

HUHUGAM HERITAGE CENTER MARICOPA CTY, ARIZONA, USA

ARCHITECTURE

Product: Gabions and Terramesh™

Problem

The Huhugam Heritage Center is a museum style campus celebrating the heritage of the Gila River Indian Community. The facility is built on reservation land in southern Maricopa County, Arizona, immediately south of the City of Phoenix.

The project architect wanted to include a large crescent shaped protective earth barrier on the eastern side of the center. The crescent structure would have a 130' radius and rise from 12' high at each end, to a maximum of 37' high at its midpoint. The inner face would be a retaining structure, and the outer face a 2:1 slope back down to ground level. Access tunnels through the structure were also included.

Solution

The aesthetics of gabions were desirable, yet a traditional gabion retaining structure would be very expensive. Therefore Maccaferri suggested the use of Terramesh™ which consists of a gabion facing unit with an integral soil reinforcing 'tail' element. This tail is compacted within the structural backfill embankment material, reinforcing it and forming a Mechanically Stabilized Earth (MSE) structure. In this application it offered the same aesthetics as a gabion wall, but for less cost, due to the reduction in gabion stone fill.

The architect creatively used the gabion faced Terramesh™ to incorporate Native American features on the interior facade of the wall, in combination with the structural integrity of an MSE solution. The fascia of the wall is designed to represent a pottery sherd. Each row of gabions is offset in such a manner as to replicate a Native American pottery design. Utilizing specially supplied rock that blends closely with the colors of the structures on the campus, the resulting appearance is striking and unique.

The workmanship on the gabion fascia is unquestionably stunning. For anyone considering using gabions in an architectural application, this is a must-see project.

Client:

HUHUGAM HERITAGE CENTER

General contractor:

JOE E. WOODS INC., TEMPE, AZ

Architect:

STASTNYBRUN ARCHITECTS INC., PORTLAND, OR

MSE Designer:

TERRANE ENGINEERING, TEMPE, AZ

MSE Structure Subcontractor:

SPECIALITY CONTRACTORS OF ARIZONA, PHOENIX, AZ

Date of building:

FALL 2002



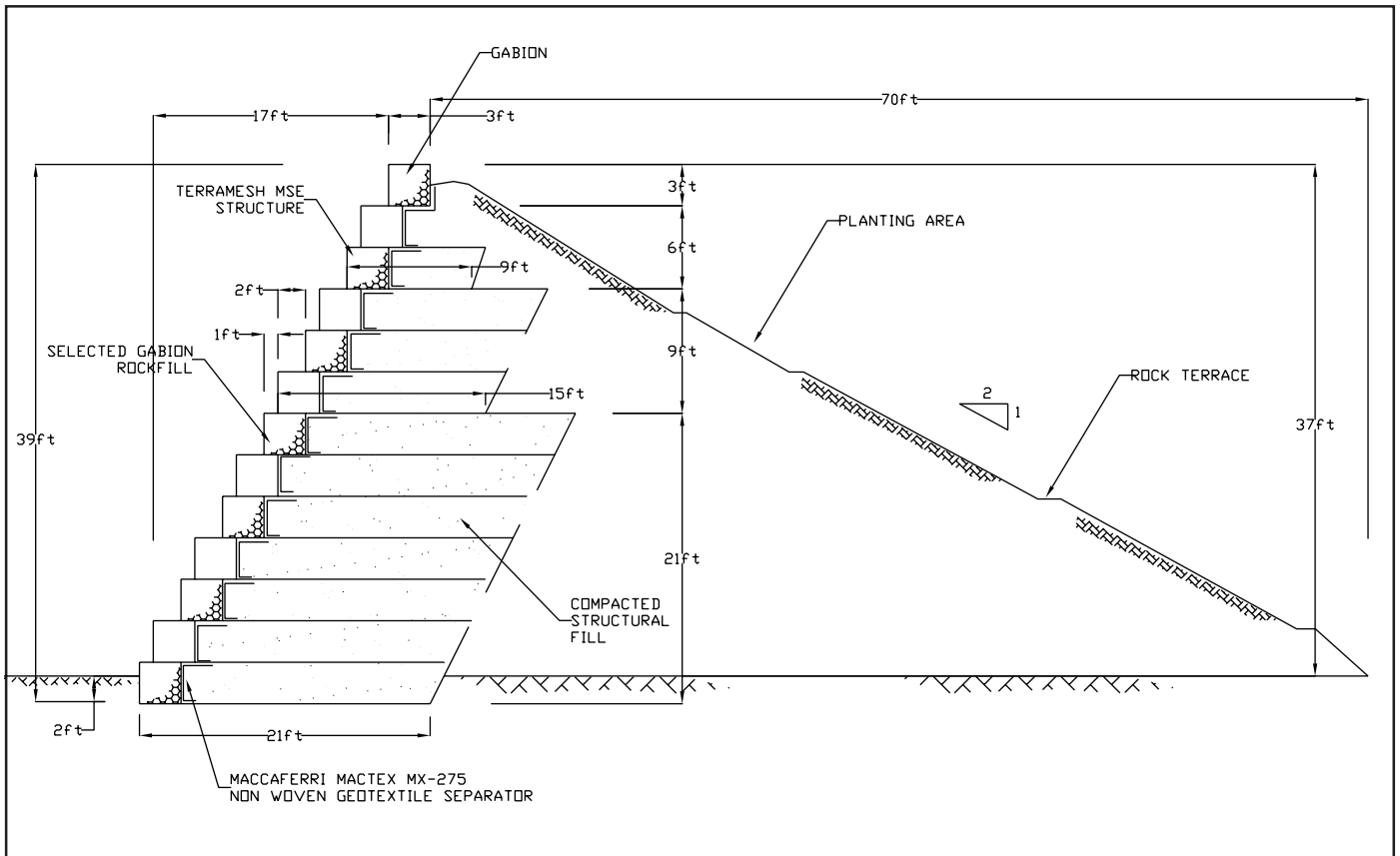
Placing Terramesh™ units - note geotextile separator



MSE structure nearing 37' high



Terramesh™ MSE structure surrounding access-way



Typical cross section



Construction nearing completion - from the air



Completed structure

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