THE GREEN HOUSE VENTURE

IMPROVING SCIENCE EDUCATION AND CHILDHOOD NUTRITION

MISSION & PRIMARY GOAL

To educate, excite, and equip an inclusive population of elementary students to pursue a sustainable world through a hands-on program in bio-science and urban agriculture

1. Introduce children to a rich, hands-on learning experience that improves bioscience education.
2. Increase student understanding of proper nutrition, and encourage families to adopt healthier everyday habits.
3. Lead more students to careers in bioscience to meet the pressing need to fill emerging jobs in science and agriculture.

URBAN EDUCATION ALLIANCE

There are 1,570 students in the participating schools that represent a diverse socio-economic and geographic spectrum. Reaching yet further, the Venture plans to employ state-of-the art technology, including food computers and communication channels to share its programs with other elementary schools across the St. Louis region and beyond.

THE GREEN HOUSE VENTURE is is a unique STEM program taught in a working urban agricultural environment, involving students from four elementary schools within South Central St. Louis:

ST. MARGARET OF SCOTLAND *{Parochial}*
3854 Flad Avenue, St. Louis 63110 • (314) 776-0363
www.smos-school.org @SMOSstl

MULLANPHY INVESTIGATIVE CENTER *{Public Magnet}*
4221 Shaw Blvd, St. Louis, MO 63110 • (314) 772-0994
www.slps.org/Domain/1294 @MullanphyPTO

TOWER GROVE CHRISTIAN ACADEMY *{Christian}*
4257 Magnolia Ave, St. Louis, Missouri 63110 • (314) 776-6473
www.tgcaonline.com @towergrovechristianacademy

ST. LOUIS LANGUAGE IMMERSION *{Charter}*
1881 Pine Street, St. Louis 63103 • (314) 399-4835
www.sllis.org @StLouisLanguageImmersionSchool

PROGRESS REPORT: 2021 RECAP

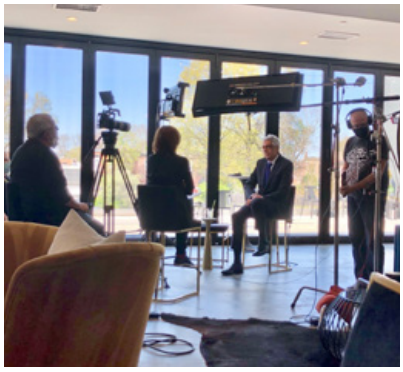
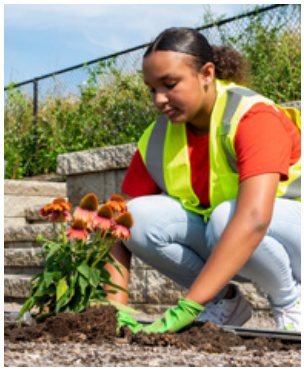
PIVOTAL YEAR

The challenges brought about by COVID-19 have curtailed a number of the Venture's program since March 2020. Most notably, we had to suspend our Ambassadors Program, as well as our Summer Adventure Camp. It is our hope that both programs can resume in 2022.

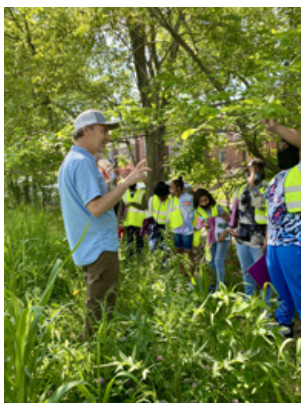
Despite those setbacks, we had some notable accomplishments during the past year:

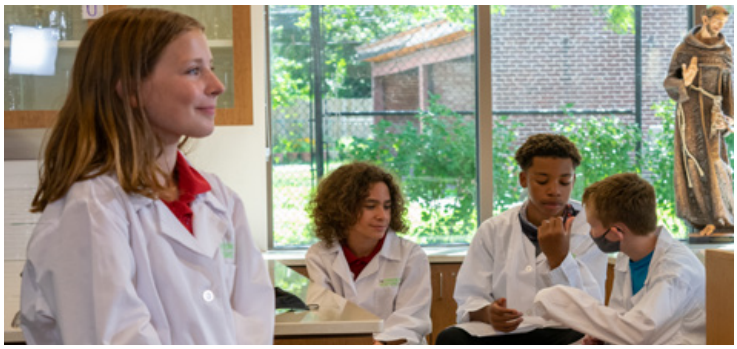
- Embankment Greenway was completed
- Approval was granted for the design and construction of our Education Center
- Initial steps were taken to launch our $6 million campaign for Phase 2 of the GHV Campus

Details about those milestones appear on the following pages in this report.







