



Cal Poly Pomona **GeoWall**

Funding Proposal **2019-2020**

Objective

The California State Polytechnic University of Pomona GeoWall Team appreciates the opportunity to submit this proposal for your sponsorship consideration. Cal Poly Pomona students involved in GeoWall are part of a student-run organization that focuses on the professional development of its members. Our team has been participating in competitions since 2009. Sponsorships allow our members to have an enriched learning experience that emphasizes our university polytechnic philosophy of “learn by doing”. These sponsorships will also provide funds for our GeoWall members to conduct research for designing a *mechanically stabilized earth* (MSE) *retaining wall*. This gives us the opportunity attend the competitions at both the national and regional levels. As we prepare for this upcoming competition season, we would like to invite you and your organization to support our team by helping us develop a positive engineering teamwork-based environment.

Our main objective is to help our members attend two main conferences this year. The first is the 2020 Geo-Congress Conference in Minneapolis, MN. Followed by the regional competition at the 2020 Pacific Southwest Conference in Fullerton, CA.

Sponsorship Benefits

ORGANIZATION PROMOTION

The ASCE Pacific Southwest Regional Conference (PSWC) and the Geotechnical Frontiers 2020 conference is attended by educators, professionals, and students, both undergraduate and graduate, from all throughout the nation. The GeoWall competition will be attended by hundreds of young engineering students.

TAX DEDUCTIONS

All donations are made to the Cal Poly Pomona Foundation, Inc. which is a public-benefit charitable-education organization under the provisions of the California Revenue and Taxation Code, Section 23701(d) and the United States Internal Revenue Code, Section 501(c)(3).

GeoWall Challenge

The objectives of the GeoWall Challenge are listed as follows:

- I. Design a MSE wall with the minimum reinforcement to withstand soil and design load.
- II. Communicate design and analysis process using effective communication in a report.
- III. Participate in a friendly and spirited competition with other universities.
- IV. Attend a world-class engineering conference.

This year competition will model a three-sided MSE wall commonly used for bridge abutments (Figure 1).



Execution

- I. **Reinforcement Fabrication Stage:** Each team will be given a sheet of 60 lb kraft paper 24" x 24". Reinforcement elements will be fabricated using authorized construction tools. Fifteen (15) minutes will be allotted for this phase, after fabrication is over the competition judges will weigh the reinforcing elements to the nearest 0.01 grams.
- II. **Wall Assembly Stage:** After the previous stage is complete the teams will be provided with two poster-board papers 22"x28" and a roll of packing tape. The tape will be used to join the poster-board sheets together through a single lap slice along with the reinforcement elements (Figure 2). No sand is added into the box during this stage and fifteen (15) minutes will be allotted for this stage.
- III. **Construction Stage:** After the wall assembly is completed the judges will initiate the construction phase. This will include filling the backfill material into the sand box until it reaches the sand fill line is covered and the backfill is leveled. Placement of a rectangular vertical surcharge bucket will mark the end of this stage (Figure 3), twenty (20) minutes will be allotted for this stage.
- IV. **Loading Stage:** This stage will occur in two steps:
 - 1) Removal of front and side panels.
 - 2) Placement of the vertical surcharge.During each step the MSE wall will be checked for these criteria.
 - i. Excessive deformation.
 - ii. Excessive soil leakage (30cm³).
 - iii. Catastrophic failure.

Backfill and Sand Box

The backfill material will be composed of clean, dry, rounded to sub-rounded sand with grain distribution shown in (Table 1) and (Figure 4). Each team will construct their own sandbox in compliance with rules specified by the Geo-Institute of ASCE (Figure 5). Aesthetic painting of sandbox along with the placement of sponsorship organization logos are highly encouraged.

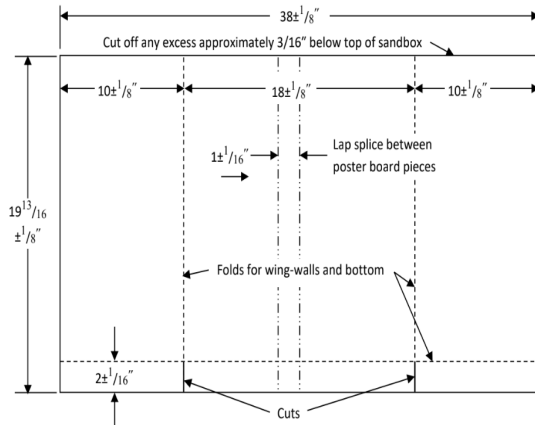


Figure 2: Poster Board Dimensions

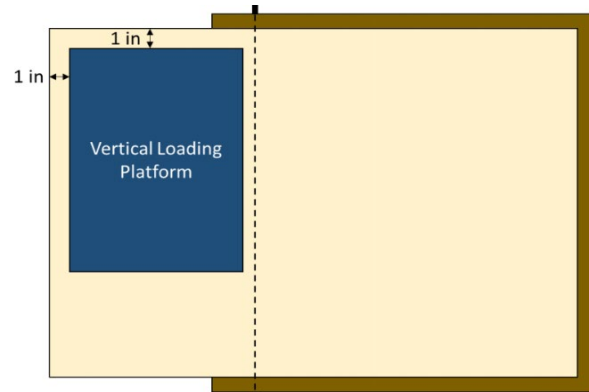


Figure 3: Vertical Surcharge Placement

Typical Distribution		Lower Bound		Upper Bound	
Size (mm)	% Passing	Size (mm)	% Passing	Size (mm)	% Passing
2.00	100.0	1.30	100.0	2.50	100.0
1.70	96.8	1.20	96.9	2.30	96.9
1.18	41.8	1.15	93.7	2.10	93.7
1.00	15.8	0.80	38.7	1.60	38.7
0.85	3.3	0.60	12.7	1.30	12.7
		0.50	2.0	1.10	2.0

