Visioning Cass: A Roadmap for the Future

Ву

Kyle Anderson, Walid Bamehriz, Michael Grady, Nana Temple, Taylor Valentine, and Parker Wise

A project submitted in partial fulfillment of the requirements for the degree of

Master of Science / Master of Landscape Architecture

(Environment and Sustainability)

at the University of Michigan

April 2024

Project Advisor: Lisa DuRussel, Assistant Professor of Practice

Sustainability Roadmap for Cass Community Social Services

"A Vision for Community-Driven Revitalization and Environmental Stewardship"





Executive Summary

Dexter-Linwood is a neighborhood on the near west side of Detroit. In the heart of this neighborhood sits Cass Community Social Services (CCSS), a non profit organization pursuing a mission to "make a profound difference in the lives of the diverse populations it serves by providing for basic needs, including affordable housing, promoting self-reliance and encouraging community involvement." CCSS works to serve residents both inside and outside its immediate campus, delivering meals, providing healthcare, and maintaining job programs. As CCSS continues to grow and plan for the future, they sought a partnership with the University of Michigan's School for Environment and Sustainability to help them explore opportunities to continue to sustainably redevelop the neighborhood they serve in proactive, rather than reactive ways. With the goal to expand CCSS's reach and deliver more options and programming to help carry out their mission in service to the community, the team's project entailed creating a vision plan and roadmap for future sustainable redevelopment opportunities on and around CCSS's campus.

The "Sustainability Roadmap" consists of projects under the interconnected themes of economic development, health, clean energy, ecological health, community vitality, and strong partnerships, largely inspired from the United Nations' Sustainable Development Goals. Each theme includes goals for specific strategies CCSS could pursue to promote and enhance the theme and the overall mission of CCSS. Embedded in each goal are opportunities and best practices, informed through site visits, case studies, research, information gathering and project management, and include funding strategies, partnership opportunities, implementation plans, and design renderings in order to provide CCSS with a portfolio of potential plans to pursue. Additionally, in order to ensure that development and programming are in sync with the needs of the community, the team presents recommendations to CSSS for how to best deliver services based on community feedback and strategies for further participatory engagement. This document is intended to be a resource for CCSS, helping them sustainably expand their footprint, and leverage their position in the community in order to deliver greater benefits to the neighborhood and the populations they serve.

Acknowledgements

Thank you to our incredible advisor Lisa DuRussel for her time, guidance and encouragement over the course of this capstone project.

The team would also like to extend our thanks to Rev. Faith Fowler and Cass Community Social Services leadership and volunteer team for all that they do for the community and for sharing their vision with us.

We'd also like to express our gratitude to SEAS and the SEAS Sustainability Clinic for their support.

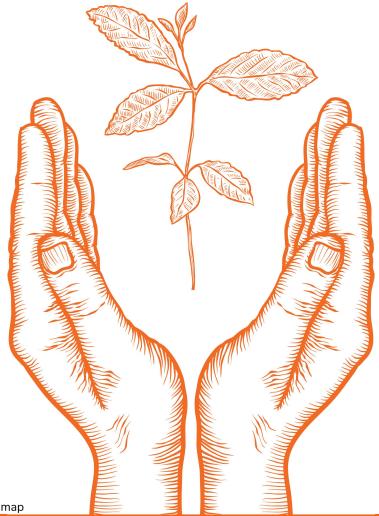


Table of Contents

1	I. Introduction
8	II. Vision
15	III. Sustainability Roadmap
16	Identifying Opportunities for Economic Development
36	Promoting Health and Wellbeing
60	Enhancing Ecological Health
77	Exploring Opportunities for Clean Energy
82	Enhancing Community Vibrancy
103	Identifying, Building and Maintaining Strong Partnerships
110	IV. Conclusion
111	V. Notes and Bibliography
130	VI. Appendices



Introduction

Cass Community Social Services

Cass Community Social Services (CCSS) is a fixture in Detroit's urban development landscape. As a Detroit-based 501(c)(3) nonprofit organization, anchored geographically in the Dexter-Linwood neighborhood, CCSS serves the most vulnerable communities across the city, providing essential services such as food, housing, health services, and job development. These critical pillars support their ultimate mission to end generational poverty.

Established in 2002 as a continuation of the social ministry work being done by Cass Community United Methodist Church, CCSS has a legacy of service that extends back over a hundred years. From running Depression-era food lines to embracing a 21st-century vision that includes green industries and sustainable development, CCSS has consistently adapted to meet the needs of their immediate community and Detroit at large. Today, CCSS harnesses the same pioneering spirit that has characterized its past, with a vision emboldened by the legacy of its longstanding commitment to service.

Under the leadership of Reverend Faith Fowler, CCSS has grown to a force of 100 employees and draws on the dedication of 5,000 annual volunteers. This intricate network is supported by a diverse annual operating budget, totalling \$5 million of public, private and philanthropic funds in 2022. Today, the Dexter-Linwood neighborhood faces challenges such as vacant lots, neighborhood blight, and historical disinvestment, challenges that are representative of problems faced by many other neighborhoods across the city of Detroit [1].



While addressing these challenges, CCSS has not lost sight of their responsibility to steward a greener and more accepting world [2]. One example of how CCSS is working to address these complex challenges is their Tiny Homes program, which creates opportunities for affordable solar-powered housing [3]. As the city faces increasing environmental challenges, CCSS looks to respond with a vision plan that weaves together poverty alleviation, environmental stewardship, and community vitality.

The Sustainability Roadmap

CCSS partnered with the U-M Sustainability Clinic and School for Environment and Sustainability (SEAS) in order to develop a "Sustainability Roadmap" that outlines the plan for active redevelopment of the campus out of which CCSS operates. As the organization continues to plan for the future, they need assistance gathering information, performing research, and creating a roadmap and vision plan for sustainable redevelopment projects that ensures equitable outcomes for the community, and fulfills their needs and desires in a proactive, rather than reactive way.

This sustainability roadmap was designed to envision a future where every project supports the overall health and happiness of the people living in CCSS's neighborhood, and the broader population they serve. Key components include historical analysis, aligning projects with global sustainability guidelines, targeted research, and identifying avenues for further expansion of their services. These endeavors are tailored to fuse the voices of the community with evidence-based strategies, creating a roadmap that stands not only as a testament to CCSS's mission but also as a catalyst for progressive change.

Neighborhood Profile

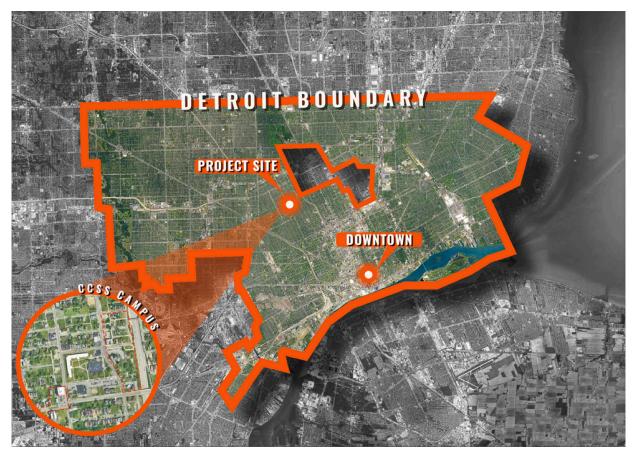


Figure 1. Project Site Context in Detroit [4]

Detroit

Detroit's identity as the "Motor City" was forged through the rise of the automotive industry, with giants like General Motors, Ford, and Stellantis shaping its economic peaks. However, by the late 20th century, challenges such as globalization and shifting market demands led to the industry's decline, triggering the need for economic restructuring and diversification. The city, grappling with sprawling suburbs, racial segregation, and economic inequality, saw a dramatic population decline and widening disparities [5]. Efforts to rejuvenate Detroit involved investing in new sectors like technology and healthcare, prioritizing neighborhood-specific developments, and fostering community engagement to drive regeneration [6]. Amidst this, Dexter-Linwood has been poised as a beneficiary of targeted efforts to revitalize urban spaces, reflecting a community-centric approach to addressing historical socio-economic challenges and laying groundwork for collective prosperity.





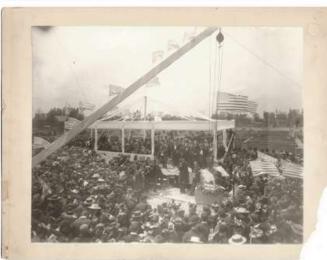




Figure 2. Historical photos of Dexter Linwood [7] Top Left: Central High School, 1927 Top Right: Apartment Building on Elmhurst, 1927 Bottom Left: Groundbreaking Ceremony for Central High School, May 13th, 1895 Bottom Right: Apartment Building on Third ave, 1920s

History of the Dexter-Linwood neighborhood

The Dexter-Linwood neighborhood in northwest Detroit has undergone significant transformations since its formation, reflecting the broader industrial and socio-economic currents of the city. Originally a neighborhood filled with a jewish and white working-class community, Dexter-Linwood's demographics shifted with the Great Migration, becoming home to many African Americans seeking industrial employment [8]. More recently, census reports show that between 2015 and 2018 the poverty level was 51% compared to the poverty level of 31% between 2018 and 2021 in the Dexter Linwood neighborhood [9]. This history paints a picture of resilience amid adversity, setting the stage for CCSS's focused efforts on sustainable redevelopment to rejuvenate this storied neighborhood.

CCSS Campus Current Map

This map shows how CCSS's campus, composed of its it's offices, shelters, residential, and economic ventures, is currently organized.



Figure 3. Current map of the CCSS campus [10]



Figure 4. CCSS Tiny Homes Community Sign on Woodrow Wilson St. [11]



Figure 5. Building of former Woods Cathedral that is now owned by CCSS [12]

Methods

The team's approach was divided into three clear phases: exploring, learning, and planning. Through extensive work across these phases, the team aimed to furnish CCSS with a strategic and tangible sustainability roadmap that propelled the organization toward a sustainable and dynamic future, well-integrated with the needs and aspirations of the community they serve. Each phase emphasized several critical facets:

Exploring Phase

Familiarization: Initially, the team immersed in understanding the ecosystem wherein CCSS operates. Through direct interaction, observations, and participatory activities, the team anchored itself within the socio-cultural intricacies of CCSS's neighborhood.

Analysis: Evaluating parallel urban efforts in similar challenged neighborhoods enhanced the team's contextual awareness. These other areas' strategies and outcomes served as models while designing CCSS's roadmap to identify best practices and potential barriers.

Integration: Delving into historical reports, strategic plans, and global sustainability guidelines, the team succeeded in focusing their study on aspects of sustainable redevelopment, community involvement, and historical evolution in CCSS's neighborhood.

Learning Phase

Data Collection: With a solid understanding of CCSS needs and goals, the team progressed into an intensive learning phase to further refine findings from the exploratory phase. Leveraging information from CCSS's board members through open communication dialogues on existing and future objectives of the organization, the team was able to understand CCSS's current demands and priorities. The synthesis from this informed the team's focus areas and project design.

Case Studies: The team comprehensively investigated case studies to gain an understanding of implementation strategies and potential challenges. This included a systematic review of past CCSS campus comprehensive plans, insights from successful non-profits within Detroit and peer cities, and sustainable development initiatives.

Subprojects and Internships: After having assessed existing and future objectives set by CCSS, each member of the team led a research project pivotal to CCSS. Moreover, all team members participated in summer internships at CCSS, providing a unique opportunity to expand on their research, engage with key stakeholders and compile their findings.

Public Engagement and Trust Building: The team engaged in multiple activities with CCSS to strengthen their relationship with the organization and the community it serves. By participating in tree-planting activities, attending the annual fundraising dinner, and being present at the opening of a newly established community center, the team not only forged links with enthusiastic volunteers and key stakeholders but also demonstrated their dedication to promoting social unity and environmental health in the CCSS campus and its surrounding areas.

Planning Phase

Vision, Strategy and Design: The planning phase translated the team's comprehensive research and the knowledge acquired into a forward-thinking vision plan and strategic roadmap. The team merged insights and feedback to formulate a sustainability roadmap centered on CCSS's mission and community aspirations.

Deliverables Integration: To compile their findings, one main report was created. Included in this report is a detailed, technical roadmap that encapsulates sustainable design insights and strategies for revitalizing CCSS's campus to be used now and in the future by CCSS.

