



## 2011 – 2012 Grant Application

The mission of the Campus Sustainability Fund is to create a sustainable campus and foster an environmentally conscious University culture by funding student-led projects that lessen the University of Washington's environmental impact.

### Project Size:

- Small, <\$2,000  
 Mid-Range, \$2,000-\$20,000  
 Major, >\$20,000

### Primary Contact

Last Name: Andrews

First Name: Leann

### Campus Affiliation:

- Student partnering with campus unit (department, RSO, etc.)  
 RSO (Registered Student Organization)  
 Faculty  
 Staff

### Campus Address:

Street 1: 242 Gould Hall, Box 355734

Street 2: \_\_\_\_\_

City, State, Zip: Seattle, WA 98195

Phone: 206.685.0521

Email: gfLab@u.washington.edu

### Secondary Contact:

Last Name: Rottle

First Name: Nancy

### Campus Affiliation:

- Student partnering with campus unit (department, RSO, etc.)  
 RSO (Registered Student Organization)  
 Faculty  
 Staff

### Campus Address:

Street 1: 242 Gould Hall, Box 355734

Street 2: \_\_\_\_\_

City, State, Zip: Seattle, WA 98195

Phone: 206.543.7897

Email: nrottle@u.washington.edu

## 2011 – 2012 Grant Application

### Project Information

Project Title: Biodiversity Green Wall, Edible Green Screen + Water Harvesting Demonstration Project, Phase II

Total Amount Requested from the CSF: \$ 86,800

Is this a:

Grant

Loan

If Loan, estimated payback period to be in \_\_\_\_\_ months

RSO or campus unit name and budget number through which awarded CSF funds will be administered:

RSO or Campus Unit Name: Green Futures Lab

Budget Number: 16-4959

How did you hear about the CSF?

Friend or colleague

Class/Academic Department

Email/Website

Other previous grant award

### Project Description:

Executive Summary: Project description (in 2-3 sentences), location on campus, proposed cost, environmental problem the project is seeking to solve in 1 sentence, statistics/metrics, website or background info, people or departments involved. 500 words max.

The Biodiversity Green Wall, Edible Green Screen and Water Harvesting Demonstration Project is a two-phase project to be constructed at Gould Hall. Phase I, the Feasibility and Design Study, was awarded funding by the Campus Sustainability Fund in the summer of 2011 and will be completed by the end of the year. During Phase I, students coordinated with over 29 campus faculty and staff including the College of Built Environments, Campus Architect and Landscape Architect, Capital Projects, and UW Grounds and Maintenance. This proposal is for \$86,800 of support, about 80% of the cost to complete Phase II, Construction and Documentation, with work to be completed by August 2012.

As an entirely student-led design and construction effort, students will transform a blank concrete wall into a showcase of improved habitat that fosters diverse native species, innovate rainwater harvesting methods, utilize solar power for lighting and irrigation pumping, try new methods of local food production, and test green systems that will potentially reduce building heating and cooling energy demand to help the campus reduce its carbon footprint and achieve its sustainability goals. Successful implementation of the Demonstration Project may lay the groundwork for the construction of other green walls on campus, helping the campus achieve its multiple sustainability goals.

Information on Phase I progress is located on the Green Futures Lab website: <http://greenfutures.washington.edu/research.php>

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### Environmental Impact

**Impact Area:**

- Waste
- Food
- Water
- Transportation
- Living Systems and Biodiversity
- Energy Use
- Other urban heat island effects, green marketing, aesthetics + education

Please explain the environmental problem in 1-3 sentences and how will your project mitigate the problem? 500 words max.

The Biodiversity Green Wall, Edible Green Screen and Water Harvesting Demonstration Project will address several environmental problems in one holistic system. Issues of native habitat destruction, interrupted food webs, polluted stormwater runoff, carbon reliance, urban heat island effects, water consumption and waste, climate changing conditions, industrial food production, and atmospheric impacts will be addressed through the multiple components of the Demonstration Project. Additionally, the project will explore variations of the aesthetics of “green” technologies, as well as maintaining and budgeting for sustainable systems.

To simultaneously address these concerns, the Green Futures Lab proposes to design, construct and document an integrated Biodiversity Green Wall, Edible Green Screen and Water Harvesting Demonstration Project at Gould Hall. Populated with local and native herbaceous and evergreen plants, the Biodiversity Green Wall will harvest rooftop water diverted into a “living wall”, providing native habitat, rainwater reuse, stormwater volume runoff reduction and water quality improvements. The Edible Green Screen will intercept surface runoff to grow edible vines, creating an innovative, space-efficient way to produce local food. Both the Green Wall and Green Screen will provide vertical habitat, assist with building insulation and summer cooling (reducing costs, energy use and carbon emissions), and provide educational and aesthetic opportunities for students, faculty and staff. The Demonstration Project will address several aspects of sustainability outlined in the UW Climate Action Plan including water recycling, sustainable land use planning, sustainable and local food production, energy and carbon footprint reduction, and UW green marketing and branding efforts.

