



Legislation Text

File #: 16-0467, **Version:** 1

Community Development Agency, Transportation Division, recommending the Board consider the following for the Green Valley Road at Indian Creek - Bridge Replacement Project, CIP 77127, and Green Valley Road at Mound Springs Creek - Bridge Replacement Project, CIP 77136:

- 1) Receive a presentation containing information regarding the scope alternatives of these Bridge Replacement Projects;
- 2) Direct staff to continue with environmental and design work utilizing the recommended alternative scope for these Bridge Replacement Projects; and
- 3) Approve appropriate revisions to the Interim 2016 Capital Improvement Program to reflect Board directed changes to the referenced Bridge Replacement Project scopes. (Est. Time: 1 Hr.)

FUNDING: Each Project is funded by Highway Bridge Program (88.53%), and a combination of Regional Surface Transportation Program and Traffic Impact Mitigation Fees as the grant match (11.47%). (Federal Funds)

DEPARTMENT RECOMMENDATION

Community Development Agency, Transportation Division (Transportation), recommends the Board receive a presentation containing information regarding three (3) project scope alternatives for the Green Valley Road at Indian Creek (Indian Creek), and Green Valley Road at Mound Springs Creek (Mound Springs) - Bridge Replacement Projects (Bridge Replacement Project/Projects).

Transportation recommends directing staff to continue with project environmental and design work utilizing Alternative C. Alternative C changes the roadway scope of the Project and increases the portion of local funds by \$950,000 in proposed Regional Surface Transportation Program (RSTP) funds.

DISCUSSION / BACKGROUND

The Indian Creek Bridge was built in 1935, widened in 1975, and is 80+ years old. It is a narrow two-lane crossing that is 28.2 feet wide. This Bridge has substandard barriers/railings; approach roadway and geometrics; deficient hydraulics; poor site distance at adjacent roadways; and, concrete is spalling on abutments. The Mound Springs Bridge was also built in 1935 and is 80+ years old. It is a narrow two-lane crossing that is 22.3 feet wide. This Bridge has substandard barriers/railings; approach roadway and geometrics; deficient hydraulics; poor site distance at adjacent roadways; and, concrete is spalling in various locations. Approximately 4,200 vehicles use these crossings daily with speed ranging from 40 to 55 mph. There is a history of many accident reports on this roadway. The Bridges are routinely inspected by the California Department of Transportation (Caltrans) every two (2) years and are given a Sufficiency Rating (SR) from 0 to 100 based on 140 elements. The SR for both of these Bridges is 68.1. Both Bridges are classified by Caltrans as Functionally Obsolete and received federal authorization for replacement funding under the Highway Bridge Program (HBP) Reimbursement Program. These Projects are included in the 2016 Interim Capital Improvement Program, which was adopted by the Board on June 7, 2016 (Item 39).

In April 2011, the County received federal authorization to complete the planning, environmental phase, and scope for Indian Creek, and in April 2012, Mound Springs received its federal authorization. The HBP requires this phase of work be completed within ten (10) years of the initial authorization date. The approved Feasibility Study Reports (FSR), completed in April 2015, identified hydraulic deficiencies and substandard roadway geometrics at both Bridges. In order to correct the substandard geometrics, the profile of Green Valley Road must be raised at each Bridge to achieve acceptable vertical and horizontal curve lengths and associated site distances. As a result, the proposed approximate approach lengths are 351 and 340 feet at Indian Creek, and 413 and 307 feet at Mound Springs. The County has concluded these lengths are the minimum attainable touchdowns for each Bridge to meet American Association of State Highway and Transportation Officials (AASHTO) standards. These widths meet minimum AASHTO requirements and are consistent with the proposed forty-three-foot (43-foot) total structure width (between the barrier rails) included in the approved FSR in order to facilitate two-stage construction. Caltrans has concurred with the structure width and extended roadway bridge approaches for eligible HBP funds.

Indian Creek and Mound Springs along Green Valley Road are separated by approximately 1,050 feet; therefore, Transportation has decided to work on the environmental and design of these bridges simultaneously in an effort to optimize efficiencies and minimize impacts. The primary funding source for these Bridge Replacement Projects is the HBP. Green Valley Road is an “on-system” roadway and according to HBP policy, roadway approach funding is limited to 200 feet adjacent to the bridge or the minimum length required making the bridge operable and consistent with current design standards.

Alternatives

Currently, three alternatives have been identified to replace the Bridges and improve the safety and performance of the adjacent roadway conditions. This section of Green Valley Road has demonstrated a history of accidents that reflect a limited line of sight. Since Green Valley Road is an important Minor Arterial in the County, all three (3) of the project alternatives are designed to keep two (2) lanes of traffic open during construction.