Figure 6 illustrates the strategic flow from the foundational values to the anticipated outcomes as described in the roadmap. Each level is summarized below as:

The first level represents the phase when team contextualized CCSS's mission that is underscored by values of inclusivity, compassion, and a drive for impactful change

The second level represents the phase when the team conducted their research and engaged with community members which informed the development of the roadmap

The third level represents the phase when the team incorporates the six overarching themes into the roadmap which are centered on the needs and aspirations of CCSS

The fourth level represents the phase when the team translates the themes into tangible goals

The fifth level represents the phase when the team developed actionable implementation plans for CCSS to bring the roadmap to life



Figure 6. Illustration of the Sustainability Roadmap's Strategic Flow [13]



Vision

CCSS's mission statement: "CCSS is dedicated to making a profound difference in the lives of the diverse populations it serves by providing for basic needs, including affordable housing, promoting self-reliance and encouraging community involvement" [1] was the primary guiding principle for the development of the sustainability roadmap, combined with the findings from the "exploring, learning and planning" phases of research.

Findings from the 'Exploring' phase

Familiarization: Through direct interaction with CCSS we observed that leadership and staff wanted to build upon the momentum of successful programs such as their Tiny Homes programs and continue to develop the neighborhood and provide more services for all of the residents in the area in and around the CCSS campus. We discerned some of their main desires were to install more solar panels on their campus, enhance natural features, inject economic development into the neighborhood, and provide or support a grocery store in the area - the grocery store was found to be a large need for residents based on a survey conducted by CCSS prior to the start of this project.

Analysis: By analyzing efforts in Detroit neighborhoods such as McDougall Hunt and neighborhoods supported by services provided by Eastside Community Network, the team learned that public participation, community engagement, and strong partnerships were key to success in developing a neighborhood and providing more services for residents.

Integration: Previous strategic plans, key aspects of sustainable development, and the findings from the rest of the exploring phase indicated that enhancing green spaces and improving walkability were further aspects that should be researched in order to promote sustainability, build economic activity, and increase social connectivity. All findings lead us to design and develop areas of research that each team member would spearhead and focus on.

Findings from the 'Learning' phase

Data Collection: While learning more about the

demands and priorities of CCSS, the team learned that while sustainability was a key desire, all efforts and solutions in the sustainability roadmap should contribute to the furthering of CCSS's mission and improve people's wellbeing.

Case Studies: By examining past CCSS plans, other neighborhood plans such as the McDougall Hunt Neighborhood Sustainable Redevelopment Plan, grocery store models, and sustainability initiatives such as solar panel installations, the team refined the areas of research into the six following projects:

- 1. Identifying Economic Development Opportunities
- 2. Grocery Store Study
- 3. Webb Campus Planning
- 4. Solar Energy Installation
- 5. Green Corridor and Road Diet Options
- 6. Identification of Potential Collaborations

Subprojects and Internships: Each member of the team was able to use the six projects listed above as their main focus for a summer internship in the summer of 2023. Each internship provided areas to collaborate with others and allow us to begin to develop a cohesive framework for the roadmap by the end of the summer. Please see appendices [x-x] to see detailed findings and deliverables from each summer project.

Public Engagement and Trust Building: After attending events and interacting with CCSS staff, volunteers, and supporters, the team learned that people were eager to help CCSS expand their reach and create more opportunities for community vibrancy to grow.

Findings from the 'Planning' phase:

Vision, Strategy and Design: Upon completion of the summer internships, we began to compare and analyze each other's work. This led us to think about how we could integrate our work together and establish a framework for the final report and roadmap. In order to help give structure to the roadmap, it was determined that using sustainable development standards such as the United Nations's (UN) Sustainable Redevelopment Goals (SDGs) could help to show how our research would promote development and CCSS's mission.

Deliverables Integration: While developing the report, it was determined that the main content would provide options and opportunities for CCSS to sustainably redevelop the area surrounding their campus while providing further research and information in appendices that can be found at the end of this document.

Vision Plan

The vision plan and sustainability roadmap aims to further the team's findings and the CCSS mission by creating an environment that is vibrant, healthy, and resilient. Through leveraging existing partnerships with local organizations, CCSS aims to foster the creation of sustainable jobs, increase access to nutritious food and comprehensive healthcare, ultimately uplifting their resident's quality of life. Simultaneously, CCSS is dedicated to improving the ecological health of their urban environment by increasing access to green spaces and installing solar systems across their campus to ensure a sustainable future. Through accessible community spaces, CCSS allows for residents to walk to everything they need within short distances of their front door. By actively engaging their residents, CCSS sets a foundation for collective well-being and prosperity. To memorialize these findings, the team has developed a plan of the CCSS campus to visually identify areas of focus and opportunity.



Figure 7. CCSS Campus Vision Map [2]

Overarching sustainable redevelopment themes

To structure the sustainability roadmap that will guide the vision of Cass Community Social Services' future work, the team developed six overarching themes that reflect the key priorities for community-based sustainable redevelopment. The themes focus on the following topics:



Theme 1: Identifying
Opportunities for Economic
Development



Theme 2: Promoting Health and Wellbeing



Theme 3: Enhancing Health and Wellbeing



Theme 4: Exploring Opportunities for Clean Energy



Theme 5: Strengthening Community Vibrancy



Theme 6: Identifying, Building and Maintaining Strong Partnerships

Harmonizing CCSS's Mission with the UN's Sustainable Development Goals

Key inspirations for these themes were the UN's SDGs, the team's research findings and CCSS's mission statement. These goals are derived from the 2030 Agenda for Sustainable Development and outline global efforts towards ending poverty hand-in-hand with efforts to reduce inequality, improve health, spur economic growth, take climate action, and protect the world's ecosystems. The SDGs represent the path towards "peace and prosperity for people and the planet, now and into the future" [3] and highlight the interconnected nature of social, environmental, and economic well being. By integrating these SDGs into the remaining scopes of work, CCSS displays its commitment to not only enhancing the local community but also contributing to the global agenda for sustainable development. These connections showcase the organization's multi-dimensional approach to promoting holistic well-being, environmental stewardship, equitable growth, and enduring community partnerships.

Each of the sustainable redevelopment themes presented in this vision plan and strategic roadmap aligns with multiple SDGs, with projects under each theme addressing specific targets within each goal. See Appendix A for further details of each goal and specific targets that informed our themes.



Figure 8. The United Nations's Sustainable Development Goals [4]

Theme 1: Identifying Opportunities for Economic Development

CCSS's primary mission is to serve areas of concentrated poverty, providing for basic needs like food, housing and medical care, in addition to job programs that allow for financial stability, workforce development, and poverty alleviation. The United States Economic Development Administration defines economic development as "creating the conditions for economic growth and improved quality of life by expanding the capacity of individuals, businesses, and communities to maximize the use of their talents and skills to support innovation, job creation, and private investment," [5].

Economic development is often a key driver of sustainable development initiatives, serving as a way to provide opportunities in a community and help alleviate poverty. In the context of CCSS, economic development is also geared towards improving social and environmental well-being in the community.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Provide Workforce Development
- Expand Green Social Enterprises
- Acquire Additional Properties

Theme 2: Promoting Health and Wellbeing

A central priority for both CCSS and general sustainable development initiatives is improving the health and wellbeing of people. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [6]. This encompasses access to nutritious food, healthcare, and environments that promote social, physical and mental health. Health is inseparable from many of the other themes, particularly influenced by economic, ecological and community prosperity.

The vision for health and wellbeing is a thriving community in which everyone has access to nutritious food, affordable healthcare, shared green space, and environments free from pollutants. The design of the neighborhood promotes social connection, physical activity, and fosters a sense of safety and belonging. In this vision, community members enjoy improved health outcomes, reduced burden of disease, and overall improved prosperity. In conjunction with the other themes, the goals under this theme seek to use sustainable community redevelopment initiatives to elevate the quality of life for all individuals.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Increase access to healthy food
- Enhance green space and walkability to promote outdoor engagement
- Pursue initiatives that prioritize mental wellbeing

Theme 3: Enhancing Ecological Health

CCSS is embarking on multiple projects whose goals include improving the ecological health of the Dexter-Linwood community. Ecological health is a broad term, though in this context encompasses both living and nonliving dimensions of the natural environment. These dimensions can include everything from air and water chemistry, to animal and plant biodiversity. Decades of research has shown that improving the local natural environment can directly and dramatically impact physical and mental health, and can have knock on socio-economic benefits to communities [7]. There are four urban ecological forces which are known to have a measurable and significant impacts on individual and public wellbeing - local air quality, urban heat, stormwater flooding, and biodiversity [8] - which are actionable at the scales CCSS is working within and tied into the broader sustainable development goals outlined by the United Nations Sustainable Redevelopment Goals.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Improve Local Air Quality
- Reduce Urban Heat Island Effect
- Manage Stormwater Runoff

Theme 4: Exploring Opportunities for Clean Energy

CCSS aims to serve people and its community while also being as sustainable as possible. Part of this commitment to sustainability is seen through implementation of renewable energy integration and production on CCSS buildings and properties. In addition to environmental benefits, renewable energy and energy efficiency can lead to a reduction in energy costs and less pollutants from fossil fuel energy use. CCSS aims to use solar panels as much as possible on existing and new developments in order to provide its residents with basic energy needs and lessen its impact on the environment.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Expand CCSS Solar Energy Efforts
- Design for Energy Efficiency
- Install Solar Security Lighting on CCSS Campus

Theme 5: Strengthening Community Vibrancy

Building a strong community that encourages involvement is a central tenant to CCSS's mission [9]. Pursuing initiatives that foster social health and connection to place, strengthen community relationships, and build collective capacity are essential components of sustainable development, ensuring that communities are not only resilient but capable of nurturing the well-being and aspirations of their residents.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Create accessible public spaces for social connection
- Foster social cohesion through enhanced community programming
- Engage community on future projects and initiatives through participatory planning

Theme 6: Identifying, Building, and Maintaining Strong Partnerships

Formal partnerships are important to sustainability and development so that more resources and knowledge can be available to a large collective of organizations, agencies, and businesses to achieve a sustainable future [10]. CCSS would like to provide for and serve a larger population and create long term improvements for as many people as possible in their surrounding areas. Establishing partnerships can help to affect a wider geographical and constituent range. CCSS can use and share knowledge and resources to provide needs to more people and create opportunities to allow people to emerge from poverty and have a realistic opportunity to enhance their quality of life.

The goals for this theme integrated into the CCSS Sustainability Roadmap include:

- Foster Connections with the Local Food System
- Cultivate Partnerships with Greening and Environmental Organizations
- Partner with Organizations Operating in Neighborhood
- Continue and Develop Institutional Partnerships



Identifying Opportunities for Economic Development

Opportunities built by and for the community



The plan laid out in the ensuing sections will serve as a valuable resource for CCSS to create workforce development opportunities, stimulate business growth, and enhance the overall prosperity of the community it serves. Each strategy or initiative is tailored to the community's context and needs, ensuring a locally-driven, inclusive, and sustainable approach to economic development. This theme covers the latest economic situation of specific regions within CCSS's campus and the larger Detroit area.



Figure 9. Highlighting Detroit on the map

Relationship to Sustainable Development

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[1] Understanding the interlinkages between economic development and other sectors such as health and the environment allows for the design of economic initiatives and policies that ensures important aspects such as the health of residents and environmental conditions are not exploited in order to achieve prosperity. As a result, the economic development strategies outlined in this theme were tailored to promote economic growth across CCSS's campus while prioritizing low environmental footprints and positive health and wellbeing.

Dimensions of Economic Development

In the context of this project for CCSS, economic development involves creating opportunities for and enhancing the economic self-sufficiency of the community members. The initiatives are designed to ensure they provide long-term, sustainable growth that contributes not just to the economic well-being of the community but also to social and environmental well-being.

Connection to CCSS's Mission

Some of the major impacts of this theme includes alleviating poverty, enhancing wellbeing and providing access to resources and opportunities for the community CCSS serves. The theme encompasses initiatives to enhance workforce development, stimulate sustainable businesses and strengthen overall social infrastructure development. The fundamental premise of this theme is to foster sustainable economic development that leads to the improved well-being and quality of life of CCSS's community members. By lowering the unemployment rate of low-income individuals, providing job opportunities to disabled and ill individuals and monitoring poverty levels regularly, CCSS is gradually meeting their objective of envisioning an environment that is vibrant, healthy, and resilient while adhering to sustainable development goals listed in their mission.

Goal 1: Introducing workforce development opportunities

One of the main priorities identified by the team is to implement programs that will assist the community served by CCSS in learning the skills required to secure in-demand jobs and contribute to a prosperous economy. Equipping individuals with the essential job skills not only improves workforce development, but also assists CCSS in filling potential job vacancies resulting from their new business ventures. Moreover, an analysis of income levels, poverty levels, educational attainment for Detroiters was conducted using charts and graphs in order to highlight economic challenges that CCSS is facing and the areas that require more focus in the future.