The Demonstration Project is a small scale project, intended to act as a working model to educate, inform and excite the campus community about “green” technologies and test the capacity of these systems to address multiple sustainability issues. A successful demonstration project may lay the groundwork for the construction of other green walls, green screens, cisterns and/or solar installations around campus and beyond.

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How will the impact be measured? (i.e. kWh of electricity saved, gallons water saved, tons of carbon emissions avoided, specific area of land preserved, etc.) 500 words max.

Phase II will involve monitoring:

**Building Performance:** The 200+ buildings on campus depend on large amounts of energy, which is correlated to both global climate and local heat island effects. Rising energy costs during the current financial crisis may need to be paid with increased tuition. Green walls are a newer technology and little information is available about their effectiveness to increase building performance in retrofit structures. To address these concerns, temperature sensors will be installed on both sides of the Green Wall and Green Screen as well as a control site, to test building performance. By comparing temperatures, students are able to project the potentials for kWh of electricity saved through heating and air condition reduction, as well as potential cost savings and carbon emissions avoided. One green wall case study at the proposed 18-story GSA federal building in Portland projects 65% reductions in energy costs, translating to energy savings of \$280,000 per year ([www.greentechnolog.com](http://www.greentechnolog.com)).

**Water Consumption:** Average daily water consumption on campus is 1.46 million gallons/day (Facilities Services, 2009). This can be especially problematic during summer when river flow is low and water demand directly competes with aquatic organisms' needs for freshwater. Future climate predictions indicate this competition will be exacerbated due to reduced snowpack (Mote, 2003). Additionally, polluted stormwater runoff from impermeable surfaces enters Lake Union untreated. Our project will address these concerns by harvesting, reusing and cleansing roof runoff to use as irrigation for the Green Wall. Water gauges built into the irrigation system will measure water use (and therefore water reuse) from the impermeable roof surface of Gould. With over 325 acres of impermeable surfaces on campus (UW Salmon-Safe-Assessment, 2010), and a significant percentage of irrigated landscaping, data from the Demonstration Project could be useful to project water bill cost savings and gallons of water reused.

**Biodiversity:** Campus and urban development degrades native terrestrial habitat, interrupting food webs and local landscape ecologies. A Biodiversity Green Wall will explore the potentials for vertical surfaces to serve as biodiversity corridors and feed native seed banks. Students will perform species counts (plants, animals and insects) on the Green Wall and plant growth will be documented over a growing season. Data from these studies will inform future designers on the efficacy of vertical surfaces to support biodiversity.

**Local Food:** Atmospheric impacts arise from the carbon footprint of typical industrial food production, calling for more efficient and innovative ways to produce local food. The Edible Green Screen will explore the efficacy of vertical surfaces to support local food. Because fruits typically take several seasons to appear, assessment will be outside of the grant timeline, however the Demonstration Project will set up the conditions for potential future student research.

**Human Delight:** Because the Demonstration Project is within view of the Green Futures Lab, students will have the opportunity to measure human use within the Varey Garden. These studies will help inform campus staff of the attractiveness of these new technologies, and the potential to visually educate and inspire the campus community.

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### Education and Outreach

How will your project be publicized to the campus and what are your specific outreach and education goals? 1,000 words max.

The Biodiversity Green Wall, Edible Green Screen and Water Harvesting Demonstration Project is housed at Gould Hall in the Varey Garden and will be visible from 15<sup>th</sup> Avenue as well as the bus stop in front of Gould Hall. The Varey Garden is an already beloved public garden and the Demonstration Project will help to further activate the space. With its close proximity to main campus and Schmitz Hall, the Demonstration Project has the potential to be a stopping point along guided Campus Tours, reaching out to prospective students as well as demonstrating UW's commitment to sustainability.

The College of Built Environments houses over 700 students and 185 faculty and staff in Architecture, Landscape Architecture, Urban Planning, and Construction Management disciplines that will directly benefit from the educational and research components of the Demonstration Project. Because both its design process and physical product break disciplinary boundaries through sustainable design, the College of Built Environments has been very supportive of this project. The Demonstration Project aligns with the educational goals of the College to integrate sustainability for a “tangible improvement of built and natural environments” and express the College’s “strong interest in interdisciplinary exchange.” Because of its ecological and stormwater benefits, the Demonstration Project also has the potential to appeal to the Engineering Departments as well as students and faculty in the College of the Environment.

