

**THREE CITIES TRAIL
FRISCO, TEXAS, U.S.A.**

Reinforced Soil Walls and Slope Reinforcement

Problem

The concept for this project was initiated in 2001 with the primary objective of establishing a central trail spine that would interconnect all six cities. It marked a pioneering effort in regional trail planning within the state of Texas. A crucial segment of the plan involves addressing the West Rowlett Creek, located just north of the Sam Rayburn Tollway, which is prone to significant stormwater runoff that poses potential risks of erosion and damage to a section of the walking trails. The integration of this trail connection holds significant importance as it forms a vital component of the Frisco Hike & Bike Master Plan, which envisions an extensive network of trails spanning hundreds of miles over the next two decades. Furthermore, the plan encompasses strategies to establish linkages between existing trails in Frisco and neighboring cities, enhancing overall connectivity and accessibility for the community.

Solution

The civil engineers at Halff successfully designed and implemented a tie-back reinforced gabion retaining wall to act as the slope toe along the section of the trail that runs alongside West Rowlett Creek. This retaining wall serves a critical function in stabilizing the slope and ensuring the structural integrity of the trail. Despite being a relatively short trail, its significance lies in its role as a key connection, facilitating vital linkages within the trail network. In recent times, construction crews have completed 0.34 miles of trail on the Six Cities Trail connector, which is an integral component of the larger Collin County Regional Trail Master Plan. This milestone represents a substantial advancement towards achieving the comprehensive trail network envisioned in the master plan, enhancing accessibility and connectivity across the region.

Client: City of Frisco

Designer / Consultant: Halff Associates, Inc.

Contractor: Keller - North America

Products used (Qty.)

- Gabions 150 pcs

Date of construction: 10/2019 - 06/2020

[Google Maps](#)

[Google Earth](#)



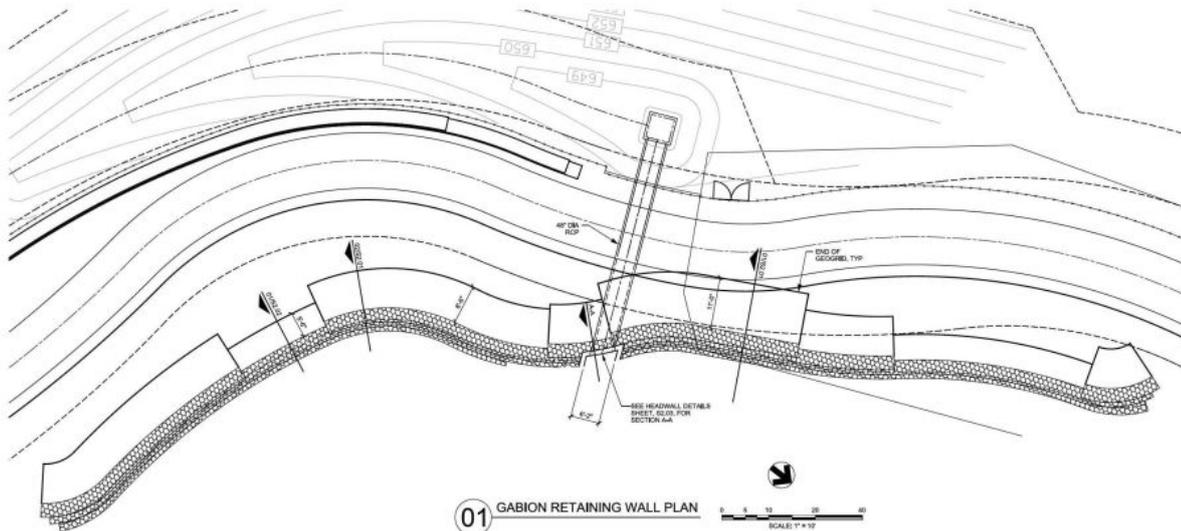
Ariel View of Project Site



Gabion Wall with Drainage Pipe



Downstream View of Gabion Wall



01 GABION RETAINING WALL PLAN



RETAINING WALLS
CONSTRUCTION OF THE GABION RETAINING WALLS SHALL BE IN ACCORDANCE WITH THE FEDERAL WORKS CONSTRUCTION STANDARDS, NORTH-CENTRAL TEXAS COUNCIL OF GOVERNMENTS, SECTION 102 STRUCTURAL, GENERAL NOTES SHEET FOR TOTAL NOTES.

REINFORCED CONCREMENT SHALL BE INSTALLED IN HEADWALLS WITH TYPICAL SPECIAL SPECIFICATION WALLS. USE ALTERNATE REINFORCEMENT THAT KEEP THE GABION FILL LOCATION THE SAME FILLING OPERATION. USE ANCHOR PINS WHERE ACTUAL REINFORCEMENT IS NECESSARY TO ONLY SECURE THE GABION. ORIENT GABION SUCH THAT TRENCH DIRECTION IS PERPENDICULAR TO THE FACE OF WALL TO PREVENT EXCESSIVE DEFORMATION OR DAMAGE DURING INSTALLATION. STRICTLY PROHIBITED, A MINIMUM OF 6 INCHES.

NOTE:
REFER L2.03 FOR DETAILED WALL LAYOUT

THREE CITIES TRAIL
BRIDGE & GABION
RETAINING WALL
Frisco, Texas



DATE	DESCRIPTION



Plan Set Overview

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