CCSS existing workforce development programs

The existing workforce development programs established by CCSS not only serve as a springboard for future expansions but also exemplify CCSS's tailored approach to fostering employability and economic growth within their community. CCSS's sustainability institute was launched in 2021 and it is a 6-month educational and vocational training program to prepare students for green jobs. CCSS currently provides vocational training programs by allowing Cass house residents to participate in sustainability classes that provide education and training for job sectors dedicated to ecological stewardship, some of which are within CCSS's green industries. These opportunities provide participants with the knowledge and skills required for success in environmentally responsible industries [2]. In addition, CCSS offers job search assistance and life skills workshops to Antisdel residents, ensuring that they receive comprehensive support aimed at improving their professional and personal development [3].



Figure 10. CCSS 2021 Annual Report [3]

One-cup Car Wash Workforce Development Opportunity

Through their One-cup Car Wash project, CCSS has already paved the way for employment opportunities that not only conserve natural resources but also promote local job growth and development. The team developed a detailed implementation plan in the opportunities section to assist CCSS in meeting their goal of providing workforce development programs in environmentally sustainable car wash operations that link water conservation to community service.



Figure 11. CANVA Image showing a microfiber cleaning cloth used in CCSS's one cup car wash

Sustainable Grocery Store Workforce **Development Opportunity**

Expanding from established initiatives, the nonprofit grocery store project proposed by CCSS harnesses the potential to employ and train community members for sustainable food retail. The labor required to successfully implement a non-profit-operated grocery store allows CCSS to employ community members while also incorporating job skills training programs that expand future vocational opportunities. Inspired by similar successful models detailed in Appendix B1, this venture is well-positioned to contribute to local economic revitalization and provide practical skills development.



Figure 12. CANVA Image showing customer-employee interaction in CCSS's future sustainable grocery store

Eco-gym Workforce Development Opportunity

CCSS's future Eco-gym project presents an innovative approach to workforce development by tapping into the growing interest in sustainable living and fitness. This initiative aims to train individuals in eco-friendly gym management and operations, integrating physical wellness with environmental stewardship. An in depth implementation plan is provided under the future opportunities section.



Figure 13. CANVA Image showing customer-employee interaction in CCSS's future eco-gym

Challenges

Declining Income and rising poverty rates in certain regions across CCSS's campus, emphasize the need for promoting economic growth. By evaluating income and poverty rates across CCSS campus, the team identified regions that require immediate attention and improvements.

Tiny Homes Region Economic Analysis

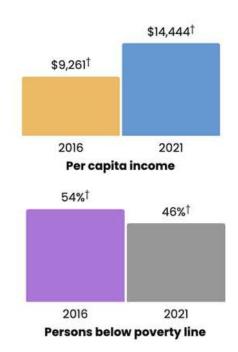
The Tiny Homes project at CCSS in Detroit began construction in 2016. The first six homes were completed and had residents move in by the end of 2017. The project has been ongoing, with additional homes built in subsequent phases. The initiative aims to create a community of tiny homes that are affordable and provide a path to homeownership for individuals with lower incomes, including those affected by homelessness or other economic hardships. In the area surrounding the Tiny Homes community, per capita income has seen a notable increase from \$9,000 in 2016 to \$14,000 in 2021. Along with this economic uplift, the percentage of persons living below the poverty line has decreased from 54% to 46% during the same period [4]. This positive shift could be connected to the enhanced access to economic resources provided to low-income individuals, such as tiny home ownership incentives. These results suggest that expanding access to similar economic resources, including the introduction of new job training programs, could further advance income levels and alleviate poverty.

World Building & Fox Family Center Region Economic Analysis

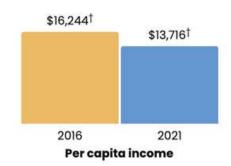
In contrast, the region encompassing the World Building & Fox Family Center has undergone an economic downturn. From 2016 to 2021, per capita income declined from \$16,000 to \$14,000, while the proportion of individuals below the poverty line sharply rose from 26% to 52% [5]. The declining income and heightened poverty rates indicate a lack of sufficient economic resources for residents in this area.

To address the growing economic disparity, CCSS should prioritize this region by increasing accessibility to economic resources, job training, and employment opportunities.

Tiny Homes Region



World Building & Fox Family Center Region



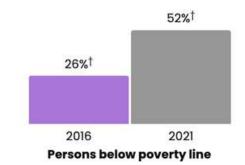


Figure 14. Change in income/capita and poverty rate across CCSS's Tiny Homes and World Building Regions [5]

Greater Detroit economic analysis

The economic landscape of the greater Detroit area, as evidenced by 2021 Census data, highlights a stark correlation between educational attainment and employment rates. In the city at large, higher levels of education have been shown to significantly improve job participation and employment prospects. This serves as a strong indicator that programs providing education and vocational training beyond high school are vital for economic upliftment and stability [6]. Furthermore, the unemployment trends in Detroit have shown a volatile trajectory in light of the COVID-19 pandemic, with rates peaking at 21% during the height of the crisis and subsequently declining to a 22-year low of 6.4% by November 2022. However, the recent increase to nearly 8% by June 2023 is a sign highlighting the need for enhanced economic development strategies to mitigate such fluctuations and promote sustained employment growth [7]. The overall improvement in the city's unemployment rate, which currently sits one full percentage point below the prepandemic level, is a positive sign (See Appendix B1). From an optimistic perspective, the city's continued recovery over the coming years will draw residents back into the workforce [8]. Therefore, the implementation of new workforce development initiatives enables CCSS to positively shape Detroit's labor force as well as the neighborhood that they serve by increasing employment rates and income while also bolstering Detroit's recovery and growth by providing individuals with the skills required in a competitive market.

Better educational standing leads to improved quality of life

Census data from 2021 shows that Detroiters who have degrees or credentials beyond high school are more likely to be in the labor force and employed than their peers. Providing educational and training opportunities beyond a high school degree or GED is critical to improving employment outcomes, and thereby increasing economic security and prosperity in Detroit. Initiatives created by the Mayor's Workforce Development Board are moving the needle on educational attainment for Detroiters [9]



Figure 15. CANVA Image showing 6 macro-economic factors that should be considered when making strategic decisions

Changes in unemployment rates (2014 till 2023)

At the height of the COVID-19 pandemic, 21% of Detroiters were experiencing unemployment, but a strong recovery has led Detroit to a 22-year low unemployment rate of 6.4% in November 2022. The unemployment rate has risen to almost 8% in June 2023. This signifies the need for future economic development initiatives to bring the unemployment rate back down [10]

Education and Employment

Evidence continues to demonstrate that obtaining postsecondary education correlates to improved employment outcomes for Detroiters

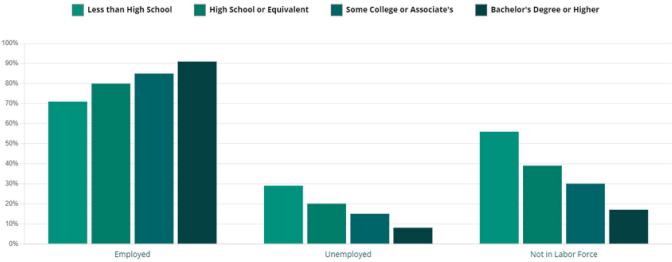
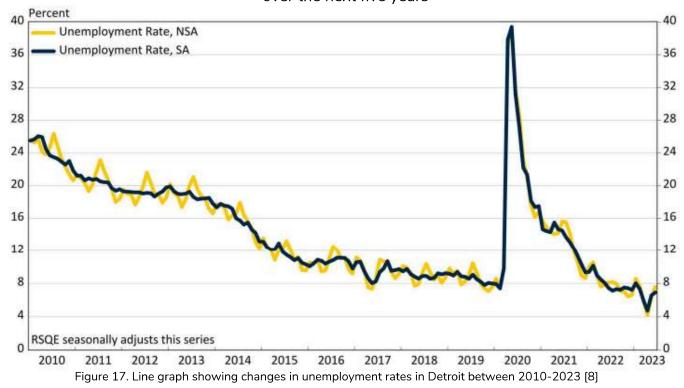


Figure 16. Bar graph showing relationship between post-secondary education achievement and employment outcomes [9]

Detroit Unemployment Rate

Projections suggests that Detroit's unemployment rate will consistently fall below 6 percent over the next five years



Future Opportunities

Building on CCSS's existing workforce development programs offered by Cass House and Antisdel Services

CCSS can partner with organizations that specialize in environmental education, sustainable business practices, and green technologies. These organizations can help train employees for advanced roles within CCSS's Green Industries. Non-profit organizations centered on sustainability often conduct workshops and educational programs that could train CCSS employees in up-cycling, recycling, and creative environmental solutions (e.g. Green Living Science, EcoWorks)[11]. More specifically, organizations that specialize in tire recycling and materials repurposing could offer targeted training for jobs within CCSS's green industries (e.g. US Tire Manufacturers Association) [12]. Other local maker spaces focused on sustainable materials could offer CCSS hands-on training in crafting and up-cycling jobs within their green industries (e.g. i3Detroit)[13]. To enhance and build upon the career preparation services offered at Antisdel as part of CCSS's workforce development programs, CCSS can curate a mix of partnerships to diversify the career preparation options available to Antisdel residents. The aim would be to create a robust support system that not only prepares individuals for immediate employment but also equips them with skills for long-term career growth and stability. Local workforce development organizations such as "Detroit **Employment Solutions Corporation" and** "Goodwill Industries of Greater Detroit" offer job readiness programs and connect individuals to a network of employers [14]. Non-profit organizations such as "SER Metro-Detroit" specialize in job training and offer tailored support for individuals entering or reentering the workforce. Vocational and Adult Education Providers such as "Focus: HOPE" offer practical skills training such as resume writing, interview preparation, and soft skills necessary in a professional setting [15].



Figure 18. Planters that were made out of illegally dumped tires. Created by Employeees at Cass Green Industries [3]



Figure 19. Employees at Cass Green Industries that provide document destruction services such as paper shredding and media/x-ray film destruction [3]

Workforce Development in CCSS's One Cup Car Wash

For the One Cup Car Wash initiative, CCSS envisions a program that imparts crucial skills for sustainable operation within the car wash industry. To implement this strategy, CCSS can establish partnerships with organizations specializing in eco-friendly practices and water conservation which is essential for setting industry standards for sustainable car washes. Associations such as the "International Carwash Association" offer insights into water-saving technologies and can provide training to CCSS employees on how to utilize and maintain such systems [16]. Connecting with local environmental agencies, such as the "Michigan Department of Environment, Great Lakes, and Energy", can enrich the program with best practices in water stewardship, which are vital to the project's sustainability objectives [17]. To enhance customer service and business operations expertise, CCSS might collaborate with vocational schools, for example, "Wayne County Community College District ", to offer certifications and training programs in customer relations and business management tailored to service industries[18]. The collaborative outcome will not only lead to operational excellence but also instill a culture of sustainability and customer-focused service at the One Cup Car Wash, contributing to CCSS's overarching goal of workforce advancement and environmental responsibility.

Workforce Development in CCSS'S **Sustainable Grocery Store**

CCSS's initiative to establish a sustainable grocery store presents a unique opportunity for workforce development in retail and sustainable food systems management. To bring this vision to life, CCSS may seek alliances with local business schools and retail management training programs, such as those offered at the "Mike Ilitch School of Business" at Wayne State University, which could provide specialized training in inventory management, customer service excellence, and sustainable business operations [19]. By collaborating with food justice organizations like "Detroit Food Policy Council," CCSS can ensure that the workforce is not only skilled in retail operations but also wellversed in principles of food equity and community nutrition [20]. This intersection of skill sets will help CCSS create a grocery store that is a model for addressing food insecurity while providing meaningful employment and training. Partnerships with agricultural cooperatives or urban farming projects, such as "Keep Growing Detroit," may also assist in offering future employees real-world experience in understanding produce sourcing and the supply chain, which can help them become highly proficient in their specific jobs [21].



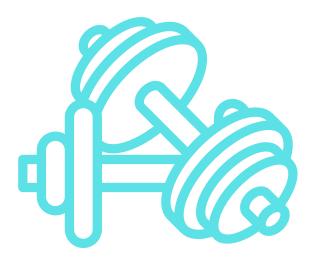


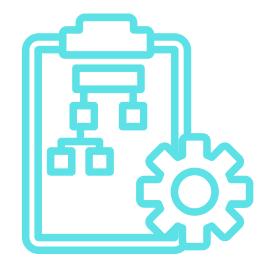
Workforce Development in CCSS's Eco-

The forthcoming CCSS Eco-Gym business venture bridges the gap between sustainable living and fitness, creating a need for a specialized workforce adept in both arenas. To address this, CCSS should consider collaborating with health and wellness education centers, such as the "National Academy of Sports Medicine" and "American College of Sports Medicine", which can provide certification and training for personal trainers and fitness professionals with an emphasis on sustainability [22]. Moreover, aligning with local environmental groups, particularly those like "The Greening of Detroit," can infuse employees with lessons on ecofriendly facility management and can help CCSS's Eco-gym establish protocols and practices that conserve energy and minimize its carbon footprint [23]. Business incubators, such as "TechTown Detroit," offer training in the operational and administrative aspects of running an Eco-gym [24]. The adoption of these strategic partnerships not only prepares individuals for careers at the intersection of health and sustainability but also positions the Eco-gym as a pioneering model for the future of the fitness industry.