Documentation of construction as well as research and monitoring results will be spread to students, faculty and staff through an in-depth Dissemination Plan. Students will have the option to present their findings and design in various university courses such as LARCH 498: Soils and Hydrology, ARCH 532: Sustainable Construction Materials, CM 313: Construction Methods and Materials, and other applicable engineering, horticulture and ESRM courses. The Demonstration Project also has the potential to be a living lab for design studios, inspiring further design ideas. Post construction, students will be invited to conduct additional research on walls, water harvesting system, and solar panels and to co-publish and present this research in courses, conferences, and academic publications. Potential opportunities for publicizing in local print include the UW Daily, UW Today e-newsletter, and the UW Botanic Gardens e-newsletter. Because the Demonstration Project is a highly public “green” structure, it could appeal to professional publications or blog entries for the Cascadia Green Building Council, American Society of Landscape Architecture, American Institute of Architects, and Green Roofs for Healthy Cities. Students will present the project at a Green Infrastructure Partnership monthly meeting as well as the Washington ASLA Committee on the Environment monthly meeting. Students will also present the project at next year’s Sustainability Fair and Summit and posters will be available for display within the CSF office if desired.

Each step of the construction process will be documented, potentially in a time-lapse video or photography. The construction documentation and monitoring outcomes, as well as the Phase I Feasibility and Design document, will be published online through the Green Futures Lab and available for CSF webpages if desired. Because of its online documentation, the Demonstration Project has the potential to be a role model for other design colleges and universities around the country as a showcase of sustainability and a display of integrated inter-disciplinary student work. Additionally, interpretive

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signage will provide passive educational opportunities for visitors to the walls in the Gould Hall Varey Garden.

Finally, project adoption and maintenance are necessary and often overlooked components of sustainability and education. Students have met with 29 campus faculty and staff as part of Phase I, all expressing their positive support of the project, and will continue the dialogue in Phase II to educate and inform UW staff about the process and challenges of a student-led sustainability project. Students coordinated a design session with the College of Built Environments Dean, CBE Department Chairs, Varey Garden designer and Green Futures Lab director to get design and technical feedback and gain project momentum and support. Students presented the Demonstration Project to the Campus Design Review Board in September 2011 and will potentially present the project again for feedback and support at the University Landscape Advisory Committee or Design Review Board in December. UW Farm and UW Grounds and Maintenance expressed their excitement about the project and verbally agreed to be in dialogue about a long term maintenance strategy. A Maintenance Plan, developed as part of Phase I, will help to educate the staff on how to sustain the project beyond the capabilities of students. The Maintenance Plan will not only educate staff on sustainability technologies, but will also assist them in opening dialogue about financial sustainability needs in taking care of these “green” systems.

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### Student Involvement

How many student jobs and/or volunteer opportunities does your project involve? Please describe their responsibilities. 1,000 words max.

The Biodiversity Green Wall, Edible Green Screen and Water Harvesting Demonstration Project is primarily student-led, from design and coordination efforts to construction, documentation, monitoring and dissemination. Students have already logged over 650 hours of design and coordination efforts in Phase I. Phase II will potentially provide 4-5 paid student jobs and 10-15 student volunteer jobs, providing an estimated 700 additional hours of work.

The Demonstration Project will engage a graduate student manager as well as two team members to act as the core Student Design Team, leading construction, documentation and dissemination efforts. One to two additional students will potentially be hired to assist in monitoring project effectiveness. Because of University liability concerns (OSHA standards and seismic concerns), students will work directly with a contractor and Capital Projects-appointed Project Manager for Green Wall installation, however students will have the opportunity to fabricate and construct the Green Screen as well as install Green Wall plant material. Student volunteers will participate in a planting day as well as ribbon-cutting workshop and celebration. The core Student Design Team will also be responsible for coordinating with campus staff, documenting construction (potentially in a time-laps video or photography), and designing, constructing and installing educational signage. Students will monitor and assess the project for the capacity to affect building temperature/performance, water reuse, plant growth, habitat potential, and human use. The core Student Design Team will then lead student workshops, present in applicable classes and monitor and disseminate project results.

