

The County of Fresno performed their first ever Cold Central Plant Recycling (CCPR) project. The project was a 2 lane, 14.5-mile segment of Lincoln Avenue, from SR 145 to Fig Avenue, with heavy agricultural traffic.

An estimated 10% cost savings

Reduction of 27,000 CY in landfill disposal and 54,000 trucking miles on surrounding roads, 65% reduction in GHG emissions

Reused 43,000 tons of on-site RAP generated through CCPR

Same-day return to traffic each day

BACKSTORY:

Lincoln Avenue consists of approximately 14.5 miles of rural County road, servicing primarily farming traffic. The existing pavement was heavily oxidized and distressed due to many years of heavy traffic, resulting in the need to reconstruct the pavement. During the project the County elected to widen the roadway as well, adding an additional 4-ft of shoulder width to each lane.

PROBLEM:

Several obstacles presented themselves during the course of the project, including uncovering paving fabric in the existing pavement section and locating a construction staging yard large enough to host the CCPR plant and operation.

SOLUTION:

Upon sampling of the roadway to perform the CCPR mix design, it was noted that throughout portions of the project paving fabric was present within the pavement section. This can be a concern during CCPR operations because paving fabric must be removed during the crushing and screening operation of CCPR, which slows production speeds and increases labor resulting in additional costs. However, because there was a surplus of RAP being generated on this project, and the concern was communicated early on in the project, the RAP containing paving fabric could be separated from the “clean” RAP and stored in another location to be used only in the event that the “clean” RAP was all used first. In this case, because of the excellent communication and diligence during the milling operations, there was enough “clean” RAP to supply the entire CCPR operation and the RAP containing fabric was not needed, therefore avoiding unnecessary costs and production delays. In many areas it can be difficult to identify and secure a staging location large enough for CCPR operations, particularly for a project of this size (over 40,000 tons of CCPR). The location must be large enough to contain not just the RAP stockpiles, but also the CCPR plant, ample space for haul trucks to deposit RAP, load CCPR material and navigate, and other incidental activities. While this project was in a rural area with many open areas, it still required cooperation with the County to secure a suitable location to accommodate the entire CCPR process. The County was able to provide a perfectly suitable location directly adjacent to the project site.

PHOTOS:



Before CCPR



During CCPR