March 28, 2015

To: ACHD Commissioners and Director

From: Dale Kuperus, PE, Manager Design and Construction

Subject: Adoption of Warm Springs Avenue Interim Safety Treatment Plan

April 5, 2017 Commission Meeting

Executive Summary

As a result of recent slope erosion and rocks falling onto Warm Springs Avenue and Starview Drive in the area of the mesa, ACHD staff has prepared a plan for an interim safety treatment ("Plan") for Warm Springs Avenue. The Plan consists of the removal of loose rock on the slope, removal of the existing chainlink netting and fence posts and the removal of the material that has accumulated behind the previously placed concrete guardrail as shown on the attached exhibit. The Plan was prepared in substantial conformance with current engineering and design standards. Staff seeks Commission approval and adoption of the Plan as the satisfactory interim treatment to increase the safety to the traveling public until a more permanent solution can be analyzed, engineered, and financed. Upon approval and adoption of the Plan, ACHD will enter into a contract with a local Contractor to complete the work in accordance with the Plan and notify the Commission of such completion.

Background

The Warm Springs Mesa area is an active geological landslide area. The area experiences periodic erosion of the slope (and falling rocks) above Warm Springs Avenue and Starview Drive in several areas from Windsong Drive to and including Starview Drive. These occurrences typically happen in winter months following heavy rain and freeze/thaw events.

During the past 2016/2017 winter storm events boulders have landed on Warm Springs Avenue and Starview Drive. Warm Springs Avenue and Starview Drive were immediately closed to traffic and a local geotechnical firm, Terracon, was engaged to assess the situation and advise ACHD of potential future long term remediation options. While ACHD staff has been monitoring the area, Warm Springs Avenue continues to see boulders falling onto roadway. Warm Springs Avenue was cleaned on Wednesday February 22, 2017 by ACHD Maintenance crews. Since this cleaning, no additional material has fallen onto Warm Springs Avenue.

The Plan consists of the removal of loose rock on the slope (to be done under the observation of a licensed Geotechnical Engineer), removal of the existing chainlink netting and fence posts and the
removal of the material that has accumulated behind the previously placed concrete guardrail as shown on the attached exhibit. The plan was prepared in substantial conformance with current engineering and design standards. ACHD Staff will notify the Commission upon full completion of the work. Additionally, Engineering and Maintenance staff will continue to closely monitor the area, and proposes to address a long term solution moving forward.

This system offers additional safety to the traveling public, as it will add mitigation to Warm Springs Avenue. While it is not considered a final solution for this area, it offers an interim treatment that is much safer than before the recent erosion events. The Plan reflects constraints upon ACHD in this situation including, but not limited to: topography, access, and current weather patterns and the need to reopen Warm Springs Avenue.

In conjunction with the plan, Staff has contacted a local contractor to prepare a time and materials contract along with “not to exceed” verbiage to complete the proposed rock scaling. It is anticipated that the rock scaling efforts will be approximately $25,000.

Development of a long term solution will include compiling, reviewing, and scoping all previous and current data and various alternative projects for this area. New or revised alternatives will be developed, analyzed and vetted with the public, elected officials, and considered for design and implementation. Terracon has submitted their Draft Report and staff is presently evaluating the results and will present the results to the Commission at a future work session. Initial cost estimates for a long term solution vary greatly depending upon which option is selected.

**Recommendation**
Staff recommends that the Commission approve and adopt the Plan as discussed herein and as shown on the attached exhibit, as a satisfactory interim treatment to increase the safety to the traveling public along this section of Warm Springs Avenue until a more permanent solution can be analyzed, engineered, and financed.