AMBASSADOR PROGRAM

Although our Ambassadors Program was suspended in March 2020 due to pandemic, it remains the Venture's signature educational activity at this time.

The program brings together a group of promising students from each school one afternoon a week to pursue an immersive eight-week experiment in growing plants under carefully controlled conditions. Participants hear presentations related to the experiment – often from faculty at our partnering universities. They also study the underlying science with undergraduate mentors, go on field trips, and enjoy an array of other activities that enhance their knowledge.

Each semester, the Ambassadors conduct an experiment on edible plants, going from seed to harvest, studying the effects of variables such as light, wind, moisture and vital nutrients. Once a week, students record detailed measurements and observations in their notebook, capping off their observations on Harvest Day, which is the happiest class of the term. Afterwards, they analyze and graph their results, comparing them with their initial hypotheses. The Curriculum Committee has been fine-tuning these experiments during the COVID-19 break.

The Ambassadors Program is guided by a professionally developed, three-year curriculum grounded in federal and state science standards. The first two years take students from the visible to the molecular in understanding the growth of plants. In the third year, we turn to Earth systems that affect food production, including climate change.

Students also learn about steps that they and their families can take to conserve the environment. Along the way, they are challenged to wrap their minds around age-appropriate lessons in Earth and atmospheric science, biology, chemistry, math, writing, art and public speaking.

The work with our student Ambassadors has become the ideal incubator and initial testing site for much that goes into our other offerings, including the Classroom Outreach Program and our Summer Adventure Camp.

The high point of each year comes after the Ambassadors finish their first major experiment, when students are awarded lab jackets to show that they are true scientists — or at least on their way.

Much of the Ambassador Program's success is due to the participation of our higher education partners: St. Louis Community College, Harris-Stowe State University, Saint Louis University, Washington University, Saint Louis University High School and the Danforth Plant Science Center.

APPROVAL OF BUILDING DESIGN & FUNDRAISING CAMPAIGN

On September 27, 2021 the City of St. Louis Preservation Commission met and approved the second phase of the Green House Venture's long-term development plan. We now have full authority to proceed with the construction of a state-of-the-art Education Center, which is one of the two cornerstones of our GHV Campus along with the Embankment Greenway. When the Center is completed, students will learn about an array of growing methods, such as hydroponics, aquaponics, vertical growing in courtyards and roof-top agriculture.

The Venture has close affiliations with multiple corporations, foundations, higher education and public institutions that are avid supporters of GHV. Since the Venture's beginning in 2015, we have raised more than $800,000 for various projects and programs.

Our fund-raising goal for the new Education Center is $6 million – $4 million for construction and $2 million operating fund. We have already received a large lead gift of $1 million from a generous donor who is committed to our work and has asked to remain anonymous at this time. Once a larger portion of the required funding is secured, we will begin construction, which is expected to take about 2 years to complete.

Our campaign is being led by two Honorary Co-Chairs – John and Joan Vatterott – plus two Operating Co-Chairs – John Nickel, President of Switch and Dr. Freddie Willis, Jr., Vice President for STEM Initiatives and Research Partnerships at Harris-Stowe University. Their efforts will be guided by Dan Reynolds from the professional fundraising firm, Holmes, Radford & Reynolds, Inc. Working with Dan, we have begun laying the groundwork for the full public launch of our campaign in January 2023.

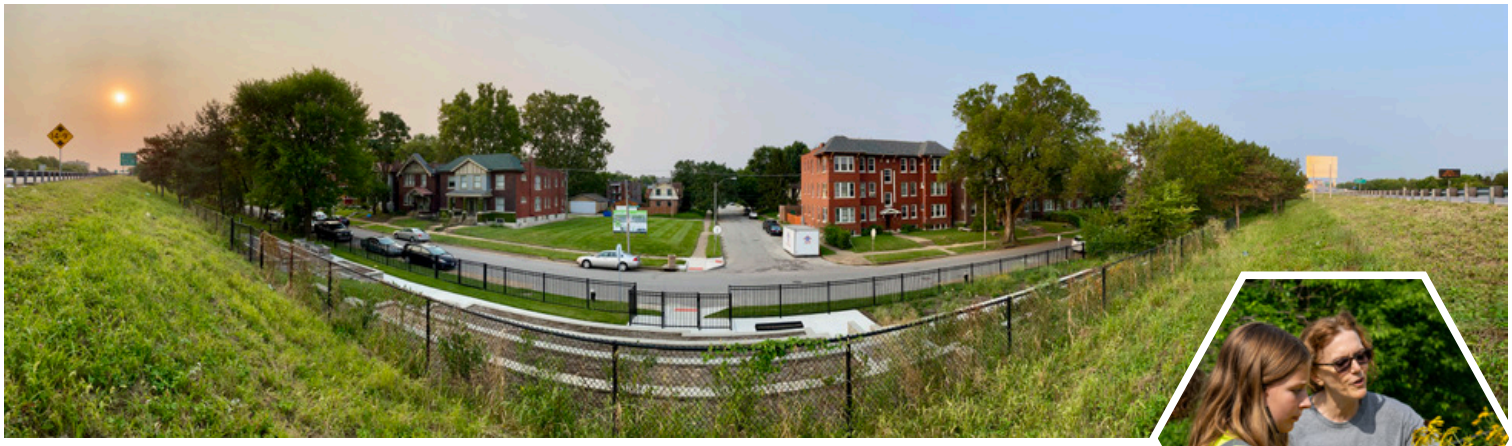
A new video was just completed that will be used throughout the campaign to describe the substance and the value of the Green House Venture program. Featuring a number of prominent area leaders, the video illustrates the importance of the Venture's work for both elementary education and the future of our nation's food supply.

