☐ Inaccurate contract time estimates ☐ Construction QC/QA issues ☐ Unclear contract documents ☐ Construction sequencing/staging/ phasing ☐ Maintenance of Traffic/ Work Zone Traffic Control

STAGE 2

Primary Evaluation Factor Assessment

Delivery Schedule

Project Complexity/Innovation

Design Completion

Costs

Delivery Schedule (Form E)

The evaluation should consider the overall project schedule from scoping through design, construction and opening to the public.

DESIGN-BID-BUILD		
Complete design and procure the Contractor		
Opportunities	Obstacles	Rating
☐ Schedule more predictable and more manageable ☐ Milestones can be easier to define ☐ Shortest contractor procurement period ☐ Elements of design are completed prior to permitting, construction, etc. ☐ Time to communicate/discuss design with stakeholders	☐ Longer time linear process ☐ Lack industry input could add time ☐ Design lead to change orders and schedule delays ☐ Low bid selection may lead to potential delays and other adverse outcomes.	
DESIGN-BUILD		
D/B procured after 30% plans (NEPA approval)		
Opportunities	Obstacles	Rating
☐ Accelerate schedule through parallel process ☐ Shifting schedule risk to DB team ☐ Encumbers construction funds more quickly ☐ Industry innovation into design and schedule ☐ More efficient procurement of long-lead items ☐ Phased Design allows to start construction earlier ☐ Allows innovation in resource loading and scheduling by DB team	☐ RFP development and procurement can be intensive ☐ Undefined events or conditions found after procurement, but during design can impact schedule and cost ☐ Requires agency and stakeholder commitment to expedite design review ☐ Design not under direct control of the owner	
CM/GC		
Designer/Contractor begin work together at 50% plans		
Opportunities	Obstacles	Rating
☐ Ability to start pieces of construction or procurement of long lead items before entire design, ROW, etc. is complete (i.e. phased design) ☐ Early identification and resolution of design and construction issues (e.g., utility, ROW, and earthwork) ☐ Shorter procurement than DB ☐ Team involvement for schedule optimization ☐ Continuous constructability review and VE ☐ Contractor input for phasing, constructability and traffic control may reduce overall schedule	☐ Potential for not reaching GMP and substantially delaying schedule ☐ Designer-contractor-agency disagreements can add delays ☐ Strong agency management is required to control schedule ☐ Design Changes/NOIs due to contractor input	

Project Complexity/Innovation (Form F)

The evaluation should consider opportunities and timeframes of when issues and innovation can be addressed and resolved.

DESIGN-BID-BUILD		
Fully resolve issues during design; innovation through VE and bidding options		
Opportunities	Obstacles	Rating
☐ Agencies can have more control of design of complex projects ☐ Agency and consultant expertise can select innovation independently of contractor abilities ☐ Opportunities for value engineering studies during design, more time for design solutions ☐ Aids in consistency and maintainability ☐ Full control in selection of design expertise ☐ Complex design is resolved and competitively bid	☐ Innovations can add cost or time and restrain contractor's benefits ☐ No contractor input to optimize costs ☐ Limited flexibility for integrated design and construction solutions (limited to constructability) ☐ Difficult to assess construction time and cost due to innovation ☐ Cannot design to a contractor's strength	
DESIGN-BUILD		
Allows Contractor innovation in design development; utilizes ATCs in bidding		
Opportunities	Obstacles	Rating
☐ Designer and contractor collaborate to optimize means and methods and enhance innovation ☐ Opportunity for innovation through draft RFP, best value, and ATC processes ☐ Can use best-value procurement to select design-builder with best qualifications ☐ Constructability and VE inherent in process ☐ Early team integration ☐ Sole point of responsibility	☐ Requires desired solutions to complex designs to be well defined through technical requirements (difficult to do) ☐ Qualitative designs are difficult to define (example. aesthetics) Need to be prescribed in RFP ☐ Risk of time or cost constraints on designer inhibiting innovation ☐ Some design solutions might be too innovative or unacceptable ☐ Quality assurance for innovative processes are difficult to define in RFP	
CM/GC		
Jointly address complex innovative designs through three-party collaboration		
Opportunities	Obstacles	Rating
☐ Allows for agency control of a designer/contractor process for developing innovative solutions ☐ Allows for an independent selection of the best qualified designer and best qualified contractor ☐ VE inherent in process and enhanced constructability ☐ Risk of innovation can be better defined, minimized, and allocated ☐ Can take to market for bidding as contingency	☐ Designer/CM relationship critical ☐ No contractual relationship between designer/CM ☐ Innovations can add cost or time ☐ Scope additions difficult to manage ☐ Preconstruction services fees for contractor involvement ☐ Cost competitiveness – sole source negotiated GMP	