Students will develop skills in project management, construction, campus coordination, maintenance, research, and leadership of their peers, UW staff and a contractor. This project will provide valuable and unique hands-on student learning experiences in sustainability and innovative “green” technologies. Students will build their personal portfolios and increase their post-college job marketability by having been involved in a sizeable interdisciplinary installation- from project inception and grant writing to construction and monitoring. A website created by the Student Design Team will showcase student-led results and indirectly educate other students interested in sustainable campus solutions. Following construction, the Green Futures Lab will work to ensure the Demonstration Project has the continued faculty guidance, staff attention, and student stewardship needed to sustain the full life of the living structures. As a component of the Green Futures Lab Materials Library, students will serve as docents of the Demonstration Project to visitors and will train incoming students to take their place following graduation.

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### Accountability, Feasibility, and Sustainability

#### Timeline:

Task	Timeframe*	Estimated Completion Date
Pre-construction Project Coordination + Permits	Est. 3 months	April 1, 2012
Green Wall, Green Screen, Cistern + Solar Construction	Est. 3 weeks	April 30, 2012
Construction Documentation + Website Initiation	Est. 3 weeks	May 7, 2012
Project Monitoring + Data Collection	Est. 4 months	August 31, 2012
Project Outreach, Education + Dissemination	Est. 4 months	August 31, 2012

#### Budget:

Item	Cost/Item	Quantity	Total
<b>Equipment and Construction</b>			
Green Wall Construction (by contractor)	\$31,900	1	\$31,900
Electric + Lighting Construction (by contractor)	\$3,750	1	\$3,750
Cistern, Pump, Irrigation + Piping connections (by contractor)	\$19,850	1	\$19,850
Sales Tax (9.5% of contractor price)	\$6,413	1	\$6,413
Allowance for Change Orders (10% of contractor price)	\$5,550	1	\$5,550
Builders Risk Insurance	\$23	1	\$23
Building Permits	\$1,450	1	\$1,450
Hazardous Materials Survey (by CPO)	\$2,200	1	\$2,200
Utility Shut-downs/Shop (by facilities dept)	\$400	1	\$400
Green Screen + Panel Construction Materials (by students)	\$6,080	1	\$6,080
Interpretive Signage Construction Materials (by students)	\$1,500	1	\$1,500
Maintenance Equipment	\$12,000	1	\$12,000
<b>Publicity and Communication</b>			
Documentation of Construction (1 student)	\$15	40 hrs	\$600
Website Design + Maintenance (1 student)	\$15	20 hrs	\$300
Ribbon Cutting Ceremony + Workshop (15 student volunteers)	\$0	60 hrs	\$0
Class presentations (3 student volunteers)	\$0	30 hrs	\$0
<b>Personnel and Wages</b>			
CPO appointed Project Manager (10.95% of constr. cost)	\$7,900	1	\$7,900
Faculty Oversight	\$60	40 hrs	\$2,400
Student Project Manager	\$15	80 hrs	\$1,200
Planting (by 15 student volunteers)	\$0	75 hrs	\$0
Interpretive Sign Design (2 students)	\$15	40 hrs	\$600
Interpretive Sign Installation (3 students)	\$15	15 hrs	\$225
Green Screen + Panel Fabrication + Installation (3 students)	\$15	60 hrs	\$900
Monitoring: Building Performance Data (1 student)	\$15	60 hrs	\$900
Monitoring: Water Consumption Data (1 student)	\$15	60 hrs	\$900
Monitoring: Biodiversity (1 student)	\$15	60 hrs	\$900
Monitoring: Human Use (1 student volunteer)	\$0	60 hrs	\$0
<b>General Supplies and Other</b>			
Printing	\$35	15	\$525
<b>PROJECT COMPLETION TOTAL:</b>			<b>\$108,466</b>
<b>CSF REQUESTED TOTAL (80%):</b>			<b>\$86,800</b>

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List all non-CSF sources you are pursuing for funding, in-kind donations, etc. using the table below.

Source/Description	Amount Requested	Date Requested	Date Received
Green Futures Lab- Gilbert Wong Donation	\$2,000	6/1/2011	6/1/2011
Work Study Support (2/3 of student pay)	\$3,650	N/A	N/A
Potential donation from College of Built Environments, Advancement/Procurement Office and/or EPA P3 Grant	\$16,016	Ongoing conversations	

**Additional potential donations:**

Seattle Public Utilities- monitoring equipment (temperature sensors, tipping buckets)  
 Capital Projects Office- percentage of staff time (as per conversation on 11/15/11)  
 Donation/Dedication from Advancement/Procurement (to fund solar panel alternative)

**Project Completion Total: \$** 108,466

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### Project Approval Forms

As part of Phase I, the Student Design Team coordinated with the below campus faculty and staff. All conversations were positive and supportive of the project moving into Phase II:

