STABILIZATION OF RECYCLED BASE COURSE

County Road Department Project

Following application of the liquid EMC SQUARED Stabilizer treatment to the asphalt millings and aggregate material, the treated aggregate mixture was processed by a tractor-drawn agricultural disk and motor graders, then shaped and compacted by vibratory smooth drum rollers.

Placement of hot mix asphalt on stabilized, or "bound" base.

Maintenance-free after 13 years.

The County of Mariposa encompasses a large and varied land area in Central California, stretching from the foothill edge of the San Joaquin Valley up into the mountainous terrain of the high Sierra Nevada, including Yosemite National Park. With steep and winding roads, the demand for road maintenance is neverending. To accomplish more within their available budget, the county found stabilization of aggregate and recycled asphalt materials to be an area where advancements in product technology were of interest. A federally funded flood repair project had necessitated a huge trucking haul of granite rip rap rock to armor the banks of the Merced River to protect repaired sections of roads along both sides of the river. The trucking haul destroyed the existing asphalt pavement on a five-mile section of county road that connected the granite quarry location with the sites where the rip rap was delivered. When funding was provided by the Federal Highway Administration (FHWA) to reconstruct and repair this section of road, the County specified a low cost mixed-in-place base stabilization treatment. Existing asphalt was milled and blended with imported aggregate and the mixture was then treated with the EMC SQUARED® Stabilizer to construct a stiffened and stable platform for the new asphalt surface. When last reviewed after thirteen years in service, this section of pavement remained in excellent condition, retaining its original alignment and providing an exceptionally smooth running surface. County road projects constructed without the EMC SQUARED Stabilizer base course treatment showed a distinct contrast. Within years of their reconstruction, pavement distress was evident in the new hot mix asphalt surfacings.

Crack sealing applications by road maintenance crews visually highlight the costs associated with paving on unstabilized base course materials. Given the field performance and laboratory testing history of the EMC SQUARED Stabilizer product, the excellent ride quality and extended service life of the asphalt pavement above the stabilized base was no surprise. As indicated in laboratory testing available for review, EMC SQUARED treatments eliminate the moisture and frost susceptibility problems of aggregate base course materials while providing bound layers with load carrying capacity similar to asphalt pavement. An EMC SQUARED base stabilization treatment is, in essence, an inexpensive method to "thicken" the effective pavement layer and prolong the service life of the full road structural section.

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