

DRISI

CALTRANS DIVISION OF RESEARCH,
INNOVATION AND SYSTEM INFORMATION

Research Notes

Pavement

MAY 2024

Project Title:
Use of Cold Recycling as Base for
Concrete Pavements

Task Number: 4391

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Use of Cold Recycling as Base for Concrete Pavements

To evaluate and implement cold recycled materials in rigid pavement bases

WHAT IS THE NEED?

This task addresses the need for evaluating and implementing cold recycled materials as the base for rigid pavements. By conducting research and developing guidelines, Caltrans aims to expand the application of cold recycling techniques, improve concrete overlays' performance, and subsequently achieve benefits such as reduced natural resource depletion, economic savings, and improved environmental and user costs in the context of pavement construction and maintenance. This task aligns with Caltrans' mission to enhance the sustainability and effectiveness of transportation infrastructure in the state of California.

WHAT ARE WE DOING?

This task involves the evaluation and implementation of cold recycled materials as the base for rigid pavements.

This task includes the following subtasks:

- Task 1: Identification of Laboratory Testing Procedure
- Task 2: Laboratory Testing of Reference Materials
- Task 3: Design and Testing of Optimized Cold Recycled Materials
- Task 4: Pilot Implementation in the Field

WHAT IS OUR GOAL?

The main goals of this task are:

- evaluate and implement cold recycled materials as base for rigid pavements
- develop guidelines based on research findings
- conduct pilot implementations in the field
- expand the use of cold recycling techniques
- improve performance of concrete overlays
- achieve overall benefits for Caltrans, including economic savings and reduced environmental impact in pavement construction and maintenance



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WHAT IS THE BENEFIT?

This task benefits Caltrans by promoting sustainability using cold recycled materials, leading to economic savings, improved pavement performance, standardized guidelines, reduced environmental impact, and lower user costs associated with pavement construction and maintenance.

WHAT IS THE PROGRESS TO DATE?

The identification of laboratory testing procedure under Task 1 of this study has been completed. The estimated percent of work completed for this study is five percent, to date.

Next quarter, the research team plans to continue the laboratory testing of reference Full Depth Recycling – Foamed Asphalt and Partial Depth Recycling materials. The selection of Full Depth Recycling – Cement mix design for testing will be initiated.