

No VOC Penetrating Emulsion Prime Coat, ePrime, contains no added solvents. The PEP penetrated the surface within 15 minutes and withstood a garbage truck that drove through the work zone.

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Eliminated the release of VOC's in the urban setting.

Ability to place the hot mix within a couple of hours rather than the typical 48 - 72 hours cure period reduced inconvenience to the traveling public.

Protected the base from erosion, provided a drivable surface for construction and vehicular traffic and enhanced the bond to the constructed pavement.

#### BACKSTORY:

Hawaiian subdivision, Clark County, near Las Vegas, Nevada. Ambient temperatures typically 90 - 100 degrees F with low humidity.

#### PROBLEM:

Traditional prime coat emulsions contain significant amounts of petroleum solvents that aide in the penetration of the product into the base. In many areas of the country however, volatile organic compounds (VOCs) released into the atmosphere are severely regulated or simply not looked upon favorably by the local community. The county was looking to evaluate a solvent-free prime coat product and assess its performance for possible use throughout the county.

#### SOLUTION:

ePrime, a solvent-free prime coat emulsion, was selected for the project. The use of this product served to eliminate the release of VOCs in this urban setting. An additional benefit of this application is a much quicker cure time as there are no solvents that must evaporate to facilitate the curing process. The ability to place a hot mix asphalt pavement within a couple of hours rather than the typical required 48-72-hour cure period provides a significant cost savings and a reduced inconvenience to the traveling public. A water truck was used to moisten the primed surface within an hour of the planned application. The prime coat emulsion was applied through a standard asphalt distributor at the rate of 0.18 gallons per square yard and penetrated the surface within 5-15 minutes of being applied. To complete the test, the county left the surface open to traffic for the weekend. The prime coat was immediately put to the test when a city-owned trash collection vehicle drove through the work zone and left the surface undisturbed.