

**DEADMAN WASH, TSMC CHANNEL INFRASTRUCTURE  
PHOENIX, ARIZONA, U.S.A.**

Weirs, Culverts and Transverse Structures

**Problem**

They needed to protect their new infrastructure from erosion caused by the Deadman Wash in North Phoenix Arizona. They needed to re-grade a channel that was 2 miles long, 300 ft wide and 6 ft tall to divert the storm water and prevent soil loss at the bed and banks. We also used semi-rigid hydraulic protection to suit the arid climate of the region. They needed to complete the project in a short time, with enough monetary savings and approval from the Maricopa Flood Control District. The Installation of the project was performed by BUESING Corporation Contracting.

**Solution**

Maccaferri worked with Wood Patel Engineering to design a hydraulic solution for the microprocessor manufacturer TSMC. To reduce the soil erosion along the channel, they installed a series of sloped weirs that lowered the bed gradient. Each weir was about 300 ft wide and 80 ft long, and they were spaced about 340 ft apart. We also used slope mattresses to cover the curved slopes. The materials that were used included 7600 CY of 9" Reno mattresses, 7750 CY of 12" gabion mattresses, 2800 CY of 3'x3' gabions and 64,000 SY MacTex N59.1. The Installation of the project was performed by BUESING Corporation Contracting.

**Client:** TSMC Arizona Corporation

**Designer / Consultant:** WOOD PATEL

**Contractor:** BUESING CORP

**Products used (Qty.)**

- Reno Mattress Plus 3800

**Date of construction:** 11/2021 - 06/2022

[Google Maps](#)

[Google Earth](#)



Curved Slope



Sloped Weir



Weirs Upstream



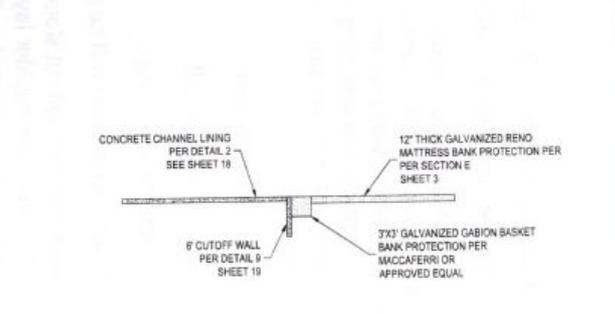
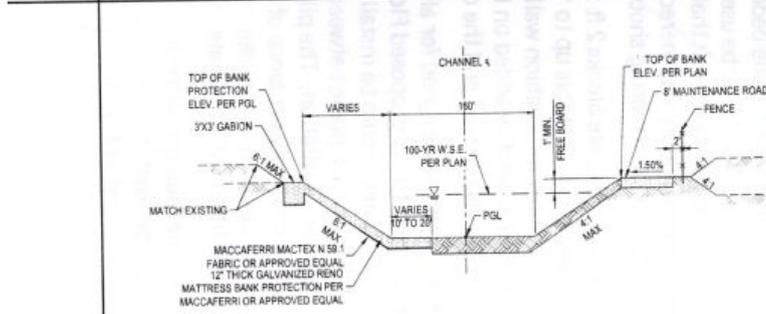
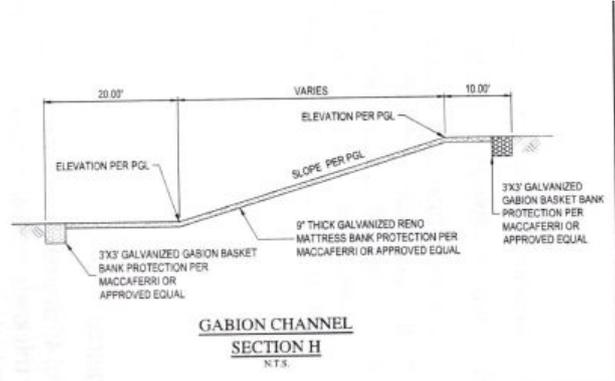
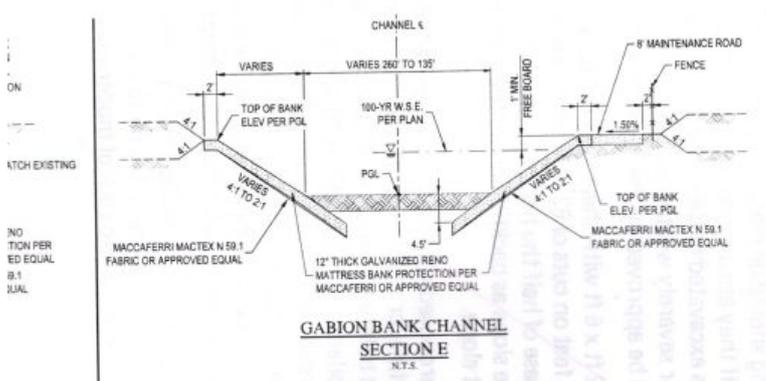
Weir downstream



Material Delivery



Aerial View During Construction



## Channel Profile

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