

Scope Change

From time to time unforeseen challenges or opportunities can affect the planned budget, timeline, or overall goals of a project funded by the Student Sustainability Committee. Past examples of these situations include projects coming in under budget but having additional opportunities available, or inclement weather delaying the planting of agriculture projects.

Below please include a brief project summary and your requested changes. Attach additional documents as needed. If you have any questions, please contact the Student Sustainability Committee at sustainability-committee@illinois.edu.

General Information

Project Name: CornCrete

Total Amount Requested from SSC: \$47,000

Contact Information

Applicant Name: Mark S Taylor
Unit/Department: School of Architecture Email
Address: mstaylor@illinois.edu

Project Information

Please provide a brief background of the project, the goals, and the desired outcomes:

The Project will divert agricultural waste fibers and direct them into a higher value end products: Insulating monolithic walls and innovative low carbon siding material.

Please provide a brief summary of how students will be involved in the project's changes:

Initially the student involvement was a little limited due to COVID restrictions. Students were involved in the design of the demonstration walls, six students were involved mocking up the demonstration wall, three students built and finished the demonstration wall along with the PI. Approximately 50 students have seen the wall as part of class instruction. The current scope change will enable a minimum of 6 additional students to be involved in the innovative creation of a low carbon cementitious material that can be used in conjunction with agricultural waste fibers to create a range of different products.

This Scope Change will also enable the Faculty Lead to work with more students in the context of Arch 593 Solar Decathlon: Past_Present_Future (Levenick iSEE Fellows course), up to 12 students will get the opportunity to work with agricultural fibers and geopolymers. This will be a complimentary line of work in which the original lime binder used to create the demonstration walls will be replace with a material with a smaller carbon footprint.

Mark the components for which you are applying to change. (Mark all that apply.)

Overall goals

Budget

Timeline

- Original Timeline: Initially it was hoped the project would have been completed by the end of Fall 2018
- It is now expected that the project will conclude at the end of Summer 2023.

Other

Please provide a brief summary of your requested scope change. How is your request different from your original plan?

This is the second Scope Change the project has encountered. Following the initial change the project has essentially come to a successful conclusion and under budget. This request is to take the balance of the funds and direct them to a related project that continues to utilize waste agricultural fibers in conjunction with a geopolymer binder. The difference in this context is the material will be applied on the outside of a structure as opposed to the inside.

Proposed Scope Change Budget – Based on Remaining Funds

	15,062.07	Current Balance 8-26-2022
Item 1	-8,862	Geopolymer Barn Boards Using Waste Fiber
Item 2	-400	Sensor for Exterior of Weigh room
Item 3	-600	Display and Signage
Item 4	-1,500	Treated Lumber
Item 5	-300	Replace Porch Lights
Item 6	-800	Reinstate Barn board LEDs
Item 7	-2,600	Videography 130hrs
	0	Balance

Initial Budget

Equipment & Construction Costs

Lime Binder	\$25.00	100	\$2,500.00	
Base	\$3,500.00	1	\$3,500.00	
Framing and Sheathing for Wall	\$2,000.00	1	\$2,000.00	
Roof	\$2,000.00	1	\$2,000.00	
Testing Equipment	\$6,000.00	1	\$6,000.00	
				\$16,000.00

Personnel & Wages

Undergrad Hourly labor	\$12.00	1600	\$19,200.00	
Grad Hourly Labor	\$15.00	120	\$1,800.00	
				\$21,000.00

General Supplies & Others

Building Design Development	\$7,000.00	1	\$7,000.00	
3D Printing Test (Personnel shop fee)	\$3,000.00	1	\$3,000.00	
				\$10,000.00
				\$47,000.00