

# DESIGNING CONNECTIONS

“To create a positive change in the world by providing connections to different communities with sustainable infrastructure design”



## BACKGROUND

This project was completed by 6 students as their Senior Capstone Project. The team partnered with a non-profit organization to design and build a cable suspended footbridge for an underserved community. The purpose of the footbridge is to provide the community safe access to essential services. These essential services include schools, hospitals, churches, and markets.

During the dry season the rivers is low and easy to cross. During the flood season the river grows over 2 meters in depth, which had led to enjuries and deaths in the community. .

## CERTIFICATIONS

**OSHA 10 Hour:** Occupational Safety and Health Administration was completed to ensure the team and community safety during construction

**WFA & CPR:** Wilderness First Aid and & Cardiopulmonary Resuscitation was completed in the event of an emergency situation, since the site is located over one hour away from emergency services.



## TECHNICAL REQUIREMENTS

The student team attended multiple courses to gain the competency to manage this project from the design phase to the construction phase. This courses included:

- Project Management
- Bridge Design
- Construction Management
- Construction
- Cultural Relations
- Marketing

In addition the students had the support from two Professional Engineers to ensure the design and calculations were up to the required standards and local building codes.

## PROJECT IMPACT



## PROJECT UPDATE

Due to coronavirus, the team was unable to travel to help with the construction of the bridge. Fortunately, with the community's effort, the construction of the bridge was completed, and it is currently serving 1,500 individuals from two different communities, from which 200 are in rolled in school.