Implementation plan

- 1. Assess the residents' current skills and compare them to the skills required for existing and future CCSS green business ventures as well as local job market demands. Then, identify skill gaps that need to be addressed to make residents viable candidates for these job opportunities
- 2. Develop or partner with existing programs that provide training in high-demand areas relevant to CCSS's needs, ensuring alignment with future job openings.
- 3. Establish hiring targets to prioritize employment for Detroit residents, with specific outreach to CCSS residents
- 4. Monitor hiring practices to ensure compliance with the DLHEO's standards and report on progress
- 5. Monitor the impact of training programs on employment rates, employee work-efficiency, employee engagement and morale.
- 6. Offer ongoing support and mentorship for individuals who have completed training programs, helping them transition into their new roles and navigate the workplace
- 7. Involve residents in the planning and implementation phases of workforce development programs to ensure they meet the community's needs







Goal 2: Developing sustainable social enterprises

Building on CCSS's commitment to environmental stewardship and sustainable livelihoods, this goal focuses on accelerating the growth of green social enterprises that align with CCSS's mission and the community's economic needs. The expansion of ventures like the sustainable grocery store and ecogym, alongside the consolidation and development of successful projects such as the One Cup Car Wash, will be central to this effort. These initiatives not only generate employment that fits into CCSS's current Green Industries and advances the organization's goal of integrating sustainability and economic development, but they are also well-supported by the workforce development programs that CCSS has introduced and will continue to introduce. All three venture projects are essential for achieving one of CCSS's many core principles as they actively support people with disabilities or other job barriers to operate and maintain the enterprises.

One Cup Car Wash

In alignment with ongoing efforts, the One Cup Car Wash has already demonstrated the viability of an eco-friendly business venture within the framework of CCSS's vision. As a business in progress, it sets the groundwork for water resource sustainability, potential cost-saving, and the creation of jobs that contribute positively to the environment.

Sustainable Grocery Store

The sustainable grocery store initiative represents a commitment by CCSS to decrease food waste, increase the availability of healthy food options, and stimulate local economies, all while contributing to a decrease in greenhouse gas emissions.

Eco-gym

The proposed eco-gym provides an avenue for CCSS to reduce the unemployment rate among low-income individuals and bolster their efforts of promoting environmental sustainability across their campus.

Challenges

CCSS is confronted with specific challenges that stem from the scarcity of natural resources, which impact the organization's ability to deliver its services efficiently and sustainably. By developing and enhancing sustainable business projects such as a sustainable grocery store, ecogym, and the One Cup Car Wash, CCSS can create targeted solutions to these pressing issues.

Water conservation in car wash operations

According to the International Carwash Association, an average home car wash can use 80 to 140 gallons of water, while a waterless (one cup) car wash method uses almost no water. CCSS demonstrates the growing concern for conserving water resources in its One Cup Car Wash project [25].

Combating food waste and scarcity

In the face of the alarming statistics from the USDA revealing that up to 40% of the US food supply is wasted, Detroit's challenges with food deserts become even more acute. As CCSS provides essential meal services, by preparing and serving 700,000 meals a year to those experiencing homelessness and living in poverty, addressing food scarcity head-on is critical [26].

Energy intensive operations

With the rising demand for environmentally conscious projects in the face of climate change, the eco-gym initiative is essential as it would allow CCSS to incorporate sustainable business practices within its operations and reduce its overall environmental footprint [27].

Implementation Plan

Sustainable Grocery Store business model

1. Securing a suitable location:

CCSS will identify and secure a strategic location for the sustainable grocery store near its campus, where economic development is most impactful. A potential site for the development could be the recently renovated Web Community Center, where the addition of a grocery store could stimulate economic activity and address the challenge of low income levels and high unemployment rates in the region.



Figure 20. Al generated exterior and interior design renderings for CCSS's future Sustainable Grocery Store

2. Identifying supply chain partners and local farmers for sourcing product:

To ensure a robust supply of fresh, locallysourced products, CCSS can engage in partnerships with Detroit-based urban farms and agricultural organizations such as "Recovery Park Farms" and "Detroit Black Community Food Security Network's D-Town Farm" [28]. These partnerships would provide direct access to locally grown, sustainable produce, supporting local agriculture and reducing the environmental impact associated with long-distance food transportation. Additionally, CCSS could collaborate with farmer's markets such as the "Eastern Market", which is a vibrant hub for regional farmers and could serve as a supplier for the grocery store [29]. CCSS could form relationships with specific vendors there who align with sustainable practices. Developing a network of local farmers and producers is crucial, and participation in initiatives like "Michigan Good Food Charter" could help solidify these relationships, ensuring a steady supply chain that supports Michigan's agricultural community [30].

3. Incorporating waste reduction practices, recycling initiatives and a system for unsold produce:

As part of its business model, CCSS's sustainable grocery store will incorporate a comprehensive waste reduction program that aims to minimize food waste through several innovative practices. This includes setting up an on-site composting system that converts organic waste into valuable compost, which can then be used in local urban farming initiatives or community gardens, such as those managed by "Keep Growing Detroit" [31]. The grocery store will also implement a robust recycling initiative to manage non-organic waste. By partnering with local recycling services like "Recycle Here! Detroit", CCSS can ensure that packaging materials and other recyclables are processed responsibly, reducing the store's environmental footprint and aligning with citywide sustainability goals [32].

To address the problem of unsold produce, CCSS can develop a distribution system that diverts surplus food to its meal services, thereby providing fresh, nutritious ingredients for the 700,000 meals it annually prepares for the homeless and impoverished. This system will be closely coordinated with food rescue organizations such as "Forgotten Harvest" and "Gleaners Community Food Bank", which specialize in food distribution to those in need [33].

Eco-gym business model

1. Securing a suitable location:

To launch the eco-gym, CCSS will pursue a strategic location selection process that not only accommodates the gym's operational needs but also reflects its environmental ethos. One promising venue is the envisioned green corridor on Woodrow Wilson Street, a site with historical significance to CCSS where previous sustainable endeavors, such as the gym-bicycle project, took place. Renovating a section of the existing CCSS warehouse on this green corridor could create the necessary space for the eco-gym, providing a direct connection to ongoing sustainability efforts. The renovation can incorporate green building protocols to enhance energy efficiency and make use of natural lighting. This location, already familiar to the community and conveniently accessible to neighborhood residents, could become a nexus of fitness and environmental stewardship.



Figure 21. Al generated interior design renderings for CCSS's future Eco-gym (Midjourney)



Figure 22. Al generated exterior design renderings for CCSS's future Eco-gym (Midjourney)

2. Integrating eco-friendly gym equipment:

The eco-gym at CCSS can incorporate advanced fitness machines that are designed to reduce energy consumption compared to conventional options. Examples include treadmills and ellipticals that harness user-generated power or utilize low-energy LED displays and utilize advanced motor efficiency. Brands like "SportsArt" and "Technogym" offer lines of equipment that enhance workout experiences while optimizing energy use [34].

3. Utilizing eco-friendly renovation materials:

For the building and renovation of the eco-gym facility, CCSS can source from suppliers specializing in sustainably harvested or recycled construction materials. Options like bamboo flooring, reclaimed wood, low-VOC paints, and energy-efficient insulation from companies like "Cali Bamboo" or "Green Building Supply" can contribute to creating a healthy indoor environment without sacrificing ecological responsibility [35].

4. Utilizing solar for power:

By Leveraging the expertise of consulting partners, such as Ecojiva, CCSS can integrate solar panels into the eco-gym's design, expanding on their renewable energy sources utilized. This aligns with CCSS's previous project of gym bikes and moves towards a more comprehensive solar solution. Supplementing exercise equipment with a dependable solar array can help power additional gym utilities and offset overall energy costs.

One Cup Car Wash business model

1. Addressing water scarcity through strategic investments:

Continuing its pledge to address water scarcity, CCSS's One Cup Car Wash project will reinforce conservation practices by ensuring that all operations remain water-efficient. This commitment to sustainability involves investing in industry-leading waterless car wash products and technologies that clean effectively while minimizing environmental impact. Innovative products, like sprays and wipes from companies such as "Eco Touch" and "Chemical Guys", allow for thorough cleaning without the need for a water supply [36]. Additionally, adopting microfiber towels that remove dirt without scratching the vehicle's surface can significantly enhance the effectiveness of these waterless cleaning solutions. CCSS can also partner with organizations that specialize in waterless car wash innovations. Forming relationships with companies such as "Optimum Polymer Technologies' ', which produces a range of water-saving products and cleaning agents, can offer CCSS access to top-tier waterless car cleaning technologies [37]. By joining networks and associations dedicated to sustainable business practices, such as the "Green Business Bureau", CCSS can remain informed about the latest tools and practices in water conservation, offering insights into maintaining a green operation [38]. By staying ahead of the curve with the latest advancements in water conservation. CCSS can maintain their car wash's ecological integrity.

2. Sourcing eco-friendly cleaning materials and forming local business partnerships:

To sustain the cost-efficiency of the One Cup Car Wash, CCSS can implement operational strategies that maximize resource utilization and minimize waste. This could involve a comprehensive review of the car wash's supply chain to source more affordable, eco-friendly cleaning materials, and exploring partnerships with local businesses willing to support their enterprise through donations or favorable pricing. For sourcing more affordable, eco-friendly cleaning materials, CCSS could reach out to companies like "Simple Green" or "Detailer's Products", which specialize in producing costeffective and environmentally safe car wash products [39]. Establishing long-term purchasing agreements with such suppliers may result in better pricing and consistent product quality. CCSS can look for partnership opportunities with Automotive stores such as "AutoZone" and "O'Reilly Auto Parts" willing to donate or provide low-cost and eco-friendly biodegradable soaps or microfiber towels as part of their corporate social responsibility programs. Other organizations such as "The Greening of Detroit" and "Detroiters Working for Environmental Justice" are known for their environmental advocacy and efforts to green the city, they could offer support such as educational materials on water conservation or even volunteers to assist with operations [40].

3. Funding workforce programs:

The earnings from the One Cup Car Wash can be reinvested into CCSS's workforce development programs. This creates a self-sustaining economic model where business revenue directly supports the creation and expansion of job opportunities for the community, aligning with CCSS's core principles of self-reliance and empowerment. "Goodwill Detroit" for example, operates a variety of non-profit enterprises, including retail stores and an automotive training program that works in partnership with local manufacturers [41].

The revenue generated from these enterprises is directly reinvested into their job training and placement programs, thereby fostering economic independence among Detroiters and supporting community empowerment. "Focus: HOPE" is also known for its various workforce development programs, which include education and training in multiple fields [42]. One aspect of their sustainability model involves revenue from their food programs, which they reinvest into their training initiatives, thereby helping community members to move towards self-sufficiency. "DRMM" operates several businesses, including a catering service and property management endeavors. Proceeds from these businesses help fund their comprehensive services, including workforce development programs that empower individuals who are homeless or facing substance abuse issues. "SER Metro-Detroit's" ventures, which include community revitalization projects and job training efforts, are designed to both engage and employ local residents [43]. They reinvest the earnings from these projects directly into further community programs and support services, ultimately working towards sustainable community development. These organizations have displayed how NGOs can create sustainable economic models that serve the dual purpose of business development and social service provision. By adopting similar practices, CCSS can establish a robust platform for community growth and resilience, solidly in line with their aim of developing a prosperous and empowered community.

4. Increasing access to inclusive employment opportunities:

Because CCSS places a high priority on providing employment opportunities that are accessible to all, tailoring job positions at the One Cup Car Wash to accommodate those with impairments or illnesses is crucial. This includes adapting workspaces and operational processes to be more inclusive and providing specialized training and supportive equipment where necessary, ensuring a workplace that is both productive and respectful of individual needs.