Design Completion (Form G)

The evaluation should consider the level of completed design and its value to the project attributes.

DESIGN-BID-BUILD		
100% design by DelDOT		
Opportunities	Obstacles	Rating
☐ 100% design by agency ☐ Agency has complete control over the design (can be beneficial when there is one specific solution for a project) ☐ Project/scope can be developed through design ☐ The scope of the project is well defined through complete plans and contract documents ☐ Well-known process to the industry	☐ Agency design errors can result in a higher number of change orders, claims, etc. ☐ Minimizes competitive innovation opportunities ☐ Can reduce level of constructability since the contractor does not buy into the project until after design is complete	
DESIGN-BUILD		
Design advanced to 30% (NEPA) and completed by DB Team		
Opportunities	Obstacles	Rating
☐ Design advanced by the agency to level necessary to precisely define the contract requirements and properly allocate risk ☐ Does not require much design to be completed before awarding project to the design-builder (between ~ 10% - 30% complete) ☐ Contractor involvement in early design, which improves constructability and innovation ☐ Plans do not have to be as detailed because the design-builder is bought into the project early in the process and will accept design responsibility	☐ Must have clear definitions and requirements in the RFP because it is the basis for the contract ☐ If design is too far advanced, it will limit the advantages of design-build ☐ Potential for lacking or missing scope definition if RFP not carefully developed ☐ Overutilizing performance specifications to enhance innovation can risk quality through reduced technical requirements ☐ Less agency control over the design ☐ Can create project less standardized designs across agency as a whole	
CM/GC		
50% design prior to Contractor procurement; remainder completed in collaboration		
Opportunities	Obstacles	Rating
☐ Can utilize a lower level of design prior to selecting a contractor then collaboratively advance design with agency, designer and contractor ☐ Contractor involvement in early design improves constructability ☐ Agency controls design ☐ Design can be used for DBB if the price is not successfully negotiated ☐ Design can be responsive to risk minimization	☐ Teaming and communicating concerning design can cause disputes ☐ Three party process can slow progression of design ☐ If design is too far advanced, it will limit the advantages of CM/GC or could require design backtracking	

Costs (Form H)

The evaluation should review the financial considerations of design, construction, potential change orders, and other project-related costs.

