

Krannert Center for the Performing Arts / University of Illinois at Urbana-Champaign
Letter of Inquiry Submission for the Student Sustainability Committee Sustainability Grant

Krannert Center for the Performing Arts, a component of the College of Fine and Applied Arts at the University of Illinois at Urbana-Champaign, respectfully requests the opportunity to submit a full proposal to the Student Sustainability Committee regarding the installation of a pilot portion of a green roof at Krannert Center. This installation of a small portion of a green roof is the next step in moving forward with Krannert Center's Green Roof Project.

Situated on the campus of the University of Illinois at Urbana-Champaign, Krannert Center boasts a 187,000 square foot roof area and results of a feasibility study conducted by Soodan & Associates, Inc. concluded that the Center's current roof structure has the capacity to support an extensive green roof system (April 29, 2009).

Krannert Center and Urban Envirosapes

Based on the results of the feasibility study, the probable construction cost for a green roof system to be installed at Krannert Center is estimated to be approximately \$50 per square foot (total of \$9.3 million).

While it is a huge (and discouraging) cost to install an entire green roof at the Center at this time, the Center began to explore other possibilities to achieve this goal. Conversations between Krannert Center and two University of Illinois students – Andy Camp and James Young – gave the project a boost.

Andy Camp and James Young started Urban Envirosapes. The company began when Mr. Camp and Mr. Young won a sustainability case competition taking place in Seoul, South Korea. Since then, the duo have received recognition both nationally and internationally for their innovation. They were invited to attend the National Summit alongside companies such as Microsoft and Dell to showcase their products at a national forum for greening the world. They have competed and won prizes in multiple competitions and recognized as a top innovator in the City of Chicago and Illinois as a whole.

The current method for installing a green roof is very time, labor, and cost intensive due to the large investment that needs to be made in transforming the roof. The Urban Envirosapes versatile green roofing module addresses all of these problems with a near maintenance-free design that is pre-made to be easily installed onto any rooftop. Furthermore, the estimated cost of installation of this green roof is \$25 per square foot – a fraction of Krannert Center's original estimate. It is hoped that after this phase is complete, the eventual target price per square foot will be \$15 – this will greatly increase accessibility and affordability.

A Step in the Right Direction

Krannert Center continues to take a leadership role in energy conservation and sustainability, and is committed to further strengthening this role in order to become a national model for architecture and facilities retrofitting and sustainable practices in the arts. The recent retrocommissioning of the Center's HVAC systems resulted in a 32.4% decrease in energy consumption. The Center upgraded theatrical lighting equipment and organizes a series of concerts around a green theme every summer. In December 2009 (with the help of a loan from the SSC), the Center will embark on an LED lighting upgrade in the Lobby – upgrading from normal 150 Watt / 2000 hours incandescent lamps to 32 Watt / 50,000 hours LED fixtures. This indoor architectural LED lighting upgrade will be the first of its kind on this scale (25,000 square feet) and will be an example for many to follow. The green roof project hopes to achieve the same, if not greater visibility and reach.

Already, a number of University of Illinois campus units and companies such as John Deere, Abbott Labs, Baxter, and Procter and Gamble are eagerly awaiting Urban Envirosape's first installation on Krannert Center for the Performing Arts to move forward with their own green initiatives.



Installation Details

240 trays (960 square feet) will be installed on the KCPA rock membrane. The modules will be installed on the southwestern section of the gravel area, next to the west entrance of KCPA.

The color will be very similar to the bushes that are seen in front of the building. The location is visible and eye-catching – since it will be right by one of the front entrances to the facility. People will be able to see how the technology works (and demystify some of the questions people might have about green roofs) and

Letter of Inquiry Submission for the Student Sustainability Committee Sustainability Grant

this area provides enough area for the plants to grow together and create a solid layer of plant life. It will be an aesthetically pleasing addition to the facility that showcases the sustainability and environmental awareness of the University of Illinois.

Since each module is 2' by 2', the area covered will be 960 square feet. This section will be fully accessible to Urban Envirosapes to conduct all necessary maintenance, research and tests

Short-Term Goals

1. Determine practical feasibility of a green roof installation at Krannert Center
2. To showcase an example of a more affordable green-roof system to other units at the University of Illinois and the Champaign-Urbana community.
3. To explore plant varieties that could be grown using modular green roofs. This installation will likely include plants that are normally sustainable on rooftops, and plants that could be sustained (but will need testing).

Long-Term Goals

1. Urban Envirosapes would like to work with Krannert Center to make additions to its installation in the future that will show off more innovative modules such as modifications to allow the green roof to grow vegetables like tomatoes, lettuce and herbs, and subirrigation units that do not require outside water. This is important since Krannert Center runs Intermezzo (a small restaurant within the facility) and the possibility of producing locally grown food items is one of the green goals of Intermezzo.
2. To continually expand the green roof to cover a greater area of the Center's 184,000 square foot roof.
3. To achieve greater energy savings, offset carbon expenditure and reduce rain runoff as a result. Given the expense of the Center's rooftop, the Center is anticipating that these results will be very significant.
4. After this breakthrough installation and pilot phase, less expensive installations will be more viable.

Costs

Item	Quantity	Unit Cost	Total Cost
Module Preparation – Manufacture + Production	240 (960 ft ²)	\$11.35 + MFG	\$10,024
Engineered GR Soil	252 ft ²	\$4.70	\$1,185
Sodium Varieties	480 bags (Fully Grown)	\$7.25	\$5,825
Sprinkler System (Nozzle, Pipe, Timer)	2 Rotors, 1000 ft ²		\$1,230
Installation	Shipping & Labor		\$4,825
Maintenance	4 hr / wk, 2 years	\$20	\$2,400
			\$25,489

Time Line

It is expected that installation will begin in early April 2010 and installation will be complete before May 1, 2010. At the time of the installation, all modules will already be fully grown and ready for installation.

Conclusion

Krannert Center is a facility that encompasses two city blocks – achieving the Center's dream of a fully installed green roof will change the campus landscape. Krannert Center envisions a fully installed green roof to compliment the visible, eye-catching architecture of Max Abramovitz and be an example to other units on campus and other performing arts organizations nationally and internationally.

Krannert Center respectfully requests a grant of \$15,000 from the Student Sustainability Committee to help fund this project. Urban Envirosapes will fund the remaining \$10,489 required to complete the project.

Thank you for your time and consideration.

Sincerely,

Valerie Oliveiro
Assistant to the Senior Associate Director / KCPA

Krannert Center for the Performing Arts / University of Illinois at Urbana-Champaign
Letter of Inquiry Submission for the Student Sustainability Committee Sustainability Grant

Krannert Center Green Roof Project Contact Information

Lead Contact: Valerie Oliveiro (valo@illinois.edu) / 217-244-4287
Assistant to the Senior Associate Director, KCPA
Secondary Contact: Rebecca McBride (rmcbride@illinois.edu) / 217-333-6700
Senior Associate Director, KCPA
Secondary Contact: Andy Camp (arcamp2@illinois.edu)
Urban Envirosapes Co-founder and CEO

Campus and Regular Mail

Valerie Oliveiro
Assistant to the Senior Associate Director
Krannert Center for the Performing Arts
500 South Goodwin Ave (MC-072)
Urbana, IL 61801