



## Harper's Preserve, Section 11

[HanesGeo.com](https://www.HanesGeo.com)

**Location:**

Shenandoah, Texas

**Product and Quantity:**

Flexamat Plus – 2,400 ft<sup>2</sup>

**Installation Date:**

February 2018

**Application:**

Outfall & Overflow Swale

**Owner:**

TBD

The developer of a private gated community in The Woodlands, Texas was looking for green alternatives to traditional rip rap for their pipe outfalls and overflow swales. The engineering team contacted Hanes Geo Components for examples of tested, green alternatives. After visiting several local project examples, including those by TxDOT and Harris County Engineering Department, Flexamat was selected for its hard armor protection and ability to fully vegetate.

The installation was completed in less than one day. The best method to establish a vegetated system is to begin with a prepared subgrade, if the soil is lacking organic content a biotic soil media can be applied to the subgrade. Then, locally selected seeds and fertilizer are applied to the subgrade before the Flexamat is installed. Once installation is complete, if desired, the top surface can be hydroseeded, though it is not required. In some cases, up to two inches of topsoil is raked in between the Flexamat pyramids and then hydroseeded with a high-performance wood fiber Hydromulch.

Vegetation establishes quickly though the Flexamat provided additional reinforcement. The Flexamat can be maintained with zero turn or batwing mowers. The natural vegetated look of Flexamat along with the hard armor protection are an ideal combination for developers and engineers in residential or master planned communities.

