

Customer Success Story

Kimley»»Horn

Expect More. Experience Better.

Restoration of Little Sugar Creek



Kimley Horn recently became involved in a project of national environmental significance. Charlotte, NC and surrounding Mecklenburg County represent a handful of regions across the country that have committed to restoring neglected and degraded urban streams through a mix of strategies that includes reintroducing natural meanders, recreating floodplains and restoring natural riparian zones.

In recent years, a number of municipalities across the nation are restoring channelized, altered, and polluted urban waterways in the interests of improving water quality, providing additional recreational opportunities, and creating valuable green space within the community.

This particular project segment is a continuation of the Cross Charlotte Trail, which is part of a larger network of greenways that crosses 15 counties and two states. This project includes approximately 3.5 miles of new greenway and approximately 1 mile of stream restoration or bank stabilization. Combined with other regional restoration efforts, the Little Sugar Creek will provide a recreational corridor that connects to nearby parks and historic areas, plentiful educational opportunities, and habitat for local wildlife. Mecklenburg County Park and Recreation, Mecklenburg County Storm Water Services, and Mecklenburg County Asset and Facility management are partnering in this initiative to extend the Little Sugar Creek greenway to the South Carolina state line.

Developing a Hydraulic Model

Engineer Jason Claudio-Diaz of Kimley-Horn described some of the goals for the segment of the Lower Little Sugar Creek that flows towards the South Carolina border. The project site, which is located near a suburban area of Pineville, North Carolina, consists of steep slopes and irregular terrain. The hydraulic analysis for the river corridor needed to factor in several pedestrian bridges and a couple thousand feet of stream bank that was prone to erosion. According to Claudio-Diaz, this was one of the primary challenges of the project.



We needed to document the existing erosive areas and predict other areas where we would need to do stream bank stabilization.”

Jason Claudio-Diaz, P.E., CFM



About Kimley-Horn and Associates, Inc.

From planning aerospace facilities to designing solar field installations, environmental and design consulting firm Kimley-Horn and Associates works actively in a variety of fields. Recently, the company became involved in a project of national environmental significance.

Unlike the traditional USACE HEC-RAS software which Kimley-Horn had used in the past, the use of GeoHECRAS’ surface generation tools on this large project streamlined the model development process. Claudio-Diaz made use of GeoHECRAS’ Scenario Manager and 2D mesh generation capabilities frequently on this project.



We were able to generate a lot of different scenarios without a lot of back and forth.”

Jason Claudio-Diaz, P.E., CFM





Solar Fields and More

Kimley-Horn has used GeoHECRAS for planning and design purposes on many different projects, from the siting and design of solar power fields to a variety of more routine water planning projects. And, when Kimley-Horn engineering staff encountered difficulties working with different kinds of data, CivilGEO's technical support team answered their modeling questions and helped get their projects successfully completed.



We are extremely satisfied. GeoHECRAS has made us much more efficient. There is a lot of value in that."

Jason Claudio-Diaz, P.E., CFM
Associate
Kimley-Horn and Associates, Inc.
Charlotte, NC



Connect with CivilGEO

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