



# ENGINEERS WITHOUT BORDERS

Texas A&M University Chapter 2024 Sponsorship Packet









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# ENGINEERS WITHOUT BORDERS

## Texas A&M University Chapter



### Who We Are

Engineers Without Borders-USA (EWB-USA) is a non-profit organization that partners with developing communities worldwide in an effort to improve their quality of life through sustainable engineering projects. By placing an emphasis on sustainability, EWB-USA ensures that its projects can be facilitated and maintained by the community well after the project is implemented. For more information about EWB-USA, visit: <http://ewb-usa.org>.

The Engineers Without Borders-USA Texas A&M University Student Chapter (EWB-TAMU) is a community of 100+ active students, engineering faculty and professional mentors. Of 350 student chapters in the United States, EWB-TAMU is among the leaders in number of projects and membership. Our members rank among the top engineering students at Texas A&M University and have a passion for service. EWB-TAMU members maintain a rigorous class schedule while attending weekly officer and project meetings, monthly chapter meetings, and various training sessions throughout the year. Our mission is to deliver sustainable and innovative solutions to real-world problems in order to empower international communities by offering opportunities for the students of Texas A&M University to:

**Manage** international engineering projects

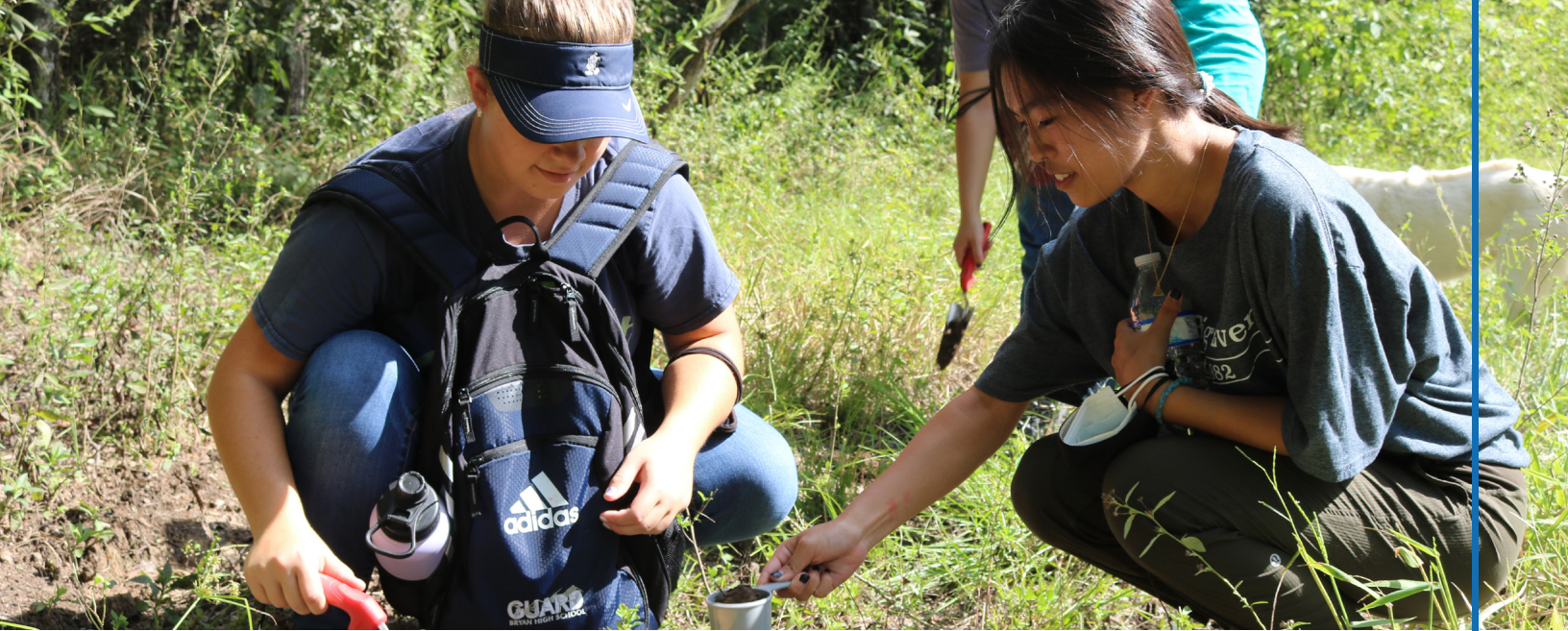
**Develop** relationships with members of other cultures

**Create** engineering designs

**Lead** the implementation of those designs

**Initiate** the supporting functions of the projects: fundraising, manage finances, and establish relationships with faculty and donors.





