



GREENFILL DEVELOPMENT

PREPARED BY MICHIGAN COMMUNITY RESOURCES
IN PARTNERSHIP WITH KEEP GROWING DETROIT

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A Guide to Repurposing Vacant Lots for Flower Farming Enterprises



JEFFERSON CHALMERS
COMMUNITY FOOD
SYSTEM

THE
KRESGE
FOUNDATION



GREENFILL DEVELOPMENT

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By Lydia Rae Levinson
and Sam Butler



About Michigan Community Resources

The mission of Michigan Community Resources is to support and empower nonprofit community-based organizations working in low-income communities, with an emphasis on community economic development, by providing pro bono legal services and technical assistance. Originally known as Community Legal Resources, we grew from a legal service provider for nonprofits to a comprehensive support organization for low-income communities in Michigan. We provide the legal, community organizing, and urban planning skills and resources that community-based organizations and low-income communities need to revitalize and thrive.

About Kresge

The Kresge Foundation is a \$3.5 billion private, national foundation that works to expand opportunities in America's cities through grantmaking and investing in arts and culture, education, environment, health, human services, and community development in Detroit. Its Detroit Program uses a comprehensive strategy to promote long-term economic opportunity in the foundation's hometown. The strategy includes major efforts to revitalize neighborhoods and build a vibrant Woodward Corridor, along with support for arts and culture, regional transit, early childhood education and the enhancement of civic capacity. Kresge's Detroit investments, including Kresge Innovative Projects: Detroit, support the Detroit Future City strategic framework, a long-range plan informed by a multiyear research and community-engagement effort, which was funded by the foundation.



THE
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About Keep Growing Detroit

Keep Growing Detroit (KGD) exists to promote a food sovereign city where the majority of fruits and vegetables Detroiters consume are grown by residents within the city's limits. KGD's talented and experienced staff operate a number of established and nationally recognized programs, including the Garden Resource Program (GRP) and Grown in Detroit (GID). Our organization's strategic approach to achieving our mission facilitates beginner gardeners becoming engaged community leaders and food entrepreneurs, addressing the immediate needs of the community while promoting sustainable change in our food system.



Acknowledgements

This report would not have been possible without the generous support of the Kresge Foundation.

Special recognition must be given to Eastside Community Network, LAND Inc., and the Lower Eastside Action Plan Stakeholder Advisory Group for providing support and guidance.

Special thanks to Creekside Community Development Corporation for graciously allowing us to hold office hours at their facility.

Finally, we'd like to express our appreciation to the boards, staff, and volunteers of Mack Alive and Jefferson Chalmers Community Food System, who generously gave their time by attending many meetings and participating in the planning of the Greenfill Development projects.

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EXECUTIVE SUMMARY

DETROIT ULTIMATELY
NEEDS TO IMPLEMENT
CONCEPTS THAT HAVE
ONLY BEEN PROPOSED IN
ORDER TO IDENTIFY THE
REAL LIFE COSTS
AND FEASIBILITY
OF RESTORING
VACANT LAND
TO PRODUCTIVE USE

According to the Detroit Future City (DFC) Framework plan, approximately 20 square miles of Detroit's occupiable land area is vacant. This is a problem Detroiters are well acquainted with, and the past few years have seen amazing strides in the City's understanding of its immense vacancy issues – finally moving away from the assumption that a successful city means a population of 2 million people again. Though Detroit has made tremendous leaps and bounds in understanding the need to re-conceptualize and repurpose vacant land, generally there is little understanding of specific adaptive reuse options for vacant land or how to implement them.

There remains a critical need to develop coherent, long-term strategies for repurposing land in environmentally and financially sustainable ways; garnering community buy-in and support; protecting community groups' interests from speculative market forces; and finally, fostering the re-conceptualization of Detroit's surplus vacant land from a perceived liability to a community asset that supports innovative programming and revenue producing adaptive reuse. In a post-DFC landscape, where vacant land data has been analyzed and a framework completed, Detroit ultimately needs to implement concepts that have only been proposed in order to identify the real life costs and feasibility of restoring vacant land to productive use.



LAND Inc. began experimenting with producing pennycress as a biodiesel crop on the Lower Eastside in 2013. PHOTO COURTESY OF METRO AG SOLUTIONS.

GLOSSARY TERM

Lower Eastside Action Plan (LEAP):

From 2009-2012, area residents worked with several community development organizations and technical partners to complete the Lower Eastside Action Plan (LEAP). LEAP outlined a series of recommendations to address the growing amount of vacant property on the Lower Eastside.

GLOSSARY TERM

Biodiversity: a measurement of the variety of organisms present in a particular environment or ecosystem.

GLOSSARY TERM

Pollinator: an animal that moves pollen from one plant to another, helping in the production of flowers, fruits, and vegetables.

GLOSSARY TERM

Community Land Trust (CLT): a community-controlled nonprofit entity that develops or stewards community assets on behalf of that community.

The Greenfill Development Project

In 2015, Michigan Community Resources (MCR) was awarded a Kresge Innovative Project Planning Grant to fund a planning process for repurposing a group of vacant lots within the **Lower Eastside Action Plan (LEAP)** area boundaries. The grant was to address the critical need to develop coherent, long-term strategies for repurposing land in environmentally and financially sustainable ways. The focus of the project was to explore creative adaptive re-use options beyond community gardens and pocket parks; more specifically, the production of non-edible crops that generate money while improving the soil and reducing stormwater runoff. In terms of amount of revenue generated, the goal was to earn enough money to cover the tax and insurance costs of the lots being cultivated.

In addition to producing revenue for community groups, Greenfill Development projects offer a host of environmental benefits. Because many of the crops have much deeper root systems than the turf grass typically found on vacant lots, they can help improve soil infiltration and decrease stormwater runoff. They can also contribute to **biodiversity** and provide habitat for beneficial birds and insects, including **pollinators**. Each of the two plans for specialty cut flower ventures included in this guide provide attractive, recreational spaces for residents to enjoy. The plants included in the designs do not require the use of harmful chemical fertilizers and pesticides, and they can help to improve local soil, air, and water quality.

This primary objectives of the planning study were to:

- Identify appropriate sites for repurposing vacant land
- Identify a coalition of community groups willing and able to implement an adaptive reuse project on vacant land (i.e. agriculture or non-food crops such as pennycress or alfalfa)
- Identify the feasibility of using alternative ownership structures (i.e., **community land trusts**) and **crowdfunding** strategies to make adaptive reuse more sustainable and less costly
- Create business model(s), operational requirements and revenue projections for adaptive reuse vacant land projects that can be used by other groups citywide

This report is the culmination of the Greenfill Development project. It provides two unique business models for two community groups located on the Lower Eastside of Detroit, outlines the steps for implementation of each project, and informs the creation of a proposal for a Kresge Innovative Project: Detroit Implementation Grant in late 2015. It is hoped that the document will serve as a guide for other community groups seeking to restore vacant land to productive use by growing revenue-generating crops.

Process and Methods

MCR issued a call for applications in May of 2015, in conjunction with the May LEAP Stakeholder Advisory Group meeting where the Greenfill Development project was formally announced. We chose to work in the LEAP area because of the considerable groundwork that has already been laid there by organizations like Eastside Community Network; residents of that area tend to be well-versed in the concepts of revitalizing vacant spaces through adaptive reuse. We sought applicants who were interested in community ownership; experienced in planning and implementing community-based projects; and experienced in vacant lot maintenance, greening, and/or beautification efforts. Extra points were awarded to groups that had already obtained site control.

An internal review committee evaluated each of the qualifying applications based in-part on their alignment with the LEAP plan and the DFC Strategic Framework Plan.

It was difficult to choose from so many worthy applicants, but ultimately the decision was made to work with Jefferson Chalmers Community Food System (JCCFS) and Mack Alive. MCR contracted Keep Growing Detroit (KGD) to provide technical assistance designing the Mack Alive Greenspace. Together, MCR and KGD worked with the organization throughout the summer of 2015 planning and designing the business model presented in the third chapter of this report, while MCR created the business model for JCCFS that is presented in the next chapter. The process of collaborating with multiple community partners strengthened the project and allowed all parties to collectively engage in the development of two unique and innovative Greenfill Development business models.

Key Lessons Learned

Planning for the Greenfill Development Projects was a collaborative learning process for each of the community groups as well as MCR. A number of important lessons were encountered, which can be summarized as the following four key findings:

NEIGHBORHOOD-SCALE PROJECTS ARE MORE APPLICABLE

Through our discussions with project stakeholders, it was determined that the preferred size for Greenfill Development projects was what we dubbed the “neighborhood-scale”. By our definition, this refers to projects that are one city-block or smaller. We found that projects at this scale are easier for community groups to plan, implement, and maintain. Moreover, since so many organizations are purchasing groups of nine or fewer parcels from the Detroit Land Bank Authority’s Community Partnership Program, this lends to the overall replicability of the projects.

SPECIALTY CUT FLOWER PRODUCTION IS A VIABLE OPTION

At the project outset, we considered a variety of different production models, including but not limited to: large scale alfalfa, lavender, and biofuel operations. However, we determined that specialty cut flower production was a great “gateway” crop and that more work is needed to examine the feasibility of larger-scale, revenue generating non-edible crops. Some of the advantages of the specialty cut flower model include:

- Cut flower production has the potential to generate enough revenue to cover the tax and insurance costs of vacant lots, with a relatively low barrier to entry.
- Locally produced specialty cut flowers is a niche market that is expanding with the growing popularity of Detroit’s urban agriculture and local food movements.
- We found flowers were easier for groups to imagine than a larger-scale farming operations.
- Some residents are more open to the idea of flowers than the idea of having a “farm” on their street.
- Other organizations looking to repurpose vacant lots in a sustainable way can consider cut flowers as an option.



Specialty cut flower production is an ideal activity for community groups seeking to repurpose vacant lots and generate revenue in the process. PHOTO BY MICHIGAN COMMUNITY RESOURCES.

GLOSSARY TERM

Crowdfunding: the use of small amounts of capital from a large number of individuals to finance a project or venture.

KNOW BEFORE YOU GROW

MCR encourages communication with neighbors, city officials, and community groups, before beginning a Greenfill Development Project. Community groups should be aware that conducting agricultural activities without the permission of the landowner may be considered trespassing and run the risk of removal.

KNOW BEFORE YOU GROW

Due diligence is the process of investigating the condition of land, its prior use, history of ownership, and potential outstanding title or legal issues.

The due diligence process helps to uncover any problems with your intended purchase or use of the land such as environmental contamination, high insurance costs, or a dispute over the property's title. A thorough process will provide you with a full understanding of a selected property which will allow you to make an informed decision as to whether to move forward with purchasing the property or to keep looking for a better fit.

THERE MAY BE KNOWLEDGE GAPS IN TERMS OF URBAN AGRICULTURE PLANNING

While the contemporary urban agriculture movement has gained significant traction in recent years, many longstanding community development corporations (CDCs) have not been engaged in planning for urban agriculture. Instead, these groups have traditionally focused on issues like housing and economic development. As more and more CDCs take on vacant properties and begin planning for adaptive reuse projects, they will likely require additional education and resources, including technical assistance. MCR was fortunate to work with KGD to navigate the afore-mentioned knowledge gap. KGD has experience guiding groups through the planning process and providing trainings and resources.

SOIL CONTAMINATION IS A SERIOUS CONCERN

Urban soils often contain dangerous contaminants, including heavy metals such as lead. This is especially common in the City of Detroit due to its history as a center of industrial manufacturing, and the widespread demolition of structures containing hazardous materials. Even the best laid plans may be unsuitable if lead or other contaminants are present. The importance of soil testing cannot be understated. Furthermore, testing should take place as early in the process as possible; ideally before the purchase of vacant land. Soil testing, along with researching the history of a parcel's use, is an important component of environmental **due diligence**. However, soil testing for agriculture is not the same as soil testing for due diligence. Community groups should contact an environmental attorney to advise proper due diligence procedures.

