



Caltrans Division of Research,
Innovation and System Information

Research

Notes

Pavement

AUGUST 2020

Project Title:
Enhancement to the Intelligent
Construction Data Management
System and Implementation, TPF-
5(334)

Task Number: 2859

Start Date: January 31, 2015

Completion Date: December 31,
2020

Task Manager:
Yue Wang
Transportation Engineer
yue.wang@dot.ca.gov

Enhancement to the Intelligent Construction Data Management System and Implementation, TPF- 5(334)

Support the implementation of intelligent compaction as a quality control tool on grading, reclamation, and asphalt paving projects.

WHAT IS THE NEED?

Intelligent Compaction (IC) is the compaction of road materials, such as pavement materials, using modern vibratory rollers equipped with an integrated measurement system. It is currently part of the Every Day Counts 2 (EDC2) initiative, with the objective of moving national implementation efforts of IC forward.

The IC and related construction technologies have been supported by the Federal Highway Administration and state Department of Transportation (DOTs) including Caltrans for their proved benefits for achieving quality construction.

IC data management system gathers large quantities production activities data each day. Integrated visualization and analysis systems are used to process the collected data in real-time, so that construction personnel can make quick decisions.

The Minnesota DOT serves as the lead for the execution of this research.

WHAT ARE WE DOING?

Enhance the current version of intelligent construction data management tool Veda (ICDM-Veda) for full implementation of the technologies. The objectives of this effort are to incorporate features and enhancements of the areas listed below:



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

1. Analysis platforms
2. Management of database and project files
3. Mapping
4. Correlation analyses
5. Spot tests
6. Data import and mapping
7. Contract administration

WHAT IS OUR GOAL?

The goal of this task is to support the implementation of IC as a quality control tool on grading, reclamation, and asphalt paving projects.

WHAT IS THE BENEFIT?

This study provides support to the national implementation efforts of IC. The intelligent construction data collection systems gather large quantities of daily production activity and help the materials and construction personnel rapidly evaluate the data and make decisions.

WHAT IS THE PROGRESS TO DATE?

The final delivery is expected to be delayed due to the COVID 19.