## About Our Projects

We currently have two active international projects and have started a local project team to equip new members with the skills needed to thrive on international teams. With past annual budgets of approximately \$32,000, we hope to increase to \$53,300 in upcoming years as our Rwanda and Dominican Republic projects grow. Corporate sponsorships are a large part of what makes our projects so successful.

Our international projects provide hands-on engineering experience for our members, and have a major impact on the developing communities in which we work. Not only are these projects the backbone of our organization, but they allow opportunities for students to participate in real-world engineering design. EWB students work alongside professional engineers, travel to foreign countries, interact with people from other cultures, and gain experience as part of a team. These projects allow us to build membership and give students opportunities that they will not find in any other student-led organization at Texas A&M, and experience that is found at few other universities in the country.

With two international projects, our financial needs have increased. Our projects are very cost-effective, but not inexpensive, and we rely heavily on corporate sponsors to support our mission. We hope that as you review these project descriptions, you find one that interests you and is worthy of your investment.

As a sponsor, there are various ways for you to get involved in our chapter for this academic year. Our success depends on our members partnering with valued sponsors who share and support our mission. Please choose the sponsorship that best meets your needs and join us in the world of international engineering service.

For more information about our chapter, visit: <http://ewb-tamu.org>.





## **| How Aggies Create Impact Across the Globe**

### **Innovation Through Latrines in Rwanda**

Matyazo, Rwanda is located in the rural mountains about three hours outside of the Rwandan capital of Kigali. The Matyazo sector is divided into five cells, two of which have been identified as having the greatest need (the Binana and Gitega cells). In these two cells, less than half of the households have any sort of latrine and must resort to open defecation or using a neighbor's toilet. Furthermore, classification of having a latrine does not mean that the sanitation issues are solved. These "latrines" range from a mud brick structure to a covered hole in the ground. The latrines are easily flooded during the rainy season, causing diseases to spread along with the excrement.

The goal outlined by the community is to impact 500 community members to solve the sanitation issue and support subsistence farming. While 500 is a large number, Rwandans have a deep sense of community and are excited to help in the project. Additionally, IDA Rwanda, a local NGO, is heavily involved in the process.

In early September of 2023, Stephanie Nishimirwe filled out a latrine report on behalf of Philippe Ntarwerero, a 93 year old blind man, living with his 16 year old grandson, Gildas Niyitangurukundo. They reported on the effectiveness and success of the latrine implementation work done in Rwanda. These product accomplishments include: the accompanying hand-washing station being used, the ease of using the latrine for children and women on their periods, and there being no difficulty or danger associated with using the latrines at night. They described large improvements between these latrines and the previous methods such as the urine waste draining properly and a lack of smell. These latrines also serve as a potential source of income as Phillipe says that he would consider collecting and selling the excess fertilizer from the pit. Overall, this latrine report displays a clear picture of the impact of this project on the community as Phillipe notes that the latrines have resulted in the promotion of hygiene and sanitation as well as an improvement in agricultural production. Phillipe concludes by saying that he is extremely thankful for the support that enables the implementation of clean latrines in both his own household and the surrounding community in need.



In January of 2020, a team from Texas A&M traveled to Rwanda to perform an assessment. While there, they spoke with community members and leaders about the sanitation project. They also visited previously built latrines to see the current situation and learn what the community is accustomed to. The greatest takeaways from the trip were:

- Community Involvement**
- Teaching Methods**
- Design Solutions**
- Achievable Goals**

After gathering this and much more information from the assessment trip, the team and our engineering mentors started work on developing a design to meet all of our criteria and address the problems put forward by the community. After a year of further development on the solution, the final engineering documents were created and submitted for implementation. Construction of the first latrine began at the beginning of 2021. This latrine was implemented remotely by our partners in Rwanda using the documentation we provided.