CCSS can adapt the One Cup Car Wash facilities to accommodate individuals with disabilities by implementing Universal Design principles [44]. For example, installing height-adjustable workstations would allow employees who use wheelchairs to comfortably and safely perform their tasks. Accessible pathways and ramps would ensure mobility throughout the car wash area. Operational processes can be modified to include job rotation to prevent repetitive strain and allow employees to work in different roles that suit their capabilities. The work schedules could be made flexible to accommodate medical appointments or the varying energy levels of individuals with chronic illnesses. CCSS can introduce training modules on the proper use of waterless car wash products that require less physical effort than traditional hose and bucket methods for efficient work without strain. Supportive equipment, such as ergonomic tools with padded grips, can help minimize joint stress for employees with arthritic conditions or other mobility challenges. Provision of low-noise equipment would be beneficial to employees sensitive to sound, like those with autism or hearing impairments. Furthermore, partnering with organizations that specialize in workplace accommodations, like "Michigan Rehabilitation Services" or the "Job Accommodation Network (JAN)", can provide CCSS with expert guidance on creating an inclusive work environment [45]. These agencies can assist in evaluating the specific needs of employees and recommending appropriate accommodations.



Figure 23. Al generated exterior and interior design renderings (with supportive equipment) for CCSS's One Cup Car Wash (Midjourney)

As CCSS continues to evolve and address the growing needs of their community, acquiring additional properties becomes a strategic necessity to scale operations and improve service offerings. In particular, there is a pressing need to expand affordable housing services, which are vital in fostering a stable and thriving community environment. With a focus on long-term sustainability and capacity building, CCSS can leverage new spaces to lay the groundwork for future developments and community programs reflective of CCSS's overarching objectives of empowerment and service. This can be done by identifying and securing properties beyond the locations designated for the Sustainable Grocery Store and Eco-gym.

Introducing CCSS's five-year strategic plan

CCSS has been providing services to the community for 19 years, starting with their initial projects in 2002. Following exceptional accomplishments in 2021, like building 25 tiny homes, a one-cup car wash, and the Fox Family Center, CCSS plans to implement a five-year strategic plan, with the development of their Woodrow Wilson green corridor being a major component. CCSS's current focus is on developing their green corridor, which currently houses the CCSS warehouse and recycling center (12025 Woodrow Wilson), where jobs in their green industries are carried out (such as creating mud mats, creating coasters out of recyclable materials, and hanging planters out of tires that have been illegally dumped in the neighborhood) [46]. To assist CCSS in maintaining its commitment to improving the quality of life for its residents, the team proposed future property acquisitions that will allow the organization to scale its operations and improve its service offerings.

Challenges

The pressing need to expand affordable housing services

The challenges of affordable housing in Detroit are complex and significant. A concerning statistic from the Urban Institute underscores the severity of the issue: out of every 100 extremely low-income households, there are merely 37 affordable housing units available [47].

This shortage of affordable housing units not only places numerous families in perpetuating cycles of poverty and instability, but also limits the broader economic growth potential of the community. The lack of accessible housing options hinders job creation opportunities and property ownership prospects which are fundamental drivers of individual and collective economic advancement. As CCSS looks to the future, understanding and addressing the critical need for adequate housing remains an indispensable facet of fostering a sustainable and prosperous community

Laying the groundwork for future developments

Finding and acquiring suitable properties is a significant obstacle for non-profit organizations, like CCSS, in their pursuit of long-term sustainability and capacity building. The rehabilitation of existing structures to an organization's specific needs goes hand in hand with this and presents another layer of difficulty, particularly in an environment where aging infrastructure may need substantial investment to repurpose effectively.



Main uses of CCSS existing properties

10 out of 13 (76%) of CCSS's existing neighborhood assets are used to provide access to Affordable Housing. In addition, CCSS's Tiny Homes (Single family Homes) project's occupancy is expected to increase over the years; hinting back at the urgent need to expand on affordable housing units occupied by residents.

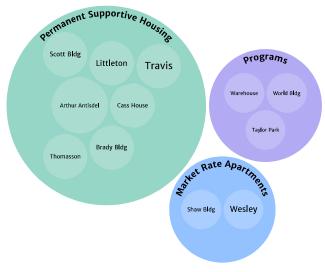


Figure 24. shows CCSS's existing properties and their uses

Future Opportunities

Expanding affordable housing and mixed use developments

The proposed acquisition of vacant lot properties on Woodrow Wilson and Chicago Streets was informed by their potential dual use, where housing can exist alongside spaces for CCSS to run future venture projects. Nevertheless, vacant lots provide CCSS with a blank canvas to scale existing projects or launch new ventures. The flexibility of an undeveloped space means structures can be tailored to suit the unique requirements of various services, from housing to green corridors and community centers. Acquiring and developing vacant lots allows CCSS to have greater control over the type and quality of the developments that take place within its neighborhood.

With the freedom to build from the ground up, CCSS can ensure that all new structures and uses align with their objectives and contribute positively to the community's needs. For example, they can ensure infrastructure projects are built with sustainability and resiliency in mind. This includes the use of green technologies and designs that reduce environmental impact and promote energy efficiency. Moreover, CCSS can partner with organizations like "Habitat for Humanity Detroit ", which has experience in sustainable home building, to ensure that construction adheres to the highest standards of environmental responsibility [48]. Similar initiatives in Detroit, like the "Eastside Community Network's Lower East Side Action Plan", showcase the potential for vacant lots to be transformed into vibrant mixed-use developments [49]. These projects not only provide housing but also include commercial and communal spaces, shaping a cohesive and engaging community.

Contributing to beautification projects and green space for recreation

Recognizing the importance of green spaces for recreation and community well-being, the team has also identified several vacant lots on Richton Street aimed at supporting the Woodrow Wilson green corridor's beautification. The development of green spaces along Richton Street can take inspiration from successful models like the "Detroit Riverfront Conservancy", which has effectively converted urban areas into public spaces [49]. Furthermore, working with organizations like "Greening of Detroit", CCSS can access expertise in landscape design and community gardening, ensuring that these new recreational areas significantly enhance the visual and functional appeal of the neighborhood [50]. These transformed spaces can serve as community hubs for engagement, fostering a sense of ownership and pride among residents and ultimately, shaping a healthier, more vibrant living environment.

Creating job opportunities and spurring economic growth

Developing these lots not only creates green construction, urban landscaping, and property management jobs but also lays the groundwork for long-term employment opportunities within the new businesses and services that will occupy these spaces, furthering CCSS's goal to foster economic growth and job creation within the community. The aim of acquiring the proposed properties is not just to expand the number of affordable housing units, but also to integrate mixed-use spaces that can support the organization's future venture projects. Similar to CCSS's tiny homes, additional affordable housing units can lead to property ownership. Homeownership is often a means of accumulating wealth, as properties tend to increase in value over time - an important step towards economic stability and upward mobility.



Figure 25. shows CCSS's Tiiny Homes on the map [3].

Renovating existing properties to support future ventures

In accordance with the Eco-gym business venture, renovating a section of the current recycling center within the green corridor that previously housed fitness bicycles provides an ideal location for the Eco-gym. Similarly, renovating a section of the Webb Community Center can result in a suitable location for the sustainable grocery store. This strategy is consistent with CCSS's ongoing efforts to maintain health and environmental consciousness while also fostering an environment conducive to business and community growth.

Last but not least, future renovations to the newly established One Cup Car Wash could be tailored to improve the business's accessibility and sustainability by using eco-friendly materials and making specific modifications to support employees with disabilities. This not only responds to an inclusive organizational ethos, but also aligns with CCSS's goal of conserving natural resources and reducing their environmental footprint.

City of Detroit Financing Options

CCSS PRIORITIES-INVESTMENTS MATRIX

		PRIORITIES		
		Affordable Housing	Job Creation	Recreational Activities
INVESTMENTS	Multifamily Apartment Complex	~		
	Tiny Homes Single Family Apartments	~		
	Vacant Land For Future Development	~	~	
	Dog Park For Sheltered Residents			~
	Web Home & Single Family Homes	~		
	Grocery Store		~	
	ECO Green Gym		~	~
	One Cup Car Wash		~	
	Food Pantry And Coffee Shop		~	
	ECO Store For Repurposing		~	
	COVID-19 Shelter & Support	V		

CCSS FUNDING SOURCES-INVESTMENTS MATRIX (FY23)

		FUNDING SOURCES		
TS		CDBG / NOF	CBCDAH	
	Multifamily Apartment Complex		~	
	Tiny Homes Single Family Apartments		~	
	Vacant Land For Future Development Dog Park For Sheltered Residents Web Home & Single Family Homes Grocery Store ECO Green Gym One Cup Car Wash		V	
Z	Dog Park For Sheltered Residents	/	V	
INVESTMI	Web Home & Single Family Homes		V	
	Grocery Store	/		
	ECO Green Gym	V		
	One Cup Car Wash	/		
	Food Pantry And Coffee Shop	~		
	ECO Store For Repurposing	~		
	COVID-19 Shelter & Support	V		

ABBREVIATIONS

CBCDAH - Capacity Building for Community Development and Affordable Housing Grants

CDBG - Community Development Block Grant

NOF - Neighborhood Opportunity Fund

Tables 1 & 2: InvestmentsxPriorities Matrix and InvestmentsxFunding Sources Matrix

Private-Sector Financing Options







Support real estate and business projects that struggle to find traditional financing (Source: Invest Detroit)



Offer technical assistance, data and mapping tools, provide financing options for planning, acquisition, renovation and construction (Source: LISC Detroit)



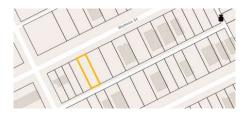
Facilitate property acquisition through permanent financing, with a focus on real estate-backed loans (Source: Capital Impact)



Provides community development organization funds, supports BIPOC housing providers, provides funds for home repairs, supports nonprofits to expand initiatives for the elderly (Source: Enterprise)

Vacant Land for Beautification Projects

2723 RICHTON, Detroit, Michigan 48206



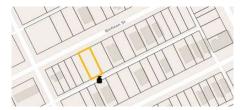


2735 RICHTON, Detroit, Michigan 48206





2717 RICHTON, Detroit, Michigan 48206





2747 RICHTON, Detroit, Michigan 48206





2737 RICHTON, Detroit, Michigan 48206





2745 RICHTON, Detroit, Michigan 48206

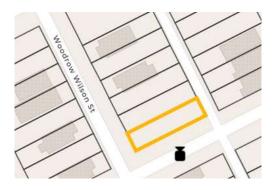




Figure 26. Maps and Realtime Screenshots of Vacant Land Opportunities to acquire obtained from Detroit Land Bank Authority (Source: Detroit Land Bank Authority)

Vacant Land for Residential Projects

7602- 7610 WOODROW WILSON ST DETROIT, MI 48206





3734 W CHICAGO DETROIT, MI 48206





3726 W CHICAGO DETROIT, MI 48206





3742 W CHICAGO DETROIT, MI 48206





Figure 27. Maps and Realtime Screenshots of Vacant Land Opportunities to acquire obtained from Detroit Land Bank Authority (Source: Detroit Land Bank Authority)

Promoting Health and Wellbeing

Thriving communities start with thriving community members



A central priority for both CCSS and general sustainable development initiatives is improving the health and wellbeing of people. The World Health Organization defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"[1]. This encompasses access to nutritious food, healthcare, and environments that promote social, physical and mental health. Health is inseparable from many of the other themes, particularly influenced by economic, ecological and community prosperity.

Dimensions of Health + Wellbeing

Health is a complex, multifaceted concept that combines many aspects of personal wellbeing. A commonly used and adapted framework is the "8 dimensions of wellbeing" model [2], which seeks to demonstrate the multiple areas under which health can be analyzed and interventions can take place. These dimensions often include: physical, mental, environmental, financial, spiritual, vocational, emotional and social health.

The contents of this chapter primarily focus on physical and mental wellbeing. Physical health generally encompasses elements such as nutrition, exercise, sleep, and medical care, whereas mental health can include sources of stress, sense of safety, and brain health. However, due to the interconnected nature of health, several of these dimensions are touched upon under other theme chapters. Vocational and Financial Health are explored in the Theme 1: Economic Development, Environmental Health is further explored in Theme 3: Ecological Health and Social Health is explored in Theme 5: Community Vibrancy.



Figure 28. "Dimensions of Wellness Wheel" [3]

Relationship to Sustainable Development

Health and Wellbeing are central components to sustainable development and the core of thriving communities. The inseparability between health and sustainability is perfectly demonstrated by food, an essential determinant of health that simultaneously has major environmental impacts. Food insecurity and inadequate nutrition are primary drivers of disease and infirmity [4] while the agricultural/food production sector is a significant contributor to waste, fresh water and land use, reduced biodiversity, greenhouse gas emissions, and environmental degradation [5]. Similarly, the health of the environment significantly impacts the health of people [6], which is why when planning for sustainable, thriving communities, health needs to be at the center.

