

COLONY1
ART AND SCIENCE CENTER FOR PUBLIC ENGAGEMENT



Colony1 is a prospective art and science facility in Miami whose mission is to allow the public access to environmental education and nutritious food. It will provide a centralized hub for collaboration between art and environmental research through a unique residency program that will be a catalyst for workshops, lecture series, on-site demonstrations and community outreach programs. The goal of this is to bring sustainability to the South Florida region. Part ecological urban think tank, part community gathering space, Colony1 will be a center for innovation led by international, interdisciplinary, art and environmental partnerships. Colony1 bring dynamic programming in the areas of food, sustainability, conservation, technology, design, art and education.



COLONY1

Colony1's goal is to bring environmental consciousness to the public through art and science. The center is founded on the belief that responding to the current environmental crises is the greatest challenge of the current era. This facility would allow the public access to the tools necessary to respond to this challenge.

The Center's design is integrated with the programming, it is aimed at being an educational demonstration of sustainable possibilities for South Florida. The site will be bio-remediated with debris removal, layers of mulching and depending upon soil testing, containments removed. The landscaping will be edible, native and function in a symbiotic relationship with the physical architecture. The architecture is inspired by many other cities that are showcasing their "green" buildings. Colony1's architecture utilizes recycled shipping containers and the design is a model from Luis De Garrido's architectural style, more specifically his R4House. This will be the component that will accommodate the resident living quarters, exhibition space, residency program live/work space, Food Lab, zero-packaging food store and administration offices.

We envision the center to be entirely self-sustained, operating with solar and wind energy and integrated into a sophisticated rainwater catchment and filtration system. Also, this particular type of architecture utilizes revolutionary vertical and rooftop gardens for insulation, allowing maximum yield of all surfaces for food and energy production.



A. PUBLIC GARDEN: SUSTAINABLE LAND USE

Sustainable land use occurs when the productive capacity of the land and its resource components of soil, air, water and biota (ecology) are preserved and enhanced. The aim of our garden is to bio-remediate, provide edible yield, preserve native flora and fauna, educate, develop new ideas of sustainable land use and inspire. The garden will be integrated into the landscaping and provide bountiful organic produce, compost, fertilizers, pollinators and create a healthy micro-ecology. Utilizing permaculture principles, the garden will be a self sustaining system employing native plants, rainwater harvesting, grey water filtration through a constructed wetland system, composting, vermiculture, recycling, and make use of wind and solar energy. The outdoor space will work with the programming by providing a constant experimental space for artists and scientists to engage with and develop ideas.

The garden will be home to a non-profit operated Community Supported Agriculture (CSA) program. This CSA will be operated by volunteers, who in exchange for time, earn a share of organic produce. In addition to volunteer shares, there will be produce shares available to the public by donation, making it easy and affordable for anyone to buy nutritious, non-GMO, pesticide free local foods. The volunteer aspect of this CSA is unique, as each volunteer will learn by a hands-on approach about all the dynamics of sustainable land use and food production. This is a unique opportunity as many permaculture or organic gardening courses are not accessible for everyone due to their high costs. The scale of the sustainable land design will allow it to be a resource for residents to obtain seeds, cuttings, saplings, mulch, compost and help facilitate a slow process of "greening" Miami.

B. DEMONSTRATION AND MODEL SITE

Leading by example is one of the most effective forms of learning. Colony1 aims to be a living example of real life solutions for South Florida residents. By using technologies such as solar energy and rainwater harvesting, the center will demystify these resources for residential use, ultimately inspiring residents and businesses for deployment on a greater scale. Colony1 will be the first public space in the South Florida region to allow residents and business owners hands-on, educational exposure to sustainable living ideas.

Shipping containers are a sustainable and innovative solution for responding to the current environmental and economic crisis. Some noted cities that have famed container buildings include: Calle, Detroit, New York, London, Vancouver, Amsterdam, Berlin, Paris, St. Louis, and Gainesville, Florida. Our primary inspiration comes from Luis de Garrido's R4House. The R4House is considered an architectural paradigm based on absolute respect for nature and human well-being. This is how we intend to be a model site, this building will be a source of inspiration for architects, artists and cities around the world, putting Miami on the global map for sustainability, future development possibilities and artistic innovation.

Shipping Containers were designed to securely store and transport goods over long distances in watertight conditions. Their dimensions were internationally standardized and coincidentally have the right human scale as well. The containers can be juxtaposed or joined together to form complex structures, are easily modified and withstand strong exterior forces with their steel framing. The shape of the structures allow for maximum yield of surface space for rainwater harvesting, solar panel installation and rooftop gardens, the latter which conveniently also provide insulation for the building. Other advantages to using containers as a building material include their low cost, their quick and simple construction capacities, and an ability to easily dismantle and relocate them.

