

CITY OF LARKSPUR

Staff Report

August 16, 2017 City Council Meeting

DATE: August 9, 2017

TO: Honorable Mayor Haroff and the Larkspur City Council

FROM: Julian Skinner, Director of Public Works

SUBJECT: BON AIR BRIDGE REPLACEMENT PROJECT-
CIP 2004-011 - PROJECT OPTIONS

ACTION REQUESTED:

Consider and provide direction on project options, including (in order of staff recommendation):

- 1 Re-advertise project “as-is” for construction bids;
- 2 Revise the project to attempt to reduce costs; or
- 3 Abandon the project.

SUMMARY

The Bon Air Bridge is in need of replacement due to structural deficiencies in the current span. The City project to replace the bridge is included the Federal Highway Administration’s (FHWA) Highway Bridge Program (HBP) making construction costs eligible for 88.53% federal funding.

Following a decade of preparation, including extensive public outreach and environmental study, the City solicited bids for the Bon Air Bridge Replacement Project in late 2016, and opened bids in January 2017. Only two contractors submitted bids, with the apparent low bid being \$26,831,623. This bid was considerably higher than the Engineer’s Estimate of \$15,651,000, and the City Council acted on March 1, 2017 to formally reject all bids. While Caltrans has a process to request funds for a bid in excess of the Engineer’s Estimate, the probability of receiving increased funding was considered low and the financial risk for the City to pursue an increase high.

At the March 1 City Council meeting, staff presented three options for next steps: re-advertise the project as-is; assess repackaging (modifying) the project to allow closure of the Bon Air Bridge during the project (the advertised project required that the bridge remain open); or fully redesign the project.

Based on feedback from the public and Council, staff has eliminated the closure option from consideration and is returning for direction. Staff believes there are three viable options: rebid the project with the same parameters as before (“as-is”), revise the project to attempt to reduce costs, or abandon the project.

Based on further review of the bids, the project history, and discussions with contractors and Caltrans, staff is recommending the project (with road open) be rebid this fall for construction commencing in early 2018. Alternate options include redesigning a less expensive bridge, which will move the project schedule out at least two years, and abandoning the project, which is not recommended due to the potential financial hardship this may cause.

BACKGROUND AND ANALYSIS

A structural deficiency of the Bon Air Bridge is causing its slow deterioration. The bridge must be replaced. In 2006, the Bon Air Bridge Replacement Project was approved for Federal Highway Bridge Program (HBP) funding. Projects placed under the HBP receive reimbursement of 88.53% of project construction costs. Caltrans administers the HBP funding process for California projects.

Since 2006, the City has designed the replacement bridge, completed an environmental analysis, and negotiated approvals from several regulatory agencies. Public engagement in the early stages of the process produced a design that features reduced bridge piles, dedicated bike lanes, and protected multi-use paths for improved bike and pedestrian safety. The project includes improvements to Bon Air Road from Magnolia Avenue to Bayview Road.

On October 19, 2016, following a decade of preparation, the City Council approved the plans for the Bon Air Bridge Replacement Project and authorized staff to publicly advertise the project for construction bids. Staff advertised the project on October 27, 2016. Ten contractors, identifying themselves as prospective prime contract bidders, attended a mandatory pre-bid conference on November 30, 2016; only 2 construction bids were received by the January 17, 2017 deadline.

The apparent low bidder was MCM Construction of North Highlands, California, with a bid of \$26,831,623. The other bidder, Kiewit Infrastructure, submitted a bid of \$29,800,000. Both bids exceeded the Engineer's Estimate for the Project, which was \$15,651,000. Staff had been monitoring the bidding climate for large-scale capital projects for some time, and based on the complexity of the Bon Air Bridge Replacement Project, was prepared for the possibility of the apparent low bid exceeding the Engineer's Estimate.

The Caltrans funding authorization for the bridge replacement is \$15,650,728. Caltrans has a process to amend these amounts and secure higher funding, provided sufficient HBP funds are available and uncommitted to other projects. To secure the higher amount after bid opening, local agency staff must conduct a bid analysis to assure that there was good competition for the project and that lowest bid reflects the lowest possible cost for the Project. Only two contractors submitted bids. These bids were more than ten percent apart from one another and were both significantly greater than the Engineer's Estimate; it was staff's determination that a bid analysis would not support the award of a contract to MCM Construction.