Connection to CCSS's mission

Health is core to CCSS's mission, exemplified through their work providing healthcare services and serving hundreds of thousands of meals to those experiencing homelessness and/or living in poverty. Continuing to center future initiatives around health and wellbeing is essential to meeting CCSS's central goal of fighting poverty, particularly as their programs are targeted at areas of concentrated poverty, which experience increased risk for mental illness and chronic disease, higher mortality, and lower life expectancy [7]. In addition, these communities often have less access to resources that support a healthy lifestyle, such as stable housing, nutritious food, healthcare and built environments conducive to physical activity, while also experiencing increased behavioral risk factors, environmental contamination, violence, and crime [8]. Furthermore, poor health status can also be a pathway into poverty, through medical debt, reduced income, and limited work and educational opportunities, also termed the "health-poverty trap [9]." By prioritizing initiatives that promote health and wellbeing CCSS can both prevent and build pathways out of poverty while contributing to a thriving community.

Implementing the Sustainability Roadmap

The following three goals outline key opportunities for promoting health and wellbeing.

- Increase access to healthy food
- Enhance green space and walkability to promote outdoor engagement
- Pursue initiatives that prioritize mental wellbeing

Nutrition is a highly impactful component of health and wellbeing. Poor nutrition and food insecurity are primary drivers of poor health in the United States [10]. An essential step towards developing thriving communities is by enhancing community nutrition, particularly by increasing access to whole foods, such as fresh fruits and vegetables, both in terms of proximity and affordability. Initiatives undertaken to increase access to healthy food also present CCSS with an opportunity to embody their commitment to sustainability, contributing to a more localized and ecologically restorative food system, while also reducing the significant amount of waste generated by commercial food production.

Detroit Food Landscape

Access to healthy food remains a key challenge in Detroit, with 69% of households reporting food insecurity in 2021 [11]. A gradual decline in grocery stores is one contributor to this problem, as between 2017 and 2020, the number of full service grocery stores in Detroit decreased from 74 to 64, while the number of dollar stores increased from 73 to 89 [12]. In the city of Detroit, there are 10 grocery stores for every 100,000 people, which can be compared to Ann Arbor's 23 stores for every 100,000 people and San Francisco's 40 [13]. It's important to note that food insecurity in Detroit cannot be fully ascribed to this decline of grocery stores. Lack of transportation is also a potent factor, with 34% of Detroiters not having access to a personal or shared vehicle, and low neighborhood walkability and proximity to nutritional sources even further limiting access [14,15].



Figure 29. Map showing food access within a 1.5 mile radius of CCSS's campus and Tiny Homes Community, both which are starred. [23]

Recent years have seen the emergence of exciting developments, such as a vibrant urban farming scene, with an estimated 2,200 gardens and farms, and the establishment of Detroit's first Director of Urban Agriculture in September 2023 [16]. A new community-owned grocery, The Detroit People's Food Co-op (DPFC), currently has over 2400 members and is slated to open May 1, 2024 [17]. Food sovereignty organizations such as Keep Growing Detroit and Detroit Black Community Food Sovereignty Network, have also played key roles in advancing food justice, which addresses not only food insecurity, but also the structural barriers and root causes of food disparities [18].

At least 19 neighborhoods, or approximately 10% of Detroit can be identified as "food deserts" by the United States Department of Agriculture (USDA) [19,20]. Food deserts are defined as "low-income tracts in which a substantial number or proportion of the population has low access to supermarkets or large grocery stores. Low access is characterized by at least 500 people and/or 33 percent of the tract population residing more than 1 mile from a supermarket or large grocery in urban areas [21]." Though food deserts is the popular term, many who study this phenomenon offer the alternative descriptor of "food apartheid," which reminds us to consider that food insecurity is often the result of generations of discriminatory planning and policy decisions [22].

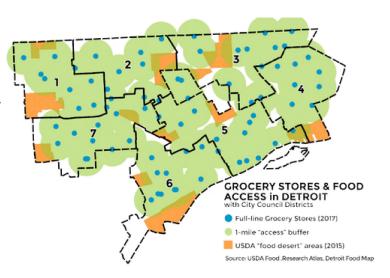


Figure 30. Map from Detroit Food Policy Council showing grocery stores and USDA-designated food deserts within the city of Detroit. CCSS's campus is indicated with a star, showing its proximity to a designated food desert. [24]

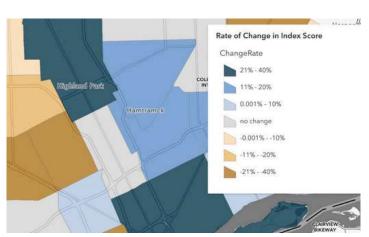


Figure 31. Map from Data Driven Detroit showing food insecurity rate changes from 2014-2021. CCSS's campus is indicated with a star, showing its proximity to areas that experienced significant increases in food insecurity within the last decade. [25]

Grocery Store Project

A recent mail survey sent out by CCSS to local residents asked community members what they would most like to see come to their neighborhood. "Grocery store" was the highest reported answer, selected by 90% of respondents [26].

Our team was directed to explore the feasibility and precedent for a CCSS-operated grocery store. To begin, a thorough exploration of existing case studies was conducted in order to compile existing models, assess best practices, anticipate challenges, and reflect on next steps. This was undertaken alongside an investigation into Detroit's current food landscape, allowing for evaluation of current trends and identification of potential partnerships. Based on the team's findings, recommendations of next steps are presented in order to inform the planning process and potential future implementation plan of a CCSS grocery store.



Figure 32. Al-generated rendering showing a potential future CCSS grocery store. [27]

Nonprofit Groceries in the US

Case studies research

As a first step towards introducing a grocery store into the community, a search was conducted in summer 2023 to identify and evaluate existing models. Primarily focused on finding non-profit operated physical storefronts, a portfolio of case studies was created that compiled existing models, funding sources, suppliers, operational features, best practices, and potential challenges.

Cases were identified through Google search using keywords "nonprofit" and "grocery" and filtered to meet the search criteria of stores that were nonprofit-operated and had some sort of physical or mobile storefront that sold groceries. Information was primarily gathered from store websites, social media pages, local news reports, and other publicly available sources.

In total, 17 models that fit the inclusion criteria were identified across 12 states. As of August 2023, 12 of these stores were still in operation, with 4 having ceased operations, and 1 having been sold to a for-profit operator. For the full case studies portfolio, see Appendix C1.



Overview of the findings

Nonprofit groceries are a relatively new phenomenon that have arisen within the past decade to combat food insecurity and health disparities presented by the "food desert" phenomenon. Based on case study findings, these grocery models are unlikely to ever be financially self-sustaining, meaning they will require a constant stream of grant funding and donations in order to meet operating costs. Successful models employ a procurement team dedicated to finding deals with vendors, distributors, farmers and other local partners on an ongoing basis. Selling produce appears to be especially challenging, with short shelf-life and less customer appeal. Most stores analyzed focus on shelf-stable products and ready-to-eat foods. Nearly all case studies report community input as a vital component, helping to inform product volumes and align inventory with actual demand. Several stores reported having to adjust their inventory or operating practices over time based on community feedback.

Characteristics of successful models

Strong Partnerships

Successful models had strong partnerships with a range of other organizations, including food banks and food rescue organizations, local growers and urban farmers, suppliers and distributors, as well as corporate sponsors, healthcare organizations, hospitals, and universities.

For example, Jubilee Food Market in North Waco, Texas partners with Baylor University on sustainability projects, including bucket composting and an aquaponics greenhouse. Exodus Marketplace in Memphis, Tennessee partners with Trader Joe's to take excess inventory, and Southpoint Community Market in Dallas, Texas partners with local caterers to stock ready-made meals.



Community Engagement

A key feature of stores still in operation was a heavy investment in community engagement and outreach, both in the planning phase and throughout operation. This was done to assess community needs, develop a culturally appropriate inventory, gain feedback on customer experience, and develop a loyal customer base.

For example, Good Food Markets in Washington, DC spent 2 years on financial analysis and community engagement. Fare and Square, fullservice grocery in Chester, Pennsylvania, worked with a local pastor to recruit and facilitate community focus groups and Meiser's Fresh Grocery in Cincinnati, Ohio employs a dedicated "Neighborhood Action Team" to engage local residents on a regular basis.



Donor Engagement

As nonprofit grocery models require a constant stream of funding, successful models have a strong focus on building a strong donor base. "Shareholder" programs and subscription plans that include member benefits and decision-making involvement are some examples, as well as providing multiple donation platforms.

For example, Community Food Club in Grand Rapids, Michigan implements a donor subscription program they call "The Bunch." Similarly, Jubilee Food Market in North Waco created a tiered "stockholder" program with incentives including discount cards and invites to annual meetings. To make direct donations as easy as possible, The Grocery Spot in Atlanta, Georgia provides six different donation platforms including directly through their website.





- Individual donations
 - One-time and monthly giving
 - Donor "share" programs
- Philanthropic foundation grants
- Local and state government grants
- Federal government grants
- Corporate sponsors
- Hospital partners
- Healthcare organizations
- Membership fees
- Sales revenue



- Distributor partnerships
- Wholesale vendors
- Local farms partners
- Food banks/pantries
- Food rescue partners
- Grocery store excess stock
- Drop-off donations
- Dollar stores and warehouse clubs
- On-site farms/greenhouses

Highlights in Innovations and Best Practices

An analysis of existing non-profit grocery stores also revealed many innovations and best practices applicable to CCSS. Some unique models incorporated opportunity hubs and community gathering spaces into their store layout to draw in additional customers and designate the store as a "third place" available for social activities. Others used a community kitchen for preparation of readymade food products, cooking classes, or for renting out to local businesses to supplement the store's income.

Several stores dedicated significant energy towards building a strong social media presence, helping build a customer base prior to opening and continually engaging customers through highlighting sales and new inventory. Another store started as a box delivery service, building up a clientele before opening their physical store.

Additional best practices include ensuring prices were lower than other local stores, steeply discounting fresh produce, and processing "ugly" produce into ready-to-eat products to reduce food waste.

Main Challenges

Essential lessons can be taken from the stores that are no longer operating. These stores report no longer being able to cover operating expenses as the primary reason for closure, highlighting that initially large grants that covered start-up costs were unable to be renewed, and further grant opportunities dried up over time, particularly after emergency pandemic funding had waned. Several cases also revealed that their model never achieved the self-sufficiency their business model anticipated, resulting in higher overhead costs. Another reported reason for model failure was inventories that weren't aligned with community need, either with price points that were inaccessible to local residents, inventories that were too small and resulted in customers looking elsewhere, or product volumes that weren't in line with actual demand. Several operators reflected on the importance of conducting an extensive market study to inform inventory early on in the planning process. Other challenges across models include difficulties selling produce, higher than anticipated labor costs, and inability to weather the post-pandemic inflation.

Next steps



Community Engagement

Based on overwhelming evidence, the team highly recommends planning for extensive community engagement campaigns in advance of any strategic planning. A market survey and financial analysis study are essential to ensure success of a future grocery project, alongside an engagement strategy to help build a community-informed product inventory. This can be done through a combination of surveys, focus groups, communityoriented planning meetings, and local community representatives on the grocery planning task force. For further details on recommended community engagement strategies, see Theme 5: Goal 1.



Developing a Business Plan

Developing a sound business plan in collaboration with professional consultants is the next step CCSS should pursue, taking care to account for the findings, best practices, and areas of concern brought to light by the case study project. The business plan should be in alignment with community feedback, and reflective of the low feasibility of a selfsustaining model. CCSS should anticipate covering a portion of the operating costs, with a starting estimate of 10-15% based on other models. The business plan should also be sure to address ongoing operating expenses and labor costs, and ideally not have all initial grant funding be used on start-up costs. Once a sound business plan is drafted, and advisable reviewed by a secondary expert, it can be used to begin to secure funding.



Securing Funding

Funding can come from a variety of sources, including philanthropic and government grants, corporate foundations, and private donors. Based on findings from the case studies, the team recommends that securing necessary funding, both in advance to initial opening as well as on-going throughout operation, be a high priority. Grant funding will be much easier to secure for the initial costs and opening, but our findings suggest that this will become more difficult as the store remains in operation for some time. For a compiled list of potential grant funding sources, see Appendix C2.



Building Relationships with Partners

Another high priority initiative will be developing relationships with potential partners. Successful models shared a variety of community partners, ranging from nonprofits, corporate sponsors, local government officials, hospitals, and universities. Strong partnerships will be key to maintaining a reliable inventory, securing continuous funding, developing innovative strategies to address challenges, and bringing in a steady customer base. For more on recommended partnerships our team suggests for consideration, see Theme 6: Goal 1. Partnering with local urban farmers is another potential opportunity to obtain fresh produce and champion sustainability goals. For a list of local urban farms, see Appendix C3.

