

Modular Gabion Systems

Project

Location:

Farnham Park, Piney Point Village,
Houston, Texas

Specifier:

Army Corps of Engineers

Contractor:

Regency Construction

Project Constructed:

1995

Much of the land along Buffalo Bayou is privately owned. Residents appreciate the natural beauty of this waterway which provides a pleasant retreat in the midst of the nation's fourth most populous city. However, the bayou is also a primary watershed encompassing more than 500 square miles in a city which receives more than 40" of rainfall each year. This rain frequently comes in torrential downpours causing the bayou to quickly swell with raging flood waters which scour away banks and vegetation. This erosion threatens homes, even neighborhoods. Throughout the city's history, various efforts have been made to control flooding and erosion along Buffalo Bayou often with little or, at best, temporary success.

In 1995, erosion at Farnham Park threatened residences in Piney Point Village. The US Army Corps of Engineers elected to design a streambank erosion control structure using Modular Gabion Systems gabion baskets and mattresses. This streambank protection begins with a toe wall of gabion baskets topped by a bank of mattresses above. Modular Gabion Systems were chosen over concrete, reticulated blocks and other products because gabions are flexible and pervious. This means structures conform to changes in the underlying terrain and are self-draining to alleviate hydrostatic pressure which would otherwise lead to project failure.

Soon after construction was finished, silt and dirt settled in the spaces of the rock fill providing a soil base for natural revegetation. Roots, rocks and mesh eventually form a web which prevents fast-moving water from pulling up tender vegetation. Today (years after Tropical Storm Allison), the structure is still providing superior erosion control and protection for tender plant roots.



MODULAR GABION SYSTEMS

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