How to Use this Document

The following chapters contain business plans for two community groups interested in repurposing vacant lots for green ventures that produce economic returns. While the information is specific to the groups and sites that participated in the Greenfill Development Project, the plan may serve as a helpful resource for other community groups seeking to carry out neighborhood-scale projects that involve restoring vacant land to productive uses with sustainable urban agriculture practices.

Community groups may use this guide to help make production decisions, determine potential returns, prepare budgets, and evaluate production loans. All cost estimates found in the guide are averaged amounts based on local prices, which may fluctuate. Practices described are based on the production practices considered typical for crops grown in Detroit. However, due to the diversity of soil types and previous land uses throughout the City, actual production practices can vary widely from one location to another. Community groups should contact local organizations such as Keep Growing Detroit and The Greening of Detroit for technical assistance in implementing any of the treatment options.

General Considerations

A number of factors must be considered before attempting to implement any Greenfill Development project. The following list provides a brief outline of some of the general considerations that community groups should be aware of.

SPATIAL CONSIDERATIONS

The two Greenfill Development projects included in this guide take place on multiple

lots that are adjacent to one another. As most vacant parcels located within Detroit neighborhoods were originally zoned for residential use, these ventures are ideally suited for areas of the city with multiple vacant lots either contiguous or in close proximity to one another for ease of care and maintenance.

LAND TENURE

Most Greenfill Development projects are multi-year efforts; thus they require that community groups secure long term access to land. This can be accomplished either by purchasing the parcels outright or by entering into a long-term lease agreement with the owner of the property. A helpful resource for determining ownership of vacant lots is Loveland Technologies' website (<https://makeloveland.com>). If it is determined that the property is owned by an LLC, please refer to Appendix A for additional assistance with obtaining contact information.

ZONING CONSIDERATIONS

In 2013, the City of Detroit codified its first urban agricultural ordinance. The ordinance establishes legal definitions for a variety of urban agriculture uses and specifies which existing zoning classifications allow urban agriculture by right or conditional use. It also describes the scale at which urban agriculture can take place in different zones. The ordinance can be read in its entirety at <http://www.detroitmi.gov/Portals/0/docs/cpc/pdf/Urban%20Ag%20Ordinance.pdf?ver=2012-11-20-112924-197>. Another helpful resource is Keep Growing Detroit's Land Use and Zoning publication, available at: http://detroitagriculture.net/wp-content/uploads/2015_KGD_Detroit-Zoning_101_with-use-table_FINAL.pdf. Before beginning any Greenfill Development project, groups should review the ordinance and contact the City of Detroit Planning Commission or Buildings, Safety Engineering & Environmental Department with any questions.

SOIL TYPE AND QUALITY

Soil is typically characterized by its structure, drainage, compaction, texture, pH, and organic matter. While both of the Greenfill Development projects included in this guide are non-edible, it is still important to perform soil tests to learn of any hazards in the soil and to gain better understanding of soil type and quality. Physical contact with contaminated soil can lead to lead exposure, so care should be taken to keep children away from contaminated areas and to utilize proper gardening practices to reduce the opportunity for lead exposure.

Both of the featured Greenfill Development projects have the potential to improve soil conditions and prepare them for the future production of edible crops. For more information on soil testing please see http://detroitagriculture.net/wp-content/uploads/2014_KGD_Testing-Garden-Soil_Page_small.pdf and <http://www.msusoiltest.com/>.

HARDINESS ZONE

A key factor in any Greenfill Development project is the local climate, which determines both the length of the growing season and the plant species that are most likely to thrive in the existing conditions. The United States Department of Agriculture (USDA) classifies different regions of the country according to USDA Plant **Hardiness Zones**. Low Hardiness Zone numbers are typically the most difficult to farm due to low winter temperatures and short growing seasons. The Hardiness Zones for Detroit range from 6a to 6b; which means that growers should expect annual minimum temperatures ranging from -10 to 0 degrees Fahrenheit.



Alfalfa is a high-value crop that is commonly used as a feed source for dairy cows and other animals. As the City of Detroit prepares to pass its first Urban Livestock Ordinance, alfalfa production may prove a viable venture for urban farmers.

PHOTO COURTESY OF LEGUMEINFO.ORG

GLOSSARY TERM

Hardiness Zone: the standard by which growers can determine which plants are most likely to thrive at a location, based on the average annual minimum winter temperature.

GLOSSARY TERM

Perennials: plants that persist for many growing seasons.

GLOSSARY TERM

Annuals: plants that perform their entire lifecycle over the course of one year.

THE GARDEN RESOURCE PROGRAM

For over a decade, Keep Growing Detroit's Garden Resource Program (GRP) has supported family, community, school, and market gardens in Detroit, Highland Park, and Hamtramck. Participants in the Garden Resource Program receive resources for their vegetable gardens, including seeds and Detroit grown transplants, and become part of a growing network of gardeners and advocates working to promote urban agriculture within a thriving local food system. Participants in the GRP are also invited to get involved in educational and community events that provide additional opportunities to access resources, training, and social networks. For information please call 313.757.2635, email keepgrowingdetroit@gmail.com or visit <http://detroitagriculture.net>

ANNUALS VS. PERENNIALS

Most crops can be classified as either annual or perennial plants. **Annuals** are plants that perform their entire life cycle over the course of one growing season. **Perennials** are plants that persist for many growing seasons. Some perennials keep their leaves year round, while in other cases, the top portion of the plant dies back each winter and re-grows the following spring from the same root system. Whether a group chooses to plant annuals and perennials will impact both the initial start-up and ongoing maintenance costs.

ACCESS TO WATER

Community groups should consider the amount of water necessary to implement their Greenfill Development project and assess available options for accessing water. Some ventures may require an on-site water source, while others may not. Large volumes of water can be purchased in barrels and tanks. Alternatively, catchment systems and rain barrels may be used to supplement water needs by diverting rainfall; saving both water and money. For instructions on how to create a rain barrel, please refer to KGD's guide available for download at: http://detroitagriculture.net/wp-content/uploads/2014Rain-Barrel_FINAL.pdf.

EQUIPMENT AND INFRASTRUCTURE

While much of the necessary equipment for implementation can either be accessed through Keep Growing Detroit's Garden Resource Program or purchased from the Detroit Farm and Garden store (<http://detroitfarmandgarden.com/>), larger mechanical items such as tractors can be more difficult to obtain. Community groups should consider renting large equipment by the day; collaborating with other groups to collectively purchase expensive items that are infrequently used; or seeking in-kind donations from individuals, businesses, and philanthropic organizations.

SECURITY

Activating vacant parcels through Greenfill Development can contribute to the health and safety of a neighborhood by improving air, water, and soil quality; providing recreational spaces for physical activity; and discouraging the crime and dumping activity that often occur in vacant, underutilized spaces. Nevertheless, community groups should take efforts to store valuable tools and equipment within secure storage units to reduce risks of the theft or vandalism.

FUNDING AND FINANCING

All Greenfill Development ventures require at least some start-up capital to purchase seeds, plants, soil delivery, other inputs like fertilizer and nutrients, and equipment. Successful projects also require a production and distribution strategy that can generate consistent revenue and allow for ongoing production. Keep Growing Detroit's Garden Resource Program provides free and low-cost access to plants and seeds, as well as a gardening tool lending library. Additional funding might include grants offered by local organizations; state and federal funding opportunities; crowdfunding platforms such as kickstarter.com or indiegogo.com; and business loans from private finance institutions.

ACCESS TO MARKETS

A successful revenue-generating Greenfill Development project requires places to sell the products. A number of helpful resources on the subject are available, including the Michigan Department of Agriculture and Rural Development's Growing Michigan's Future publication (http://michigan.gov/documents/mda/MDA_guide_335948_7.pdf) and the Partnership for Sustainable Communities' Urban Farm Business Plan Handbook (http://www.epa.gov/brownfields/urbanag/pdf/urban_farm_business_plan.pdf). A list of farmers' markets in the City of Detroit, along with contact information and rental information is available at www.detroitcommunitymarkets.org. Keep Growing Detroit's 'Grown in Detroit' cooperative purchases fresh produce from Garden Resource Program members, which it sells at local markets. More information is available at <http://detroitagriculture.net/farms-and-markets/grown-in-detroit/>.

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JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM

BY FOLLOWING THIS
BUSINESS PLAN, IT IS
EXPECTED THAT JCCFS'
DETROIT ABLOOM
PROJECT WILL
GENERATE ENOUGH
INCOME TO SUPPORT
THREE PART-TIME
EMPLOYEES AND ENJOY
EXPANDING
OPERATIONAL SUCCESS
FOR YEARS TO COME

Background

The mission of the Jefferson Chalmers Community Food System (JCCFS) is to:

- Make a wide-range of excellent, organically grown produce available to local residents;
- Create spin-off businesses and meaningful jobs;
- Engage youth and seniors;
- Transform blighted land into places of beauty;
- Improve overall community well-being;
- Attract new residents; and
- Unite a growing number of people in an exciting and inspiring vision of a community-owned and operated food system.

For the past four years, JCCFS has farmed a 12-acre vacant parcel of city-owned land, known simply as 'The Garden', on Detroit's Lower Eastside. During that time, the organization has discussed with local individuals and organizations the idea of repurposing upwards of 250 vacant, blighted lots within the Jefferson Chalmers neighborhood to establish a community food system that would produce enough fruits and vegetables to feed the local population of 2,500 residents and have surplus food to retail. Over the last seven years, JCCFS has operated a community-supported agriculture program (CSA), which generates revenue to support the farm's activities. The CSA provides a wide range of organically grown local produce to more than 40 families, including residents of Jefferson Chalmers and others throughout the City of





Throughout the season visitors of all ages come to The Garden to learn about and participate in the food system. **PHOTO COURTESY OF JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM.**

Detroit and the greater metropolitan area. JCCFS also provides part-time employment for local youth and operates the Manistique-Ashland Horticultural Learning Center.

This business plan was developed for the proposed Detroit Abloom project, and does not include JCCFS's ongoing vegetable and cut-flower production taking place at The Garden. The Detroit Abloom project will add value to existing programs and initiatives, as well as generate revenue to support the expansion of JCCFS's operations, while creating a safe and healthy community space for residents to enjoy. The specific mission of the Detroit Abloom project is to inspire people and give them hope by demonstrating how our communities can be revitalized by essentially and fundamentally taking care of one another as fellow human beings.

Project Design

The Detroit Abloom project is located on eight vacant lots on the streets of Manistique and Ashland, near the intersection of Alter Rd and Korte. The lots actively cultivated will be 236, 238, 242, 244, and 248 Manistique and 247, 249, and 251 Ashland. The sites on Manistique face Southwest and enjoy full sun, while the sites on Ashland face Northeast and only the front portion of the lots are in the sun at least six hours a day. The lots on both streets are relatively flat and directly adjacent to one another, connected by a tree-lined, decommissioned alley.

Soil tests reveal optimum or above optimum levels of some nutrients including Phosphorus (P), Potassium (K), Calcium (Ca), and Magnesium (Mg). Generally, the percentage of organic matter present is less than desired. Lead levels are slightly above that which is generally considered safe for routine exposure on just two of the lots. For this reason, it is recommended that plants be grown in raised or mounded beds with a dense cover of organic matter between beds or rows, and that JCCFS use good gardening practices to reduce lead exposure.

The soil is clay loam and although it is compacted in some areas, the drainage appears adequate.