Shortly after the first latrine was constructed, an implementation trip was planned for the summer of 2022 to build the second latrine in-country with a student team. The implementation trip in May 2022 was a great success and consisted of six students and one professional mentor. They were able to take part in the latrines construction and bring back easier and more cost effective building techniques that were added into the construction plan when they returned. They were also able to continue to talk to the community and gather input directly from the first beneficiary on the latrine design.

After the implementation trip, the team started to shift more towards a fundraising standpoint. EWB started raising funds to meet the goal of 50 latrines and also started the cost optimization process to decrease the price of latrines so that the money could build more latrines. During this phase, EWB continued the with remote implementation and completed a total of 15 latrines during this time.

In January of 2024 a monitoring trip was completed to structurally inspect the conditions of all previously completed latrines. Every latrine was still in great condition, even the ones built 3 years ago. The team also interviewed the recipients of the latrines and gathered feedback from them to bring back to the chapter. Finally, they were able to speak to the local Rwandan government and secure the future of the project by negotiating an agreement with the government where they will supply the local materials for the latrines. This cut down the price per latrine by a third.

The plan for the future is to continue to raise money in order to reach their goal of 50 latrines. The team also plans to continue talking to the Rwandan government and see if they can secure more funding or materials from them.



# | How Aggies Create Impact Across the Globe

## Implementing a Drainage System in the Dominican Republic

Located near the capital of the Dominican Republic, Villa Verde is a diverse, Spanish-speaking community. The community is comprised of approximately 6,000 members who travel along dirt roads in personal vehicles (motorcycles and small cars). However, when the community experiences rain for more than an hour, the poorly developed streets quickly flood, making them impassable for daily commutes. Additionally, as the water pools, it becomes a breeding ground for mosquitoes carrying malaria. Our goal is to work alongside the community to develop and implement a drainage system that diverts the water and makes the roads passable.

Our team does not plan to do this alone. Without the input and buy-in from the community, the project would be ineffective in the long-term. We have partnered with Community Empowerment, a local NGO in the Dominican Republic. Community Empowerment has worked in Villa Verde for many years and has built a strong rapport with the members of the community. They have been an integral part of the planning, implementation, and monitoring of the project.

In the summer of 2022 an assessment trip was conducted to the community where survey data, elevation points, and pictures of proposed improvements were taken. Additionally first contact was made with the community to go over the future of the project, goals, and discuss initial design ideas. This information was taken back to Texas A&M where students used this data to develop drainage design including ditches, underground piping, road grading, and more.