Other opportunities to expand food access

Webb Campus Community Gardens

The Webb Campus/Community Center serves as another project area in which the goal to increase access to healthy food could be addressed. Interior space can be designated for a future grocery store, a community kitchen, hosting food educational programming, or holding farmers' markets, such as through the Detroit Community Markets program. External space and landscaping plans can incorporate community gardens, providing an additional source of healthy food that can engage community members.



Figure 35. Al-generated image of community garden plots located outside the Webb Community Center [28]



Figure 33. Al-generated rendering showing a farmer's market hosted outside the future community center. [29]

Hosting Farmer's Markets

Another opportunity to expand food access at CCSS is through considering hosting weekly farmers markets. This can be organized independently through coordinating with local farmers (Appendix C3), or through existing farmers' markets, such as the Detroit Community Markets program. A partnership with the nearest existing market, located at The Congregation, which is close to CCSS's campus and held on Sundays, could also be considered.



Goal 2: Enhance green space and walkability to promote outdoor engagement

A key element to both physical and mental well-being is time spent outdoors, particularly while engaging in physical activity and being exposed to nature [30]. The health benefits of green space and exposure to nature are extensive and well documented, including but not limited to increased cardiovascular and pulmonary health, improved sleep quality, enhanced immune function, reduced blood pressure, and alleviation of stress and anxiety [31]. Furthermore, urban green spaces help encourage regular physical activity and social interaction, which further improve health and wellbeing [32].

Another component of urban design that influences health is walkability, or the "extent to which the built environment is friendly to people who walk [33]." The presence and vicinity to essential and recreation services, such as grocery stores or parks, is a primary influence to a neighborhood's walkability. More feasible and short-term interventions to improve walkability is through pedestrian experience, which includes the size and condition of sidewalks, protection from vehicle traffic, and aesthetic considerations such as street cleanliness and greenery [34].

Neighborhood walkability is strongly associated with community health outcomes, as increased walkability promotes physical activity, facilitates social interaction, and reduces pollutants from vehicles [35]. Walkability additionally contributes to community sustainability, as it allows for reduced emissions, facilitates a more localized economy, and incentivizes the incorporation of more nature-centric space. As CCSS continues to expand its reach and further develops its campus, efforts should be taken to enhance green space and walkability throughout the neighborhood as key strategies to promote community health and sustainability.



Improve Cardiovascular and Pulmonary Health



Increase Physical Activity



Enhance Immune Function



Lower Blood Pressure



Alleviate Stress and Anxiety

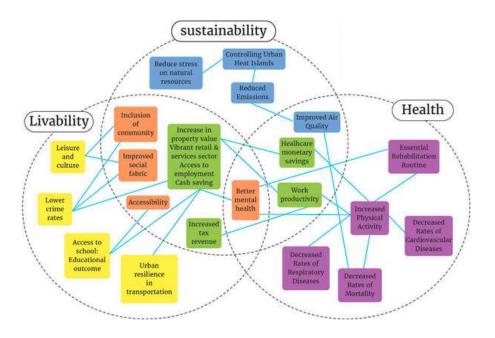


Figure 36. Venn diagram showing walkability's relationship to health, livability and sustainability. [36]



Figure 37: Walkshed map showing properties within a 5-min of Woodrow Wilson St that CCSS currently owns or plans on acquiring. Credit: Michael Grady

Current challenges

From the team's multiple site visits, we were able to observe some of the conditions that present barriers to outdoor engagement. Notably, sidewalks were badly maintained, overgrown and uneven, resulting in inaccessible walkways that deter pedestrian activity. Street lighting was minimal, which discourages outdoor activity after dark. Green spaces were sparse and disjointed, with a lack of connectivity that would allow for residents to easily navigate public space.





Figure 38: Condition of sidewalks on Woodrow Wilson St. Credit: Nana Temple

Opportunities

Enhancing pedestrian experience

A key focus area for implementing this goal is through strategies to improve pedestrian experience across CCSS's campus. This can include widening and repairing sidewalks, particularly those located within the Tiny Homes community, installing adequate night lighting, and incorporating additional greenery. These initiatives should be undertaken in collaboration with the city and local organizations, which is further explored in Theme 6.

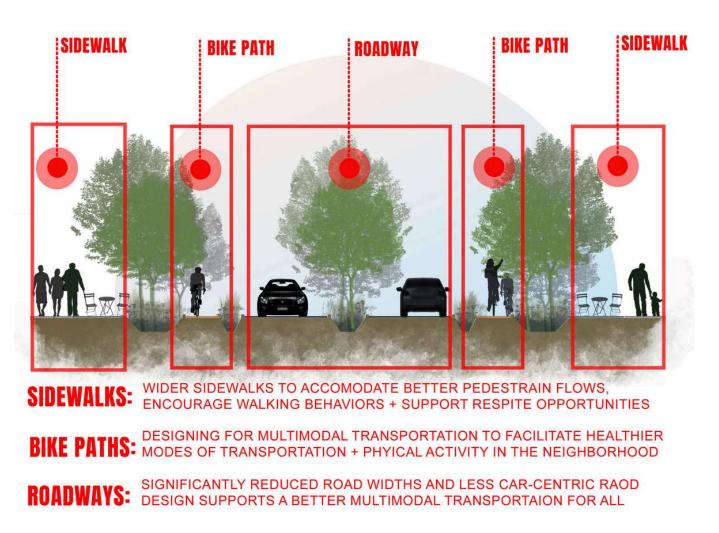


Figure 39. Typical road diet section diagram highlighting the health + well-being elements incorporated into design efforts Credit: Nana Temple

Green Corridor Project

Another area this goal can be implemented is through the "green corridor" initiative aimed at expanding and connecting green space throughout the campus and within the local community. Green corridors are defined as "networks of linked landscape elements that provide cultural, recreational, and ecological benefits to the community [37]." In addition to improving a neighborhood's walkability, the enhanced connectivity brings environmental, social, and economic benefits to communities and improves quality of life. By incorporating natural elements into the urban environment, green corridors stimulate a variety of senses, provide ecological services (see Theme 3), and promote a more socially vibrant neighborhood [38] (see Theme 5). By creating a network of public green space, community members can enjoy increased range of movement, enabling more active lifestyles and creating spaces to facilitate social connection. For more on this project see Theme 5: Goal 2.

Green Corridor Benefits



Make necessities easy to access



Create destinations



Reduce pollution



Spur business creation



Stop traffic violence



Encourage physical activity

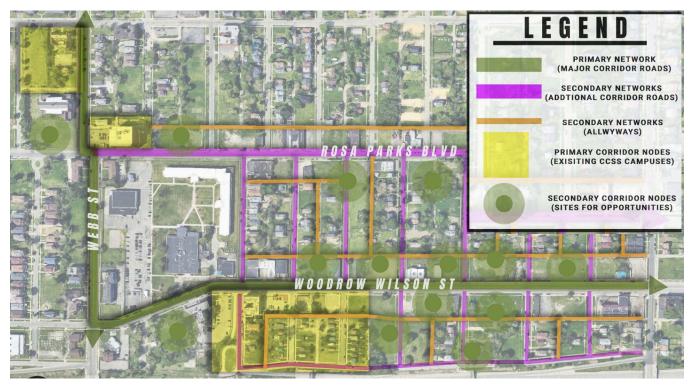


Figure 40. Map of potential green corridor network through CCSS campus. Credit: Nana Temple

Webb Campus Community Center

CCSS is currently planning the renovations for its future community center located at the former Woods Cathedral, the property now referred to as Webb Campus. This piece of land has a significant portion of space for landscaping, presenting an opportunity to incorporate additional greenspace into design plans, including the creation of new urban forests, courtyard gardens, community farms and an outdoor gym.



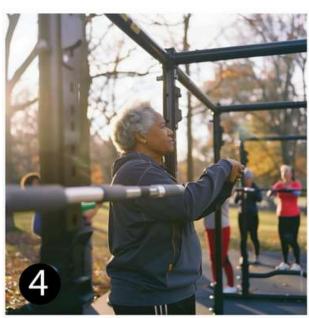
Figure 41. Graphic showing proposed Webb Campus Plans with Health and Wellbeing elements Numbered 1-7 [39] Credit: Michael Grady

- **Forest**
- **Basketball Court**
- **Courtyard w/ Fountain**
- **Outdoor Gym Equipment**
- **Campus Garden**
- **Sports Field**
- Flex Space for Events















The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community [40]." Mental well-being is heavily influenced by social and physical health, and can incorporate aspects such as a sense of safety, ability to cope with stress, and mastery over one's environment. Particularly in light of the persisting impacts of the Covid-19 pandemic and Americans reporting a decline in mental wellbeing, it is more important than ever to prioritize mental health through explicit initiatives [41].

There are several opportunities for CCSS to address key challenges posed to community mental wellbeing. In addition to proactively mitigating concerns outlined below, CCSS can ensure that all future projects take components of mental wellness into account in order to build a healthier community for all.

While this goal focuses on the mental wellbeing of individuals, social wellbeing is a key component to this, which includes a sense of belonging and ability to contribute to one's community. These ideas are further explored along with corresponding strategies in Theme 5: Strengthening Community Vibrancy.

Components of Mental Wellbeing



Sense of Safety / Security

Perceived sense of personal safety is foundational to psychological wellbeing. It includes feeling safe in our homes, workplaces and communities, and can be impacted by physical, financial, interpersonal, and environmental threats [42].



Brain Health

"Brain health is the state of brain functioning across cognitive, sensory, social-emotional, behavioral and motor domains, allowing a person to realize their full potential over the life course [46]." Recognized as a key priority for global health initiatives, brain health can be addressed through health-promoting design, cognitively stimulating environments, and intergenerationally inclusive practices [47].



Sense of Mastery of Environment

Environmental mastery is one's ability to control their environment. Higher levels of perceived control over one's surroundings is an important contributor to psychological wellbeing, and has been associated with reduced stress levels [44].



Stress

Stress is the body's response to a perceived threat, and is a significant contributor to disease. Long-term exposure to stress can lead to chronic mental as well as physical health conditions [43]. The other components listed in, in addition to physical activity and nutrition, all impact stress levels.



Social Connection

Social connectedness is vital to individual and community wellbeing. Those with higher levels of social interaction and supportive relationships are better able to cope with stress, more likely to make healthier choices, and have improved mental and physical health outcomes. A community with strong social connections is also more resilient and better prepared to address challenges [45].



Sleep Quality

Sleep, both quality and quantity, can be a significant influence on mental wellbeing. Improved sleep quality is associated with improved mental wellness, while lack of sleep is a potential contributor to the development of mental illness [48].

Current challenges

Woodrow Wilson road conditions

The wide lanes of Woodrow Wilson Street make it a frequent destination for drag racing, which is a common complaint from local residents, particularly those in the Tiny Homes community, who report not being able to sleep or access the road. These late night occurrences bring in dozens of spectators, contributing to an unsafe environment that puts people in danger and results in police involvement, further diminishing community members' sense of security and heightening stress [49]. Paired with reduction in sleep quality, these factors lead to a strain on community members' mental wellbeing.

Freeway noise and safety concerns

Adjacent to the Tiny Homes community is the freeway, another major source of noise that can take a toll on mental wellbeing. There is only a thin strip of land between the freeway and the Tiny Homes community, with very little visual or auditory buffering. Another freeway-related concern is the exit to Elmhurst, which has been a site for several car accidents due to speeding [50], and has been closed on and off for the last several years until an effective solution could be found.

Occasional instances of damage and theft

CCSS has reported several instances of theft and/or damage, particularly in their on-going construction sites. Neighborhood crime and even perceived levels of crime can contribute to higher levels of distress, anxiety and depression among residents [52].

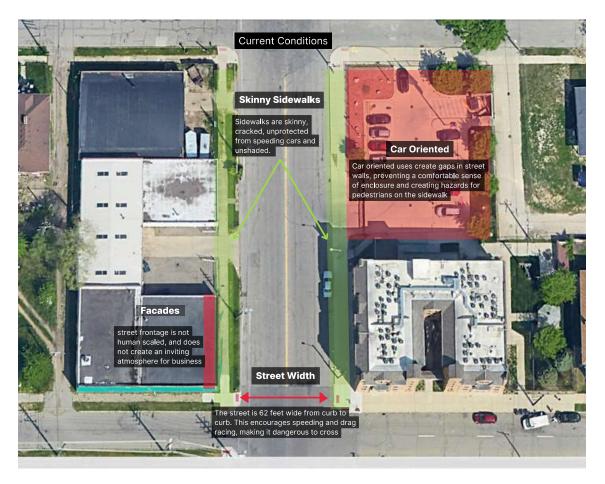


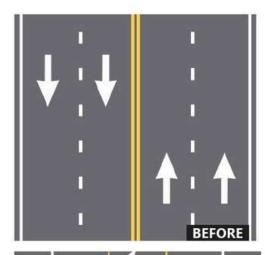
Figure 42. Graphic showing current street conditions of Woodrow Wilson St. Credit: Michael Grady

Opportunities

Traffic calming

A key opportunity to address some of these challenges would be through traffic calming initiatives aimed at reducing speeding, disincentivizing drag racing, improving road safety, and reducing noise. This could be done through our proposed "road diet" initiative on Woodrow Wilson Street, which would reduce the number of lanes for vehicles, widen sidewalks, and improve pedestrian safety and experience.