The project design includes three key features:

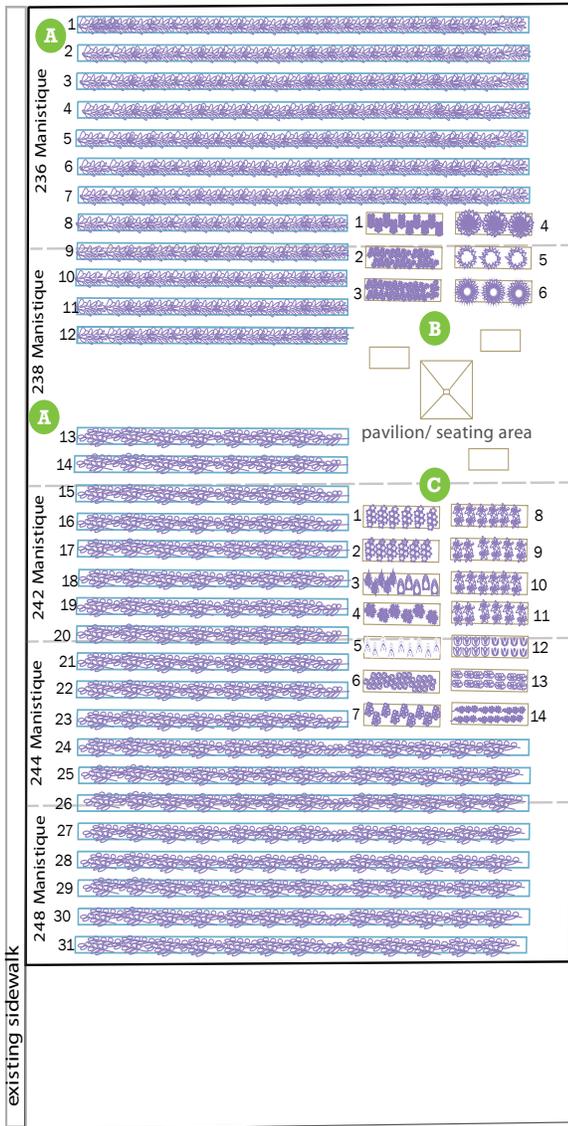
- A. A production area for lavender
- B. A specialty cut flower production area
- C. A community park with a shaded pavilion (that will double as flower storage on cutting days) and seating for residents to enjoy throughout the seasons

The site plan is shown on the following page and the planting detail can be found in Appendix B.

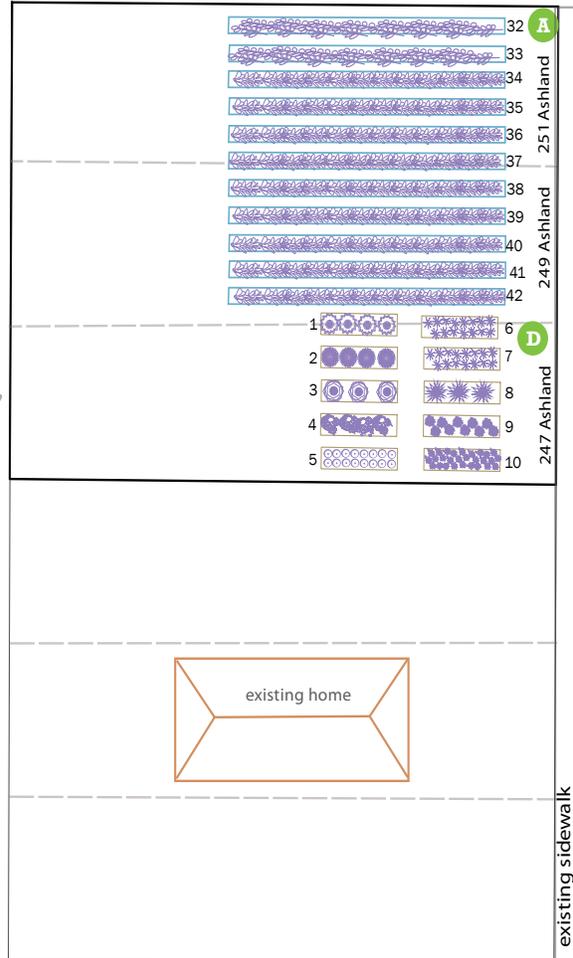
Project Goals

The goal of the project is to produce tangible economic, social, and environmental benefits for the entire community. Detroit Abloom offers a holistic approach to community revitalization. Cultivating and marketing specialty cut flowers, lavender, and their value-added products as a means to repurpose vacant land has the potential to create meaningful jobs; transform vacant, unused lots into places of beauty; and ultimately, the project could help improve the community's overall well-being.

MANISTIQUE



ASHLAND



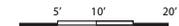
LEGEND

- A. Lavender Beds
- B. Raised Beds
- C. Raised Beds
- D. Raised Beds

Lot Boundary - - - -

JCCFS Owned

scale



JCCFS : Detroit Abloom
 SITE PLAN October 30th, 2015

Designed by:





Dahlias are a high-value crop, both as cut flowers and potted plants. **PHOTO BY MICHIGAN COMMUNITY RESOURCES.**

The project can contribute to the economic development of Jefferson Chalmers by encouraging agriculture-related businesses that create jobs and recirculate financial capital locally. Potential spin-off businesses from Detroit Abloom might include a plant nursery, landscape services, a gift shop, and educational classes and workshops to name a few. Additionally, JCCFS is interested in developing a cooperative framework by which they could train residents to grow cut flowers on their own lots to be purchased wholesale by the organization. This cooperative concept would allow residents throughout Jefferson Chalmers to develop (or deepen) their agricultural knowledge and earn income by growing cut flowers in their own yards or on nearby vacant lots, while simultaneously mitigating blight and beautifying the neighborhood.

Finally, everything about Detroit Abloom will benefit the local environment. All aspects of the project will be organic, meaning there will be no use of synthetic chemicals that might contaminate the air, soil, and water. The project will emphasize **biodiversity** through the cultivation of a variety of flowers and plants that provide habitat for a wide range of insects and birds. Detroit Abloom could eventually become an outdoor classroom that demonstrates innovative ways to positively impact the environment, including: harvesting rainwater from rooftops to irrigate crops; detoxifying and otherwise improving the soil through natural processes such as bioremediation and composting; and creating bio swales and wetlands for water purification, decreased stormwater runoff, and providing wildlife habitat. In keeping with the project's goals, Detroit Abloom's operations and management will utilize a triple bottom line approach that takes into account the environmental, social, and economic health of the community.

Products and Services

Detroit Abloom will produce a diversified line of products for a targeted customer base that includes small businesses, local restaurants, and residents of the Jefferson Chalmers neighborhood, the lower eastside of Detroit, and the nearby Grosse Pointes. The first product is specialty cut flowers, which will be available as:

- Bouquets retailed directly to the public at a local café, Coffee and (_____)
- Bouquets available through a weekly flower CSA subscription program
- Buckets of stems sold to area restaurants and others interested in buying specialty cut flowers such as the Atwater Brewery; Mimi's Bistro; Coffee and (_____); and Rose's Fine Food

Additionally, JCCFS would like to donate a weekly bouquet and any blooms that do not sell to a different church, senior residence, a non-profit, or to someone that may be sick or in hospice. This winter, JCCFS will experiment with drying leftover blooms and exploring other opportunities for utilizing extra blooms to create value-added floral products.

The second product is potted dahlia plants sold in one gallon pots. These will be marketed throughout the month of June and the first week of July at Coffee and (_____) and the West Park Farmer's Market in Grosse Pointe Park. JCCFS has been experimenting with different dahlia varieties for several years, and they are one of the most popular plants among customers. At the end of each season JCCFS has more tubers than they need for the following spring. Potting the excess tubers and selling them as plants will allow JCCFS to generate additional revenue.

GLOSSARY TERM

Biodiversity: a measurement of the variety of organisms present in a particular environment or ecosystem.

GLOSSARY TERM

Value-Added Agriculture: changing a raw agricultural product into something new through processing, drying, packaging, or other methods.

The third product is lavender, sold as fresh and dried bundles. The lavender bundles will also be sold at Coffee and (_____) and the West Park Farmer's Market. Eventually, JCCFS would like to market a line of **value-added products** made with lavender, such as essential oils, soaps, sachets, sleep masks, and bath salts. Additional research, stakeholder engagement, and potentially supplies are required to determine the type of product and the sales outlet options for value-added lavender products.

This diversified approach to flower farming and marketing will allow JCCFS to spread the risks associated with agricultural production and maximize the use of its land, labor, and capital. Diversification ensures that the success of the Detroit Abloom venture is not tied to any one specific crop, thereby making the project more resilient in the face any potential market disruptions or crop failures.

Operations and Management

JCCFS has already removed more than five tons of debris from the property and installed a cedar split rail fence around the front and side portion of the lots. By the time this guide is published, JCCFS will have constructed and planted four raised beds consisting of Tulips, Larkspur, and Anemone; as these are early spring blooms that must be planted in the fall.

Additional one-time site development activities that will need to take place to complete the project include soil testing and preparation; tree removal; concrete removal; installing waterline and connections; installing a Coolbot system for climate controlled flower storage; constructing raised beds; planting and mulching 1,180 perennial and 7,360 annual plants; and designing and constructing the shaded pavilion and sitting areas. On-going maintenance will include growing and planting annual crops, harvesting, post-harvest handling, marketing, and site maintenance such as watering, weeding, pest management, and fertilization. JCCFS plans to hire three seasonal part-time workers to maintain the project, with additional support coming from their already extensive volunteer network.

The creative force behind JCCFS, The Garden, and Detroit Abloom are Tom Milano and Nancy Weigandt. Tom is particularly interested in articulating the vision of the project, garden design, the building of infrastructure, writing, and community networking and relations. Tom primarily manages the volunteer program, but both Tom and Nancy actively engage with volunteers. Nancy is the 'brains' behind the unfolding specialty cut flower and lavender business; she has 31 years of experience cultivating flowers and she's constantly researching, evaluating data, and developing experience with germinating seeds and cultivating plants. She is also responsible for developing the market strategy, as well as supervising the timing of planting, harvesting, and other technical considerations.

Two of the future part-time seasonal employees are Julia Griffins and Rachel Darling, current volunteers at The Garden who have learned from Nancy how to harvest the fresh cut flowers and how to arrange them in bouquets. Julia and Rachel are very interested to learn about all aspects of flower farming and marketing. Both women will be engaged with the planting of the seeds in the soil block trays in the early spring as well as learning to maintain the operation of the greenhouse. As the operation expands and production increases, JCCFS hopes to create additional jobs for local residents of the Jefferson Chalmers neighborhood.



Nancy Weigandt and Tom Milano, the creative force behind JCCFS, The Garden, and Detroit Abloom. **PHOTO COURTESY OF JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM.**

GLOSSARY TERM

Community Land Trust (CLT): a community-controlled nonprofit entity that develops or stewards community assets on behalf of that community.



Buckets of freshly cut flowers from JCCFS's farm.
PHOTO COURTESY OF JEFFERSON CHALMERS
COMMUNITY FOOD SYSTEM.

JCCFS is currently working with MCR and pro bono legal counsel to examine property and sales tax concerns and to explore alternative models of community ownership, such as **community land trusts (CLTs)**. They are interested in the CLT framework as a means of resolving local land use concerns in the Jefferson Chalmers neighborhood, while empowering local residents to repurpose vacant land for the betterment of the community. If such a model were implemented, a board that is representative of the community would govern the CLT and the land could be leased back to JCCFS (and possibly other groups) for farming and stewardship.

Next year, JCCFS plans to acquire an additional nine parcels from the Detroit Land Bank Authority. These parcels would also be entrusted to the community through a CLT and leased back to the organization to farm both edible and nonedible crops.

Market Analysis

According to the Michigan Agriculture Council, the State's **floriculture** industry employs more than 9,000 individuals across the State and is ranked third in the nation in terms of production output.¹ Yet about 80% of cut flowers sold in the United States are imported from other countries², where they are often treated with harsh chemicals in order to preserve blooms during transport. The National Sustainable Agriculture Information Service reports that specialty cut flowers are becoming more and more important to the industry, making it easier for local growers to compete with imported products.³ The expanding popularity of the local and organic food movements in recent years, along with the growing number of new restaurants and commercial development in Detroit, indicates an untapped demand for local, sustainably produced cut flowers in the City and surrounding areas.

