



2017 ?? Sacramento Wash Crossing at Oatman Highway (Historic Route 66)

Description

Meta Fields

Project Summary : Mohave County, Arizona is the fifth-largest county by area at 13,311 square miles in the contiguous United States and maintains 48 miles of Historic Route 66 (a.k.a. "Oatman Highway") comprising part of the longest contiguous section of Route 66 operating today. Its westernmost section approaching California crosses the Sacramento Wash point of discharge into the Colorado River, draining watersheds across 1,300-plus square miles. Summer monsoon conditions have proven the 90-year Oatman Highway's inadequacies as a low-water dry wash crossing at Sacramento Wash, a crossing crucial to commuter and tourist traffic. Storm-driven closures have precipitated numerous swift-water rescues and underscore corridor operational and reliability challenges due to a 24-mile detour as Oatman Highway provides the lone connection along the only highway paralleling the Colorado River and bisecting Mohave County's proverbial west coast. The County's need for an all-weather crossing at Sacramento Wash coupled with its array of traffic, environmental, site and area characteristics precipitates perhaps the most dynamic demand for ABC technologies including Prefabricated Bridge Elements (PBE) to which the County secured a merit-based \$1 million Federal Highway Administration (FHWA) Accelerated Innovative Deployment grant award toward applying ABC solutions promoted through the FHWA Every Day Counts Program. The resulting \$2.96 million Oatman Highway Bridge Project is the first ABC project for Mohave County delivered through stellar partnership with Arizona Department of Transportation and FHWA yielded numerous successes central to ABC and PBE benefits answering Project demands. These include (1) user cost savings at \$33+ thousand daily in context of 4-day (87-hour actual) maximum hard closure versus 11-week traditional Project construction an aggregate benefit value exceeding Project construction cost, (2) contractor convenience and labor efficiencies in fabricating the bridge superstructure outside of the Project's rural locale, and (3) largely controlled environment in Project prosecution that reduced weather impact, bettered work zone safety and duration thereof and collectively made more effective use of work time, thus improving safety, quality, convenience, and cost.

Project Location : Oatman Highway approximately 1 mile north of Interstate 40 Exit 1 in the Topock area.

Mobility Impact Time : ABC closure of 87 hours vs. 3-month full closure for conventional construction. Project construction cost was wholly returned in benefit realized through user cost savings in vehicle operation and personal time attributed to 24-mile detour avoidance. At \$33+ thousand daily, the application of an ABC method using PBES reduced potential user costs under traditional bridge construction from \$2.6 million to \$135K (95% reduction) through the applied Every Day Counts innovations. Mohave County and ADOT carried out a post-construction survey of property owners in the nearest Census Designated Places to the Project site: Golden Shores, Arizona and Topock, Arizona. ADOT mailed surveys in May 2017 to 1,502 property owners, and the County received 146 survey responses marking 9.7% response rate. The survey found majority user satisfaction with the Project's overall impact to traffic and Project overall results. Of particular note, 56 percent of respondents answered "yes" to the question "If Accelerated Bridge Construction costs more, would you support your tax dollars being allocated to implement it on future projects?"

Impact Category : Tier 2 (within 3 days)

Dimensions : 113.83-ft-long and 38.83-ft-wide single-span modular decked beam bridge; 0 degree skew

Average Daily Traffic At Time Of Construction : 1350

Traffic Management : Conventional project construction would have required an 11-week full closure of Oatman Highway given the road's two-lane configuration and Project's 100-foot right-of-way bisecting the Havasu National Wildlife Refuge, an environmentally sensitive area. Closure in an area flanked by the Colorado River and absent of intersecting local roads demands 24-mile detour. User cost in context of vehicle operation and travel time value is estimated at \$25 per vehicle, and with Oatman Highway serving 1,350 vehicles per day, conventional construction would entail approximately \$2.6 million in road user cost.

Existing Bridge Description : The Project represents new bridge construction. Existing conditions entail Oatman Highway crossing Sacramento Wash, a dry bed of an intermittent stream, at-grade.

Replacement Or New Bridge : The new bridge has two 12-foot wide traffic lanes and two 6-foot wide

