

**EROSION CONTROL**

**Product: Gabion Mattresses, Non-Woven Geotextiles**

**Background**

State Route 299 runs across the northern part of the California from Arcata to the Nevada state line. This highway is part of the California Freeway and Expressway System and portions of the highway are included in the State Scenic Highway System.

**Problem**

Steep mountainous terrain, combined with challenging geotechnical and soil conditions required non-typical methods of construction.

The road has been realigned many times in an effort to accommodate the challenging and dangerous grades and curves through the mountains. In an effort for highway safety improvement, a project from mile marker 0.3 to 7.1 was initiated.

The project:

- Decreased approximately 43 horizontal curves to 15
- Revised the horizontal & vertical alignment
- Increased lane and shoulder widths
- Added a passing lane
- Put in place a 4 foot soft median

**Solution:**

Gabion Mats were used in lieu of rock-lined ditches to minimize the potential for “ditch shifting” due to erosion and undercutting.

It was anticipated that gabion voids would help decrease sediment transport onto waterways and that overtime the gabions will fill with sediment and allow natural vegetation to grow.

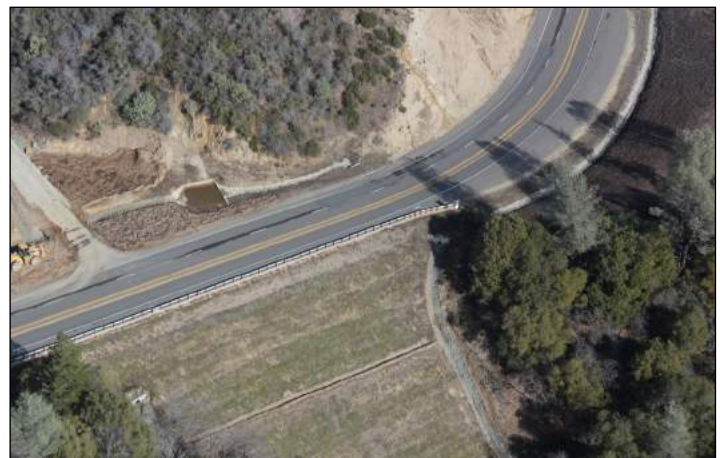
To complete this work, 1,300,000 cubic yards of soil was excavated from 22 cuts and placed into 8 major fills.



Site Prior to Work



Installation of the Gabion Benches



Completed project withn Collectors and Benches installed

Client:

CALTRANS

Main contractor:

STEVE MANNING CONSTRUCTION

Designer:

CALTRANS

Products used:

GABION MATS, MACTEX, GALVANIZED SPENAX

Date of construction

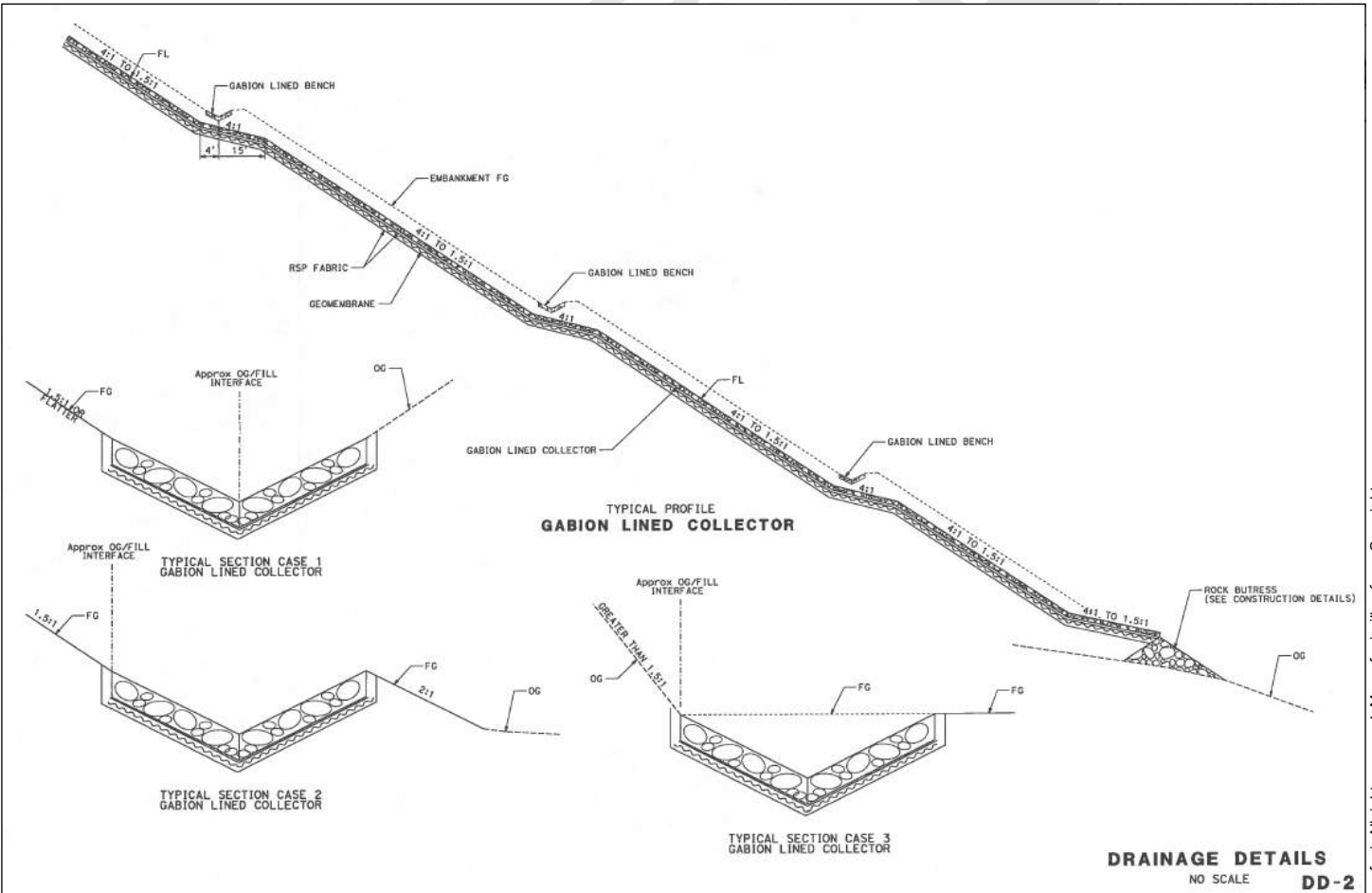
2015



After site clearing and preparation



Installation of the benches



Design Drawing

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