

**GEOTECHNICAL ENGINEERING EXPLORATION
SITE IMPROVEMENTS AT DOT KAHULUI BASEYARD
650 PALAPALA DRIVE
TMK: (2) 3-8-079: 018 (POR.)
KAHULUI, MAUI, HAWAII**

SECTION 1.0 INTRODUCTION

We have performed a geotechnical engineering exploration for the *Site Improvements at DOT Kahului Baseyard* project in Kahului on the Island of Maui, Hawaii. The location of the project and general vicinity are shown on the Project Location Map, Plate 1.

The purpose of our exploration was to observe and evaluate the general subsurface conditions at accessible locations at the project site to formulate geotechnical recommendations to assist in the design of the project. This report summarizes the findings and presents our geotechnical recommendations resulting from our site reconnaissance, field exploration, laboratory testing, and engineering analyses for the project. The findings and recommendations presented herein are subject to the limitations noted at the end of this report.

1.1 PROJECT CONSIDERATIONS

The project generally involves improvements to the existing DOT Kahului Baseyard located at 650 Palapala Drive in Kahului on the Island of Maui, Hawaii. We understand the planned improvements generally include replacement of an existing wash rack and concrete pad at the existing fueling station and reconfiguration of parking areas and landscaping. A layout of the project site is shown on the Site Plan, Plate 2.

Based on the information provided, we understand the new concrete pad for the fueling station will have plan dimensions of approximately 20 feet by 30 feet and will generally support new equipment and two 5,000-gallon fuel tanks, each weighing about 90,000 pounds when filled. We understand the new wash rack being planned will generally be located on the northeastern portion of the baseyard. In addition, we understand a new drywell is being considered for the on-site management of storm water runoff at the near the new wash rack area.

A grading plan was not provided at the time this report was prepared. We envision site grading for the project to generally consist of cuts and fills associated with foundation construction, new pavements, and infrastructure installation at the project site.

1.2 PURPOSE AND SCOPE OF WORK

The purpose of our services was to generally explore and evaluate the subsurface soil conditions at accessible locations at the project site to provide geotechnical recommendations to assist in the design of the project. The work was performed in general accordance with our fee proposal dated March 18, 2020. The scope of work for this exploration included the following items:

1. Coordination of boring stake-out and utility clearances by our engineer.
2. Mobilization and demobilization of a truck-mounted drill rig to the project site and back.
3. Drilling and sampling of two boreholes extending to depths ranging from about 11.2 and 14.7 feet below the existing ground surface. In addition, collection of bulk samples of the near-surface soils for laboratory California Bearing Ratio (CBR) analyses.
4. Performance of one field permeability test at a selected location to evaluate the permeability characteristics of the subsurface materials to assist in the design of the on-site drywell system.
5. Coordination of the field exploration and logging of the boreholes and field permeability testing by our field engineer.
6. Laboratory testing of selected soil samples obtained during the field exploration as an aid in classifying the materials and evaluating their engineering properties.
7. Analyses of the field and laboratory data to formulate geotechnical recommendations to assist in the design of the project.
8. Preparation of this report summarizing our work on the project and presenting our findings and recommendations.
9. Coordination of our overall work on the project by our project engineer.
10. Quality assurance and client/design team consultation by our principal engineer.

SECTION 1.0 INTRODUCTION

11. Miscellaneous work efforts such as drafting, word processing, and clerical support.

Detailed descriptions of our field exploration methodology are presented in the following section and the Logs of Borings are presented in Appendix A. Results of the laboratory tests performed are presented in Appendix B. Results of the field permeability test performed are presented in Appendix C.

END OF INTRODUCTION