

APPENDIX E
HUSHMAND ASSOCIATES INC. ADDENDUM (APRIL 2010)



HUSHMAND ASSOCIATES, INCORPORATED
Geotechnical, Earthquake and Environmental Engineers

April 22, 2010

R.D. Olson Development
2955 Main Street, Third Floor
Irvine, California 92614

Attn: Mr. Anthony Wrzosek
Director of Planning and Development

**SUBJECT: ADDENDUM I – Revision of Overexcavation Depth in Building and Swimming Pool Areas due to Underlying Archeologically Sensitive Areas
The Residence Inn By Marriott - Goleta, Santa Barbara County, California
HAI Project No. RDO-07-001**

Dear Mr. Wrzosek:

Hushmand Associates, Inc. (HAI) has reviewed the “Archeology Overex Impact Exhibit” prepared by Penfield & Smith, the project Civil Engineer, to evaluate and provide a mitigation measure for the impact of the archeologically sensitive areas on the site preparation and grading procedures, and the building foundation and slab performance.

The civil drawings for the site indicate that the entire site will be raised by about 3 feet to provide an even, flat surface close to the street elevation. HAI had originally recommended overexcavating and recompacting a minimum thickness of 18 inches of onsite soils before backfilling and compaction operation for raising the site, in order to minimize undesirable surface settlements. To avoid disturbance of the archeologically sensitive areas of the site, according to R.D. Olson, the buildings and swimming pool will be designed with structural slabs that can span between the pile foundations and grade beams without any soil support and thus, will not be adversely affected by potential settlements of the top soils (~ the upper 1 to 2 feet). Therefore, the overexcavation in the building and swimming pool areas may be eliminated. However, the effect of the lower compacted fill thickness (3 feet versus 4.5 feet) on the lateral support of the shallow foundations or pile caps should be considered in the design.

In order to minimize undesirable surface settlements in the parking and hardscape areas, we have recommended overexcavating and recompacting a minimum thickness of 18 inches of onsite soils as engineered fill. In addition, we have recommended using geosynthetic layers in the fill placed in these areas to provide a 4.5-foot-thick mat of reinforced earth (see Section 7.2 of the HAI 2007 Geotechnical Investigation report for the site for the grading requirements).

Layers of geosynthetic reinforcement (e.g., geogrids or geotextiles) should be inserted in the engineered fill to provide a mat of reinforced earth that would help to bridge any localized depression and minimize differential settlements. We also recommend placing a separator geosynthetic layer between onsite soils and the engineered fill.

We also understand that the 18-inch overexcavation for the parking and hardscape areas within the property archeologically sensitive zones, including the courtyard, will be eliminated. According to R.D. Olson, the property owner accepts the risk associated with settlements of the surficial soils in these areas and will repair any damage to the improvements in these areas that may occur as a result of ground settlements.

HAI appreciates the opportunity of being of service to R.D. Olson. Should you need additional information or any clarifications please call the undersigned.

Sincerely,

HUSHMAND ASSOCIATES, INC.

A handwritten signature in black ink that reads "Ben Hushmand". The signature is written in a cursive, flowing style.

Ben Hushmand, PhD, PE
President, Principal Engineer