Detroit is not the only legacy city with the potential to expand its urban agriculture industry to include revenue-generating specialty cut flower production. Recently, the City of Baltimore, Maryland conducted an analysis to explore the viability of returning vacant lots to productive use through the cultivation of specialty cut flowers. The findings of the analysis were as follows:

1. Flowers are currently overlooked as an urban agriculture product
2. The floriculture industry is changing to a more localized industry
3. Urban flower farmers have the same needs as other urban farmers
4. Cut flowers are more lucrative than other value-added products
5. Demand for locally grown flowers is gaining traction⁴

JCCFS has been in conversations with the management of a number of local restaurants, who have expressed serious interest in purchasing bouquets from the group on a weekly basis. In fact, the owner of Coffee and (_____) has already agreed to allow JCCFS to sell bouquets out of her storefront. Additional market research includes a review of more than 24 cut flower CSA and subscription services throughout Michigan and the rest of the United States, along with the USDA's Agricultural Market Service weekly Ornamental Crop Price Reports. This information was used to determine appropriate CSA subscription rates, as well as pricing for flower buckets and retail bouquets. The price for potted dahlias is based on the going rate for specialty tubers at local nurseries and farmer's markets.

GLOSSARY TERM

Floriculture: the industry word for flower farming, particularly the cultivation of ornamental blooms.

Lavender is an increasingly popular herb; valued for its aromatic, medicinal, and culinary uses. Market research indicates that lavender can be one of the highest value, lowest maintenance crops for small-scale farmers. It is known to generate up to \$34,000 per acre at peak production in nearby climates such as Northeast Ohio.⁵ Moreover, lavender farming has the potential to produce year round income, despite it being a warm weather crop; since the plant can be dried and used to create value-added products that may be sold long after the growing season has ended. According to the National Sustainable Agriculture Information Service, lavender agri-tourism is a fast growing niche market.⁶ Northern Michigan is home to several successful lavender farms, but the metro Detroit area appears to be an untapped market in terms of lavender agri-tourism.



Bouquets of fresh cut flowers ready for delivery.
PHOTO COURTESY OF JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM.

Project Funding

JCCFS and MCR will pursue project start-up funding by applying for a Kresge Innovative Projects: Detroit implementation grant in the fall of 2015. Once the venture is running, it is expected to be self-sustaining; generating enough net revenue to allow Detroit Abloom to maintain and expand production.

Financials

In 2014, JCCFS operated with a **net margin** of 33%, with cut flowers accounting for less than 10% of the total income, and vegetable sales and CSA subscriptions accounting for approximately 80% of total income. Table 1 contains the organization’s Historical 5-Line Income Statement.

	Dollars	Percent of Sales
Sales (total income)	\$23,350	100%
- Cost of Goods Sold (variable costs)	\$13,406	57%
= Gross Margin	\$9,944	43%
- Overhead (fixed costs)	\$2,215	10%
= Profit (net margin)	\$7,729	33%

The new Detroit Abloom specialty cut flower and lavender operation will initially include five distinct lines of revenue:

- A. Cut flower bouquets
- B. Cut flower CSA shares
- C. Cut flower buckets
- D. Potted Dahlia plants
- E. Lavender bundles

The estimated production costs for Detroit Abloom, including the initial start-up expenses, were calculated using JCCFS’s 2014 and 2015 specialty cut flower and lavender production outlays, and extensive industry research, including but not limited to conversations with Michigan specialty cut flower producers. The total anticipated start-up costs for the venture are estimated at \$43,275. Table 2 illustrates the projected budget for the first year of the Detroit Abloom operation.

GLOSSARY TERM

Net Margin: percentage of total revenue remaining after all fixed and variable costs are deducted.

GLOSSARY TERM

Variable Costs: costs that increase or decrease in relation to production levels, such as seed or fertilizer.

GLOSSARY TERM

Fixed Costs: basic operating costs that cannot be avoided, such as rent or mortgage payments.

TABLE 2. First Year Implementation Budget

	DETAIL	QUANTITY	COST/EA	TOTAL
INFRASTRUCTURE				
Concrete removal	JCCFS labor and materials	1	\$0	\$0
Tree removal	JCCFS labor and materials	1	\$0	\$0
Wood and compost for raised beds	ea. 16'x4'x1'	7	\$100	\$700
Irrigation system	permit and installation of water meter, meter box, and 4 water spickets	1	\$3,500	\$3,500
Covered pavilion and seating for public park area	wooden pavillion, built on patio or raised deck, benches made of the same materials	1	\$5,000	\$5,000
Sign	wooden, carved or painted	1	\$300	\$300
Solar powered security cameras	installation of two cameras	1	\$1,500	\$1,500
Utilities for Hoop House	heat and electricity	1	\$200	\$200
Monthly water bill	April thru September	6	\$70	\$420
Annual property taxes	summer and winter	8	\$40	\$320
Coolbot and AC	for flower storage	1	\$300	\$300
CONTRACTUAL				
Part-time Employees	20 hrs per week at \$12 per hour, March-October	1	\$21,600	\$21,600
Insurance	Liability coverage for JCCFS and all parcels	1	\$250	\$250
Vendor fees	West Park Farmer's Market	6	\$20	\$120
SUPPLIES				
SEED/BULBS/CORMS				
Ageratum Houstonianum, Blue Horizon, White Bouquet, Red Top	300 seeds	1	\$13	\$13
Snapdragons, Rocket & Potomac (group 3-4), Costa (group 2)	1000 seeds	1	\$21	\$21
Zinnia, Benary's Giant, Benary's Giant Lime, Oklahoma Golden Yellow, Pumilla Mix	500 seeds	1	\$16	\$16
Sunflowers, Variety Pro Cut Series (BiColor, Lemon, Orange, Red, Gold), Soraya, Jade, Sunrich Orange, Starburst Lemon, Buttercream	1000 seeds	1	\$79	\$79
Celosia, Ruby Parfait, Pampas Plume, Cramers Amazon, Chief Mix	400 seeds	1	\$16	\$16
Dianthus, Amazon and Green Ball	120 plugs	1	\$90	\$90
Gladiolus, Commercial and Border Mix	4000 corms	1	\$550	\$550
Ammi Visnaga, Green Mist	300 seeds	1	\$8	\$8
Statice, Blue Fortress, QIS Yellow	150 seeds	1	\$7	\$7
Liatris, Spicata	600 corms	1	\$130	\$130

	DETAIL	QUANTITY	COST/EA	TOTAL
PLANTS				
Lavender, Grosso and Fred Boutin	1 gallon pot	500	\$5	\$2,500
Delphiniums, Elautin and Belladonna Mix	3 inch pot	260	\$1	\$260
GREENHOUSE MATERIALS				
Soil block materials	mix of Sunshine peat moss, azomite, commercial sand, top soil, green sand, lime, blood meal, vermiculite/perlite	1	\$148	\$148
Germinating trays	used cafeteria trays	50	\$1	\$50
Peat moss for potted dahlias	1 yard	1	\$30	\$30
Pots for potted dahlias	1 gallon, already purchased	50	\$0	\$0
LANDSCAPE MATERIALS				
Compost	price by the yard	90	\$12	\$1,080
Soil	price by the yard	90	\$25	\$2,250
Builders sand	price by the yard	40	\$25	\$1,000
Straw bales		30	\$6	\$180
Fertilizer	kelp and fish emulsion	1	\$25	\$25
TOOLS				
Buckets	buckets, assorted sizes	100	\$1	\$100
Pruners	felco #2	4	\$30	\$120
Cleaning supplies	detergent, bleach, and sponges	1	\$15	\$15
Watering and irrigation supplies	hoses, nozzels, cans	1	\$200	\$200
Row cover	agribon 19, 250 feet	1	\$53	\$53
Twine	hemp	1	\$15	\$15
Stakes	Woodew	1	\$50	\$50
Butcher paper and rubberbands	2 rolls 15" White paper	2	\$35	\$70
MARKETING MATERIALS				
Printed advertisement	3"x5" cards	500	\$0.10	\$50
Advertise on Local Harvest website		1	\$35	\$35
Advertise on Field to Vase website		1	\$25	\$25
PROJECT TOTAL				\$43,395



A monarch drinks nectar from a zinnia grown by JCCFS. PHOTO COURTESY OF JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM.

The projected total income of the first year of operation includes \$23,050 in sales revenue and assumes that the group obtains \$43,395 in grant funds from the second round of Kresge Innovative Projects: Detroit grants. Accordingly, the net profit is estimated at \$66,325, with the grant funding covering 100% of the overhead and the costs of goods sold. This initial injection of funds, along with the earned sales revenue, will provide JCCFS with a solid foundation on which to grow their business and ample funds for future expansion. Table 3 illustrates the projected revenue for the first year of Detroit Abloom. Table 4 breaks down the projected sales revenue by product.

TABLE 3. Projected 5-Line Income Statement: Year One

	Dollars	Percent of Sales
Sales (total income)	\$66,445	100%
- Cost of Goods Sold (variable cost)	\$0	0%
= Gross Margin	\$0	0%
- Overhead (fixed cost)	\$0	0%
= Profit (Net Margin)	\$0	0%

TABLE 4. Projected Sales Revenue: Year One

Item	Unit price	Volume	Total	Description
Cut Flower Bouquet	\$10	450	\$4,500	Avg. 25 bouquets per week over 18 weeks
Cut Flower CSA Subscription	\$180	20	\$3,600	18 weeks
Cut Flower Bucket	\$25	270	\$6,750	Avg. 15 (1) gallon buckets per week over 18 weeks
Potted Dahlias	\$20	50	\$1,000	1 gallon pots
Lavender Bundle	\$8	900	\$7,200	
Grand Total			\$23,050	

The Detroit Abloom project is expected to generate increasing revenue in years to come as variable costs are reduced, yields increase, and value-added products are added to the existing income streams. In Nancy's experience, her cut flower yields have increased every year as the perennial plants become more established and her germinating, planting, and harvesting techniques become more refined with time. For a detailed table of expected bloom yields, please see Appendix C. Based upon industry research and discussions with other flower farmers, Nancy expects second year revenue to increase by an average 25% over the conservative estimates used to generate the first year's revenue projections. During the second year, specialty cut flower, lavender, and dahlia sales account for 100% of total income and the net margin is 19%. It should be noted that this projection does not include the additional revenue generated by the incorporation of value-added income streams. After JCCFS experiments this winter with those additional product lines, the projected income for the second year will increase. Table 5 contains the Projected 5-Line Income Statement for the second year of Detroit Abloom. Table 6 breaks down the projected sales revenue by product.

	Dollars	Percent of Sales
Sales (total income)	\$28,785	100%
- Cost of Goods Sold (variable costs)	\$22,047	77%
= Gross Margin	\$6,766	23%
- Overhead (fixed costs)	\$1,540	5%
= Profit (Net Margin)	\$5,466	19%

Item	Unit price	Volume	Total	Description
Cut Flower Bouquet	\$10	562	\$5,620	Avg. 31 bouquets per week over 18 weeks
Cut Flower CSA Subscription	\$180	25	\$4,500	18 weeks
Cut Flower Bucket	\$25	337	\$8,425	Avg. 18.5 (1) gallon buckets per week, 18 weeks
Potted Dahlias	\$20	62	\$1,240	1 gallon pots
Lavender Bundle	\$8	1125	\$9,000	
Grand Total			\$28,785	



The business plan was a collaborative effort between MCR and JCCFS. **PHOTO BY MICHIGAN COMMUNITY RESOURCES.**

Conclusions and Recommendations

A great deal of effort has been made to develop a plan for a sustainable business model. By following this business plan, it is expected that JCCFS's Detroit Abloom project will generate enough income to support three part-time employees and enjoy expanding operational success for years to come. Both yields and revenues are projected to increase with time. Eventually, it is hoped that there will be increasing numbers of residents in the community interested in having their lots be included in JCCFS's vision of creating jobs and enhancing the overall well being of the Jefferson Chalmers neighborhood.