You can view it by clicking on the following link:

In memory of

Dr. Jonathan C. Smith, Jim O'Donnell and Mark Steinhoff

GHV EMBANKMENT GREENWAY



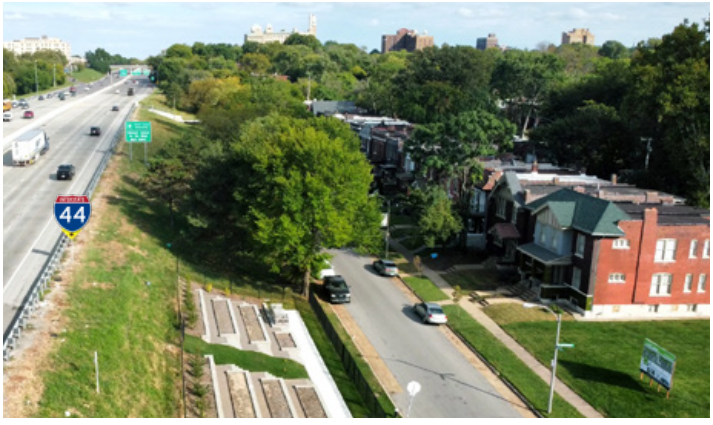
One of our biggest accomplishments in the past year was the completion of the Venture's Embankment Greenway, a 3.7-acre expanse along the south side of Interstate Highway 44 in the historic Shaw Neighborhood of St. Louis City.

Responding to the 2015 Federal Highway FAST Act, the Embankment Greenway is designed to explore the use of interstate highway margins to revitalize declining pollinator populations, including butterflies and the native bees that are essential for large-scale agriculture.

The Greenway includes two main anchors. The *Terrace Garden* is designed to test safe crop production on unused land along roadways. The *Pollinator Recovery Habitat* is devoted mainly to research by scientists at Saint Louis University.

Both areas are designed to address a challenging reality facing the future of our nation's food production and distribution system. By the middle of this century, our growing population will be confronted with pitting the need to decrease fuel-consuming, long-distance food transportation against the need to increase food supplies to large urban centers like St. Louis.

The two corner points of the 1700-foot-long Embankment Greenway feature decorative gardens planted by Focal Pointe Outdoor Solutions, who also installed diverse plantings at one end of the Terrace Garden. In the 8,500 square feet of the Terrace Garden that lies at the center of the embankment, students will be able to study a variety of food crops. As examples, the Saint Louis Zoo/ Coahoma Orchards will supply a terrace filled with crops favored by Native Americans. Harris-Stowe State University, a Historically Black institution, will devote a terrace to foods traditional among African Americans.



Terraces also will allow students to plant, cultivate, study, and harvest produce to cook with their families, using recipes and instruction provided by the Saint Louis University Department of Nutrition and Dietetics.

Other sections of the Terrace Garden will be devoted to little-known native plants such as rock grapes, scarlet runnerberries, and paw paws. Indigenous nut and berry bushes provide a windbreak around the terraces, which are ADA accessible for children of all abilities.

In the Pollinator Recovery Habitat, children will be able to learn about 28 species of native Missouri plants, grasses and wildflowers, as well as the many species of ground-nesting bees that thrive in the embankment's nurturing environment.

The entire Embankment Greenway—which is protected by a new guardrail and state-mandated safety protocols—will be tested regularly for soil nutrients and roadside contaminants, along with other important data. That information will allow research scientists and students to gauge the success of their efforts to expand the possibilities for feeding a growing planet.