DESIGN-BID-BUILD		
Competitive low bid based on designer calcs typical; potential change orders		
Opportunities	Obstacles	Rating
☐ Competitive bidding provides a low-cost construction to a fully defined scope of work ☐ Increase certainty about cost estimates ☐ Construction costs are contractually set before construction begins	☐ Cost accuracy is limited until design is completed ☐ Cost reductions due to contractor innovation and constructability is difficult to obtain ☐ More potential of cost change orders due to Agency design responsibility	
DESIGN-BUILD		
Fixed budget determined at Contractor selection		
Opportunities	Obstacles	Rating
☐ Contractor input into design should moderate cost ☐ Design-builder collaboration and ATCs can provide a cost-efficient response to project goals ☐ Costs are contractually set early in design process with design-build proposal ☐ Allows a variable scope/bid to match a fixed budget ☐ Potential lower average cost growth ☐ Funding can be obligated in a very short timeframe ☐ Stipends can foster better ATC's	☐ Risks related to design-build, lump sum cost without 100% design complete, can compromise financial success of the project ☐ Lack of Stipends may eliminate competition	
CM/GC		
Collaborated price determination; non-competitive negotiated GMP		
Opportunities	Obstacles	Rating
☐ Agency/designer/contractor collaboration to reduce project risk can result in lowest project costs ☐ Early contractor involvement can result in cost savings through VE and constructability ☐ Cost will be known earlier when compared to DBB ☐ Integrated design/construction process can provide a cost-efficient strategy to project goals ☐ Can provide a cost-efficient response to the project goals	☐ Non-competitive negotiated GMP introduces price risk ☐ Difficulty in GMP negotiation introduces risk that GMP will not be successfully executed, requiring aborting the CM/GC process ☐ Paying for contractors' involvement in the design phase may increase total cost ☐ Prescribed design elements can lead to cost increases	

Risk (Form I)

The evaluation should consider the risks including number, complexity, and probability.

DESIGN-BID-BUILD		
More control during design; project liability in time and dollars for omissions in construction		
Opportunities	Obstacles	Rating
☐ Risks managed separately through design, bid, build is expected to be easier ☐ Risk allocation is most widely understood/used ☐ 100% design mitigates some risk ☐ Risk related to environmental, railroad, & third-party involvement best resolved before procurement ☐ Utilities/ROW best allocated to the agency and mostly addressed prior to procurement	☐ Agency accepts risks associated with project complexity and unknowns ☐ Low-bid related risks ☐ Misplaced risk through prescriptive specs ☐ Innovative risk allocation difficult to obtain ☐ Limited industry input in risk allocation ☐ Change order risks can be greater ☐ Contractor may avoid risks	
DESIGN-BUILD		
RFP needs to be detailed in performance requirements; manage risk for best party		
Opportunities	Obstacles	Rating
☐ Performance specs allow for alternative risk allocations to the design builder ☐ Risk-reward structure better defined ☐ Innovative opportunities to allocate risks to most appropriate parties (e.g., schedule, phasing) ☐ Opportunity for industry review of risk allocation (draft RFP, ATC processes) ☐ Avoid low-bid risk in procurement ☐ Contractor helps identify risks with environmental, railroads, ROW, and utilities ☐ Design-Build team can work toward innovative solutions to, or avoidance of, unknowns	☐ Need a detailed RFP to get comprehensive responses to the RFP (Increased RFP costs may limit bidders) ☐ Limited time to resolve risks ☐ Risks allocated to designers for errors and omissions, claims for change orders ☐ Unknowns and associated risks need to be carefully allocated through a well-defined scope and contract ☐ Poorly defined risks are expensive ☐ Contractor may decrease consultant fees at risk to quality	
CM/GC		
Balance risk management through collaborative efforts		
Opportunities	Obstacles	Rating
☐ Contractor better understands of the unknown conditions as design progresses ☐ Innovative opportunities to allocate risks to different parties (e.g., schedule, phasing) ☐ Chance to manage cost risks through CM/GC input ☐ Contractor will help identify and manage risk ☐ Agency still has considerable involvement with third parties to deal with risks ☐ Avoids low-bid risk in procurement ☐ More flexibility and innovation available to deal with unknowns early in design process	☐ Low motivation to manage small quantity $$ ☐ Increase costs for non-proposal items ☐ If GMP not reached, additional low-bid risks ☐ Limited to risk capabilities of CM/GC ☐ Designer-contractor-agency disagreements can add delays ☐ Strong agency management is required to negotiate/optimize risks ☐ Discovery of unknown conditions can drive up GMP, which can be compounded in phased construction	

STAGE 3

Secondary Evaluation Factor Assessment

Staff Experience and Availability

Oversight and Control Levels

Competition and Contractor Experience

Staff Experience and Availability (Form J)

The evaluation should consider staff's experience with various delivery methods and availability to participate in all phases.