The following is a set of recommendations developed for the Detroit Abloom project going forward:

UPDATE BUSINESS PLAN ANNUALLY

A business plan should be a dynamic document that reflects any market shifts or changes in the local business climate. Therefore, the Detroit Abloom business plan should be updated thoroughly at least once a year. JCCFS might start by revising this plan or may choose to start from scratch if, for example, the project's goals or organizational structure change dramatically. The most important thing is that the business plan accurately describes the business, its market, goals, development strategy, budget, and revenue projections.

DEVELOP A COMMUNITY OUTREACH AND ENGAGEMENT STRATEGY

It is essential that JCCFS inform and engage community stakeholders as early as possible in the implementation of the Detroit Abloom project. This will help to build relationships and cultivate future volunteers and customers. Nearby residents should be given a forum to express any concerns or questions that they might have about JCCFS as an organization, as well as the Detroit Abloom enterprise itself. Ideally, a community meeting should be held at the site, where attendees can collectively engage in a respectful and inclusive dialogue. An experienced, neutral third party



Each year JCCFS holds a Harvest Festival at The Garden; community events such as this should be held at the new Detroit Abloom site as part of a community engagement strategy.

PHOTO COURTESY OF JEFFERSON CHALMERS COMMUNITY FOOD SYSTEM

should facilitate the dialogue. Other potential engagement methods might include administering surveys and hosting focus groups. If JCCFS chooses to pursue a form of alternative ownership such as a community land trust, additional engagement will be required. A robust outreach and engagement strategy will help to ensure that the project is successful and that it reflects the values and interests of the entire Jefferson Chalmers community.

SEEK ADDITIONAL FUNDING

JCCFS and MCR should apply for a 2016 Kresge Innovative Projects: Detroit Implementation Grant. If the project is not able to secure funding from Kresge, JCCFS should apply for other local grant opportunities; apply for a small business loan; or launch a crowdfunding campaign to make the plan a reality.

UTILIZE SOCIAL MEDIA TO MARKET THE VENTURE

In an increasingly technology-driven world, it is imperative that Detroit Abloom have an established web presence. This should include a website, Facebook page, and perhaps a Twitter or Instagram account, in addition to web advertising through Local Harvest and Field to Vase. This will help to get the word out of the available products and generate interest in the new venture.

CONTINUE RESEARCH AND DEVELOPMENT EFFORTS

Tom and Nancy have some great ideas for value-added products and season extenders that they would like to market in the future. They should continue to explore these options by experimenting with dried flowers and lavender products throughout the winter, to determine the feasibility of incorporating new revenue streams and creating additional jobs for local residents. They also have some innovative thoughts regarding establishing a cooperative flower farming model that might contribute to the economic development of the Jefferson Chalmers neighborhood. Each of these concepts is worth additional research.

CONNECT DETROIT ABLOOM TO THE MISSION AND PROGRAMMING OF JCCFS

JCCFS's current programming is primarily focused on their farm at The Garden site at Newport and Freud. The new Detroit Abloom project is more likely to succeed if it is connected to the existing programming and JCCFS's overall mission to improve the wellbeing of the entire community and establish a community owned and operated food system. There are various ways that this might be accomplished, such as hosting summer lectures, workshops, concerts, and community meetings at the new site. It is paramount that the project site's use reflect its community ownership.

Footnotes:

1. MI. Legis. S. Resolution 66, 2013. Retrieved from <http://www.legislature.mi.gov/documents/2013-2014/resolutionintroduced/Senate/pdf/2013-SIR-0066.pdf>
2. About Flowers. (2014, December). Floral Industry Overview. Retrieved from <http://www.aboutflowers.com/about-the-flower-industry/industry-overview.html>
3. NCAT. (2006). Specialty Cut Flower Production and Marketing.
4. Baltimore Office of Sustainability. (2015, April). Flower Farming in Baltimore; Considering the Concept
5. Farm Show. (2005). Profitable Lavender Business Thrives on 14 acres. Retrieved from https://www.farmshow.com/a_article.php?aid=17507
6. NCAT. (2007). Lavender Production, Products, Markets, and Entertainment Farms.

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MACK ALIVE

Background

The mission of Mack Alive is to enhance the growth and development of the eastside of Detroit through comprehensive programs and services that educate, empower, and elevate the entire community. To these ends, Mack Alive offers tutoring, mentorship, and employment readiness programs for youth as well as initiatives to reduce crime and eliminate blight. Mack Alive is currently working to secure and renovate a building at 3753 Fischer (immediately adjacent to the proposed project site) to function as a shelter and rehabilitation center for homeless veterans as part of their new 'Vets Alive' program. The proposed Mack Alive Greenspace project will add value to these existing programs and initiatives.

For more than 23 years, Mack Alive has been working to provide a safe environment and serve as a positive change agent for neighborhood growth and revitalization in the 48214 zip code. Recently, the organization created a community garden, the 'We are One' garden, behind their Community Resource Center. The garden has functioned as an outdoor classroom for many of their youth-centered activities, and is a source of pride for the community.

This business plan was developed for the proposed Mack Alive Greenspace project, and does not include any of the ongoing production taking place through the We are One garden. The Mack Alive Greenspace project will generate enough revenue to cover the tax and insurance costs incurred by the organization's purchase of the lots from the Detroit Land Bank Authority (DLBA) and the City of Detroit's Planning and Development Department.

THE MACK ALIVE
GREENSPACE PROJECT
WILL GENERATE ENOUGH
REVENUE TO COVER THE
TAX AND INSURANCE
COSTS INCURRED BY THE
ORGANIZATION'S
PURCHASE OF THE LOTS



Participants of Mack Alive's My Brother's Keeper: Becoming a Man, ten-week mentor and professional development program for Detroit area males, ranging from 13 – 17 years of age.

PHOTO COURTESY OF MACK ALIVE

Project Design

The Mack Alive Greenspace project is located on two and a half vacant lots on Fischer Street, near Mack Ave, across from the Mack Alive Community Resource Center and adjacent to the future Vets Alive veterans' center. The lots actively cultivated will be 3715 and 3729 Fischer, as well as half of 3741 Fischer. The lots are contiguous and share two alleys. The site receives full sun with the exception of the western portion of 3715 Fischer, which is shaded by the adjacent auto repair business after 12 pm. There is also a large Catalpa Tree located in the center of 3741 Fischer that we are suggesting be removed. Catalpa Trees are generally considered weed trees and/or invasive species in Michigan and the shade cast by the tree would disrupt plant growth in the proposed herb production area.

The soil is clay loam and although it is compacted in some areas, the drainage appears adequate. There is urban debris present in the soil including visible chunks of concrete near the front of 3729 Fisher; most likely pieces of a driveway not completely removed during demolition. Soil tests reveal adequate levels of some nutrients including Phosphorus (P) and Potassium (K) and above optimum levels of Calcium (Ca) and Magnesium (Mg). Generally, the percentage of organic matter present is less than desired and lead levels are above that which is generally considered safe for routine exposure. **As a result, it is recommended that the project not be implemented on these parcels, and that other potential sites be identified.**

The project design includes four key features:

- A. A cut flower production area;
- B. A landscaped space with **perennial** and **annual** flowers;
- C. A production area for herbs and medicinal plants; and
- D. A hoophouse that includes space for both in-ground and container production.

The site plan can be found on page 26 and the planting detail can be found in Appendix D.

Project Goal

The goal of the project is to help Mack Alive achieve its goals of uplifting the community and providing hope through neighborhood revitalization and stabilization. It is hoped that the project will create a domino effect that will inspire community members to care about Fischer Street and Detroit as much as Mack Alive does. The Greenspace will serve as a venue for community events and be tied into Mack Alive's existing programming. Finally, it is expected that the project will generate enough revenue to cover the tax and insurance costs of the newly purchased lots.

Products and Services

The Mack Alive Greenspace project will produce two different products. The first product is specialty cut flowers that will be sold to wholesale outlets by the stem/bucket and in bouquets directly to consumers at the Islandview Farmers' Market.

GLOSSARY TERM

Annuals: plants that perform their entire lifecycle over the course of one year.

GLOSSARY TERM

Perennials: plants that persist for many growing seasons.

The Islandview Farmers' Market, is conveniently located on the corner of Mack and East Grand Boulevard, less than a mile away from Mack Alive's offices. The market is operated by Genesis Hope Community Development Corporation, and the cost to exhibit is \$10 per week. In 2014 the market had 10 vendors and averaged around 70 shoppers a day. Cut flower bouquets generally sell for \$3-\$10 depending on the size. Competition is minimal because there are no other vendors that specialize in seasonal cut flowers. Mack Alive has also expressed an interest in marketing specialty cut flower arrangements to several of the nearby churches and funeral homes along Mack.

The second product is a **value-added** product made with herbs and medicinal plants, which could include teas, spice rubs, tinctures, salves, or soaps. Additional research, stakeholder engagement, and potentially supplies are required to determine the type of product and the sales outlet options for value-added products.

Operations and Management

One-time site development activities include soil testing and preparation; tree removal, concrete removal; installation of waterline and connections; hoophouse construction, including assembly of tables and a large raised growing area; planting and mulching 570 perennial and 410 annual plants; planting two flowering cherry trees; and design and installation of the mural and sitting areas. On-going maintenance will include growing and planting annual crops, harvesting, post-harvest handling, marketing, and site maintenance such as watering, weeding, pest management, and fertilization. Mack Alive will need to hire a part-time project coordinator to launch the project. Keep Growing Detroit has offered to provide assistance with developing a position description, as well allowing Mack Alive to advertise for the position via their monthly newsletter which reaches a wide network of trained urban farmers and gardeners.

Additional support from Mack Alive leadership and staff will be necessary early on, as production decisions should be made by the organization itself and not solely by the project coordinator. Other expected tasks for Mack Alive staff include recruiting volunteers; purchasing materials; and hiring and overseeing the contractors for the tasks of tree removal, soil preparation, and utility installation; as well as hiring the project coordinator. The job duties of the project coordinator include planting, maintaining, and harvesting activities, as well as supervising and training volunteers and staff in all aspects of operations.

The overall sustainability of the project will increase as the maintenance is tied into Mack Alive's current and future programming. For example, encouraging the youth of Mack Alive's Green Corps youth program or the residents of the Veteran's Alive center to participate in the program would garner community support for the project, while distributing the workload. It is important that the part-time project coordinator cross-trains volunteers, residents, and stakeholders in all aspects of the operations and maintenance of the Greenspace, so that the position can be phased out after the first year and overhead can be reduced.

