



MAY 2024

Project Title: PPRC23: Pavement Management System

Task Number: 4259

Start Date: January 10, 2024

Completion Date: September 30, 2026

Task Manager: Somayeh Mafi Somayeh.mafi@dot.ca.gov



DRISI provides solutions and knowledge that improves California's transportation system

Research

Notes

Scoping Study for Next Generation Pavement Management System (PMS)

Evaluate Frameworks for the Next Generation PMS

WHAT IS THE NEED?

Caltrans manages its pavements with a new and modern pavement management system, PaveM. While the Caltrans PMS (PaveM) has set a national standard for PMS practice, it is clear that the PMS architecture of the software (which is derived from 1980s computer architectures) is not adequate to handle the complex decision-making environment in California. However, PMS software vendors are not attempting to address these deficiencies. A better framework is needed to allow for full use of the data collected and provide more accurate predictions.

WHAT ARE WE DOING?

This project will investigate what type of decision support software is actually needed and will propose an architecture for this software based on modern computer architectures (e.g., cloud based, big data, machine learning). The scope will also include linking other software (design, LCCA, LCA) directly into the PMS to speed project delivery. This project will not develop this software, only outline what would be required, so that Caltrans can decide how to proceed.

WHAT IS OUR GOAL?

A scoping and architecture document will be provided for a next generation PMS. This project will not develop this software.

WHAT IS THE BENEFIT?

The improved APCS data will allow PaveM to make better pavement predictions and, thus, Caltrans can be more proactive in maintaining its pavements. This will lead to reduce maintenance costs and create savings by maintaining longer lasting pavements.

ADA Notice: Users with accessibility issues may contact the California Department of Transportation, Division of Research, Innovation and System Information. For TTY assistance, call the California Relay Service at 711, email: pm2.communications@dot.ca.gov or write Caltrans, DRISI – MS-83, P.O. Box 942873 Sacramento, CA 94273-0001



Scoping Study for Next Generation Pavement Management System (PMS)



WHAT IS THE PROGRESS TO DATE?

This task has just been executed.

The contents of this document reflect the views of the authors, who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the California Department of Transportation, the State of California, or the Federal Highway Administration. This document does not constitute a standard, specification, or regulation. No part of this publication should be construed as an endorsement for a commercial product, manufacturer, contractor, or consultant. Any trade names or photos of commercial products appearing in this document are for clarity only.