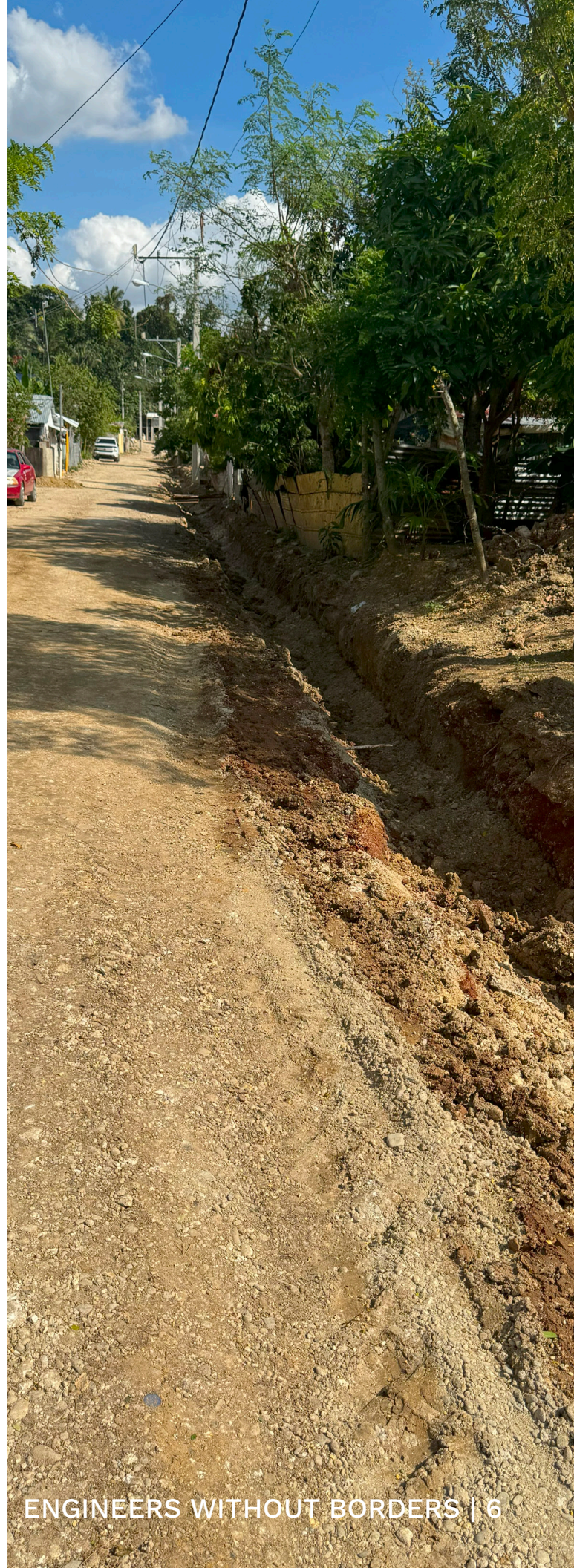
*It was so amazing to see all of the work, research, and planning we were doing throughout the semester unfold before us on this trip. The community was so welcoming towards us, and it was very fulfilling to see their excitement towards the end when they saw the improvements we'd made on their road. I also learned so much about project management and implementation, and I'm looking forward to learning even more as we continue to work with this wonderful community.*

**- Renee Schoellman**

*Nuclear Engineer Major  
Class of 2026  
EWB Member*

The implementation trip was made in January of 2024 which marked the first time breaking ground in the community. On this trip the team was able to work alongside the community members to implement the drainage solutions. This included graded and re-constructing a gravel road, digging a drainage ditch alongside the roadway, identifying and developing a retention pond to hold rainwater, and installing a pipe with a flap gate to control water flow. The travel team was able to not only maintain communications and relationships with the community members but also to work on field design to identify areas of improvement throughout the community.

Now the team is primarily focused on adding finishing details to the work done during the implementation trip including walkway bridges for the ditch and an operation and maintenance manual for the project. Additionally, the team looks to continue to design and develop drainage solutions throughout the community and is working with the community to identify additional areas where implementation of pipework and ditch design would be beneficial. The team remains in contact with both the Community Empowerment team to continue to plan, design, and coordinate future trips and projects, including remote implementation.







# Serving the Bryan, College Station Community Through Engineering

## Establishing FIELD to Empower Change

After developing multiple international projects, EWB recognized a need in the organization for teaching students the basics of engineering design. While previous projects have a Civil Engineering emphasis, EWB members major in all branches of engineering and non-engineering and have a variety of experience levels. As such, in August of 2021 the organization established FIELD, a “Fundamental Introduction to Engineering and Local Design,” which partners with REACH, a local service organization benefiting the essential Aggie employees who tirelessly serve Texas A&M University as custodians, cooks, and many more.

Through the partnership with REACH, EWB have identified project each semester for the members to work on. FIELD projects have ranged from raised beds to solar powered aquaponics all with the goal of provide support to REACH’s mission to provide essential Aggies with an affordable living complex. In the span of one semester, members will go through the 3-5 year engineering design process that then are employed for the international projects. Through weekend workshops and weekly meetings, members will learn how to manage a project, draft a 3D model, write a technical reports, and use tools to implement the final design themselves. In doing so, EWB members will gain the skills to succeed on a larger scale, international project while giving back to the local community.