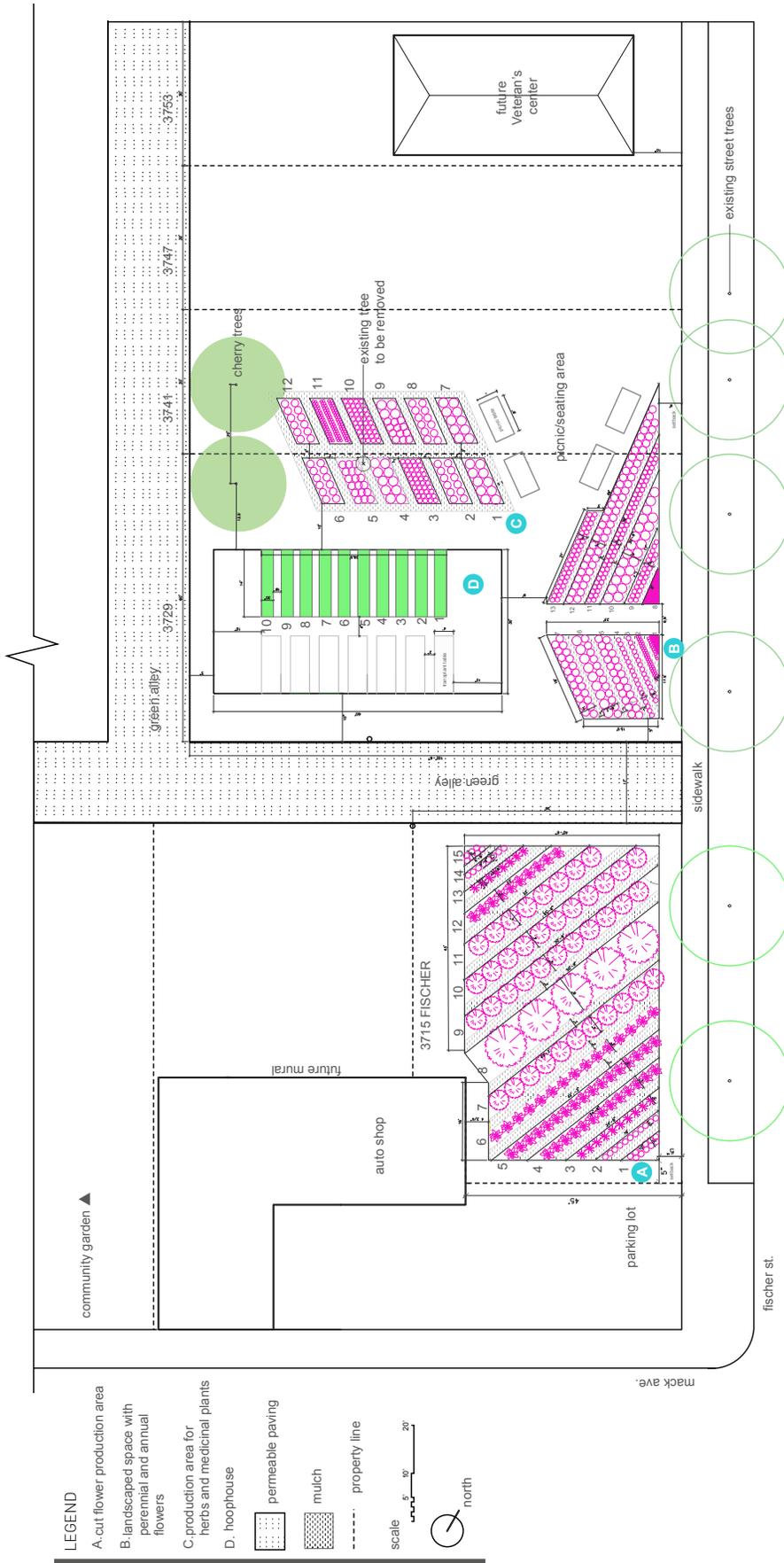
MCR has offered to provide Mack Alive with pro bono legal council to examine property and sales tax concerns and to explore alternative models of community ownership, such as community land trusts (CLTs), should they choose to do so. Mack Alive plans to eventually acquire all of the vacant lots on the 3700 block of Fischer, between Mack and Sylvester. This would afford the organization the opportunity to expand the operation in the future and to create a unique and cohesive neighborhood landscape that combines residential housing with specialty cut flower farming.



Alberta Tinsley-Talabi, State Representative at Michigan House of Representatives and founder of Mack Alive, stands outside the Community Resource Center on Fischer. PHOTO COURTESY OF MACK ALIVE

GLOSSARY TERM

Value-added agriculture: changing a raw agricultural product into something new through processing, drying, packaging, or other methods.



LEGEND

- A. cut flower production area
- B. landscaped space with perennial and annual flowers
- C. production area for herbs and medicinal plants
- D. hoophouse
- permeable paving
- mulch
- property line

scale 5' 30' 20'

north

MACK ALIVE: Greenspace Project
SITE PLAN August 21, 2015



Designed by:

Mack Alive staff and the project coordinator should work together on the research and development of a line of value-added herb and medicinal plant products, such as teas, spice rubs, tinctures, salves, or soaps. The plan provides Mack Alive with a variety of popular herbs and medicinal plants to grow and experiment with during the first year, in order to identify which varieties and products they would like to cultivate and market. The detailed operations and management schedule can be found in Appendix E.

Market Analysis

According to the Michigan Agriculture Council, the State's **floriculture** industry employs more than 9,000 individuals across the State and is ranked third in the nation in terms of production output.¹ Yet about 80% of cut flowers sold in the United States are imported from other countries², where they are often treated with harsh chemicals in order to preserve blooms during transport. The National Sustainable Agriculture Information Service reports that specialty cut flowers are becoming more and more important to the industry, making it easier for local growers to compete with imported products.³ The expanding popularity of the local and organic food movements in recent years, along with the growing number of new restaurants and commercial development in Detroit, indicates an untapped demand for local, sustainably produced cut flowers in the City and surrounding areas.

Detroit is not the only legacy city with the potential to expand its urban agriculture industry to include revenue-generating specialty cut flower production. Recently, the City of Baltimore, Maryland conducted an analysis to explore the viability of returning vacant lots to productive use through the cultivation of specialty cut flowers. The findings of the analysis were as follows:

1. Flowers are currently overlooked as an urban agriculture product
2. The floriculture industry is changing to a more localized industry
3. Urban flower farmers have the same needs as other urban farmers
4. Cut flowers are more lucrative than other value-added products
5. Demand for locally grown flowers is gaining traction⁴

The prices for wholesale specialty cut flowers and retail bouquets are based on the rate that Keep Growing Detroit's Grown in Detroit program pays local flower producers and the going rate farmer's markets, respectively.

As noted previously, additional research, stakeholder engagement, and potentially supplies are required to determine the type of product and the sales outlet options for value-added products. However, preliminary market research indicates that consumer awareness of and demand for medicinal plant and herb products has increased in recent years. Medicinal plant and herb production is a niche market that can produce considerable revenue, even at a small scale. Direct market herb production can yield \$5,000 to \$10,000 per acre⁵, and value-added products can generate even more net returns.

GLOSSARY TERM

Floriculture: the industry word for flower farming, particularly the cultivation of ornamental blooms.

TABLE 1. First Year Implementation Budget				
	DETAIL	QUANTITY	COST/EA	TOTAL
INFRASTRUCTURE				
Hoophouse	30'x60'	1	\$12,000	\$12,000
Utilities - Water	permit and installation	1	\$1,700	\$1,700
Tables for Hoophouse	4'x12'	7	\$359	\$2,513
Mural	buy supplies and partner	1	\$1,000	\$1,000
Picnic Tables	8'x4', cedar	4	\$600	\$2,400
Sign	carved wood, YEA-Detroit	1	\$300	\$300
Annual property taxes	summer and winter	3	\$40	\$120
CONTRACTUAL				
Tree Removal Services	tree in center of property	1	\$1,000	\$1,000
Tilling Services/Concrete Removal	prep outdoor planting areas	1	\$650	\$650
Stall Rental Fees	Islandview farmers' market weekly	10	\$10	\$100
Labor for Hoophouse Construction		1	\$1,400	\$1,400
Insurance	liability coverage for all parcels	1	\$250	\$250
Part-time Project Coordinator	May-Oct. 30 hrs week	1	\$9,000	\$9,000
SUPPLIES				
SEED				
Zinnia, Gold Medal Mix	GRP membership	1	\$20	\$20
Calendula, Flashback Mix	GRP membership	1	\$0	\$0
Nasturtium, Jewel Mix	GRP membership	1	\$0	\$0
Cosmos, Sensation Mix	GRP membership	1	\$0	\$0
Snapdragon, Rocket Mix	GRP membership	1	\$0	\$0
Celosia, Pampas Plume	seed, 1/8oz	1	\$9	\$9
Dill, Bouquet	GRP membership	1	\$0	\$0
Chamomile, Common	GRP membership	1	\$0	\$0
Basil, Aromatto	seed, 1 pack	1	\$4	\$4
Yarrow, Colorado Mix	seed, 1 pack	1	\$4	\$4
Sage, Common	seed, 1 pack	1	\$4	\$4
Sage, White	seed, 1 pack	1	\$4	\$4
Thyme, Orange	seed, 1 pack	1	\$4	\$4
Lavender, Ellagance Purple	seed, 1 pack	1	\$5	\$5
PLANTS				
Rosemary	3" pot	14	\$5	\$70
Lemon Verbena	3" pot	30	\$5	\$150
Lemon Balm	3" pot /free	24	\$5	\$120



	DETAIL	QUANTITY	COST/EA	TOTAL
Lavender, Hidcote	1 gallon	38	\$9	\$342
Thyme, German Winter	3" pot	12	\$5	\$60
Oregano, Vulgare	3" pot	24	\$5	\$120
Mint, Spearmint	3" pot /free	12	\$5	\$60
Mint, Chocolate	3" pot /free	12	\$5	\$60
Bee Balm	1 gallon	10	\$9	\$90
Anise Hyssop	1 gallon	10	\$9	\$90
Siberian Iris, Caesar's Brother	root	24	\$10	\$240
Liatris Spicata, Kobold	1 gallon	13	\$9	\$117
Shasta Daisy, Real Glory	1 gallon	33	\$9	\$297
Rudbeckia, Goldstrum	1 gallon	23	\$9	\$207
Hydrangea, Strawberry Sundae	1 gallon	11	\$25	\$275
Hydrangea, Pee Wee	1 gallon	30	\$25	\$750
Hydrangea, Tardiva	3 gallon	5	\$35	\$175
Peony, Kansas	root	40	\$20	\$800
Peony, Duchesse de Nemours	root	15	\$25	\$375
Sedum, Autumn Joy	1 gallon	18	\$8	\$144
Sedum, Yellow Stonecrop	3" pot	13	\$5	\$65
Hosta, Touch of Class	1 gallon	37	\$9	\$333
Cherry, Garfield Plantation	bareroot	2	\$24	\$48
GREENHOUSE MATERIALS				
Potting Soil	1.5 cubic feet	100	\$8	\$800
Germinatin Trays	10 (50/case)	1	\$40	\$40
Web Flats	200 (50/case)	4	\$35	\$140
Pots	3" pots (850/case)	2	\$155	\$310
LANDSCAPE MATERIALS				
Mulch	yard	10	\$36	\$360
Compost	yard	6	\$30	\$180
Lumber	hoophouse			\$750
Soil	yard	12	\$25	\$300
Delivery	trip	4	\$40	\$160
TOOLS				
Buckets		10	\$3	\$30
Pruners	Nice	4	\$30	\$120
Watering and Irrigation Supplies	hoses, nozzels, cans			\$200
PROJECT TOTAL				\$40,865



Young residents learn about nature at Mack Alive's We Are One Community Garden. PHOTO COURTESY OF MACK ALIVE.

Project Funding

Mack Alive could pursue start-up funding by applying for grants or small business loans, or through web-based crowdfunding platforms. Initial fundraising efforts should seek to identify appropriate sites that are free of harmful contaminants. Once the venture is running, after three years it is expected to be self-sustaining; generating enough net revenue to allow the Greenspace to maintain and expand production.

Financials

The new Mack Alive Greenspace specialty cut flower and value-added herbal products operation will initially include two distinct lines of revenue:

- A. Wholesale cut flowers
- B. Retail cut flowers

The estimated production costs for the Greenspace project, including the initial start-up expenses were calculated based on Keep Growing Detroit's experience with launching new garden operations. The total anticipated start-up costs for the venture are estimated at \$40,865. Table 1 (on the previous page spread) illustrates the projected budget for the first year of the Greenspace operation.

The Mack Alive Greenspace will begin generating revenue from medicinal plant and herb production during the second year. However, revenue for these product lines cannot be projected until Mack Alive decides what types of products that they would like to market. The specialty cut flower production will not generate revenue until the plants have become established in year three. The projected total income of the third year of specialty cut flower production includes \$2,295 in sales revenue and assumes that the group obtains \$40,865 in grant funds to cover the start-up costs in the first year. This initial injection of funds, along with the earned sales revenue, will provide Mack Alive with a solid foundation on which to grow their business and ample funds for future expansion. The initial start-up inventory for the greenhouse operation has been intentionally overstocked to ensure that there will be no need to purchase additional inputs, apart from seeds, before year three. Table 2 contains the Projected 5-Line Income Statement for the third year of the Greenspace, not including revenue from the medicinal plants and herbs value-added products. For a detailed table of expected bloom yields, please see Appendix F.

The Mack Alive Greenspace project is expected to generate increasing revenue in years to come as variable costs are reduced, yields increase, and value-added products are added to the existing income streams.

