one of many shuttered stores in the downtown neighborhoods of New Orleans, 2009
table of contents

1 food security in new orleans
2 vision
3 design concept
4 sites
5 organization
6 phasing
7 sustainability
8 budget
9 partners
In 1943, Americans planted over 20 million Victory Gardens, and that harvest accounted for nearly one third of all the vegetables consumed in the country that year. Today, fresh food follows a much more circuitous path, resulting in increased preservatives, transportation costs and cultural uniformity. This disconnect particularly penalizes the poor, who are both more likely to live in food deserts and can’t afford to pay the high price of imported perishables.

The situation for young people is even worse. According to the State Indicator Report on Fruits and Vegetables, fewer than 10% of the youth in grades 9 through 12 were meeting dietary recommendations in Louisiana. Compared to other regions in the U.S., youth in the South struggle with overall health and food access, factors that ultimately undermine student performance.

In New Orleans, a post-Katrina landscape offers up abandoned and under-used land for food production. Vacant lots, some thirty thousand already seized by the New Orleans Recovery Authority for redevelopment, are logical opportunities for the extension of greenspace in the city. The resurrection of the Victory Garden concept within this new landscape fits neatly into the New Orleans Recovery model, while simultaneously repairing the disconnect between farm and table.

Fresh, local food is also a central fixture at the Covenant House in New Orleans. Here, young people between the ages of 16 and 21 receive shelter, education, job training, counseling, clothing, childcare, medical attention and an opportunity to repair their lives. With an average of seventy-five students in residence at the Covenant House daily, wholesome and sustaining meals have become the core of this critical support.
vision

While the New Orleans Covenant House shares common values with national partners, the organization has developed a set of site-specific strategies for youth training. White Dove Landscaping and the Covenant Café teach students real-world job skills under a proven social entrepreneurship model. Covenant Farms will build upon these two existing job training programs, linking landscape to kitchen through food production. Although real goods and services come out of these three initiatives, the primary focus of each program is on youth development.

Covenant Farms will introduce students to urban farming through the work of hands-on gardening and a paired curriculum focused on food justice. Using several donated lots in downtown New Orleans, students will clear, plant, cultivate and harvest edibles. They will apply the landscaping techniques taught through White Dove, and they will help to supply local produce for the Covenant Café. Student teams will work alongside educators from the New Orleans Food and Farm Network and the staff at the Covenant House, and as they progress through the program, the ultimate goal will be increased autonomy in maintenance of the garden.

Students will learn gardening skills through a curriculum provided by the New Orleans Food and Farm Network, and they will hone their skills through hands-on practice and experiential education. By necessity, students will address a wide range of issues, including soil health and toxicity, responsibility and follow-through, and how to create a marketable final product.

Covenant Farms will prepare students for the growing number of green jobs in today’s market. These skills represent cutting-edge techniques and a new set of industry standards. At the same time, the gardening expertise learned at Covenant Farms can be considered part of a body of life skills that lead to self-sufficiency for each individual.
Initially, a basic tool shed structure will be constructed on the farm lots. Eventually, this building can be outfitted to house chickens for egg production. The structure is tall and narrow, raised above base flood level on stilts. Laying boxes can be hung on the rear wall, and a ramp will be added to connect chickens to a run. The basic structure is a wood frame, with corrugated steel roofing and cladding.
design concept

Because this project involves multiple lots, the development of Covenant Farms will occur incrementally over time. Each lot provides a different set of design conditions, including soil quality and solar access, size, shape, neighborhood context, water availability, and proximity to the Covenant House. As the program grows, planting trends may change to accommodate shifting needs.

Because New Orleans is located in the hot and humid south, Covenant Farms will be able to operate year-round with uninterrupted produce yields. Its location Zone 9 offers a variety of options for fruits, herbs, vegetables and flowers. Initially, Covenant Farms will begin with two dedicated herb gardens, with additional plots producing flowers, seedlings, heirloom vegetables, fruit-producing orchards, eggs and even honey.

