



# ARAM Quarterly

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Asphalt-Rubber Aggregate Membrane

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## Caltrans at Work

The Largest ARAM Composite Layering System in Southern California



Interstate 5  
BEFORE



Interstate 5  
AFTER ARAM Composite Layering System

Caltrans recently completed the largest Asphalt-Rubber Aggregate Membrane (ARAM) composite layering system project in Southern California's history. ARAM has a standard Caltrans specification and consists of an asphalt-rubber binder (sprayed between 385-415 degrees Fahrenheit) and a 3/8 inch hot pre-coated aggregate. It also has over 40 years of proven performance.

The approximately 115 lane mile (over 800,000 square yards) project on Interstate 5 included 125,000 tons of Asphalt-Rubber Hot Mix (ARHM) over ARAM, and the two combined recycled the equivalent of over 350,000 California scrap tires. If stacked like Lifesavers, that many tires would reach a height of over 190,000 feet (36 miles). That's more than halfway to outer space, folks (62 miles).

The ARAM project was located just North of Six Flags Magic Mountain in Valencia, from Lake Hughes Road to Vista Del Largo (commonly referred to as the "Grapevine"). The composite layering system consisted of a 2 1/2 inch cold mill, ARAM interlayer and a 2 inch ARHM overlay, which will extend the life of

the roadway by a decade or more by preventing water intrusion and reflective cracking. The majority of the work was done at night to have a minimal impact on traffic congestion.

As we travel for work, school, trips to the beach and holiday vacations out of town, we must remember how important it is to maintain our interstate highways and the rest of our nation's infrastructure. Always drive safely through construction zones. Caltrans' "Slow Down for the Cone Zone" is not just a slogan, but a vital message for all drivers in California to abide by. **Always slow down for highway workers...It's the law.**

In 2000, "SLOW FOR THE CONE ZONE" was implemented.



## Interstate 5 cont.

Caltrans was the major player on Interstate 5, designing and overseeing the project. Security Paving Inc. and Manhole Adjusting Inc. were the two main contractors, with Security Paving Inc. in charge of the grinding and ARHM overlay and Manhole Adjusting Inc. applying the ARAM. Below are pictures of the major construction operations, which took approximately three months to complete (including full striping). All operations, from grinding to overlays, were completed during each shift.





# City of Long Beach

## Over a Decade of Performance at a Half-Decade Price

The City of Long Beach recently expanded its street maintenance toolbox to include Asphalt-Rubber Aggregate Membrane (ARAM) cape seals. These ARAM System 1 applications will provide maintenance free streets for 12 - 15 years at a fraction of the cost of other conventional treatments. In addition, ARAM recycles the equivalent of over 600 scrap tires per lane mile, making it eligible for CalRecycle's grant program and helping to reduce California's epidemic of discarded tires. The streets that were treated are E. Anaheim Rd. (from El Prado Ave. to Clark Ave.), E. 1st St. (from Junipero Ave. to Orizaba Ave.) and Josie Ave. (from E. De Leon St. to E. Rendia St.).



ARAM applications are generally applied very quickly and without the need for grinding or reconstruction, which could lead to public inconvenience or public liability. It can also be driven on almost immediately after it is placed, allowing the surface to be traffic ready much faster than conventional treatments. The City of Long Beach made some special preparations before applying the ARAM to improve overall ride-ability and long term performance, including crack sealing and micro-milling.

Long Beach applied over 22,000 square yards of ARAM (over 3 lane miles) in September, recycling the equivalent of almost 2,000 CA scrap tires and providing taxpayers with the most fiscally responsible street maintenance system with limited public funds. If those recycled tires were stacked like Lifesavers, they would reach a height of three Vincent Thomas Bridges stacked on top of each other.



***"It's easy to overspend on individual street maintenance and repairs. ARAM cape seals will give Long Beach up to 15 years of maintenance free life, at a significantly reduced cost of other conventional treatments. ARAM cape seals allow us to pave more miles of street at no additional cost."***

**Gary DeLong**, Councilmember for the City of Long Beach



*Interstate 5 Article, cont. from cover*



Before



After ARAM Composite Layering System



Before



After ARAM Composite Layering System



**36 miles**

**I-5 Project**

Over 350,000 recycled CA scrap tires/ would reach a height of 36 miles if stacked like Lifesavers

Approx. 115 lane miles (over 800,000 square yards)



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