WHAT



C. ART AND SCIENCE PROGRAMMING

Collaboration between art and environmental research has the potential to create new knowledge, ideas and processes beneficial to both fields. Artists and scientists approach creativity, exploration and research in different ways and from different perspectives; when working together they open up new ways of seeing, experiencing and interpreting the world around us.

Colony1's art and environmental research residency program will allow an artist and an environmental researcher or group a space for exploration, dissemination and public engagement. The facility's architectural and landscaping design will provide an on-site platform or workspace for experiments, tests, developments, new ideas and public exposure. A schedule of weekly and monthly talks, workshops, performances, concerts, readings, exhibitions, installations and educational events will be produced as a result of this residency program.

The first year's programming will concentrate on local environmental groups already operating in South Florida. For example, a pairing may occur between a beekeeper and an architect, an Everglades restoration expert and an installation artist, or a microbiologist and a visual artist. These pairings will be carefully considered and directed towards beneficial results for the art and environmental community in South Florida. The schedule of artistic programming that occurs around this residency aims to engage the public in complex ideas about the changing world around them in a language that is more accessible than academic rhetoric.



R4House - some points of interest:

- The structure is 100% recycled material, thereby capturing the maximum amount of embodied energy and existing material.
- The system ensures a low carbon footprint in occupation.
- The system has good air tightness and is thermally efficient.
- The cooling and lighting systems are carefully designed to reduce energy consumption.
- Renewable energy is used where appropriate e.g. solar, wind and water.
- Rainwater harvesting and green roofs are incorporated.
- Protects the environment by ensuring the integrity of the biosphere with sustainable land use.
- Structure would be LEED certified by the United States building council.

SITE COMPONENTS

Arboretum: an outdoor living classroom with native and edible landscaping. The Arboretum will host a volunteer based C.S.A. program, experimental organic gardens, wetland constructed grey water filtration system, aquaculture, vermiculture, compost, rainwater harvesting, miniature food forest, native plant exhibition, public art installations, outdoor cinema, and a space for future technological developments by Colony1's residency program.

Zero Store: A zero packaging locally produced food store. This store is the economic stability for the center, providing low-cost and locally produced goods. Customers can bring their own containers and obtain goods like rice, lentils, jams, herbs, soaps and even drinking water.

Arcade Exhibition Hall: A public showroom, venue, gallery, lecture room, technology showcase and artistic interface for the Art and Environmental Research residency program.

Food Lab: An event and teaching kitchen. This kitchen features everything needed to teach children to adults about healthy food preparation. As we invite chefs and food artists to utilize crops from Colony1's garden, the public will be invited to attend demonstrations, tastings and dinners aimed at celebrating sustainable food production and cuisine. The Food Lab is designed to integrate with outdoor herb, vegetable and vertical gardens, making fresh ingredients readily available.

Residency Quarters: Residents who participate in the Art and Environmental Research Residency program will be provided on-site quarters for living, working and collaborating. Each artist and scientist will be given a studio/research space, access to all of Colony1's resources for exploration and development.

Control Center: An operating center for Colony1 with curatorial, administration offices, research and development offices. Also providing resident facilities for caretakers and operators of Colony1. Here the inner workings of the center are sustained, managed and decided.





WHY

LIVABILITY

"We believe that attractive, accessible public spaces are critical to quality of life," said Miami Foundation president and CEO Javier Soto. "We want to help move the needle on livability and quality of life. The question is, how can we create a city that is a magnet for the talent needed to create economic vibrancy?"

WYNWOOD

As Miami begins to grow commercially it is becoming less and less sustainable. The arts industry has brought international buyers and entrepreneurs to buy art and real estate. These international buyers have moved families, artists, scientists and local communities out of their homes, land and facilities. This leaves Miami with no sustainable communities, only wealthy vacationers, who have no community ties or concerns for Miami's natives or ecology.

Allowing a center like Colony1 to establish itself guarantees support for the growing sustainability movement currently desired in Miami. The center would connect residents, groups, institutions, organizations and the general public together allowing lasting communities to be established and grow in Miami. This connection will be facilitated through the hybrid programming of cross-pollinating scientific and artistic cultures together in the unique ecology and industry of Miami. Miami has a large scientific, ecological and conservation community. It is also home to the second largest contemporary art fair in the world. The merger of the two is a must for the sustainability and resilience of Miami's culture, industry and ecology.

As a neighborhood like Wynwood grows, one can't help but notice the usual pattern of gentrification. Artists improve an area, rents rise and artists are pushed out of the very communities they helped build. Why not break this cycle and make Miami's artistic community resilient. Artists possess astute communication skills that can disseminate existing environmental and social strategies of reform and preservation. This makes it even more vital to expose the Wynwood community to contemporary environmental research and practices through our Art and Environmental Research Residency program. The curriculum recognizes art's inspirational capacity and its ability to activate the behavioral changes needed to evolve our culture toward a sustainable future.