Regardless of the lot type, site circulation must allow for universal access and work efficiency. Raised beds, built high off the ground with a wooden frame, allow for this access while also separating new soils from the ground. These beds will provide a clear organization for the garden, and ensure that toxins on site don’t get transferred to the dinner table. Logical and intelligent planting relationships, such as companion planting, will be taught through the program.

Fences and perimeters will also help to delineate space for each of these individual garden lots. Because each of these gardens is literally woven into the existing fabric of a historic residential neighborhood, there must be some sort of perimeter identified. While low fences won’t prohibit entry, they will help to keep animals out and generally deter vandalism. These fences, combined with rolling gate signage, will help to shape a shared identity among the disparate Covenant Farm lots.
Raised beds enable better access, reduce the amount of weeding needed, and provide a clear space for new soil on the site. These beds are modular units that can be organized according to varying site conditions. The 3' by 4' by 10' volume can also be adjusted depending on specific farming goals. The structure is made from wood, with corrugated steel cladding, while the bed itself is composed of rough fill and 18" of growing medium.
On some of the lots, rainwater catchment will be incorporated into the watering strategy through the use of cisterns. These rain barrels will need to be located near a roof or downspout, and the array can be sized to accommodate the anticipated volume of rain, annually.
A bench, table and fence works as a part of a modular system that can be sized to any lot. The white gate acts as signage, rolling into the fence next to it. The table offers storage as needed.
A 4’ by 4’ by 4’ compost bin can be used alone on a small site, or in concert with other bins for a more productive, phased composting system. The top hatch opens to receive brown and green organic matter, while the front of the bin slide up to allow access to the composted soil below. Corrugated steel cladding keeps out pests and reduces noxious smells.
Because the Covenant House has already acquired six sites, with another five in process and plans for even more, the construction plan has been designed with a flexible kit-of-parts approach. Each garden will contain the same raised beds, compost bins, work surface, and water source, but these units will be organized according to site-specific factors. Additionally, some of the supports for these gardens can be optimized and shared. One centrally-located tool shed, for instance, could accommodate the needs of multiple sites, and a single chicken coop may prove sufficient for the entire project.
The Covenant Farms project will have four core steps: preparing the lot, planting, growing and harvesting. Each lot will move through these phases, and ongoing maintenance and planting cycles will continue as the program develops. Each of these four steps offers unique learning opportunities, and will need to address the following issues:

Preparing the Lot: This part of the process involves real estate acquisition, insurance, the identification of usable lots, the negotiation of tenure, ownership or lease, and the physical removal of material from the site. Students will engage in soil tests and the preparation of raised beds. If the site needs utilities, fencing or livestock areas, they will be constructed on the site. Any sustainable features, such as rainwater cisterns or site drainage, will be built. This step is a critical one for the project; with better preparation on the front end, the sites will need less maintenance for weeding, watering and soil care.

Planting: Anticipating market demand, students will identify an optimal planting scheme for each lot. This may include theme gardens, or educational collections, or perhaps simply an efficient farming response to the conditions of the site.

Growing: Garden maintenance is the key component of a successful program. In addition to watering, regular weeding, pest management and soil fertilization will be necessary. Recognizing that there will be unforeseen challenges along the way, a horticultural consultant will be assigned to each garden to assist in monthly troubleshooting. Each lot will need roughly 20 person-hours per week, with site visits ranging from daily to once every three days.