Partners in the design, development and maintenance of the Embankment Greenway include the Missouri Department of Transportation, the Federal Highway Commission, the landscape architectural firm DTLS, the seeding company Native Landscape Solutions, the Missouri Extension Service and Master Gardener Program, the St. Louis Board of Public Service, the Metropolitan Sewer District, Shaw Nature Preserve, Accurate Disbursing and Focal Pointe.

The Embankment Greenway project has been made possible through generous donations from numerous individuals and institutions throughout the St. Louis area.

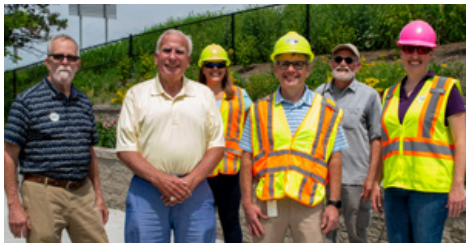
VENTURE HIGHLIGHTS

Mayors Visit

We were honored on July 19th to receive a visit from the Honorable Tishaura Jones, Mayor of the City of St. Louis. Accompanying the Mayor was 8th Ward Alderperson, Annie Rice, who lives in the area and is a big fan of our work. As a former resident of the Shaw area where the Venture is centered, the mayor was enthused about the scope and substance of the program that makes it such a distinctive educational experience in bio-science and urban agriculture for elementary school children.

MoDot Regional Leadership Visit

Another important visit came on July 15th from the Missouri Department of Transportation (MoDOT), represented by Tom Blair, District Engineer along with others from his staff, Michelle Forneris, Assistant District Engineer, and Jennifer Wade, Area Director for the City of St. Louis. MoDOT has been a vital partner in the work of the Green House Venture since its beginning. They were instrumental in helping us build the guardrail that protects the students from I-44 traffic, and clearing the 3-acre expanse for the creation of our Embankment Greenway.



Anniversary Video

To mark the celebration of our six years in operation, we produced an 11-minute video that provides an excellent overview of our history, our programs and the compelling rationale for the Venture's creation. View it by clicking on the follow link: ***https://youtu.be/2yRnFsuj2uk***

KEY PARTNERSHIPS

- Tower Grove Park
- Operation Food Search
- SLU
- Wash U
- Harris Stowe
- SLCC
- Switch
- MoDot
- Danforth Plant and Science Center
- DTLS
- UIC

THE GHV CAMPUS DONORS

- John and Joan Vatterott Family Foundation
- MySun Foundation
- Kauffman Foundation
- Thad Simons/NOVUS
- Ameren
- Wells Fargo
- Bernard Purcell
- Thomas and Virginia Purcell
- Great River Confluence
- Terry Donohue
- Green House Venture Directors
- Kerr Foundation
- Jordan Charitable Foundation
- Saigh Foundation
- Cardinal Care
- Purcell Family Trust
- First Bank
- Gary Pohrer
- SNIA – Helping Hands
- St. Louis Philharmonic
- American Heart Association
- Villa Lighting
- John Rick
- KWS
- John Nickel
- Chris Adelman-Adler
- Jack Lane
- Willian Duffe
- GiveSTL Campaign
- Bob St. Vrain
- Matt Villa

PayPal

Contributions can be made through PayPal

give STL DAY.org

Goal was set for $4000

Give Day Total for 2021 $3,681 (27 donations)

2 YEAR TOTAL $6,147.65

BOARD OF DIRECTORS

Thomas Purcell, *President*
Donald Stump, Ph.D., *Vice-President*
Jack Connaghan, *Interim Secretary*
Dennis Purkis, *Interim Treasurer*
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Michael Gregory (TGCA)
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Bill Anderson
Molly Schaller, Ph.D.
Elizabeth Boedeker
Jacqueline Davis-Wellington
Michele Duffe
Dr. Freddie E. Wills, Jr.
Peter Benoist (Site)

CAMPUS OPERATIONS COMMITTEE

A special committee has been formed to advise and direct the use of our new Terrace Garden that will showcase the many different ways that plants can be grown on the perimeter of our nation's interstate highways.

- St. Louis Zoo/Coahoma Orchards
- Shaw Nature Preserve
- St Louis Master Gardener Chapter (MOU)
- Forest ReLeaf of Missouri
- Missouri Department of Conservation
- Gerardo Camilo of the Biology Department of St. Louis University
- Harris Stowe University

"Every single boy and girl born in the world has the same potential for greatness that any of us have, but it's the opportunity gap. And I think that there are things that we can do to bridge that opportunity gap. The Green House Venture is an example of that."

— Sam Fiorello
President Cortex Innovative Community