



LOCATION

Winters, CA

CLIENT

California Department of
Transportation (Caltrans)

CATEGORY

Slope Stabilization



Project Spotlights: CA DOT: 04-02G9504



ABOUT THE PROJECT

In 2015, Caltrans advertised a project to repair an unstable slope on Highway 128 (west of Winters, CA). According to the Preliminary Geotechnical Report (PGR) dated March 4th, 2014, the roadway was constructed on a poorly made fill slope that caused slip outs in the winter.

The PGR recommended removing the bulk of the slide debris and a portion of the underlying soil before reconstructing the fill slope with Expanded Polystyrene (EPS) Geofoam blocks. Replacing the poor material with EPS serves two functions: it increases shear strength of the low-strength, poorly compacted fill, and its light weight reduces the driving forces on the slide. Bid tabulations indicate that bid prices for the EPS ranged from \$130/CY to \$170/CY.

THE SOLUTION

Cell-Crete Corporation, as a subcontractor to the winning general contractor (GC), worked to submit a Cost Reduction Incentive Proposal (CRIP) to the State to replace the EPS blocks with Cell-Crete's Lightweight Cellular Concrete (LCC). Cell-Crete's LCC mixes cement slurry with a preformed foam to create a final product with a low unit weight and moderate strength. Once cured, the LWCC is similar to pumice. The mix design submitted had a cast density of 27 PCF (pounds per cubic foot) and an unconfined uniaxial compressive strength of 40 + PSI at 28 days.