Harvesting: Harvesting must also occur regularly, in order to ensure productive yields and fresh produce. A plan for the delivery and dissemination of garden produce must be tied to the harvesting process. Because food security begins at home, Covenant Farms will feed itself first. Students will make the connection between the farm and the table, cooking and eating their own meals.
phase one

313  N Johnson  
28' x 30'

413  N Johnson  
28' x 27'

2213  Orleans  
80' x 14-20'

phase two

823  N Claiborne  
108' x 31'

312  N Roman  
54' x 17.5'

816  N Galvez  
100' x 15'

phase three

1808  Columbus  
63' x 18'

1818  Dumaine  
128' x 22'

1614  Laharpe  
72' x 21'

1717  Laharpe  
100' x 17'

1021  N Miro  
71' x 17'
phase one

The first phase involves clearing, preparing and planting the first three lots, located at 2231 Orleans, 313 N Johnson and 413 N Johnson. These square lots will provide just enough space for long raised beds, a composting system, and several work spaces. Because the lots are relatively small, they will both be used as dedicated herb gardens, with interspersed flowers and trees designed to attract pollinators. The fences in each case will need to be augmented and repaired, and a front planted fence will include signage to identify the farm.

Some of the built components on these first three lots can be added over time. The large tool shed, for instance, may be constructed well after the gardens are underway. These building projects may provide students with unique opportunities to engage in the design and planning of their own space, allowing them to leave a lasting imprint on the more transient garden landscape.

Before beginning the second phase, an evaluation and reflection period needs to occur to critique these first three lots. At this point, students, staff and educators will participate in focus groups to identify any challenges or opportunities for future development. Production goals and an assessment of the work completed will be analyzed. Finally, follow-up soil testing will help to show any changes in contaminated areas.
The second phase includes clearing, preparing and planting the remaining three lots that have already been acquired, located at 823 N Claiborne, 816 N Galvez, and 312 N Roman. These gardens will include a fruit-producing orchard located at the large lot adjacent to the freeway on N Claiborne, as well as three vegetable farms on the other lots. Although the orchard will take up to three years produce fruit, a continued supply of herbs and new seasonal vegetables will begin to create great volume for Covenant Farms.

Any learning from the first phase will be integrated into the second phase, as a way of developing a long-term sustainable farm network.

**Phase Two**

<table>
<thead>
<tr>
<th>Summer 2009</th>
<th>Phase One</th>
<th>Spring 2010</th>
<th>Summer 2010</th>
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<tbody>
<tr>
<td>Assemble team</td>
<td>Acquire initial lots</td>
<td>Clear and plant Johnson lots</td>
<td>Harvest herbs</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>Summer 2009</td>
<td>Summer 2010</td>
<td>Summer 2010</td>
</tr>
<tr>
<td>Clear and plant four lots</td>
<td>Reflection for first phase</td>
<td>Additional soil testing</td>
<td></td>
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</tbody>
</table>
phase three

The third phase includes clearing, preparing and planting the final five lots, which have been dedicated through long-term leases rather than ownership. The logistics of this tenure must be addressed before beginning construction, as well as other development requirements, such as necessary site surveys. These lots will contain vegetables, fruit, flowers, and seedlings as needed. At this point the learning curve associated with gardening and teaching will have leveled, and animals, such as chickens and bees, may be introduced.

Throughout all phases, funding, staffing, and curriculum development will need to grow alongside the farms. And as it grows, Covenant Farms may eventually build a dedicated farm stand to sell produce.
Sustainability

Sustainable farming practices not only protect the longevity of the program, but they also provide a timely and useful set of skills for students preparing to enter the green job market. Students will get first-hand experience with the environmental stewardship of these sites, and they will quickly witness the power of their work.

At a large scale, urban farming environments contribute to community health by reducing food miles and providing much-needed fresh food in urban communities. Because they are inherently flexible and non-permanent, gardens can be used as a place-holder through time, supporting healthy, connected neighborhoods while recognizing this shrinking city’s reduction in density. If the population of New Orleans grows dramatically in the future, these lots could once again become sites for buildings. Looking at these pocket gardens as a rebuilding strategy is particularly important as a land-use and urban development measure in the resurrection of productive landscapes.

