



Napa County

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Legislation Text

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TO: Board of Supervisors
FROM: Steven Lederer, Director of Public Works
REPORT BY: Sydney Diede, Assistant Engineer

SUBJECT: 2023 Annual Guardrail Repairs Project - Amendment No. 1 to the Professional Services Agreement No. 230084B with ADKO Engineering, Inc. for the 1) Chiles Pope Valley Road MPM 3.63 Culvert Repair, 2) Chiles Pope Bridge Replacement, and 3) Silverado Trail at Bell Canyon Creek Bridge Project (RDS 22-27), herein referred to as "the Project".

RECOMMENDATION

Director of Public Works requests the following:

1. Approval of and authorization for the Chair to sign Amendment No. 1 to Agreement No. 230084B with ADKO Engineering, Inc. increasing the maximum compensation by \$19,955 for additional engineering design and support services for the Chiles Pope Valley Road MPM 3.63 portion of the project, for a new accumulated total maximum compensation of \$317,600; and
2. Approval of a Budget Transfer for the following (4/5 vote required):
 - a. Increase appropriations by \$19,955 in the SB-1 Non-Operating Special Revenue Fund (Fund 2440, Org 1220052, Object 56100) with the use of its available fund balance to be transferred to Project 23006 (Fund 2040, Org 2040500, Object 48200); and
 - b. Increase appropriations by \$19,955 in Project 23006 (2023 Annual Guardrail Repairs) (Fund 2040, Org 2040500, Object 52360) budget offset by a transfer-in revenue from the SB-1 Non-Operating Special Revenue Fund.

EXECUTIVE SUMMARY

Heavy rainfall has caused significant damage to the road and the guardrails at the intersection of Chiles Pope Valley Road and Lower Chiles Valley Road. As a result of findings during the initial design phase, the original scope of work for this project has increased, which warrants the need for an amendment to the existing PSA for additional funding. Some changes include structural additions to the bridge and culvert, scour resistant facilities within the waterway, and additional barriers.

FISCAL & STRATEGIC PLAN IMPACT

Is there a Fiscal Impact? Yes

Is it currently budgeted?	No
Where is it budgeted?	Funding will come from SB-1 Non-Operating Special Revenue Fund (Fund 2440, Org 1220052).
Is it Mandatory or Discretionary?	Discretionary
Discretionary Justification:	The additional funds requested for the Chiles Pope Valley Road MPM 3.63 Project are to supplement additional engineering design and support services.
Is the general fund affected?	No
Future fiscal impact:	The future fiscal impact is limited to routine maintenance of the roads, the bridge, and the guardrails.
Consequences if not approved:	Without additional funding, the design for the Chiles Pope Valley Road MPM 3.63 project cannot be completed, nor can the necessary environmental permits be pursued. If additional funding is not approved, the bridge will remain undersized and a hazard during a large rainstorm, the roadway will continue to degrade, and the existing guardrails will cease to provide their purpose for protecting drivers in the event of an accident. Ceasing work on this project, will put those who travel this road at risk.
County Strategic Plan pillar addressed:	Livable Economy for All
Additional Information	The project will improve existing transportation and the road system to safely accommodate all users.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: It has been determined that this type of project does not have a significant effect on the environment and is exempt from the California Environmental Quality Act. [See Class 2 (“Replacement or Reconstruction”) which may be found in the guidelines for the implementation of the California Environmental Quality Act at 14 CCR §15302.]

BACKGROUND AND DISCUSSION

The bridge/culvert at Chiles Pope Valley Road MPM 3.63 is located near 3298 Chiles Pope Valley Road and Lower Chiles Valley Road in St. Helena, CA (APN 025-240-034). The existing bridge/culvert, which crosses below the intersection of Chiles Pope Valley Road and Lower Chiles Valley Road, is undersized and the passage of Lower Chiles Creek through this facility has led to scouring and erosion on both the upstream and downstream ends of the bridge/culvert. During a January 2017 storm event, significant damage occurred at Chiles Pope Valley Road and Lower Chiles Valley Road, in which heavy rainfall infiltrated the soil excessively and resulted in slope creep. The resulting soil instability damaged the roadway and the guardrails protecting the bridge/culvert crossing.

In 2022, the County included this location as part of the 2023 Annual Guardrail Repair project, with the intention of repairing and upgrading the guardrails at the ends of the bridge/culvert. On August 9, 2022, the County entered into Agreement No. 230084B with ADKO Engineering, Inc. (ADKO) to obtain consulting services for three (3) major projects under one (1) Agreement: Chiles Pope Valley Road MPM 3.63, Chiles

Pope Bridge Replacement, and Silverado Trail at Bell Canyon Creek Bridge Project. The proposed Amendment No. 1 for Agreement No. 230084B is to increase the budget of the Chiles Pope Valley Road MPM 3.63 project only.

ADKO provided structural engineering inspections at the Chiles Pope Valley Road MPM 3.63 site and determined that the slope on the east and west side of the bridge/culvert was failing, and this had reduced the lateral confinement of the roadway and caused the guardrail and its posts to be uprooted from the soil. In addition, a hydraulic analysis was performed and the study determined that the existing culvert was scour critical and at a minimum the County needed to repair the existing wingwall on the west side of the bridge (because it did not meet scour requirements). According to the hydraulics/hydrology report, flooding in Lower Chiles Creek could cause a scour depth of 15.5 feet on the south side and 10.9 feet on the north side of the eastern wingwall (upstream side of the culvert).

As a result of discussions with the consultants and engineering analysis, the Chiles Pope Valley Road MPM 3.63 project will include repairs to areas with slope failure, guardrail repairs/upgrades to meet current safety standards, repairs to damaged pavement, creek embankment reconstruction, and repairs to the western concrete wingwall.

The Professional Services Agreement Amendment No. 1 increases the scope of work to include the following: provide three (3) new wingwalls for the bridge/culvert, provide a concrete slab in the channel upstream of the culvert and riprap at the downstream end to reduce scour, and provide two (2) new bridge barriers for traffic protection in addition to the guardrail repairs/upgrades. The increased scope of work requires more funding for the project so ADKO and their sub-consultants will have enough money for additional engineering design, construction support services, and environmental permits. Construction would occur within the limits of the creek bank; therefore, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife will likely require permits.

During the January 2023 storms, a portion of Chiles Pope Valley Road, above the bridge/culvert at MPM 3.63, was scoured by the increasing water elevation of Lower Chiles Creek. Additionally, a portion of the soil surrounding the road and creek bank washed downstream. As a result, the bridge/culvert and road were at risk of being washed out. To protect drivers, Chiles Pope Valley Road was reduced to one (1) lane and the Road's Department installed barricades along damaged areas.

Emergency repair work began on January 10, 2023, and the road was fully reopened on January 11, 2023. The repair consisted of excavating the loose material at the washout site and then stabilizing the embankment with rock slope protection (RSP), keyed into the toe of the slope. The washout area was backfilled with clean drain rock and then topped with asphalt grindings, about one (1) inch in diameter. The County has promptly notified the CDFW (California Department of Fish and Wildlife) and the RWQCB (Regional Water Quality Control Board) of the washout and the need to place rip-rap within scoured areas. The above-listed improvements will prevent the road and soil from further washout. The County will follow up with a larger project for more

permanent repairs; it is probable that project costs for Chiles Pope Valley MPM 3.63, may increase depending on field findings. The County will seek FHWA (Federal Highway Administration) funding because Chiles Pope Valley Road is a major collector road and an emergency response route in Napa County.