Modular Gabion Systems

Houston, Texas USA

Solutions to Stabilize Soil, Restore Vegetation & Control Erosion

MODULAR GABION SYSTEMS

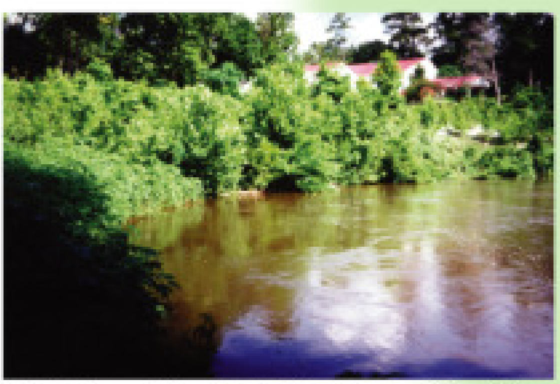
Buffalo Bayou at Piney Point Village, Houston, Texas, USA
Preconstruction, Spring 1995

Soil erosion is an ever-present problem and gabions have proved to be an effective and lasting solution around the world. In the earliest known applications, woven baskets filled with rocks were placed along the banks of the Nile River during the era of the Pharaohs. In the subsequent 7000 years since this initial use by the Egyptians, the gabion system has been implemented into the construction of many different types of structures; gabions have been used extensively throughout Europe for more than 100 years.

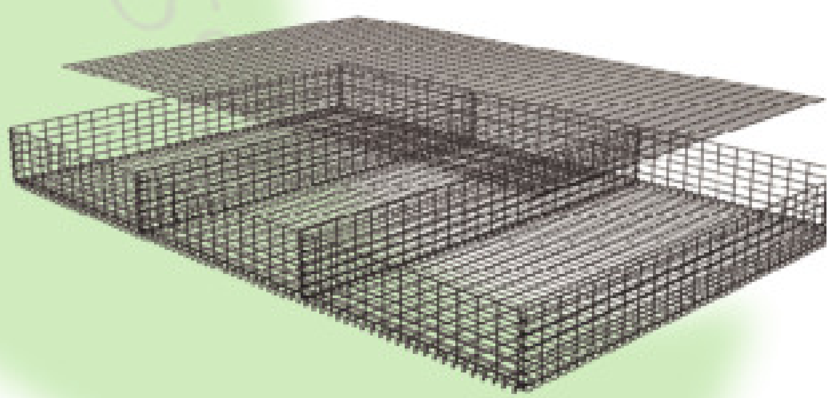
Buffalo Bayou at Piney Point Village, Houston, Texas, USA
Post-construction, Summer 1995

Today utilizing modern technology, gabions are fabricated from welded corrosion resistant wire mesh formed into large boxes, usually rectangular in shape but variable in size, designed to solve the complex problems of erosion and floods at a low cost. Gabions are erected at the project site, quickly joined together and filled with stones. The gabion boxes, or baskets, can be handled as "building blocks" to form monolithic, permeable, flexible structures of any size and shape.

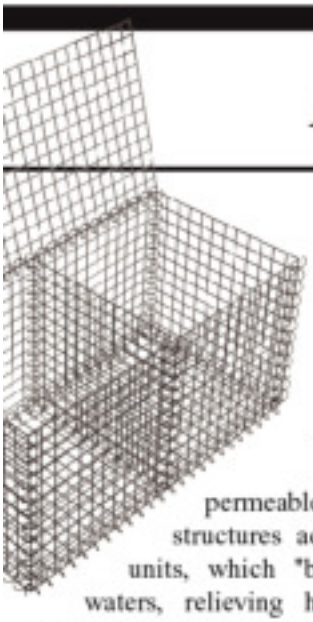
As a natural function of their inherent flexibility, gabion structures yield to earth movement yet retain their full efficiency and remain structurally sound. This gives gabion structures an important advantage over rigid or semi-rigid structures, which may suffer complete failure when even slight changes occur in their foundations.