An award to MCM was likely to make the City responsible for as much as \$11.2 million in unbudgeted construction costs.

After rejection of bids, the City's options included; re-advertise the project as-is, revise the project and advertise for construction bids, or abandon the project. The last option was not and is still not considered valid, as the project is to replace a bridge that has known structural deficiencies and the City would owe the HBP approximately \$3.3 million if the project were abandoned. Revising the project would mean changing parameters of the existing project or completely redesigning the project. Re-advertising as-is requires minimal work to repackage the documents for another bid, but includes no changes to project scope aimed at reducing costs.

Prior to the March 1 meeting, staff analyzed the two submitted bids and spoke with bidding contractors, including some who attended the pre-bid conference but chose not to submit a bid. Based on their feedback, the high bid was attributed to two factors, the environmental constraints (habitat for protected species) and the requirement to keep Bon Air open to traffic.

The environmental constraints include restrictions on when work may occur due to adjacent habitat for Ridgway Rail (previously classified as the "Clapper Rail") and Steelhead Trout. The resulting shortened construction seasons extend a two-year project to four years, increasing project costs. The requirement to keep the bridge open during construction resulted in the need to construct two temporary trestles in Corte Madera Creek to serve as construction platforms. The trestles add cost to the project in addition to the time needed to construct and remove the structures.

At the March meeting, staff estimated the cost savings of closing the bridge during construction at \$5 million, and presented the option of re-advertising the project with this one change in an effort to reduce project costs. Based on an estimated eight-minute bridge-closed detour and the proximity of Marin General Hospital, there was neither public nor Council support for re-advertising the project allowing the bridge to be closed during construction.

Aside from closing the bridge, substantial bridge redesign is an option that might reduce construction costs. Bridge redesign would require re-circulation of the project through the Caltrans project approval process, including environmental review, and would most likely require re-evaluation of all the project permits (Bay Conservation and Development Commission, Regional Water Quality Control Board, etc.) This process would take at least 18-24 months to complete, pushing construction to 2019, at the earliest. The magnitude of potential construction cost savings is not known, and would have to be weighed against the cost of the delay and the additional work. In addition, costs reimbursed to date for designing components of the project that may be eliminated with redesign may need to be paid back to the HBP.

It should be noted that at the conclusion of the preliminary bridge design, and prior to finalizing environmental permits, the City held a value engineering session to evaluate the chosen bridge design along with alternative options. A consulting bridge engineer, a UC Berkley engineering professor, and a bridge contractor were invited to review the project and discuss alternatives. Based on a review of site constraints and the public input on bridge function and aesthetics, the team determined that although less expensive bridge types were available, the City's design was the most appropriate.

Since the March meeting, staff and project consultants have further reviewed the bids, talked with contractors and evaluated options for reducing construction costs. Based on this review, staff has determined that reducing construction cost is achievable only by significantly changing the bridge design. At public meetings, members of the public inquired as to whether narrowing the bridge by eliminating one of the bicycle lanes would yield savings. Staff has determined this change does not yield significant construction cost savings. In addition, it would trigger re-evaluation of the permit issued by the Bay Conservation Development Commission, which could lead to additional mitigation costs that would exceed the modest construction cost savings yielded by the change.

The Consultants have updated the Engineer's Estimate for a fall 2018 rebid of the same project as the fall 2017 bid. Based on feedback from contractors and an analysis of the current and projected construction climate, the new Engineer's Estimate of construction cost is \$24.7 million; approximately \$2 million less than the 2017 low bid. Staff is confident that if the project were to be rebid, and the low bid were in line with the new Engineer's Estimate, that a request to Caltrans for the additional funding would be successful. This is based on additional bids justifying the higher project cost and the City being able to document that less expensive alternatives, including closing the bridge during construction are not feasible.