	Dollars	Percent of Sales
Sales (total income)	\$2,295	100%
- Cost of Goods Sold (variable costs)	\$49	2%
= Gross Margin	\$2,246	98%
- Overhead (fixed costs)	\$660	29%
= Profit (Net Margin)	\$1,586	69%

Conclusions and Recommendations

A great deal of effort has been made to develop a plan for a sustainable business model. By following this business plan, it is expected that Mack Alive's Greenspace project will generate enough income to cover the tax and insurance costs associated with owning the properties and enjoy expanding operational success for years to come. Both yields and revenues are projected to increase with time. The following is a set of recommendations developed for the Mack Alive Greenspace project going forward:

OBTAIN AN ENVIRONMENTAL ASSESSMENT OR IMPLEMENT THE PROJECT AT ANOTHER SITE

The results of the soil tests for the Mack Alive site indicated that the lead content was above safe levels. Thus, it was determined that it would be hazardous to proceed with the project. MCR recommends that Mack Alive obtain an environmental assessment of the lots, along with targeted soil testing to determine available options for remediating and/or developing the land. Alternatively, Mack Alive might consider implementing the project on some of the other lots it plans to acquire along Fischer.

CONTINUE RESEARCH AND DEVELOPMENT EFFORTS

The plan includes a variety of medicinal herbs and plants that Mack Alive can produce the first year in order to experiment with different value-added products that they might like to market during the second year of the project. Mack Alive and MCR discussed various value-added product options, including but not limited to things like teas, spice rubs, tinctures, salves, or soaps. It is up to Mack Alive to try their hand at a variety of different products to determine which they are most interested in producing and marketing.

UPDATE BUSINESS PLAN ANNUALLY

A business plan should be a dynamic document that reflects any market shifts or changes in the local business climate. Therefore, the Greenspace business plan should be updated thoroughly at least once a year, and certainly once the organization has determined what type of value-added herb products it would like to market. Mack Alive might start by revising this plan or may choose to start from scratch, if for example, the project's goals or organizational structure changes dramatically. The most important thing is that the business plan accurately describes the business, its market, goals, development strategy, budget, and revenue projections.

DEVELOP A COMMUNITY OUTREACH AND ENGAGEMENT STRATEGY

It is essential that Mack Alive inform and engage community stakeholders as early as possible in the implementation of the Greenspace project. Nearby residents should be given a forum to express any concerns or questions that they might have about the enterprise. Ideally, a community meeting should be held at the site, where attendees can collectively engage in a respectful and inclusive dialogue. An experienced, neutral third party should facilitate the dialogue. If in the future Mack Alive chooses to pursue a form of alternative ownership such as a community land trust framework, additional engagement will be required. A robust outreach and engagement strategy will help to ensure that the project is successful and that it reflects the values and interests of the entire neighborhood.



Mack Alive's 'We Are One' community garden, located behind their Community Resource Center.
PHOTO COURTESY OF MACK ALIVE

GLOSSARY TERM

Variable Costs: costs that increase or decrease in relation to production levels, such as seed or fertilizer.

GLOSSARY TERM

Fixed Costs: basic operating costs that cannot be avoided, such as rent or mortgage payments.

GLOSSARY TERM

Net Margin: percentage of total revenue remaining after all fixed and variable costs are deducted.



Birdhouses created by youth participating in Mack Alive's 'Days of Me: Art, Gardens and Photographs' program. PHOTO BY MICHIGAN COMMUNITY RESOURCES.

GLOSSARY TERM

Crowdfunding: the use of small amounts of capital from a large number of individuals to finance a project or venture.

SEEK STARTUP FUNDING

Mack Alive should consider applying for local grant opportunities; apply for a small business loan; or launch a crowdfunding campaign to make the plan a reality. Potential web-based crowdfunding platforms include www.IOBY.org or www.patronicity.com.

UTILIZE SOCIAL MEDIA TO MARKET THE VENTURE

In an increasingly technology-driven world, it is imperative that Mack Alive's Greenspace project has an established web presence. This should include a website, Facebook page, and perhaps a Twitter or Instagram account. This will help to get the word out of the available products and generate interest in the new venture.

CONNECT THE GREENSPACE TO THE MISSION AND PROGRAMMING OF MACK ALIVE

Much of Mack Alive's current programming takes place at their Community Resource Center on Fischer, across the street from the Greenspace. The Greenspace project is more likely to succeed if it is connected to the existing programming and Mack Alive's overall mission to enhance the growth and development of the eastside of Detroit through comprehensive programs and services that educate, empower, and elevate the entire community. There are various ways that this might be accomplished, such as utilizing the greenspace as a demonstration site, venue for community events, and an outdoor art space; as well as incorporating some of the production and maintenance tasks into existing programs such as the youth Green Corps and the future Vets Alive program.

Footnotes:

1. MI. Legis. S. Resolution 66, 2013. Retrieved from <http://www.legislature.mi.gov/documents/2013-2014/resolutionintroduced/Senate/pdf/2013-SIR-0066.pdf>
2. About Flowers. (2014, December). Floral Industry Overview. Retrieved from <http://www.aboutflowers.com/about-the-flower-industry/industry-overview.html>
3. NCAT. (2006). Specialty Cut Flower Production and Marketing.
4. Baltimore Office of Sustainability. (2015, April). Flower Farming in Baltimore; Considering the Concept
5. Cooperative Extension Service University of Kentucky College of Agriculture, Food and Environment. (2015, April). Culinary Herbs.

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APPENDICES



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APPENDIX A. BUSINESS ENTITY SEARCH

How Do I Find Contact Information for a Corporation or LLC?

Often, a Wayne County Register of Deeds search will reveal that the property is owned by an entity instead of an individual. This guide will help you perform a Business Entity Search online to find a contact person within a business that owns property.

The State of Michigan Business Entity Search gives you a way to find one or more human beings behind that entity. All entities doing business in Michigan are required to register with the state and provide annual status updates, including the name and address of a contact person, and occasionally a phone number. The website is operated through the state's Department of Licensing and Regulatory Affairs (LARA) and is free to use.

Begin the search by navigating to http://www.dleg.state.mi.us/bcs_corp/sr_corp.asp. There are three search options: business name, business keyword, and business ID number. You will usually search by business name, though keyword searches may be helpful. Start by entering the business's name as it appears on the Wayne County Register of Deeds website, the deed, or the other source you have. You should leave off suffixes such as "LLC" or "Co." If the entity you are looking for does not come up initially, try playing around with using partial names or narrowing the results.

Once you find the name that best fits the entity you are looking for, click on it. You will see contact and other information about the entity on the resulting page. This corporate entity details page should provide you with a preliminary set of contact information about the property, including the name of an individual, the street address for their registered office, a mailing address, the status of the company, and where and when the company was formed.

At the bottom of this page you will see a link to "view document images." This will take you to a list of "Corporate Entity Documents" or "Limited Liability Company Documents." A look at the company's most recent annual report or other most recent document can alert you to changes in the registered agent or phone number. You may want to scan all the documents in the entity documents list, which may contain additional information about the entity you're searching. You may find old addresses or old phone numbers for the entity or its agent.

Once you have gathered all this information from the Business Entity Search website, you can double check the information by searching the company's name or the agent's name on a search engine such as Google or on a site such as www.whitepages.com to find out more information.

At this point, it is up to you or your community organization to decide how to reach out using this contact information.

APPENDIX B.

TABLE 4. JCCFS' Detroit Abloom Planting Detail*

BED #	SECTION	PLANT	VARIETY	ANNUAL/ PERENNIAL	PLANT DATE	SEED/ PLANT	BLOOM COLOR	HEIGHT/ STEM LENGTH	BLOOM TIME	TOTAL PLANTS NEEDED
12	C	Tulip	Dordogne	A	Fall	Bulb	Coral and pink	24"	Apr-May	250
12	C	Tulip	Menton	A	Fall	Bulb	Pink	24"	Apr-May	250
14	C	Larkspur	Cannes Mix	A	Fall	Seed	Blue, purple, pink, and white	60"	May-June	550
13	C	Anemone Coronaria	Decaen Single Mix	P	Fall	Bulb	Pink, purple, red, and white	10"	May-June	300
13	C	Ageratum Houstonianum	Blue Horizon	A	Spring	Plant	Purple	18"	June-Sept	60
14	C	Ageratum Houstonianum	White Bouquet	A	Spring	Plant	White	12"	June-Sept	60
12	C	Ageratum Houstonianum	Red Top	A	Spring	Plant	Pink-red	15"	June-Sept	60
1	B	Snapdragon	Rocket	A	Spring	Plant	Red, orange, pink, white, and yellow	30"	June-Sept	200
1	B	Snapdragon	Potomac	A	Spring	Plant	Pink	45"	June-Sept	200
1	D	Snapdragon	Costa	A	Spring	Plant	Pink, white, red, and peach	32"	June-Sept	200
8-11	C	Zinnia	Benary's Giant	A	Spring	Plant	Pink, red, yellow, purple, orange, and white	45"	July-Oct	240
1	D	Sunflower	Variety Pro Cut Series (BiColor, Lemon, Orange, Red, Gold)	A	Spring	Seed	Multi	65"	July-Oct	150
2	D	Sunflower	Soraya	A	Spring	Seed	Yellow	72"	July-Oct	150
3	D	Sunflower	Jade	A	Spring	Seed	Pale yellow	45"	July-Oct	150

*The Bed #s and Sections correspond to the landscape design shown on page 11.

BED #	SECTION	PLANT	VARIETY	ANNUAL/ PERENNIAL	PLANT DATE	SEED/ PLANT	BLOOM COLOR	HEIGHT/ STEM LENGTH	BLOOM TIME	TOTAL PLANTS NEEDED
4	B	Sunflower	Sunrich Orange	A	Spring	Seed	Yellow	50"	July-Oct	150
5	B	Sunflower	Starburst Lemon	A	Spring	Seed	Pale yellow	52"	July-Oct	150
8	B	Sunflower	Buttercream	A	Spring	Seed	Pale yellow	52"	July-Oct	150
3	C	Celosia	Ruby Parfait	A	Spring	Plant	Purple	25"	July-Oct	45
3	C	Celosia	Pampas Plume	A	Spring	Plant	Pink, yellow, and red	42"	July-Oct	45
4	C	Celosia	Cramers Amazon	A	Spring	Plant	Pink	60"	July-Oct	45
5	C	Celosia	Chief Mix	A	Spring	Plant	Pink, red, orange, and yellow	38"	July-Oct	45
4	D	Dianthus	Amazon	B	Spring	Plug	Pink	24"	June- Sept	60
5	D	Dianthus	Green Ball	B	Spring	Plug	Green	12"	June- Sept	60
1	C	Gladiolus	Commercial	A	Spring	Corm	Multi	45"	July- Sept	2000
2	C	Gladiolus	Border Mix	A	Spring	Corm	Multi	30"	July- Sept	2000
9	C	Ammi Visnaga	Green Mist	A	Fall and Spring	Seed	Green	48"	June- Oct	150
2	B	Statice	Blue Fortress	A	Spring	Seed	Blue	18"	July-Oct	30
3	B	Statice	QIS Yellow	A	Spring	Plant	Yellow	30"	July-Oct	30
6-7	D	Liatris	Spicata	A	Spring	Corm	Purple and white	30"	July-Oct	160
1-12, 34-42	D	Lavender	Grosso	P	Spring	Plant	Purple	30"	June- Aug	250
13-33	A	Lavender	Fred Boutin	P	Spring	Plant	Purple and blue	30"	June- Aug	250
6	C	Delphiniums	Elautin	P	Spring	Plant	Blue, purple, pink, and white	60"	Apr-July	130
7	C	Delphiniums	Belladonna Mix	P	Spring	Plant	Blue and white	40"	Apr-July	130

APPENDIX C.