Buffalo Bayou at Piney Point Village, Houston, Texas, USA
Revegetated, Spring 2001



MODULAR GABION SYSTEMS



Highly permeable, the gabion structures act as self-draining units, which "bleed" off ground waters, relieving hydrostatic heads. Interstitial spaces between the stones dissipate the energy from high velocity floodwaters and normal current and wave action, so the entire structure is a "breathing" unit requiring no additional drainage.

Modular Gabion Systems prevent erosion and may make possible the reclamation of already eroded land. Gabion efficiency, rather than decreasing with age, actually increases over time. During early periods of use, silt and vegetation will collect within the rock filling the voids to form a naturally permanent structure where roots can take hold. Natural revegetation occurs as the stonework contained by the gabion structures gradually becomes matted with soil and plant growth. In time, the roots will penetrate the structure and bind the rocks together so effectively that a permanent solid wall is formed. Where it is desirable to eliminate invasive and destructive plant species with indigenous ones, Modular Gabion Systems structures may be easily and effectively planted or seeded. The stable soil base assures rapid plant growth returning the project to a beautiful, naturalized appearance.

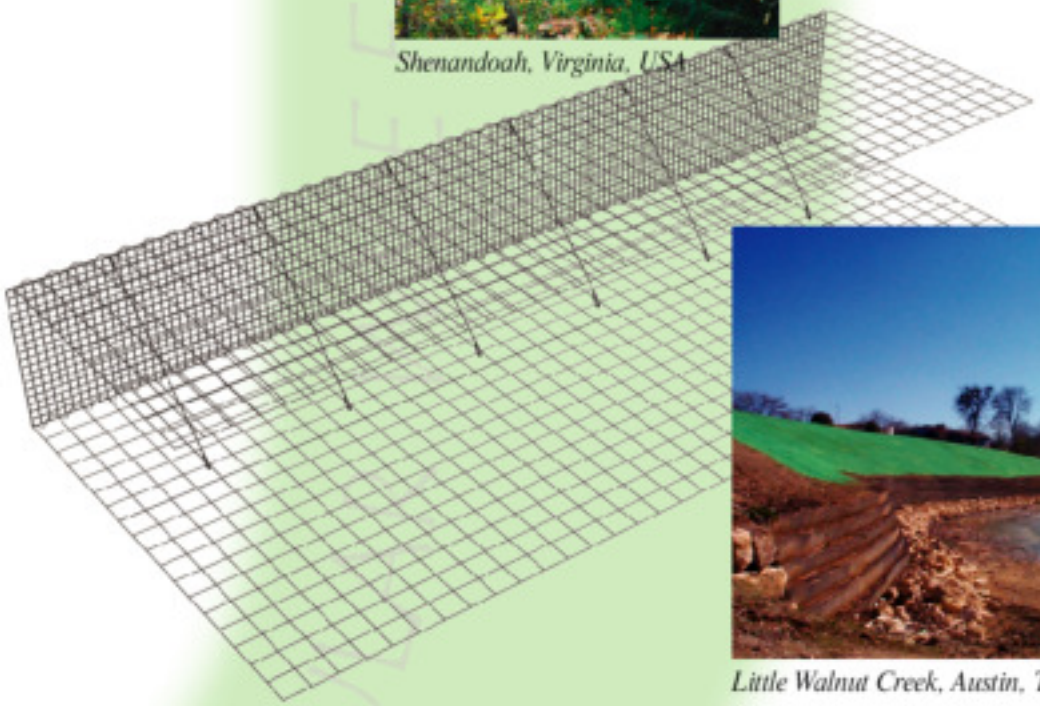
Acapulco, Mexico - revegetated retaining wall

Acapulco, Mexico - revegetated retaining wall

Claycomo, Missouri, USA - retaining wall planted with indigenous ground cover

Shenandoah, Virginia, USA

Shenandoah, Virginia, USA



Little Walnut Creek, Austin, Texas, USA

MODULAR GABION SYSTEMS

MODULAR GABION SYSTEMS

2221 Canada Dry Street, Houston, Texas 77023 USA
800.324.8282 • 713.924.4371 • 713.924.4381 fax
www.gabions.net • mgsi@gabions.net

Erosion Control Specialists