

SAVE MY ROAD

Problem: Cracked road

Solution: Cold in-place recycling

Success Story: Cold In-Place Recycling

Faced with a severely cracked State Highway 191 and limited funding, the Utah Department of Transportation (UDOT) needed a progressive roadway solution.

UDOT looked to double/double cold in-place recycling (CIR) as the answer. This process comprises CIR overlaid with a cold central plant recycling mix that is sealed with a double chip seal. The costs and required structural coefficients of the cold recycled pavement were comparable to those of conventional paving methods, so the state felt comfortable moving forward with this process.

The total Structural Number of the existing section of roadway was 1.68; the proposed redesign would bring it up to 2.48. A 4-inch CIR and 1.5-inch hot mix asphalt overlay were used on the first five-mile section. A 3-inch CIR with a 3-inch cold central plant recycling overlay and a double chip seal wearing surface were used on the next 8.5 miles.

The project was completed in 54 days, and total funds expended came to \$3.6 million — a 26% savings over conventional mill and fill.

The improvements in the distress index speak for themselves. The ride quality increased from 46 to 83.19. The environmental cracking index went from 56.2 to 95.41, and the rutting index improved from 70.3 to 74.97. Overall, the condition of this section of Highway 191 increased from 65.3 to 88.22. Due to the massive improvement in roadway quality and the impressive cost savings, UDOT is expected to use CIR again in the future.