

SECTION 4. LIMITATIONS

The analyses and recommendations submitted herein are based in part upon information obtained from the field borings. Variations of conditions between and beyond the field borings may occur, and the nature and extent of these variations may not become evident until construction is underway. If variations then appear evident, it will be necessary to re-evaluate the recommendations presented herein.

The field boring locations are approximate, having been estimated by taping from reference points and visible features shown on the Site Plans provided by Austin, Tsutsumi & Associates, Inc. on April 27, 2017 and May 16, 2017. Elevations of the borings were estimated by interpolation from the spot elevations shown on the Site Plans provided by Austin, Tsutsumi & Associates, Inc. on December 18, 2017. The physical locations and elevations of the borings should be considered accurate only to the degree implied by the methods used.

The stratification breaks shown on graphic representations of the borings depict the approximate boundaries between soil/rock types and, as such, may denote a gradual transition. We did not encounter groundwater in the borings at the time of our field exploration. However, it must be noted that fluctuation may occur due to variation in seasonal rainfall, and other factors. These data have been reviewed and interpretations made in the formulation of this report.

This report has been prepared for the exclusive use of Austin, Tsutsumi & Associates, Inc. for specific application to the Freeway Management System, Phase 2, Federal Aid Project No. NH-0300(160), Districts of Honolulu and Ewa, Island of Oahu project in accordance with generally accepted geotechnical engineering principles and practices. No warranty is expressed or implied.

This report has been prepared solely for the purpose of assisting the engineer in the design of the proposed project. Therefore, this report may not contain sufficient data, or the proper information, to serve as the basis for preparation of construction cost estimates. A contractor wishing to bid on this project is urged to retain a competent

geotechnical engineer to assist in the interpretation of this report and/or in the performance of additional site-specific exploration for bid estimating purposes.

The owner/client should be aware that unanticipated soil conditions are commonly encountered. Unforeseen soil conditions, such as perched groundwater, soft deposits, hard layers or cavities, may occur in localized areas and may require additional probing or corrections in the field (which may result in construction delays) to attain a properly constructed project. Therefore, a sufficient contingency fund is recommended to accommodate these possible extra costs.

This geotechnical engineering exploration conducted at the project sites was not intended to investigate the potential presence of hazardous materials existing at the site. It should be noted that the equipment, techniques, and personnel used to conduct a geo-environmental exploration differ substantially from those applied in geotechnical engineering.

END OF LIMITATIONS