Kristine Kenney	Campus Landscape Architect
Rebecca Barnes	Campus Architect
Jackie Harris	Roofing
Ellen Oxley	Roofing
Tom Berg	Facilities Architect
Guarrin Sakagawa	Facilities Mechanical Engineer
Tom Pittsford	Facilities Structural Engineer
Clarence Geyen	Grounds and Maintenance
Howard Nakase	Grounds and Maintenance
Brian Davis	Grounds and Maintenance
Julia Reed	UW Farm
Dean Herrwagon	Professor, Mechanical Systems
Kate Simonen	Professor, Structure
Jim Morin	Facilities Civil Engineer
Daniel Winterbottom	Professor, Valey Garden Knowledge
Abby Crossen	Assistant Dean, College of Built Environments
Meegan Amen	Facilities Manager, Gould Hall
John Kelley	Safety + Window Washing
Gina Zagala	Capital Projects + UW Project Tracker
Ashley Kangas	Capital Projects, Small Projects Coordinator
Clara Simon	Capital Projects + SustainAbilities Scorecard
Susan Malysiak	Purchasing and Procurement
Daniel Friedman	Dean, College of the Built Environments
Jeff Hou	Chair, Department of Landscape Architecture
Qing Shen	Chair, Department of Urban Design + Planning
John Schaufelberger	Chair, Construction Management
Gundula Proksch	Assistant Professor, Architecture
Nancy Rottle	Director, Green Futures Lab

Attached are Project Approval Forms from the following:

College of Built Environments, Dean Daniel Friedman  
 Green Futures Lab, Nancy Rottle  
 Capital Projects Office, Ashley Kangas  
 UW Maintenance and Grounds, Howard Nakase  
 Campus Landscape Architect, Kristine Kenney

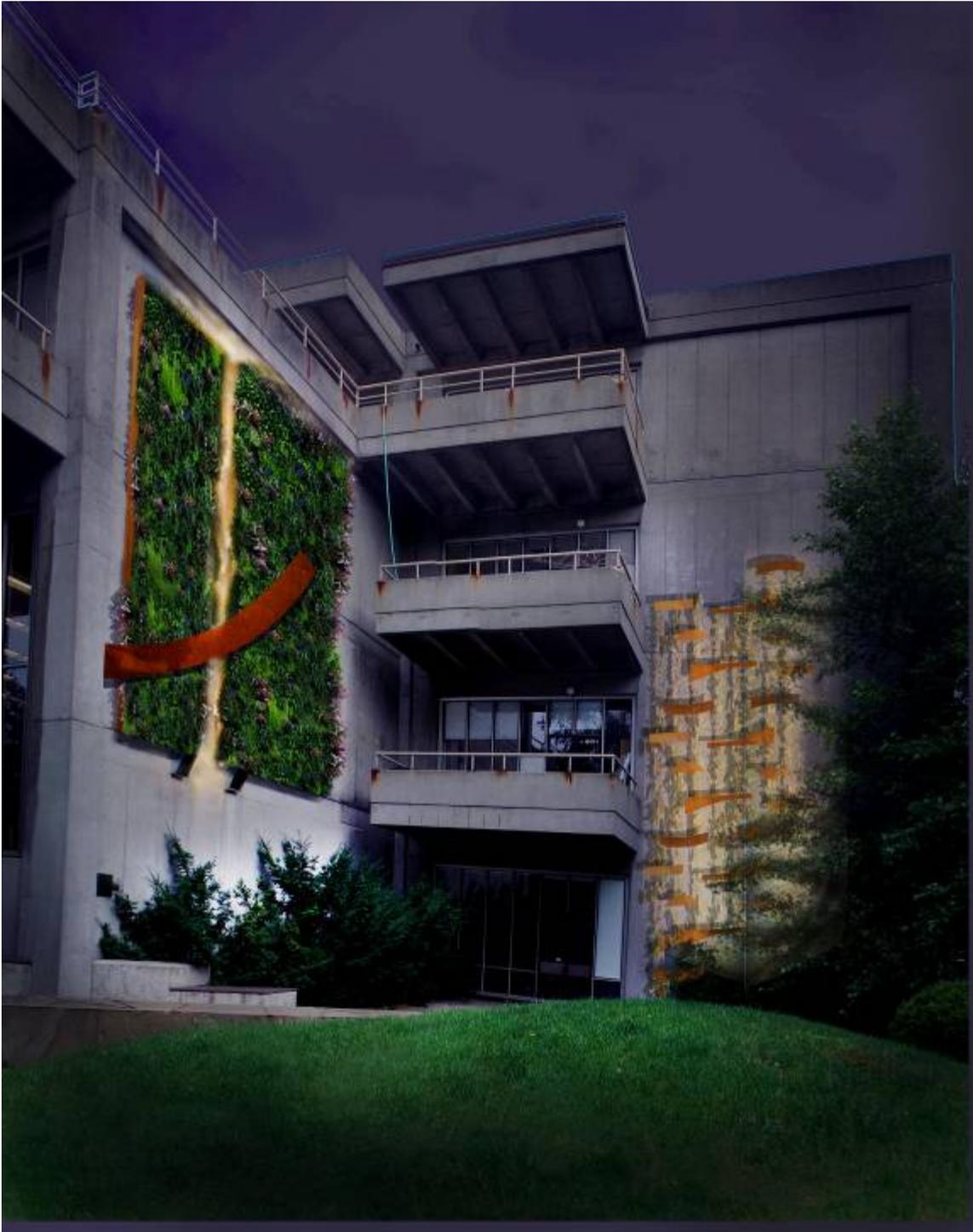
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Daytime rendering of Green Wall + Green Screen Demonstration Project



