Alternate Technical Concepts in Design Build Contracting at WSDOT

2011 Annual Report

January 31, 2012

In accordance with the Memorandum of Understanding dated October 26, 2010 between the Washington State Department of Transportation and the Federal Highway Administration, the following annual report is hereby submitted.

Background:

As a part of the process of FHWA approval for funding of Design Build alternative contract procurement, WSDOT obtained a programmatic waiver of the requirements of 23 CFR 636.209(b) as permitted under Special Experimental Project-14 (SEP-14). That regulation specifically requires that "Alternate technical concept proposals may supplement, but not substitute for base proposals that respond to the RFP requirements." The process used by WSDOT allows proposers to incorporate any approved Alternate Technical Concepts (ATCs) into their proposal without providing a second, unaltered base proposal. Following review of the WSDOT request and process for evaluating ATCs, the waiver was granted by FHWA under the terms of the Memorandum of Understanding (MOU) dated October 26, 2010 and signed March 22, 2011. This waiver applies to all Federal-aid Design Build contracts advertised after June 1, 2010.

The aforementioned MOU includes the following requirement:

"As a condition of the waiver, WSDOT will report annually on the effectiveness of the proposed ATC process. The reportable elements shall include at a minimum:

- The number of projects where the ATC process was utilized
- The number of Bidders on each project
- The number of ATCs generated on each project
- The Best Value price as proposed and the engineer's estimate for each project
- A comprehensive list on any complaints about the proposed ATC process
- A comprehensive list of any formal protests associated with projects utilizing the proposed ATC process.

WSDOT will consider additional reportable factors that FHWA deems appropriate."

WSDOT has been using the design build (DB) project procurement process since 2001. Prior to 2009, this was on state funded projects only. The concept and process for incorporation of ATCs in the DB proposal process was already an established practice as a part of that program when WSDOT proposed using DB on federally funded projects. WSDOT has found the use of ATCs to be a valuable tool that allows our proposers to apply their innovative skills to optimize our projects to the benefit of our agency and the taxpayers. The sheer volume alone of ATCs submitted confirms their popularity among proposers on WSDOT projects. The ATC is one of the ways that the competitive influence of the design build procurement can be harnessed to the benefit of the agency and taxpayers. As stated in the waiver application, the ATC process is founded on the concept that an ATC must be equal to or better than the original or base project concept. This ensures the 'level playing field' that is essential for competitive bidding without the need for a second, unaltered base proposal. The ATC process also allows a certain level of control by the agency over potential risks contemplated by proposers.

Prior experience with ATCs has provided WSDOT with the opportunity to refine the ATC process. On a project that was advertised earlier, an ATC approval had to be rescinded during the proposal review phase of procurement. All proposers were then obligated to revise their proposals, resulting in a delay of bid opening and added stipend cost to WSDOT. As a result, the ATC review process and guidance procedure is now better defined and more robust through the Memorandum of Understanding and accompanying guidance document.

Other key elements in the ATC process are: 1) The proposer takes responsibility for obtaining necessary approvals for their ATC (including Design Deviations and third party approvals), 2) WSDOT reserves the right in its sole discretion to reject any ATC that it is not equal or better, or would require excessive time or cost to review, evaluate, or investigate, and 3) the ATC process is confidential. Proposers do not fear that their proprietary innovations will be disclosed to their competitors. Participants in the review and evaluation process are required to sign confidentiality agreements.

The ATC process (along with the proposal and stipend processes) gives WSDOT the right to use the ATCs of unsuccessful proposers who accept the stipend. In fact, just such an example occurred on the recently completed I-405 - 195th to SR 527 Auxiliary Lane project, when an ATC approved for an unsuccessful proposer was added into the current contract at a savings to the contract price.

The ATC process outlined in the waiver application and approval has now been employed on eleven Federal aid projects. There have been no formal complaints or protests regarding ATCs on any of these projects.

The implementing language in the Memorandum of Understanding has been included in the standard contract template documents adopted by WSDOT for all future design build projects. It has also been reviewed by the Design Build committee that WSDOT leads with the AGC, ACEC and FHWA, in an additional effort to ensure the understanding and support of industry.

Current Practice:

An informational spreadsheet listing all current Federal Aid design build contracts with the specific project and ATC information is attached.

The following are examples from specific design build contracts where ATCs have provided valuable contributions and innovations.

Examples:

On the ***I-405 - 195th to SR 527 Auxiliary Lane*** project, one proposer performed some field investigation and determined that the depth of pavement on an existing shoulder was greater than shown in the contract documents. In an ATC, they proposed that the shoulder be left in place instead of removed and replaced. This ATC was approved. This team was not the best value proposer, however. Once the contract was awarded and stipends paid, WSDOT received the right to use this idea. The idea that originated with an ATC was then implemented under the contract with a savings of $138,929.

On the ***I-5 - Joe Leary Slough to Nulle Road Pavement Rehab*** project, one proposer submitted an ATC to reuse portions of the existing guardrail instead of the wholesale replacement of all guardrail elements as originally envisioned. This provided a savings to the contract in both time and dollars along with a transfer of responsibility to the design builder for evaluating which guardrail sections must be replaced and which could be reused.

On the ***I-405 – NE 8th to SR 520 Braided Ramps*** project, a proposer submitted two ATCs that together shifted the ramp alignment and raised the ramp profile from the original concept. This eliminated the stacked roadway (and associated future maintenance costs), reduced excavation and wall quantities and reduced construction impacts to the neighboring regional hospital and medical center.