DESIGN-BID-BUILD		
Various resources spread out over development, design, and construction phases		
Opportunities	Obstacles	Rating
☐ Agency, contractors, and consultants have high level of experience with the traditional system ☐ Designers can be more interchangeable between projects	☐ Can require a high level of agency staffing of technical resources ☐ Staff's responsibilities are spread out over a longer design period ☐ Can require staff to have full breadth of technical expertise	
DESIGN-BUILD		
Critical technical needs during RFQ and RFP stages; design and construction need throughout		
Opportunities	Obstacles	Rating
☐ Less agency staff required due to the sole source nature of DB ☐ Opportunity to grow agency skill levels for staff by learning a new process	☐ Limitation of availability of staff with skills, knowledge, and personality to manage DB projects ☐ Existing staff may need additional training to address their changing roles ☐ Need to "mass" agency management and technical resources at critical points in process (e.g., RFP development, design reviews)	
CM/GC		
Strong Agency commitment through collaborative process throughout		
Opportunities	Obstacles	Rating
☐ Agency can improve efficiencies by having more project managers on staff rather than specialized experts ☐ Smaller number of technical staffs are required through use of consultant designer	☐ Strong committed agency project management is important to success ☐ Limitation of availability of staff with skills, knowledge, and personality to manage CM/GC projects ☐ Existing staff may need additional training to address their changing roles ☐ Agency must learn how to negotiate a Proposed Construction Price (PCP)	

Oversight and Control Levels (Form K)

The evaluation should consider Agency monitoring and control during design and construction phases.

DESIGN-BID-BUILD		
Full control over linear design and construction process		
Opportunities	Obstacles	Rating
☐ Full agency control over a linear design and construction process ☐ Oversight roles are well understood ☐ Contract documents are typically completed in a single package before construction begins ☐ Multiple checking points through three linear phases: design-bid-build ☐ Maximum control over design	☐ Requires a high-level of oversight ☐ Increased likelihood of claims due to agency design responsibility ☐ Limited control over an integrated design/construction process	
DESIGN-BUILD		
Performance specs lead to less control in design; QA performed in construction by DB		
Opportunities	Obstacles	Rating
☐ A single entity responsibility during project design and construction ☐ Continuous execution of design and build ☐ Getting input from construction to enhance constructability and innovation ☐ Overall project planning and scheduling is established by one entity	☐ Can require a high level of design oversight ☐ Can require a high level of quality assurance oversight ☐ Limitation on staff with DB oversight experience ☐ Less agency control over design ☐ Control over design relies on proper development of technical requirements	
CM/GC		
Most control by Agency in design, construction, and collaborative Project Team		
Opportunities	Obstacles	Rating
☐ Preconstruction services are provided by the construction manager ☐ Getting input from construction to enhance constructability and innovation ☐ Provides agency control over an integrated design/construction process	☐ Agency must have experienced staff to oversee the CM/GC ☐ Higher level of cost oversight required	

Competition and Contractor Experience (Form L)

The evaluation should consider available competition levels; availability; and experience of contracting community relative to project type, complexity, and capacity to perform the work.