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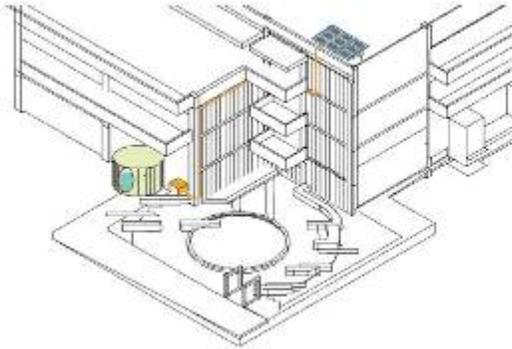
Nighttime rendering of Green Wall + Green Screen Demonstration Project



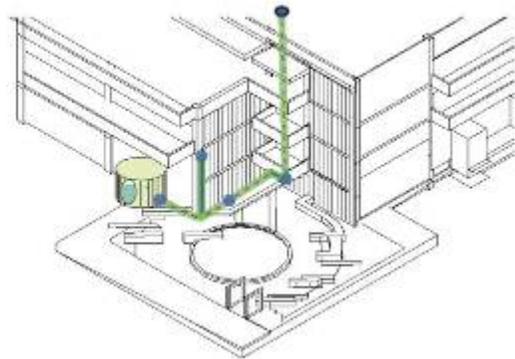
## 2011 – 2012 Grant Application

The Demonstration Project will incorporate Water Harvesting as well as Solar Panels to power irrigation pumps and lighting elements. Location options are below.