On the ***SR-520 – Pontoon Construction*** project, the winning team proposed an ATC that reduced the size of the casting basin to be constructed but compensated for the smaller facility by building it faster and accelerating the pontoon casting schedule to meet the original delivery date specified. This resulted in a significant savings in bid price and still met the original delivery date for the pontoons.

On the ***SR-520 – Floating Bridge and Landings*** project, the winning team proposed two ATCs that provided an alternative bridge superstructure system that made extensive use of precast concrete columns, piers and roadway deck sections. This choice of superstructure significantly reduced the amount of exposed steel as well as cast in place concrete work performed over Lake Washington. This resulted in significant cost and schedule savings as well as reduced environmental risk.

On the ***SR-520 – Floating Bridge and Landings*** project, the winning team proposed two ATCs that reconfigured the floating bridge maintenance facility and dock to make more efficient use of the space available, reduce life cycle operating costs and further reducing impacts to the surrounding, sensitive community.

The ATC process, as practiced at WSDOT, is a valuable and effective tool that helps to further refine our design build projects and obtain the best value for taxpayers. It is well established and accepted by industry as evidenced by the level of participation during procurement. The experience documented in this report confirms this success by both statistical and anecdotal data. This ATC process provides another avenue for application of the competitive market influence to the design build procurement method within the bounds of the level playing field and to the benefit of our taxpayers. Additionally, this process makes use of the FHWA waiver authorization to avoid extra, duplicative efforts by our proposers and evaluation teams associated with the preparation and review of a second, unaltered proposal.

If you have any questions or comments, please contact Derek Case, Design Build Development Engineer at (360) 705-7826 or via email at cased@wsdot.wa.gov

Attachments:

WSDOT Design Build Contract ATC Data

Conclusion:

WSDOT Design Build Contract ATC Data

Award Date	Execution Date	Contract number	Fed Funded	Contract Name	Winning Proposer (other proposers listed below)	Winning Proposal Amount	Number of Proposers	Engineer's Estimate	ATCs Allowed?	ATCs Submitted	ATCs Approved	ATC Complaints?	ATC Protest?
11/9/09	11/25/09	7726	Y	I-405, NE 8TH ST TO SR 520 BRAIDED RAMPS- INTERCHANGE	Guy F. Atkinson Construction LLC	$107,500,000	3	$175,100,000	Y	5	5	No	No
					Kiewit Construction Company					2	2		
					Granite Construction Company					4	4		
8/24/09	9/11/09	7761	Y	I-405, NE 195TH ST TO SR 527 - AUXILIARY LANE	Kiewit Construction Company	$19,263,000	4	$30,000,010	Y	1	1	No	No
					Canyon Park Constructors					Non-Responsive			
					Granite Construction Company					3	3	No	No
					Tri-State Construction					2	2	No	No
6/22/09	7/13/09	7766	Y	I-5 ET ALL, ACTIVE TRAFFIC MANAGEMENT SYSTEM	Elcon Corporation	$34,450,000	2	$37,948,029	Y	5	3	No	No
					Parsons/RCI					1	0	No	No
					Signal Electric					8	3	No	No
1/8/10	2/12/10	7826	Y	SR 520 PONTOON CONSTRUCTION	Kiewit/General JV	$367,330,000	3	$600,000,006	Y	11	6	No	No
					Flatiron/Graham/Turner					5	4	No	No
					Skanska/Mowat/Manson					1	1	No	No
10/29/10	11/29/10	7963	Y	SR 520, EASTSIDE TRANSIT AND HOV PROJECT	Eastside Corridor Constructors (Granite)	$306,278,000	3	$422,064,082	Y	27	15	No	No
					Kiewit/Atkinson J.V.					24	13	No	No
					Skanska/Flatiron J.V.					27	13	No	No
12/17/10	1/6/11	7999	Y	SR 99, BORED TUNNEL ALTERNATIVE	Seattle Tunnel Partners (Dragados/Tutor-Perini)	$1,089,700,002	2	$1,056,945,208	Y	8	4	No	No
					Seattle Tunneling Group					18	14	No	No
2/4/11	2/18/11	8016	Y	I-5, JOE LEARY SLOUGH TO NULLE RD VIC PAVING	Granite Construction Company	$14,553,000	5	$18,641,000	Y	9	7	No	No
					Tri-State Construction					4	0	No	No
					IMCO Construction					5	3	No	No
					Graham Construction					0	0	No	No
					Balfour Beatty					3	3	No	No
8/11/11	8/31/11	8066	Y	SR 520 Evergreen Point Floating Bridge and Landings Project	Kiewit/General/Manson JV	$586,561,000	3	$640,769,000	Y	17	12	No	No
					Flatiron/Skanska/Traylor					18	4	No	No
					520 Corridor Constructors					62	27	No	No
9/7/11	10/5/11	8177	Y	US 2, Rice Road Intersection - Safety Improvements	Lakeside/Tri-State JV	$2,170,507	3	$2,750,002	Y	1	0	No	No
					Guy F. Atkinson Construction LLC					9	3	No	No
					IMCO Construction					1	0	No	No
1/23/12	*	8204	N	I-405, NE 6th to I-5 Widening and Express Toll Lanes	Flatiron Constructors, Inc	$155,500,001	4	$249,999,996	Y	*	*	No	No
					Kiewit Infrastructure West								
					Guy F. Atkinson Construction LLC								
					Granite-Mowat J.V.								
*	*	8216	N	SR 9/SR 92 Intersection - Intersection Improvements	Guy F. Atkinson Construction LLC	$3,346,888	3	$3,900,000	Y	*	*		
					Northwest Construction								
					Granite Construction Company					Non-Responsive			
								TOTALS		281	152	0	0

* Contract not executed yet. Details not available.