



UNITED STATES

## CalTrans Route 12 San Joaquin County



**Owner**  
Caltrans

**Engineer**  
Caltrans

**General contractor**  
O.C. Jones & Sons, Inc.

**Dates of work**  
2014/06 2014/10

### Description

The Bouldin Island rehabilitation/median barrier project covers a 4-mile segment of State Highway 12 on Bouldin Island from the Sacramento County line at the Mokelumne River Bridge to the Potato Slough Bridge.

To improve a deteriorating roadway surface and driver safety, the project proposed to replace the existing two-lane freeway with a new roadway section that includes 12-ft travel lanes in each direction, 8-ft outside shoulders and a concrete median barrier.

Due to soft, near-surface soils, excessive settlement was predicted unless ground improvement was provided.

### Main figures

**Wick drains**  
2300000 LF

### Ground conditions

The location of the construction site rests entirely in intertidal deposits, which consist mostly of peaty mud. The soil is composed of soft mud and peat, each of which were deposited in marshes, swamps and adjacent waterways.

The near-surface soils consist of an estimated 7 ft of loose/soft peat underlain by 5 ft of loose to very loose silty to clayey sand. To mitigate settlement, Menard and Advanced Geosolutions proposed the installation of wick and strip drains.

### Solution

Menard and Advanced Geosolutions installed a total of 177,300 LF of strip drains and nearly 2.3 million LF of wick drains along the 4-mile segment of SR 12. Facing strict deadlines by the California Department of Transportation, Menard overcame swampy, marshy conditions to complete the project on schedule.