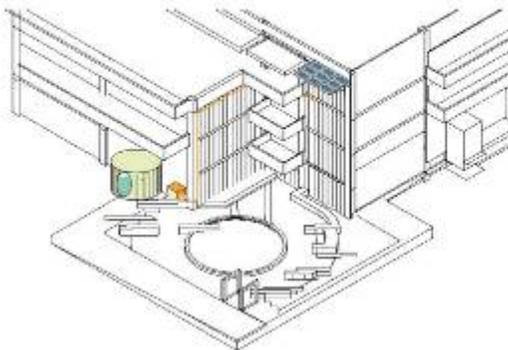
Solar Panel Location Option #1



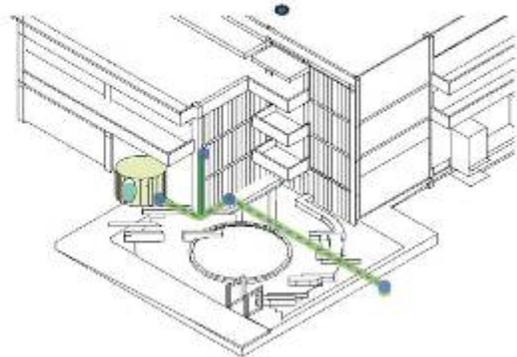
Rain Water Access Option #1



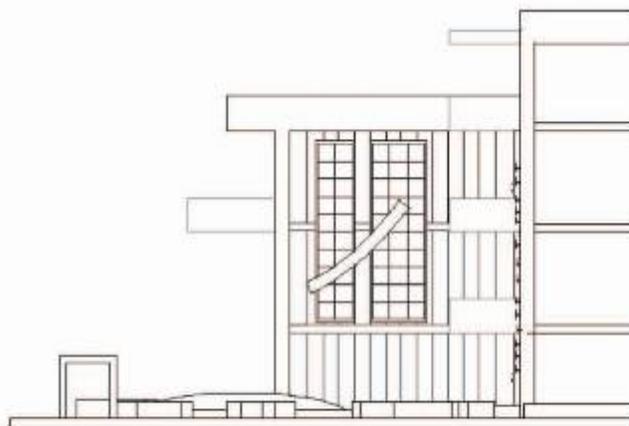
Solar Panel Location Option #2



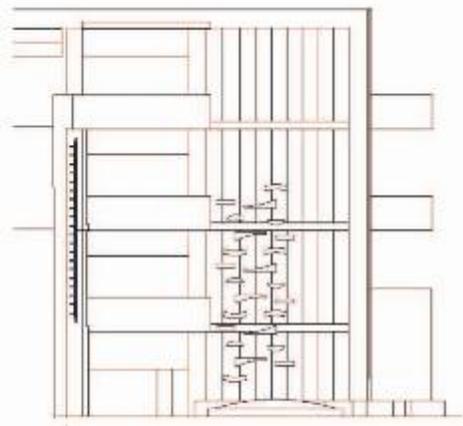
Rain Water Access Option #2



Preliminary Construction Drawings of the Demonstration project:



East Elevation|Section



South Elevation|Section

**W**

UNIVERSITY OF WASHINGTON  
COLLEGE OF BUILT ENVIRONMENTS  
224 GOULD HALL  
BOX 355726  
SEATTLE, WA 98195-5726

OFFICE OF THE DEAN

November 16, 2011

CSF Fund Coordinator  
Campus Sustainability Fund  
University of Washington  
Seattle, WA 98195

Dear CSF Fund Coordinator:

Please accept this letter as evidence of my full support for the Gould Hall Biodiversity Green Wall project, and my pledge to lend the full cooperation of the College of Built Environments in its successful implementation.

Beyond its instructive and aesthetic value, the Gould Hall Biodiversity Green Wall addresses fundamental and critical elements of a sustainable environment including food, water, energy, habitat, climate, and atmospheric integrity in concert with the UW Climate Action Plan. This working model has the potential to inform and excite the UW community about emerging technologies fundamental to the creation of sustainable environs, and to serve as a model for other campus buildings, colleges and universities. Completed, it will be a showcase.

It is equally exciting to witness the evolution of creative and efficient environmental greening concepts supported by the growing body of literature on the value of vertical landscape solutions. In alignment with the educational goals of the college, this interdisciplinary undertaking holds the promise of effecting a living lab, inspiring design ideas, and future design paradigms. These structures will establish conditions for further research and the data provided will inform the design of structures to support biodiversity. I am inspired by the elegance and foresight of this entirely student-led project.

Finally, given such a verdant opportunity for students to develop skills in design, invention, management, construction, maintenance, research, leadership and public engagement, my office will be happy to explore our capacity to cover funding gaps that may ultimately exist in the fulfillment of this project. I endorse the Green Wall project unreservedly and with admiration for its innovators.

Sincerely,



Daniel S. Friedman, Ph.D., FAIA  
Dean

**Project Approval Form**

**Project Title:** Biodiversity Green Wall, Edible Green Screen + Water Harvesting Demonstration Project, Phase II

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**Primary Contact:** Leann Andrews

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By signing this form, I confirm that the project lead(s) has/have discussed this project with me, and that I (please check all that apply):

- approve the stated project to be conducted on the University of Washington-Seattle campus (this approval can only be given by campus units or by individuals on behalf of campus units) **(REQUIRED)**
- agree to be part of the project team
- will provide support to the project by being a partnering organization, department, or individual.
- am the administrator for my campus unit and agree to be responsible for the financial and human resources transactions associated with this project.
- agree to take over the operational costs of this project.

**With the following stipulations (if applicable):**

<b>Name/Signature:</b> Daniel S. Friedman 	<b>Date:</b> November 16, 2011
<b>Title:</b> Dean	
<b>Department/Organization:</b> College of Built Environments	
<b>Phone:</b> (206) 616-2441	<b>Email:</b> dsfx@uw.edu

**Additional Notes:**

*Please save this completed form as "Project Contact Name\_Project Name" and email it to [uwcsf@uw.edu](mailto:uwcsf@uw.edu). The email originating directly from the approving body will be considered a signature. Paper copies may be sent through campus mail to Attn: CSF Fund Coordinator, Box 351248 or dropped off to the CSF Office at 280 Gerberding Hall and must include an original signature of the approving body.*



## Project Approval Form

<b>Project Title:</b>	Biodiversity Green Wall, Edible Green Screen + Water Harvesting Demonstration Project, Phase II
<b>Primary Contact:</b>	Leann Andrews

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**With the following stipulations (if applicable):**

<b>Name/Signature:</b> Nancy Rottle, ASLA, RLA	<b>Date:</b> 11/14/11
<b>Title:</b> Director, Green Futures Lab	
<b>Department/Organization:</b> UW Green Futures Research and Design Lab	
<b>Phone:</b> (206) 685-0521	<b>Email:</b> nrottle@u.washington.edu

**Additional Notes:**

The Green Futures Lab agrees to give \$2,000 from the Gilbert Wong Donation in support of this project.

