



Case Study:

Blossom Park

HydroTurf Z[®] + High Performance Turf Reinforcement Mat

San Antonio, TX



Blossom Park

HydroTurf Z[®] + High Performance Turf Reinforcement Mat

Project Date:

March 2020

Engineer/Architect:

Pape Dawson

Contractor:

Maldonado

Project Goals and Specs:

The goal was to provide a low-maintenance, flexible concrete channel solution that is aesthetically pleasing.

Problem

The existing earthen channel was under-designed based on the current drainage needs. The limitation on space required upgrading this channel to a concrete-lined channel. HydroTurf[®] proved to be an option that would provide a hard armor solution capable of dealing with the increased hydraulics while providing an excellent aesthetic look for the neighborhood. The competitive cost and low maintenance of a concrete solution needed to be realized.

Site Conditions

The existing channel was either under-designed, or it became under-designed due to recent variable storm events and new development, which changed how the area drained. With the capacity of the channel being underestimated, water was coming up the slopes and wasn't staying in the channel. The channel's volume capability needed to be more profound, and the side slopes/channels needed to be reinforced.

Identified Issues and Constraints

Limited site access in an existing neighborhood and limitations to expanding the width of the channel both contributed to a challenging project for the City of San Antonio.

★ Solutions / Final Application / Results

HydroTurf® was used as a rapid, low-impact installation with minimal impact and minimal construction equipment, making it a scalable solution for large projects.

The successful installation of HydroTurf® resulted in channel armoring that smoothly and visually blended into adjoining vegetative solutions. HydroTurf® was used in areas of the channel where geography changed and additional water accumulated, providing more protection in those critical areas. The final result was a no-maintenance, hard armor solution that looks natural, provides permanent erosion control and stability, and is long-lasting.



Optimization Highlights

Quick construction, minimized excavation, and no need for heavy equipment eliminated the need for rework after storms.



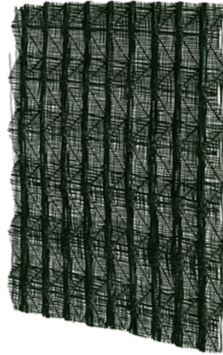
Customer Takeaways:

- **Numerous engineers have visited the site and have been blown away at how natural it looks.**
- **They can't believe it's concrete, and now they want to figure out where they want to use it/how they want to use it on their projects.**

Blossom Park – HydroTurf Z® + HPTRM



HARD ARMOR SOLUTION
HYDROTURF



SOFT ARMOR SOLUTION
HPTRM

★ **Solution Synergy: Hard Armor + Soft Armor**

This project called for a combination of technologies to meet the customer's needs. We were able to utilize the HydroTurf as a hard armor for the primary footprint of the channel where the lionshare of high flow velocities would need to be endured. A high performance turf reinforcement mat was installed along the perimeter of the channel, where the client needed to maintain green aesthetics, while providing adequate reinforcement for the occasional heavy storm event where the side slopes could be threatened by drastic changes in stormwater elevation. A concrete toe was poured at the transition between materials within the channel to prevent a high flow event from undermining the Hydroturf system. The trenches where soil filled along the side slope transitions where topping was of minor concern. This medley of solutions produced a high performance channel, while allowing the client to stay within budget.



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