Semester	Project	Cost
Fall 2021	Raised Beds	Completed
Spring 2022	Pergola	Completed
Fall 2022 - Spring 2023	Floating Dock	Completed
Fall 2023	Solar Pump for Pond	\$1,500 - 2,000
Spring 2024	Tractor/Pedestrian Bridge	Exp. \$1,800



# Benefiting Areas in the United States of America

## A Trip to Arkansas



With the Rwanda latrine project nearing closure the chapter picked up a national project to continue developing the members. Heifer Ranch, Arkansas, requested a way to use solar energy to power equipment on a prairie chicken schooner that could provide light to extend daylight hours and fans to cool down the chickens in the summer, and reduce the manual labor to feed the chickens. EWB mentors, Jon Fripp and Dan Lepinski, provided a solar workshop in Fall 2023 to teach members how solar power works and what is necessary for a Photovoltaic system. Electrical knowledge was also disseminated regarding how to measure volts, amps, and input/output at a point in an electrical system.

The project members interviewed Heifer poultry expert Buzz (Bailey Egan) and electrician (Tim Nacke) about their prairie chicken schooners and the way they raise the chickens. Using this information, equipment was identified to confirm power generation requirements. Details regarding the budget and who would be using it were gathered to ensure an optimal design with the needed equipment. To do so, measurements of the schooner joints and the distance between them were recorded. Opinions of the operators and safety concerns were written down to be taken into consideration.

## Arkansas Timeline

### Fall 2023

Kickoff and Solar  
Car Workshop

### December 2023

Heifer Technical  
Information Call

### February 2024

Heifer Assessment Trip

### March 2024

Design and Calculations

### April 2024

Initial Design Report

### September 2024

Redesign Period, Based on  
Concerns and Issues with  
Initial Designs

### October 2024

Finalize Design & Submit

### November 2024

Wrap Up and Issue Final  
Documentation Reports







# OUR BUDGET & SPONSORSHIPS

Varying levels of sponsorship of our chapter offers a great opportunity to advertise with top tier students across multiple engineering disciplines. This year we are providing better recognition and branding for our sponsors. Many of our members have said that they hope to continue working with EWB-USA post-graduation and would love to be in a company that supports the organization. We hope that you take advantage of this opportunity to support our members and the communities in which we work.

	Platinum	Gold	Silver	Bronze
Cost	\$5,000+	\$3,000+	\$1,000+	\$500+
Link and logo on our website	✓	✓	✓	✓
One-time Social Media shout out	✓	✓	✓	✓
Sponsor acknowledgment and thanks at events	✓	✓	✓	✓
Logo on flyers	✓	✓	✓	✓
Logo on t-shirts	Center, Large	Medium	Small	
Excerpt of company on website	✓	✓	✓	
Logo on monthly newsletters	✓	✓		
Opportunity to speak at a meeting	✓	✓		
Recurring Social Media shout out	✓	✓		
Member resume collection	✓			
Featured sponsor at events, such as the banquets	✓			



# HOW TO CONTRIBUTE

All general and international project donations can be sent directly to EWB-USA at the link below or you can mail a check to our on-campus mailbox. You can also visit our website at <http://ewb-tamu.org> for more information.

Donation Link: <http://tinyurl.com/ewbtamu-donate>

Make checks payable to EWB-USA. Please specify Texas A&M University Chapter and Sponsorship Level on the memo line. If you are donating to a certain international project, please specify the project in the memo line as well.

We also would appreciate gift cards and other in-kind materials to be used for our projects. This may include gift cards to Home Depot or Lowe's, or a discount in power tools or other materials. If you would like to choose this option, please contact us directly at the information below.

Lastly, two anonymous former students passionate about international travel and students have created an endowment to benefit our chapter. If you would like to contribute to this endowment fund, please contact Sybil Popham, director of development, at [popham@tamu.edu](mailto:popham@tamu.edu).

## Mailing Address

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# THANK YOU!

Thank you so much for taking the time to learn about our student chapter of Engineers Without Borders at Texas A&M and for your consideration in financially supporting our work. If you have any questions or would like to know more, do not hesitate to contact us. Our contact information is found below. Thank you again for your support!

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The 2023 - 2024 Sponsorship Packet was designed by our Director of Communications. For design information, contact:

**Ally Currie**

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# STAY CONNECTED

We appreciate your interest in the Texas A&M University Chapter of Engineers Without Borders USA. Please consider connecting with us in a variety of ways to stay updated with our organization.



Scan our QR Code  
to access our website!

 @ewbtamu

 **Engineers Without Borders-USA:  
Texas A&M Student Chapter**

[www.ewb-tamu.org](http://www.ewb-tamu.org)