LOGISTICS AND FUNDING

As a non-profit venture, Colony1 aims to serve the community and make, distill and combine efforts to develop public interests. We are collaborating with IOBY.org and have secured the donation of materials for the construction of the Colony1 foundation and building. We have volunteer architects, a permit specialist, a contractor, donated founding pouring equipment, equipment from SunBelt rentals, and a group of FIU students who have pledged their support for the development for the center.

PHASES OF DEVELOPMENT

Phase one: 1-6 months

- Soil testing
- Mulching & soil remediation
- Surveying and site plan construction
- City meetings
- Obtaining permits
- Compiling and securing sponsors and donations

Phase two: 6-12 months

- Receiving donated materials on site
- Fence construction
- Pouring foundation
- Digging out ventilation system
- Placement and welding of modular units
- Implementing landscape design
- Establishing food garden
- Building rainwater harvesting
- Mounting solar array
- Building battery bank

Phase three: 12-18 months

- Residency program curriculum begins
- Workshops, demonstrations
- Exhibitions a full programming begins
- Organic food yielding for public consumption
- Zero Store begins operation



LE CORBUSIER REVISITED

Miami/Dade County carries a strong heritage from the Swiss modernist architect Le Corbusier. Viewed in the light of contemporary sustainable urban design, his 5 core design principles yield surprisingly relevant inspiration, both in function and aesthetic:

Pilotis – The replacement of supporting walls by reinforced concrete columns that bears the load of the structure.

Roof gardens – The flat roof can be utilized for gardening, while also providing essential protection to the roof.

Free design of ground plan – The absence of supporting walls means that the house is unrestrained in its internal usage.

Free design of façade – By separating the exterior of the building from its structural function the façade becomes free.

The horizontal window – The façade can be cut along its entire length to allow rooms to be lit equally.



ART OF CULTURAL EVOLUTION

Art of Cultural Evolution (ACE) is an environmental and arts non-profit dedicated to fostering a sustainable future through the arts. The organization is responsible for many projects in Miami including MiamiZine, a publication dedicated to sustainable living in Miami, the Ecological Bus Project, A mobile demonstration of sustainable living that has toured the country visiting schools, festivals, community events, offering a hands-on curriculum about alternative, renewable energy and sustainable lifestyles.





The organization's most notable project is Midtown 34th Street. A vacant lot in the Wynwood/Edgewater area was turned into a sustainable Land Lab. The site has become home to experimental organic

gardens that demonstrate the potential of growing food in an urban setting. The site also demonstrates fertilizer production with vermiculture (worm bin) and various other forms of composting. Our projects are supported by Yake Solar, who installed solar night lights that are equivalent to street lamps that use no energy and are completely self-sustaining. Yake Solar also installed a solar array which powers our irrigation for the garden, an outdoor projector, additional outdoor lighting and power tools. In addition, the garden is irrigated using rainwater barrels donated by the University of Florida's Extension Office.

The project regularly hosts public workshops, demonstrations, classes, art events, outreach program and youth activities. The site has become a catalyst to an ever-growing sustainability movement in Miami and the South Florida region.

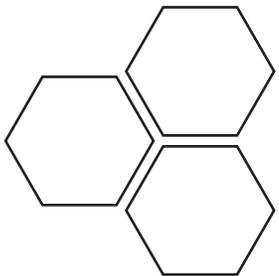
The Midtown 34th Street project attracted more attention than anticipated, residents from all over the county visited the project in order to find out more and we have connected them to organizations like Urban Paradise Guild, Urban Oasis Project, Art and Ecology, Fertile Earth Foundation, Urban Grow, Ready-to-Grow Gardens,

Little River CSA, Emerge Miami, Magic City Bikes and other organizations in Miami that are pioneering our sustainable future. Midtown 34th Street has also attracted academic and journalistic attention. Midtown 34th Street has helped to generate content for an essay regarding the role of art in emerging sustainability practices for the UK journal *Antennae*.

Collaborators and sponsors:

Fertile Earth Foundation, Shell Lumber, Fairchild Tropical Gardens, Yake Solar, University of Florida's Extension Office, 12 Tree, Permaculture Miami, Little River CSA, Gigi's Café, Panther Coffee, Wynwood Association, Sommerset Soils, Legacy Nursery, Galloway Farms, Cannonball, Office of Sustainable Initiatives, Sunbelt, Earth-N-U's Farm, Bamboo Barry, Anytime Rentals, Flojet, Transit Antenna, Artlurker.com, Groupon Grassroots, Fairchild tropical Gardens and others.





artofculturalevolution.org/colony1

