Presented by: Thien Nguyen and Mark Simpkins

Past Projects

Arraijan, Panama
- Timber Pony Truss Bridge, 40 foot span.
- Constructed in the Summer of 2014.
- Enabled the community to safely cross a hazardous ravine, allowing them to access a church, community center, and clean water sources.

Bajo Grande, Panama
- Cable Suspended Bridge, 230 foot span.
- Constructed in the Summer of 2015.
- Allowed the community to safely cross a valley susceptible to flooding, granting them access to the only local school and medical center.

Purpose of the Project

After seeing the bridges that the Collaboratory at Messiah College built in Panama, Cliff Martin, the executive director of Woodcrest Retreat, approached the Collaboratory to build a similar bridge structure at the campground.

The bridge will:
- Connect two hiking paths at the campground.
- Be visible as visitors enter the campground.
- Serve as a distinctive feature of the campground.
- Attract new people to Woodcrest Retreat and share the love of Christ.
- Allow student project members to use God given talents and gain practical civil engineering experience.

Client
Woodcrest Retreat

Woodcrest Retreat is a campground with a mission to introduce people to Jesus Christ and encourage Christian growth through wholesome programs and quality facilities in a wooded setting.

Planned Project Schedule

- The bridge design is currently about 90 percent complete.
- Building Permits application — Summer 2016.
- Final design and construction drawings — Fall 2016.
- Begin excavation and foundation construction — Fall 2016.
- Remaining structure and bridge construction — Spring 2017.
- Woodcrest Retreat target bridge opening — Summer 2017.

Current Design

- Cable Suspended Bridge, 78 foot span.
- 5 tensioned, structural cables.
- Reinforced concrete anchors and tower foundations.
- Steel I-beam towers.
- Timber decking and approach stairs.

Acknowledgements

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Professor Scott Heisey
Dr. Brian Swartz

The Woodcrest Bridge Team:
Dylan Clemente (Student Project Leader)
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