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MEMORANDUM

Date: February 16, 2012 **BKF No.:** 20110109-10

Deliver To: Douglas Atmore, HKS Hill Glazier Studio

From: Tom Morse, BKF Engineers

Ryan Bernal, BKF Engineers

Subject: Silver Rose - Calistoga

Preliminary Earthwork Volumes

SUMMARY:

BKF has completed a preliminary estimate of the earthwork volumes for the Silver Rose redevelopment project in Calistoga. The estimate is based on the preliminary site grading plan and the topography included in the ALTA/ACSM Land Title Survey completed by Albion Surveys dated December 2010.

85,000 cubic yards of earthwork are estimated for the project. Of the 85,000 cubic yards of earthwork, 39,000 cubic yards is cut and 46,000 cubic yards is fill. 80,000 cubic yards of this earthwork is generated from the proposed resort components. To arrive at this estimate, the site was evaluated on a 100 foot by 100 foot grid. For each grid, the average existing and proposed elevations were estimated and the difference applied across the area of the site within the grid to approximate the earthwork associated within each section. The total earthwork volume was estimated by totaling the cut or fill volumes within each grid. The existing pond will be reconfigured to approximately match existing storage volumes on site. The final pond design is still in development; based on the current pond design profile, it is anticipated that 5,000 cubic yards of earthwork will be required to reconfigure the pond.

7,000 cubic yards of import are estimated to complete the site work. This assumes that there is a 24 inch foundation on the hotel site and hardscape improvements and foundations over the rest of the site total 6 acres and are 1 foot in average depth. The import/export volume was estimated by considering the cut volumes within each grid as a negative number and the fill volumes within each grid as a positive number and totaling the volumes within each grid across the entire site. As described above, the reconfigured pond volume is expected to remain the same as the current pond and therefore no export/import is anticipated for the pond reconfiguration. It is the project's goal to achieve an approximately balanced site for the project for both cost and environmental reasons. To that end, the pond may be deepened to reduce the amount of import required.

Mark-ups showing the 100 foot by 100 foot grid over the existing topography and the Preliminary Site Grading Plan are attached as Exhibits A and B. The average elevation within each grid is shown on the existing topography. The Preliminary Site Grading Plan shows the average elevation and cut/fill amount within each grid.

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