Alternative A (exhibit entitled “Alternative A: 2-Lane Hourglass”) will replace Indian Creek and Mound Springs Bridges with a widened bridge that accommodates future turn pockets or expansion, and retains a two-lane minimum width and length of roadway approach work at each Bridge. This Alternative is funded by 88.53% HBP and a 11.47% local match contributions, but does not enhance safety or performance beyond the Bridge replacements nor fully optimize the grant funding for the Projects. This Alternative will start with the original roadway alignment and then widen the roadway to accommodate the first Bridge. Next, taper the roadway to match the existing alignment. Then, once again, widen the roadway to accommodate the second Bridge, and finally returning to the original alignment. This change in alignment can be visualized as an hourglass shape between the Bridges (see Attachment D). The roadway returns to the original alignment for less than 300 feet between the Bridges. The total cost of both Bridges using Alternative A is approximately \$8.1 million.

Alternative B (exhibit entitled “Alternative B: Stagecoach Lt-Turn”) will replace Indian Creek and Mound Springs Bridges with a wider bridge as well; however, proposes to add a left-turn pocket west of Indian Creek Bridge to accommodate turning vehicles entering Stagecoach Road. The remaining bridge approaches, east of Indian Creek Bridge and adjacent to Mound Springs Bridge, will maintain the minimum two-lane widths and lengths for the Bridges to be operable. Similar to Alternative A,

this will leave the hourglass shape between the Bridges and does not enhance the safety or performance of the approach roadway outside the Bridge limits or one (1) left-turn pocket. This Alternative results in an additional 344 feet of locally-funded roadway improvements to provide the left-turn pocket and cannot be funded by HBP funds. These proposed roadway improvements for Alternative B requires an additional \$300,000 of local funds to be obtained from RSTP and Traffic Impact Mitigation (TIM) fees. The total cost of Alternative B is approximately \$8.4 million.

Alternative C (exhibit entitled “Alternative C: 3-Lane”) proposes to improve the safety between and within the limits of these two (2) Bridges by providing three (3) lanes the entire length of the Projects. The roadway width at the Bridges will be consistent between them, offering a two way left-turn lane and refuge for turning vehicles. By keeping the roadway geometry consistent between the Bridges, extending the ends of the Project to accommodate turn pockets, and improved approaches, an additional 944 feet of roadway improvements are needed to complete this Alternative. This section of the additional roadway improvements cannot be funded by HBP funds. In order to complete these safety betterments, additional funding from the local sources (RSTP and TIM) needs to be obtained. The total cost of Alternative C is approximately \$9 million.

Outreach

Transportation held a public meeting on August 27, 2015, to present the Projects and gather public input regarding the bridge replacements. A follow up meeting was presented to the Home Owner’s Association of Greenstone Country Community on April 6, 2016. Local residents that attended the meetings expressed support of these Projects.

ALTERNATIVES

If the Board chooses to not approve any of the three Alternatives listed, Transportation may need to refund monies to HBP for funds already spent on these Projects and cancel them.

Should the Board approve one of the alternatives presented, Transportation will continue work on these Projects using the approved Alternative.

OTHER DEPARTMENT / AGENCY INVOLVEMENT

N/A

CAO RECOMMENDATION

Chief Administrative Office concurs with staff’s recommendations.

FINANCIAL IMPACT

For Alternative A, which is the current scope with no additional roadway improvements, HBP will be funding 88.53% (\$7.17 million) and TIM fees will fund 11.47% (\$0.93 million) of the \$8.1 million Project cost.

For the next two alternatives, additional roadway improvements cannot be funded using either HBP or TIM fees and are proposed to be funded by RSTP, with TIM fees funding the original 11.47% grant match.

For Alternative B, the costs associated to provide the left-turn pocket amount to an additional \$300,000 which adds approximately 3.6% to the total Project costs. HBP will be funding 85.3% (\$7.17 million), TIM fees will fund 11.1% (\$0.93 million), and RSTP will be funding 3.6% (\$300,000) of

the \$8.4 million Project cost.

For the recommended Alternative C, the costs associated with the additional scope and roadway improvements amount to \$950,000 which adds approximately 10.5% to the total Project costs. HBP will be funding 79.2% (\$7.17 million), TIM fees will fund 10.3% (\$0.93 million), and RSTP will be funding 10.5% (\$0.95 million) of the approximate \$9 million Project cost.

There is no Net County Cost associated with the proposed action.

CLERK OF THE BOARD FOLLOW UP ACTIONS

N/A

STRATEGIC PLAN COMPONENT

Infrastructure

CONTACT

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