FBR 0704-224 (18149)

Pecos St over I-70 Replacement of Structure E-16-FW

PROJECT DELIVERY SELECTION MATRIX

Assign Value to Factors

- ● Most appropriate
- ✓ Appropriate
- o Least appropriate

- X Fatal flaw
- Na Factor not applicable or relevant to the selection

Results of Project Delivery Selection Meeting on June 23, 2011

	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
Project Factors									
1.	Project Complexity								
	The level of interaction necessary between people to resolve complex technical issues and processes	●	Allows selection of designer and builder based on qualifications to jointly address complex and qualitative elements (technically, architecturally, constructability, etc)		o	Incorporates contractor into design process through best value and ATCs. Requires that desired solutions to complex projects be well defined through contract requirements		✓	Allows CDOT to fully resolve complex and qualitative designs before procurement
Project Remarks: A high degree of interaction with a highly qualified contractor is most desirable for this ABC project. Also, level of interaction between FHWA and CCD during final design of roundabouts make it difficult to properly define contract requirements if preliminary design only is provided with a design-build project									
	Construction Cost	●	Can provide a cost efficient response to project goals, however negotiated GMP introduces price risk		✓	Designer-builder collaboration and ATCs can provide a very cost efficient response to project goals.		o	Competitive bidding provides a very low cost construction for a fully defined scope of work.
Project Remarks: Design-Bid-Build is least appropriate because without contractor input not likely to select and properly specify the lowest cost ABC									

2.	Opportunities for Innovation								
	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
	The ability of the delivery method to allow for new designs and processes to achieve the project goals	●	High potential of innovation through three party collaboration of CDOT, designer and contractor		✓	Strong potential of innovation through best value and ATC processes		○	Innovation provided through traditional processes such as VE studies, bid alternatives, post bid VE and CDOT/consultant expertise
Project Remarks: Innovation through three party collaboration including the contractor is most appropriate to develop this initial ABC project									
3.	Delivery Schedule								
	Assess the overall project schedule from scoping through design, construction and opening to public: Assess time considerations in getting Project started or funding dedicated Assess project completion Importance to schedule	✓	Quickly gets contractor under contract Parallel process of development of contract requirements, design, procurements and construction can accelerate project schedule		✓	Quickly gets construction (and bid cost) commitment Parallel process of design and construction can accelerate project schedule, however longest procurement time		✓	Requires time to perform linear design and bidding
Project Remarks: A schedule assessment was performed for all three delivery methods and determined that CMGC provides the quickest delivery, however all delivery methods can probably meet the schedule requirements for the project.									

4.	Level of Design								
	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
	Percentage of design completion at the time of project delivery procurement		Lower level of design required prior to contracting and joint development of CDOT, designer and contractor in development of design			Design advanced by CDOT to the level necessary to define contract requirements and properly allocate risk (typically 30% or less)			100% design by CDOT, with CDOT having complete control over the design
Project Remarks: Design is currently at a low level, therefore can facilitate any of the delivery methods									
5.	Project Unknowns								
	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
	Unanticipated events or conditions that occur during design and construction	na	CDOT, designer and contractor collaboratively resolve unknowns and define scope		na	Unknowns and associated risks need to be properly allocated through well defined scope and contract requirements, or resolved prior to procurement		na	Unknowns should be resolved prior to procurement to reduce potential for change orders and claims
Project Remarks:									

Agency Factors									
6.	Staff Experience / Availability								
	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
	Staff experience and availability as it relates to the project delivery method	○	Strong, committed CDOT project management resources are important for success		✓	Technical and management resources and expertise necessary to develop RFP and administrate the procurement.		●	Technical and management resources necessary to perform the design and plan development.
Project Remarks: Strong, committed staff can be provided to satisfy the requirements of any of the delivery methods, but the most staff experience is in design bid build delivery.									
7.	Level of Oversight								
	The amount of agency staff required and the amount of agency control over the delivery process	●	Strong control over the design, less control over the construction QA (requires least amount of resource oversight)		✓	Less control over the design and construction QA (requires more oversight of design, can minimize construction oversight)		✓	Full control of the design and construction QA (minimal design oversight after procurement, most construction oversight required)
Project Remarks: Strong control over the design is critical to the success of the project									