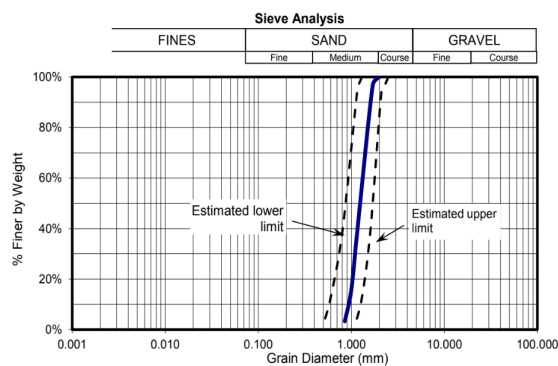


Table 1: Sand Distribution Gradation

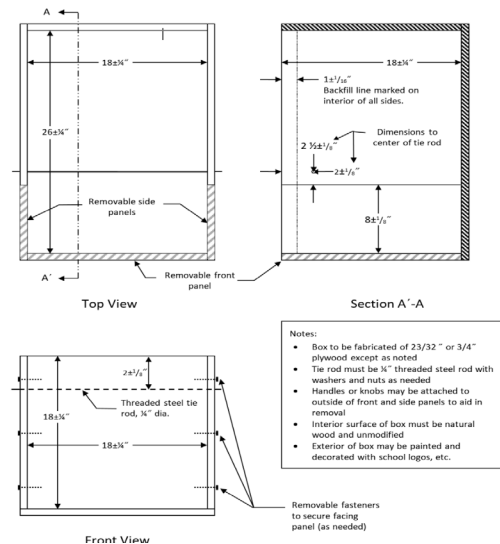


Figure 4: Sand Box Dimensions

Academic Budget

It is essential that the 2019-2020 GeoWall team raise enough funds to support the participation, travel, and materials cost throughout this year's competition season. Each item in our budget is based on the current rates for transportation and materials. The conference fees are based on the previous year's fees (Table 2).

GeoWall Budget 2019-2020	
# ITEM	COST
Equipment and Materials	
1 Paper Materials	\$80.00
2 Construction Supplies	\$300.00
3 Sandbox	\$200.00
Total	\$580.00
National Competition: 6 Students	
4 Registration	\$1,350.00
5 Airfare	\$1,800.00
6 Hotel	\$1,000.00
7 Food	\$250.00
8 Car rental	\$175.00
9 Shipping	\$350.00
Total	\$4,925.00
Regional Competition: (PSWC)	
10 Registration/Hotel	\$1,300.00
11 Gas/Travel	\$100.00
12 Food	\$200.00
Total	\$1,600.00
Total GeoWall Cost	\$7,105.00
Total Academic Cost:	\$7,105.00

Table 2: Cost Estimate

Sponsorship Packages

Bronze Level Sponsor: *Investment between \$1 and \$99*

Personal letter of thanks from GeoWall
Recognition on our membership shirts with an organization logo
Logo and website link on our website
Recognition on our team's sandbox with a three (3) inch organization logo



Silver Level Sponsor: *Investment between \$100 and \$499*

Personal letter of thanks from GeoWall
Recognition on our membership shirts with an organization logo
Logo and website link on our website
Recognition on our team's sandbox with a four (4) inch organization logo
Logo on the back of the competition team shirt



Gold Level Sponsor: *Investment equal to \$500 or more*

Personal letter of thanks from GeoWall
Recognition on our membership shirts with an organization logo
Logo and website link on our website
Recognition on our team's sandbox with a six (6) inch organization logo
One (1) GeoWall 2019-2020 Team T-Shirt
Sponsor recognition club and team photo



Cal Poly Pomona GeoWall Sponsorship & Donation Form

Please fill out this form and return to the address listed below. Thank you!

Company Name: _____

Contact Person: _____

If no name is supplied, you will remain as an anonymous donor.

Company Address: _____

City, State: _____

Zip Code: _____

Phone Number: _____

Email Address: _____

Type of Donation: ☐ Cash ☐ Check

Amount Donated: _____

Additional Comments or Information: _____

Please make all checks out to:

“Associated Students, Inc.”

On *MEMO* line, please fill in: CPP CalGeo

Address:

Cal Poly Pomona Gift Processing
PO Box 3121
Pomona, CA 91769

THANK YOU FOR SUPPORTING GeoWall

Please send your high-resolution color and black and white logos to
cppgeowall.fundraising@gmail.com
All materials will be sent for your approval before going to print.

For questions, please contact:

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