DESIGN-BID-BUILD		
High level of competition and experience; selection typically low-price based		
Opportunities	Obstacles	Rating
☐ Promotes a high level of competition in the marketplace ☐ Opens construction to all reasonably qualified bidders ☐ Transparency and fairness ☐ Reduced chance of corruption and collusion ☐ Contractors are familiar with DBB process	☐Risks associated with selecting the low bid (the best contractor is not necessarily selected) ☐No contractor input into the process ☐Limited ability to select contractor based on qualifications	
DESIGN-BUILD		
Balance of price and non-price selection factors; experience varies by project type		
Opportunities	Obstacles	Rating
☐ Allows for a balance of qualifications and cost in design-builder procurement ☐ Two-phase process can promote strong teaming to obtain "Best Value" ☐ Increased opportunity for innovation possibilities due to the diverse project team	☐ Need for DB qualifications can limit competition ☐ Lack of competition with experience with the project delivery method ☐ Reliant on DB team selected for the project ☐ The gap between agency experience and contractor experience with delivery method can create conflict	
CM/GC		
Selecting most qualified contractor; typically, limited marketplace experience		
Opportunities	Obstacles	Rating
☐ Allows for qualifications-based contractor procurement ☐ Agency has control over an independent selection of best qualified designer and contractor ☐ Contractor is part of the project team early on, creating a project "team" ☐ Increased opportunity for innovation due to the diversity of the project team	☐ Currently there is not a large pool of contractors with experience in CM/GC, which will reduce the competition and availability ☐ Working with only one contractor to develop GMP can limit price competition ☐ Requires a strong project manager from the agency ☐ Teamwork and communication among the project team	

STAGE 4

Pass/Fail Assessment for Optimal Delivery Method

Project Delivery Selection Summary

Sample Recommendation Letter to Chief Engineer

Project Delivery Selection Summary (Form M)

Complete the summary form below, based on your general evaluations for the primary and secondary evaluation factors from Forms E-L.

PROJECT DELIVERY METHOD OPPORTUNITY/OBSTACLE SUMMARY			
	DBB	**DB**	**CM/GC**
Primary Evaluation Factors			
Delivery Schedule (Form E)			
Project Complexity/Innovation (Form F)			
Design Completion (Form G)			
Costs (Form H)			
Risks (Form I)			
Secondary Evaluation Factors			
Staff Experience and Availability (Form J)			
Oversight and Control Levels (Form K)			
Competition and Contractor Experience (Form L)			

Sample Recommendation Letter to Chief Engineer (Form N)

To: Shanté Hastings, Chief Engineer, Director of Transportation Solution

From: Mike Simmons, Assistant Director, Project Development South

Re: Project Number/Project Name Delivery Recommendation

Date: October 1, 2019

Project Development South has held a workshop to review Project ###. Due to the complexities or uniqueness of this project, we felt it would be advantageous to look at ways to get contactor input into the development of this project. We have reviewed the risks and feel that there are portions of the project construction that would benefit from their experience and input. Looking to match a design and a contracting team early in the design development stages may allow the Department to provide a plan that is the best value to the public as far as time and efficiency to get the work done.

Attached is our analysis from the workshop including the Project Delivery Selection Summary form. We ask the Department to consider the use of XXXXX as the optimum delivery method for this program.

We are available to meet and discuss the results. Please contact me or Bryan Behrens to discuss further.

cc: Bryan Behrens, Program Manager, Project Development South

APPENDIX A

TERMS AND DEFINITIONS	
Alternative Technical Concept (ATC)	Changes to the Technical Requirements that are proposed by the Contractor and Approved by DelDOT. ATCs will be Approved by DelDOT that are equal or better in quality or effect to the Technical Requirements which they replace (as determined by DelDOT in its sole discretion). ATCs that provide less than equal quality and, or effect with the intent of saving project cost for other undefined uses will not be Approved.
Guaranteed Maximum Price (GMP)	GMP states that the Contractor will be compensated for all actual costs associated with building the structure, as well as the guaranteed maximum price--a fixed fee with a ceiling (maximum) price
Request for Proposals (RFP) or RFP Documents	The documents issued by DelDOT that govern both the procurement process and the design and construction of the project. The documents include performance specifications developed by DelDOT and its design team and deliverables required of the Design Build Team. DelDOT will evaluate the selection based on responses to the RFP.
Request for Qualifications (RFQ) or RFQ Documents	Utilized in a two-step procurement to evaluate and shortlist potential submitters to a Design Build Project. Often criteria will include experience of the Design Build Team, Project team, Capacity/Resources to perform the work, etc.
Value Engineering	The process by which the engineer, architect, and contractor offer cost saving suggestions, and alternates to the owner of a project to reduce the cost.