

Fixed Budget/Best Value Contracting Review and Evaluation

Federal Aid Project A12(039): SH-21, Bridge Deck Preservation

Introduction

Idaho Transportation Department (ITD) experimented with a fixed budget/best value contract with expectation to yield a greater amount of square yardage of bridge deck preservation than with the low-bid method. Economies of scale due to grouping bridges with location proximity and with identical preservation methods were the primary reasons to anticipate higher quantity of quality bridge deck preservation.

Bidding Process and Outcome

The project documents notified the bidders that this was a different type of bidding and contracting process. The bidders were required to determine the total number of square yards of deck preservation that they could accomplish for the fixed budget of \$700,000. This budget was set at 66 % of the Engineers Estimate in an attempt to promote competition and to capitalize on market conditions. The low bid was determined by dividing the fixed budget by the square yards bid by bidders. The bidder with the lowest price/ square yard was the low bidder.

The bidding documents contained a new bid schedule that was different than the regular low-bid process schedule. The documents required the contractor to determine the contract time to perform the work. This was used as the contract working days and as a tie-breaker if multiple bidders bid the same yardage.

Bid opening for this project was held on June 22, 2010. The project had five bidders who bid the entire square yardage of deck preservation, four of which were apparent irregular. The common cause for the irregularity was lack of understanding of how to use the new bid schedule form. The winning bidder contract time was one day.

Evaluation

The table below provides comparison of this project (denoted in red) to similar bridge deck preservation projects that were previously bid using low-bid method.

| District | Key No. | Project Name | Bid Date | \$/yd | No. of Bidders |
|----------|---------|--|-----------|----------|----------------|
| 1 | 06608 | SH-200, MOSQUITO CR BR, CLARK FORK | 1/26/2006 | \$129.20 | 3 |
| 1 | 09448 | US 95, Sandpoint Long Br | 5/15/2007 | \$62.87 | 5 |
| 2 | 09796 | SH 7, Clearwater RV Br, Orofino | 12/8/2009 | \$106.11 | 7 |
| 3 | 12039 | SH 21, Bridge Deck Preservation | 6/22/2010 | \$67.08 | 5 |

There were five bidders on this experimental project which was commensurate with the number of bidders for the projects that were bid with the regular low-bid method at the time. The price /square yard of \$67.08 is the lowest \$/sq yard with the exception of KN 09448 which had the largest square yardage at 27,641 sq yd where economies of scale were apparent.

Conclusion

The use of the “Fix Budget/ Best Value” approach for this project was effective in achieving results equal to or better than if the low bid approach had been used. This project was able to preserve 10,435.50 square yards of bridge deck without a decrease in industry participation and for a price per square yard lower overall, than the low-bid method.

The project had zero change orders and construction staff stated that this project wasn’t any more difficult than a low bid contract to administer and also easier to track from a construction administration standpoint.

Recommendations

- Training and/or more instruction on how to use the new bid schedule form is needed.
- Tie breaking metric of lowest working days needs to be revisited as it allowed for unintended consequences of unrealistic working days.
- Bidding system and upstream/downstream software input and modifications are needed to adapt to a single fixed price vs. unit prices.