These gardens will respond directly to the sustainability of food culture and New Orleans history. Rather than just using native plants, students will identify and cultivate the important components of New Orleans cuisine, or crops that are familiar to people here. Gumbo herbs, okra and collard greens, and Louisiana citrus or pecan trees are the types of hardy growers that should perform well in this climate, while sustaining local food culture.

The gardens also support sustainable urban living by increasing habitat in the city for animals, birds, insects and bees. Specific plants can help to detoxify the soil over time, gradually removing heavy metals from the ground. Shade from large bushes and trees may help to improve thermal comfort on sites and for surrounding neighbors, and assist in mitigating the urban heat sink phenomenon.
Site infrastructure and initial start-up costs represent the bulk of the financial commitment for this project. Early stages of the budget allocate only the most necessary items. Optional additional items include sustainable features, educational signage, and paid workers.

Beyond project start-up costs, Covenant Farms will need to plan for ongoing maintenance and repairs, such as water use, organic pesticides, organic fertilizer, and tools.

In addition to seeking grants and donations, Covenant Farms may be able to sell produce to generate ongoing farm funding. Opportunities include selling produce at local farmer’s markets, at a farm stand on the sites themselves, or through direct relationships with chefs and neighbors.

While the budget addresses the building and maintenance costs for the development of vacant land parcels, additional funding will be needed to staff this program. Horticultural training and technical support in production growing from the New Orleans Food and Farm Network, as well as staffing from the Covenant House will be necessary for both curriculum development and project implementation. These salaries, as well as educational materials, evaluations, field trips and overhead, range from $150,000 per year.
tool list, for one shed hub

garden resources/library at hub $350
organic pesticides, amendments for one growing season $350
tiller and rear tine tiller $5,000
(10) shovels $80
(3) rakes $30
(3) garden forks $37.50
(2) wheelbarrows $140
(2) posthole digger $50
(3) hammers $27
(2) saws $23
(2) 30’ tape measure $24
chalk line, level, framing square and extension cords $45
tool box $25
(3) drills $180

total $6,390.50
### monthly costs, per lot

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>monthly water use</td>
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<tr>
<td>organic pesticides</td>
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</tr>
<tr>
<td>seeds and seedlings</td>
<td>$50</td>
</tr>
<tr>
<td>organic fertilizer</td>
<td>$10</td>
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</table>

**total cost per lot** $150
The Tulane City Center

The Tulane City Center houses the Tulane School of Architecture’s applied urban research and outreach programs. Programs of the City Center vary over time, but share a focus on improving cities - particularly our home city of New Orleans - through fostering global urban research, the development of flexible and innovative urban strategies, and the provision of environmentally and culturally informed principles to guide the design and revitalization of the contemporary metropolis. An important aspect of the City Center’s work is to ensure that, where appropriate, our research is activated through design and construction and/or advocacy and education.

Team: Scott Boroughs, Carey Clouse, and Dan Etheridge.

The New Orleans Food and Farm Network

The New Orleans Food & Farm Network believes everyone should have access to fresh, healthy, and sustainably produced food for the long-term health of our environment, economy, and communities. NOFFN works with individuals, organizations, growers and communities to help make fresh, healthy food more accessible to everyone. As a grassroots organization, the New Orleans Food & Farm Network partners with neighborhood groups and community residents to identify their community’s food needs and design solutions that best meet those needs.

Team: Pamela Broom, Daphne Derven, and Johanna Gilligan.

Covenant House New Orleans

Covenant House New Orleans provides shelter and services to homeless, runaway and at-risk youth 16 - 21. Since 1984, Covenant House New Orleans has touched the lives of over 17,000 youth, providing them with food, shelter, clothing, medical attention, individual and family counseling, substance abuse management, educational assistance, vocational and job training, living skills and much more. Covenant House New Orleans seeks to rebuild and reunite families whenever possible, or offer youth the opportunity and the tools they need to build healthy, independent and productive lives.

Team: Renée Borie Blanch, Wayne Bruno, Donna Callahan, Stacy Horn-Koch, and Booth Pohlmann.