Please save this completed form as "Project Contact Name\_Project Name" and email it to [uwcsf@uw.edu](mailto:uwcsf@uw.edu). The email originating directly from the approving body will be considered a signature. Paper copies may be sent through campus mail to Attn: CSF Fund Coordinator, Box 351248 or dropped off to the CSF Office at 280 Gerberding Hall and must include an original signature of the approving body.

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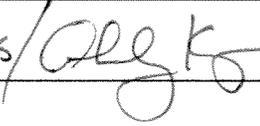
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**Primary Contact:** Leann Andrews

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**With the following stipulations (if applicable):**

<b>Name/Signature:</b> ASHLEY KANGAS / 	<b>Date:</b> 11/15/2011
<b>Title:</b> UNIT MANAGER, SPDT	
<b>Department/Organization:</b> THE UNIVERSITY OF WASHINGTON. CAPITAL PROJECTS OFFICE	
<b>Phone:</b> 206.897.1848	<b>Email:</b> AKANGAS@U.WASHINGTON.EDU

**Additional Notes:**

Please save this completed form as "Project Contact Name\_Project Name" and email it to [uwcsf@uw.edu](mailto:uwcsf@uw.edu). The email originating directly from the approving body will be considered a signature. Paper copies may be sent through campus mail to Attn: CSF Fund Coordinator, Box 351248 or dropped off to the CSF Office at 280 Gerberding Hall and must include an original signature of the approving body.



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- agree to take over the operational costs of this project.

**With the following stipulations (if applicable):**

<b>Name/Signature:</b> Howard Nakase	<b>Date:</b> 11/16/11
<b>Title:</b> Manager of Grounds Operations	
<b>Department/Organization:</b> Facilities Services/Grounds Management	
<b>Phone:</b> 206.685.1407	<b>Email:</b> hmnakase@u.washington.edu

**Additional Notes:**

We support this project; however long-term maintenance is still under discussion. Awarding the Project Team the necessary funding would be appropriate but it should not be dispersed until there is a suitable resolution. In addition, a meeting with the leadership team of the Office of Environmental Stewardship and Sustainability is necessary to discuss future funding for this project.

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Please save this completed form as "Project Contact Name\_Project Name" and email it to [uwcsf@uw.edu](mailto:uwcsf@uw.edu). The email originating directly from the approving body will be considered a signature. Paper copies may be sent

## Project Approval Form

**Project Title:** Biodiversity Green Wall, Edible Green Screen + Water Harvesting Demonstration Project, Phase II

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**Primary Contact:** Leann Andrews

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By signing this form, I confirm that the project lead(s) has/have discussed this project with me, and that I (please check all that apply):

- approve the stated project to be conducted on the University of Washington-Seattle campus (this approval can only be given by campus units or by individuals on behalf of campus units) **(REQUIRED)**
- agree to be part of the project team
- will provide support to the project by being a partnering organization, department, or individual.
- am the administrator for my campus unit and agree to be responsible for the financial and human resources transactions associated with this project.
- agree to take over the operational costs of this project.

**With the following stipulations (if applicable):**

<b>Name/Signature:</b> Kristine Kenney		<b>Date:</b> November 16, 2011
<b>Title:</b> University Landscape Architect		
<b>Department/Organization:</b> Office of Planning & Budgeting, Office of the University Architect		
<b>Phone:</b> 206.685.6430	<b>Email:</b> kkenney@uw.edu	

**Additional Notes:**

The team has done a great job with coordination of the preliminary phases and the expectation is this will continue as the project evolves through design and implementation.

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Please save this completed form as "Project Contact Name\_Project Name" and email it to [uwcsf@uw.edu](mailto:uwcsf@uw.edu). The email originating directly from the approving body will be considered a signature. Paper copies may be sent through campus mail to Attn: CSF Fund Coordinator, Box 351248 or dropped off to the CSF Office at 280 Gerberding Hall and must include an original signature of the approving body.