Angeles Forest Highway Road Rehabilitation Project (Overall Winner)

Location: Angeles National Forest

City or County Responsible for Project: Los Angeles County

Award Category:
Efficient and Sustainable Road and Bridge Preservation, Maintenance and Construction and Reconstruction Projects

Narrative Description Of Your Entry:
environmentally responsible way. To this end, the County has embraced a three prong sustainable approach to manage the road network. The approach incorporates principles that (1) take care of roads that are in good condition, first; (2) use recycled materials in the treatment selections; and (3) reutilize the existing materials in-place. The Angeles Forest Highway Project showcases the benefits when properly applying the sustainable approach. Angeles Forest Highway (AFH) is a scenic mountain route that allows access to an extensive network of hiking and equestrian trails. In addition, it is the only route that connects the Antelope Valley with the Los Angeles Basin other than SR-14. Approximately 16.5 miles of pavement was in very poor condition and exhibited severe structural deficiency and required major rehabilitation. The objective of the project was to rehabilitate these 16.5 miles and bring the roadway to current standards. The project was a joint effort between the Federal Highway Administration (FHWA) and the County. FHWA took the lead in the design and project administration. In addition, FHWA shared the cost of the project. Construction involved rehabilitating the roadway by recycling the existing pavement to a depth of 3 inches using a cold in-place recycling (CIR) treatment then constructing 1½ inches of asphalt rubber hot mix over the CIR pavement. CIR was selected as it reduced time and cost. By reusing the existing pavement in-place, the CIR treatment eliminated the need to haul out existing pavement from the project location then importing conventional hot mix asphalt. Eliminating these steps from the project resulted in less environmental impact, shortened construction durations, and reduced road closures. The CIR pavement rehabilitation cost for the project was $4.3 million ($1.74 per square foot). When compared to a conventional hot mix alternative, the CIR treatment resulted in a cost savings of approximately $2.0 million while extending the service life of the pavement by an estimated 10 years. In addition to being cost effective, the CIR treatment reduced energy consumption by 72%, greenhouse gas (GHG) emissions by 74%, and landfill use by 10,000 cubic yards. It also allowed us to be good stewards of natural resources by mitigating the need to quarry tons of virgin material. In summary, the AFH Project preserved and improved the overall quality of the road system in a cost effective and environmentally responsible way. The County's commitment to implement sustainable projects like the AFH Project addresses existing funding shortfalls and meets the objectives of AB32 of reducing GHG emissions. The AFH project was the 8th CIR project successfully completed by the County in the last 5 years and is a testament of a proven model for other agencies to adopt.

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