TABLE 5. JCCFS' Detroit Abloom Projected Yields (Primary Blooms)

PRIMARY SELLER	VARIETY	BLOOM COLOR	STEM LENGTH	BLOOM TIME	TOTAL PLANTS	#BLOOMS /PLANT	TOTAL BLOOMS
Tulip	Dordogne	Coral	24"	Apr-May	250	1	250
Tulip	Menton	Pink	24"	Apr-May	250	1	250
Larkspur	Cannes Mix	Blue, purple, pink, and white	60"	May-June	550	5	2,750
Anemone Coronaria	Decaen Single Mix	Pink, purple, red, and white	10"	May-June	300	3	900
Ageratum Houstonianum	Blue Horizon	Purple	18"	June-Sept	60	30	1,800
Ageratum Houstonianum	White Bouquet	White	12"	June-Sept	60	30	1,800
Ageratum Houstonianum	Red Top	Pink-red	15"	June-Sept	60	30	1,800
Snapdragon	Rocket	Red, orange, pink, white, and yellow	30"	June-Sept	200	14	2,800
Snapdragon	Potomac	Pink	45"	June-Sept	200	14	2,800
Snapdragon	Costa	Pink, white, red, and peach	32"	June-Sept	200	14	2,800
Zinnia	Benary's Giant	Multi	45"	July-Oct	240	12	2,880
Sunflower	Variety Pro Cut Series (BiColor, Lemon, Orange, Red, Gold)	Multi	65"	July-Oct	150	1.5	225
Sunflower	Soraya	Yellow	72"	July-Oct	150	1.5	225
Sunflower	Jade	Pale yellow	45"	July-Oct	150	1.5	225
Sunflower	Sunrich Orange	Yellow	50"	July-Oct	150	1.5	225
Sunflower	Starburst Lemon	Pale yellow	52"	July-Oct	150	1.5	225
Sunflower	Buttercream	Pale yellow	52"	July-Oct	150	1.5	225
Celosia	Ruby Parfait	Purple	25"	July-Oct	45	13	585
Celosia	Pampas Plume	Pink, yellow, and red	42"	July-Oct	45	13	585
Celosia	Cramers Amazon	Pink	60"	July-Oct	45	13	585
Celosia	Chief Mix	Pink, red, orange, and yellow	38"	July-Oct	45	13	585
Dianthus	Amazon	Pink	24"	June-Sept	60	16	960
Dianthus	Green Ball	Green	12"	June-Sept	60	16	960
Gladiolus	Commercial	Multi	45"	July-Sept	2000	1	2,000
Gladiolus	Border Mix	Multi	60"	July-Sept	2000	1	2,000
Ammi Visnaga	Green Mist	Green	48"	June-Oct	150	11	1,650
Statice	Blue Fortress	Blue	18"	July-Oct	30	17	510
Statice	QIS Yellow	Yellow	30"	July-Oct	30	17	510
Liatris	Spicata	Purple and white	30"	July-Oct	160	2.5	400
Lavender	Grosso and Fred Boutin	Purple	10"	June-Aug	500	55	27,500
Delphinium	Elautin	Blue, purple, pink, and white	60"	Apr-July	130	10	1,300
Delphinium	Belladonna Mix	Blue and white	40"	Apr-July	130	10	1,300

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APPENDIX D.

TABLE 1. Mack Alive Greenspace Planting Detail*

BED #	SECTION	PLANT	VARIETY	ANNUAL/ PERENNIAL	PLANT DATE	SEED/ PLANT	BLOOM COLOR	HEIGHT/ STEM LENGTH	BLOOM TIME	TOTAL PLANTS NEEDED
1	A	Hosta	Touch of Class	P	Spring	Plant	purple	12"	July-Aug	11
2	A	Hosta	Touch of Class	P	Spring	Plant	purple	12"	July-Aug	11
3	A	Sedum	Autumn Joy	P	Spring	Plant	Green, Pink	24"	July-Sept	10
4	A	Peony	Kansas	P	Fall	Root	Red	30"	May	13
5	A	Peony	Kansas	P	Fall	Root	Red	30"	May	17
6	A	Peony	Duchesse de Nemours	P	Fall	Root	White	30"	May	15
7	A	Hydrangea	Strawberry Sundae	P	Spring	Plant	Pink	30"	July-Sept	11
8	A	Hydrangea	Tardiva	P	Spring	Plant	White	36"	July-Sept	5
9	A	Hydrangea	Pee Wee	P	Spring	Plant	White	30"	July-Sept	11
10	A	Hydrangea	Pee Wee	P	Spring	Plant	White	30"	July-Sept	11
11	A	Hydrangea	Pee Wee	P	Spring	Plant	White	30"	July-Sept	8
12	A	Peony	Kansas	P	Fall	Root	Red	30"	May, June	10
13	A	Sedum	Autumn Joy	P	Spring	Plant	Green, Pink	24"	July-Sept	8
14	A	Hosta	Touch of Class	P	Spring	Plant	purple	12"	July-Aug	8
15	A	Hosta	Touch of Class	P	Spring	Plant	purple	12"	July-Aug	7
1	B	Sedum	Yellow Stonecrop	P	Spring	Plant	Yellow	6"	July-Sept	13
2	B	Liatris Spicata	Kobold	P	Spring	Plant	Purple	12"	July-Aug	13
3	B	Shasta Daisy	Real Glory	P	Spring	Plant	White and Yellow	24"	June-Aug	15
4	B	Shasta Daisy	Real Glory	P	Spring	Plant	White and Yellow	24"	June-Aug	18
5	B	Siberian Iris	Caesar's Brother	P	Fall	Root	Purple	24"	May	24
6	B	Yarrow	Colorado Mix	P	Spring	Plant	Pink, Yellow, White	30"	June-Aug	24
7	B	Rudbeckia	Goldstrum	P	Spring	Plant	Yellow and Black	30"	July-Oct	23
8	B	Nasturtium	Jewel Mix	A	Spring	Plant	Yellow, Orange, Red	6"	June-Aug	11
9	B	Calendula	Flashback Mix	A	Spring	Seed	Yellow, Orange	20"	June-Aug	25
10	B	Snapdragon	Rocket Mix	A	Spring	Plant	Multi	30"	July-Aug	53
11	B	Zinnia	Gold Medal Mix	A	Spring	Plant	Multi	36"	July-Aug	69

BED #	SECTION	PLANT	VARIETY	ANNUAL/ PERENNIAL	PLANT DATE	SEED/ PLANT	BLOOM COLOR	HEIGHT/ STEM LENGTH	BLOOM TIME	TOTAL PLANTS NEEDED
12	B	Celosia	Pampas Plume	A	Spring	Plant	Red, Yellow, Pink	40"	July- Aug	56
13	B	Cosmos	Sensation Mix	A	Spring	Seed	Pink, Red, White	48"	June, Aug	40
1	C	Chamomile	Common	P	Spring	Plant	White and Yellow	12"	June- Sept	60
2	C	Mint	Chocolate	P	Spring	Plant	na	12"	June- Oct	12
3	C	Oregano	Vulgare	P	Spring	Plant	na	18"	July- Sept	12
4	C	Lemon Balm	Lemon Balm	P	Spring	Plant	na	20"	June- Sept	12
5	C	Basil	Aromatto	A	Spring	Seed	Dark Purple	24"	June- Sept	18
6	C	Beebalm	Raspberry Wine	P	Spring	Plant	Hot Pink	30"	July	10
7	C	Thyme	German Winter	P	Spring	Plant	na	12"	June- Sept	12
8	C	Mint	Spearmint	P	Spring	Plant	na	12"	June- Oct	12
9	C	Oregano	Vulgare	P	Spring	Plant	na	18"	July- Sept	12
10	C	Lemon Balm	Lemon Balm	P	Spring	Plant	na	20"	June- Sept	12
11	C	Dill	Bouquet	A	Spring	Seed	Yellow	36"	July-Oct	108
12	C	Anise Hyssop	Anise Hyssop	P	Spring	Plant	Purple	36"	June- Aug	10
1	D	Thyme	Orange	P	Spring	Plant	na	12"	June- Sept	19
2	D	Lavender	Hidcote	P	Spring	Plant	Purple	18"	June- Sept	19
3	D	Lavender	Hidcote	P	Spring	Plant	Purple	18"	June- Sept	19
4	D	Lavender	Ellagance Purple	P	Spring	Plant	Purple	18"	June- Sept	19
5	D	Sage	Common	P	Spring	Plant	Purple	20"	June- Sept	15
6	D	Sage	White	P	Spring	Plant	Purple	24"	June- Sept	15
7	D	Lemon Verbena	Lemon Verbena	A	Spring	Plant	na	36"	July- Sept	15
8	D	Lemon Verbena	Lemon Verbena	A	Spring	Plant	na	36"	July- Sept	15
9	D	Rosemary	Rosemary	P	Spring	Plant	na	48"	June- Sept	7
10	D	Rosemary	Rosemary	P	Spring	Plant	na	48"	June- Sept	7

• *The Bed #s and Sections correspond to the landscape design shown on page 26.

APPENDIX E.

Mack Alive Greenspace Projected Yields

TABLE 2. Mack Alive Greenspace Projected Yields (Primary Blooms): Third Year

PRIMARY SELLER	VARIETY	BLOOM COLOR	STEM LENGTH	BLOOM TIME	TOTAL PLANTS	#BLOOMS /PLANT	TOTAL BLOOMS
Peony	Kansas	Red	30"	May	40	4	160
Peony	Duchesse de Nemours	White	30"	May	15	5	75
Hydrangea	Strawberry Sundae	Pink	30"	July-Sept	11	20	220
Hydrangea	Tardiva	White	36"	July-Sept	5	14	70
Hydrangea	Pee Wee	White	30"	July-Sept	30	14	420

APPENDIX F.

Mack Alive Greenspace Labor Plan

Labor Plan Key:

x= Mack Alive Staff Person 70 hours
 x= New Hire, Part-time Seasonal May-Oct. 30 hrs week x 4 weeks/month x 6 months x \$12/hr = \$9,000

Year 2:
 Start annual flowers and herbs on tables in hoophouse

Plant annual flowers and herbs in areas B, C, and D.

Research and Development with cut flower arranging and sales

Year 3:
 Wholesale flower sales begin

TABLE 3. Mack Alive Greenspace Labor Plan: Year 1

DESCRIPTION OF WORK	Plan	Green Corps Program											
		March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Develop and Post Job Description		5											
Hire Contractor for Tree Removal		3											
Hire Contractor Soil Preparation		3											
Hire Contractor Utility Installation			5										
Develop and Install Signage			3										
Order Perennials (Planted in May, Including Cherry Trees)	A		5										
Recruit Volunteers for Spring Flower Installation	A	3	3										
Oversee Installation of Utilities			5										
Oversee Preparation of Soil			3										
Hire Project Coordinator			3										
Design and Commission of Murals/Green Alley Plan				5									
Purchase and Secure Picnic Tables				3									
Host Spring Perennial Installation Event	A			16									
Water and Weed Perennial Flowers	A			8	8	8	8	8	8				
Order Herbs (Planted in June)	C												
Recruit Volunteers for Spring Herb Installation	C		3	3									
Host Perennial Installation Event (herbs)	C				10								
Water and Weed Perennial Herbs	C				4	4	4	4	4				
Research and Develop Perennial Herb Product(s)	C				7	7	7						
Hire Contractor Hoophouse Construction	D				3								
Order Hoophouse and Tables	D				3								
Order Seed and Greenhouse Supplies	D					5							
Oversee Construction of Hoophouse	D					5							
Set Up Tables and Build Raised Bed in Hoophouse	D						15						
Plant In Ground Beds in Hoophouse	D							7					
Water and Weed Plants in Hoophouse	D							4	4	4			
Order Perennials (Planted in September)	A,B,C					3							
Recruit Volunteers for Fall Flower Installation	A,B,C					3	3						
Host Fall Perennial Installation Event (finish all perennial flowers)	A,B,C							10					
Water and Weed Fall Perennials	A,B,C							4	4				



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info@mi-community.org • 313.962.3171 • mi-community.org
DETROIT | 615 Griswold, Suite 200 • Detroit, MI 48226 • 313.962.3171

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