

## Updating the State Pavement Management System & Calibration of the 2002 AASHTO Pavement Design Guide for Conditions in Hawaii

**Principal Investigator:**

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**Project Sponsor:**

Loy Kuo

**Need:**

HDOT needs method to allocate funds based on predicted performance of the roads. Use of the new mechanistic-empirical pavement design procedure requires calibration of the design parameters for conditions in Hawaii.

**Objective:**

Provide an updated pavement design manual and an updated pavement management system.

**Duration:**

August 1, 2005 – July 31, 2010

**Cost:**

\$950,000

**Update:**

- Laboratory equipment has been installed and tested in the UH Pavement Materials Laboratory
- Will allow assessment of material properties such as dynamic modulus, flow number, and fatigue curves for Hot Mix Asphalt, resilient modulus for soils and granular materials (including permeable base materials), permeability of granular materials, and aging, viscosity and dynamic shear modulus of asphalt binders
- Developing interim design guide that includes recommendations for flexible pavement overlay design and alternatives for permeable base
- Developing a methodology for traffic vehicle load data in pavement design
- Will continue working on material testing activities, analysis of pavement rehabilitation procedures using FWD deflection measurements, pavement condition survey, traffic loading evaluation procedure, software evaluation and/or development, etc.