8.	Risk Allocation (note: can address as single item or by separate sub-sets as shown)								
	Topic	Value	CMGC		Value	Design-Build		Value	Design-Bid-Build
	Assess how risk is best assigned to the party that can best control it Private Utilities	●	Utilities impacts can be resolved collaboratively by CDOT, designer and contractor and utility owner.		○	Utilities responsibilities need to be clearly defined in contract requirements, and appropriately allocated to both design-builder and CDOT. Important to define schedule risk.		✓	Utility risks best allocated to CDOT and mostly addressed prior to procurement to minimize potential for claims.
Project Remarks: CMGC offers best opportunities to collectively resolve utility conflicts. CMGC will encourage a collaborative relationship and joint ownership between the contractor and the utility owner.									
	Assess how risk is best managed Public Utilities	●	Utilities impacts can be resolved collaboratively by CDOT, designer and contractor and utility owner		○	Public utility design and construction risks can be allocated to design-builder if appropriately incorporated in contract requirements		✓	Public utility risks best resolved prior to procurement and relocation designs included in the project requirements
Project Remarks: CMGC offers best opportunities to collectively resolve utility conflicts. CMGC will encourage a collaborative relationship and joint ownership between the contractor and the utility owner.									
	Assess how risk is best managed 3rd party approvals (off-site drainage, federal and state agencies, work for other owners,etc)	✓	3rd party approvals can be resolved collaboratively by CDOT, designer and contractor		○	3rd party approvals and processes that can be fully defined can be allocated to the design-builder		●	3rd party risk is best Mitigated through design process prior to procurement to minimize potential for change orders and claims
Project Remarks: Design-bid-build provide most familiarity with standardized processes with both CDOT and the 3rd parties.									

	Assess how risk is best managed Geotechnical	●	Geotechnical risks can be collaboratively resolved by CDOT, designer and contractor		○	Risks can most efficiently be allocated to the design-builder, but CDOT should provide geotechnical investigation to avoid duplication of effort during procurement		✓	Risk is best Mitigated through design process prior to procurement
Project Remarks: CMGC provide the opportunity for contractor and geotechnical engineer and structural engineer to collaboratively develop most advantageous and lowest risk solutions.									
	Assess how risk is best managed Hazardous Materials	✓	Hazmat risks can be collaboratively resolved by CDOT, designer and contractor		○	Hazmat responsibilities need to be clearly defined in contract requirements and appropriately allocated to both design-builder and CDOT. Important to define schedule risk.		●	Risk is best Mitigated through design process prior to procurement
Project Remarks: Design-bid-build provide the familiarity with standardized processes for both CDOT and 3rd parties, to facilitate expeditious approvals.									
	Assess how risk is best managed Other Environmental Water Quality	●	Environmental risks can be collaboratively resolved by CDOT, designer and contractor		○	Environmental approvals and processes that can be fully defined can be allocated to the design-builder		✓	Risk is best Mitigated through design process prior to procurement
Project Remarks:									
	Assess how project specific risks can be best managed ABC Risk	●			✓			○	
Project Remarks: ABC risk is best managed by a collaboration of CDOT the design consultant and a highly qualified contractor.									

Market Factors									
9.	Competition, Availability and Experience								
	The level of competition in the market place and capacity and experience for the project and delivery method	●	Allows for the selection of the single most qualified contractor but GMP can limit price competition.		✓	Allows for a balance of qualifications and price in the selection process		✓	High level of competition, but limited ability to chose based on qualifications
Project Remarks: Selection of a highly qualified contractor is important and best accommodated by CMGC (note: project team assessment – not discussed in 6/23 meeting)									
10.	Contractor Resource Availability - not relevant to the selection								
	Project specific materials, equipment, personnel and expertise availability		Flexibility to develop project requirements to match specific contractor resources			Design-builder can design to fit contractors resources and capabilities and allows for industry review and input			More time to assess the market resources and adjust the design accordingly, but limited industry input
Project Remarks:									
Other Factors									
11.	Third Party Involvement -addressed in risk section								
	Timeliness and impact of third party involvement		3rd party approvals can be resolved collaboratively by CDOT, designer and contractor			3rd party approvals and processes that can be fully defined can be allocated to the design-builder			3rd party risk is best Mitigated through design process prior to procurement to minimize potential for change orders and claims
Project Remarks:									

12.	Regulations and Clearances -addressed in risk section								
	Permits and Clearances		Permits and clearances can be resolved collaboratively by CDOT, designer and contractor			Permits and clearances and associated processes that can be fully defined can be allocated to the design-builder			Best to be obtained by CDOT before impacting construction to avoid change orders and claims
Project Remarks:									