FISCAL IMPACT:

The project is included in the FY17-18 Capital Improvement Program. Not including design costs to date (same for all three options), the fiscal impacts of the three options are summarized below:

Option	Total est. Construction Cost (incl. cont. & con. Eng.)	Total other costs (not including costs to date.)	Net total cost	Net City cost (11.47% of CON cost; 20% of design cost, 100% of non-eligible costs)
Rebid existing project fall 2018	\$31.3M	none	\$31.3M	\$3.6M
Redesign project – fall 2020? bid	\$27M	\$2M – re-design, public engagement, environmental review and permitting	\$29M	\$3.5M
Abandon project	\$0	\$4M – repay HBP for design work and utilities for relocations	\$4M	\$4M

ENVIRONMENTAL STATUS:

This project has been previously processed for both CEQA and NEPA compliance. Option 2 (redesign bridge) will require additional analysis for both CEQA and NEPA as well as review by permitting agencies.

STAFF RECOMMENDATIONS:

Staff recommends that the project be re-bid this fall, without significant change.

This recommendation is based on the following:

1. The current project is the result of a ten-year process that included significant public input.
2. The cost of the bridge replacement is driven by the environmental and access constraints – these factors are present in any bridge design at this location, reducing the cost effectiveness of alternate, otherwise less expensive designs.
3. Permits are in place for the proposed project, but would be subject to review and modification, at unknown additional cost, with any significant redesign
4. The redesign and construction costs and timing of a new bridge design are unknown – there is no guarantee that a ‘less expensive’ bridge will result in a less expensive project.
5. Abandoning the project would cost the City the same today as replacing the bridge, but would place the City at significant financial risk in the future.
6. Preliminary feedback from Caltrans is that additional federal funding would be available should a second bid result in a construction cost in line with the new Engineer’s Estimate.

Respectfully submitted,

Julian Skinner
Director of Public Works/City Engineer

Attachments: CIP Project Sheet

Project Name
Bon Air Road Bridge Replacement

CIP #: 2004-011 Category: Streets

Location: Bon Air Road btwn Magnolia Ave & So Eliseo

Project Status: active

Anticipated Start Date:

Project Description
Replacement of the existing Bon Air Road Bridge.

Project is: fully funded un/under funded

Justification/Objective
The bridge was determined to be structurally deficient and replacement under the HBP deemed most cost-effective solution

PROJECT EXPENDITURE:		FY2016-17 & prior	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	Total
Design Engineering	D&E	\$ 3,964,958	\$ 520,042	\$ -	\$ -	\$ -	\$ -	\$ 4,485,000
Improvements	IMP	-	3,500,000	7,000,000	7,000,000	7,000,000	3,500,000	28,000,000
Construction Mgt	CM	-	525,001	1,050,000	1,050,000	1,050,000	525,001	4,200,002
Total Design/Construction Costs:		\$ 3,964,958	\$ 4,545,043	\$ 8,050,000	\$ 8,050,000	\$ 8,050,000	\$ 4,025,001	\$ 36,685,002

FUNDING SOURCES		FY2016-17 & prior	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	Total
HBP Caltrans/FHWA	D&E	\$ 3,588,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,588,000
HBP Caltrans/FHWA	IMP	-	3,098,550	6,197,100	6,197,100	6,197,100	3,098,550	24,788,400
HBP Caltrans/FHWA	CM	-	464,783	929,565	929,565	929,565	464,783	3,718,261
Bridge Fund	D&E	897,000	-	-	-	-	-	897,000
Bridge Fund	IMP	-	401,450	802,900	802,900	802,900	401,450	3,211,600
Bridge Fund	CM	-	60,218	120,435	120,435	120,435	60,218	481,741
Total Funding:		\$ 4,485,000	\$ 4,025,001	\$ 8,050,000	\$ 8,050,000	\$ 8,050,000	\$ 4,025,001	\$ 36,685,002
Carryover		\$ 520,042						

Notes:

Approval Mechanism (Reso # & Date)	Reso#	Date	Notes

Adopted in FY:
Last revised on: 6/1/2017
Printed on: 8/2/2017
4:26:06 PM