A road diet, or roadway configuration, typically involves the conversion of a 4-lane roadway to a 3-lane roadway, which can be complemented by widened sidewalks, reduced speed limits, and the opportunity to install pedestrian islands, bike lanes, on-street parking, or transit stops [53]. If undertaken by the City of Detroit, it can also serve as a pilot project for determining effective strategies to improve safety and walkability across the rest of CCSS's campus and throughout the Dexter-Linwood neighborhood.



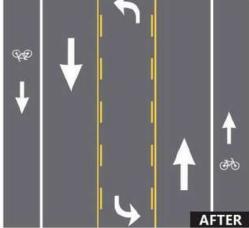


Figure 43. Graphic demonstrating a classic "road diet" lane reconfiguration [54]

Security lighting

Another opportunity to prioritize resident's sense of safety is through deploying additional security lighting. Improved street lighting has been associated with reduction in crime, which in turn can alleviate distress and anxiety amongst local residents [55]. CCSS plans to implement new solar security lighting throughout its campus, which can be done strategically to target sites most likely to deter criminal activity. For more on this project, see Theme 4, Goal 3.

Noise absorption and visual separation

There are a few strategies that could be considered to reduce the amount of noise from the freeway that Tiny Homes residents are exposed to. Though the least feasible, the most effective would be a solid barrier, such as a wall or berm that completely visually obstructs the freeway.

Though unlikely to have as significant an impact, some noise abatement measures may be possible through greenery, particularly high density trees and shrubs. However noise reduction above 3-5dBA through purely vegetation is unlikely within the width that exists between the freeway and the Tiny Homes Community [56]. A minimum of 5 meters and ideally 10 meters of moderately dense vegetation would be needed to reduce traffic noise by half (57), which isn't possible within the small strip between the freeway and The Tiny Homes Community. That said, even if greening initiatives wouldn't directly reduce the amount of noise pollution, trees and shrubs can still enhance the soundscape, reduce residents' perception of traffic, and can significantly contribute to a sense of comfort and improve mental well-being [58]. If choosing to pursue any greening initiatives, partnering with local organizations is highly recommended. For more on potential organizations to collaborate with, see Theme 6, Goal 2.



Figure 44. Al-generated image demonstrating security night-lighting





Figure 45. Top image shows Google Street view screenshot showing the proximity of the Tiny Homes Community and the freeway. Below is a Al-manipulation showing visual separation through trees and hedges [59].

Trauma-informed design

The population CCSS serves need safe, stable and welcoming environments in which to process their experiences, develop social trust, build healthy relationships, and redevelop agency over their lives. Trauma-informed design can help facilitate these desired outcomes. These strategies can be deployed in future CCSS projects, such as the future Webb Campus Community Center, to prioritize mental wellbeing and lead to better health outcomes.

Elements



Dignity & Self Esteem

Reminding individuals of their inherent value



Personal Autonomy

Areas, such as kitchens, workspaces, or gardens where residents can utilize their skills and interact without management from staff



Stress management

Ample interior sunlight, natural mater plants and aquaria, accessible natural lighting that cues regular routines



Privacy & Security

Open sight lines, clear boundaries, Clearly demarcated personal spaces



Sense of Community

Desirable and centrally located common spaces



Creation of Beauty and Meaning

Artwork & furnishings made by residents. Areas, like gardens that allow for ownership and tracking of growth





Bill Richards Center for Healing, Rockville, MD [65]



Karris Supportive Apartments, Grand Junction, Colorado [69]



PATH supportive housing, Aurora Colorado [67]

Examples of Trauma-Informed Designed Spaces



Common Space

[72]



Examples of Trauma-Informed Design Elements

Cued evening lighting

[72]



Away spaces

[74]



Ample Sunlight

[70]



Workplace

[63]



Natural materials & grounding colors



Owned space

[62]



Resident made Artwork

[75]



Healing Garden

[61]



Indoor Plants & Aquaria

[70]



Accessible Nature

[60]



Natural soundscape

[73]

Webb Campus

Webb Campus presents an opportunity to utilize the principles of trauma informed design both inside buildings and in the design of the landscape. The figures below show how a proposed design could incorporate this design philosophy to aid the mental wellbeing of residents and staff.

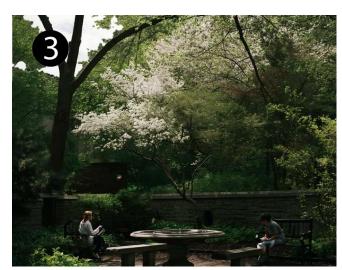


Fig 46. Map showing the layout of the campus, with mental wellbeing elements numbered 1-6. Credit: Michael Grady

- **Forest**
- **Obscured Brick Perimeter Wall**
- **Healing Garden w/ Fountain**
- **Courtyard Garden W/ Fountain**
- **Winter Sunroom**
- Summer Patio w/ Fountain
- 7 **Campus Garden**



Forest Sitting Area



Walled Garden



Seasons Courtyard



Winter Sunroom



Public Summer Courtyard



Community Orchard

Credit: All images generated with Midjourney.

Enhancing Ecological Health



Health for the environment is health for the community

Cass Community Social Services has embarked on a mission to increase their positive impact on the community they serve. Improving the environmental condition of the Dexter-Linwood neighborhood is central to that goal, and the organization is pursuing multiple projects to improve the ecological health of the Dexter-Linwood community. Ecological health, also called environmental health is a broad term, it encompasses both living and nonliving dimensions of the natural environment. These can include everything from air and water chemistry, to animal and plant biodiversity [1]. Decades of research has shown that improving the local natural environment can directly and dramatically impact physical and mental health, and can have added socio-economic benefits to communities [2]. There are four urban ecological forces which are known to have a measurable and significant impact on individual and public wellbeing, and which are actionable at the scales CCSS is working at. These dimensions are local air quality [3], urban heat [4], stormwater flooding [5], and biodiversity [6]. Improvements in these four metrics are core to CCSS' mission of sustainable development, and tie into the broader sustainable development goals outlined by the United Nations. These include good health and wellbeing, clean water and sanitation, sustainable cities and communities, climate action, and healthy life on land.

Neighborhood Challenges

The Dexter-Linwood neighborhood faces several significant ecological harms on a regular basis. Air pollution, mainly from car exhaust, poses threats to human health, especially during the summer [7]. Urban heat island effect, compounded by the relative lack of street tree cover, threatens the health of vulnerable groups, and puts pressure on energy consumption [8]. Street and basement flooding after heavy rain events are a significant personal and financial burden, and are becoming more frequent as climate change stresses the city's aging stormwater infrastructure [9]. The lack of well kept natural areas in the neighborhood compounds other stressors, and may be contributing to poor health outcomes as well as alienation and social dissolution [10].

Connection to CCSS's Mission

Because environmental quality can affect human health and socioeconomic outcomes over the long term, improving it is one of the central pillars in CCSS's mission to end homelessness, and stop cycles of generational poverty.

Implementing the Sustainability Roadmap

The following three goals outline key opportunities for enhancing ecological health.

- Improve local air quality
- · Reduce urban heat island
- Manage stormwater runoff
- Increase local biodiversity

The broad definition of air pollution is the contamination of indoor or outdoor air by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere [11]. Air pollution poses serious short term and long term risks to human health and economic outcomes. Inhaling pollutants such as ground level ozone, and particulate matter can damage the lungs, heart, and brain, cause serious chronic illnesses, and negatively affect childhood development and behavior patterns [12]. Air pollution levels can vary daily, weekly, and seasonally depending on a variety of anthropogenic and environmental conditions, but are usually highest and most persistent closest to the sources of pollution [13]. The main sources of air pollution in the United States come from energy production, transportation exhaust, and industrial facilities [14]. Air pollution burdens are almost always highest in poorer and marginalized communities [15]. Chronic, air pollution related diseases such as asthma, and heart disease are significantly higher in these communities as a result [16]. Air pollution poses an even greater risk of disease and early mortality to smaller animals such as insects and birds. Because of its affects both on people and the environment, CCSS is focused on reducing outdoor air pollution in the Dexter-Linwood community.

Current Challenges

Research done by Community Action to Promote Healthy Environments, (CAPHE) finds that air pollution on the West side of Detroit comes from two kinds of sources: point source generators, and mobile generators [18]. Point sources are industrial facilities which consistently release air pollution at the same geographic location, while mobile sources come from automobile exhaust and pollute areas surrounding freeways and major transportation corridors. The vast majority of air pollution on CCSS campus is caused by mobile pollution emanating from the adjacent M-10 freeway. As internal combustion vehicles idle, drive, and refuel, they produce nitrogen oxides (NOx), particulate matter (PM2.5), volatile organic compounds (VOCs), carbon monoxide(CO), & diesel exhaust. Reactions between NOx, VOCs, air and sunlight create ground level ozone (O3) also called smog, another dangerous summertime pollutant [19]. Trucks release significantly more harmful pollution than cars, and thus truck traffic is a major determinant in local air pollution levels. The negative effects of diesel exhaust, smog and PM2.5 are highest within 200 meters of a major road or freeway [20]. As of 2019, the section of the M-10 freeway running through CCSS's Campus, sees an average traffic volume of 118,000 cars per day and 1,600 to 2,000 trucks per day [21].

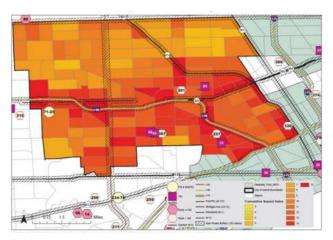
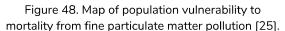
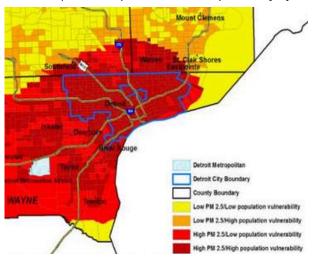


Figure 47. Map showing Air Pollution sources and cumulative health impact [81].





Reducing residents' exposure to airborne contaminants is therefore crucial. The health impacts of air pollution exposure can be exacerbated by socioeconomic factors. People in lower income communities often experience more adverse health impacts from exposure due to existing co-morbidities, age demographics, poor indoor air filtration, and nutrient deprivation in the diet [22, 23,24]. Residents on the west side of Detroit have more exposure to diesel exhaust and measurably higher rates of cancer and respiratory illness than the tri-county average [25]. (See Figures 47 & 48)

Opportunites

Reduce Academic Burden

Because of its ties to physiological health and childhood development, reducing air pollution will have a myriad of long term socioeconomic benefits in the Dexter-Linwood community. Chief among these benefits are improvements in academic potential. Studies have confirmed the role quality early education plays in allowing people access to higher paying and more stable careers[26]. PM2.5 pollution has been shown to impair childhood brain development [27], and cognitive function [28]. Studies performed in Texas, on children in classrooms before and after the installation of air filtration systems found that indoor air pollution levels were correlated with significant drops in academic performance. Improving air quality boosted academic performance more than reducing class size [28]. Cleaner air means healthier and more socioeconomically mobile futures for kids.

Reduce Violent Crime

A second, and just as transformative benefit of reducing air pollution is reduction of violent crime. In recent years comparative studies of neighborhoods with similar socioeconomic and demographic makeups have shown that locales that are subject to more air pollution, especially particulate matter pollution and ozone, experience measurably more incidents of violent crime [30]. This effect is powerful, and has been observed not just across neighborhoods, but within the same neighborhood over time.

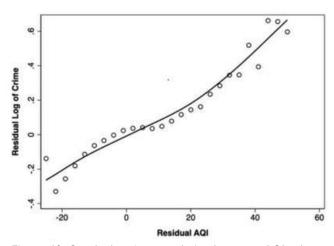


Figure 49. Graph showing correlation between AQI value and crime trends [32].

A longitudinal study published by the University of California Davis in 2018 measured ozone air pollution, weather conditions, and incidences of violent crimes in Los Angeles & Houston neighborhoods between 2005 and and 2013 found that a 10 ppb increase in ozone concentrations was correlated with a 4.4% average increase in assaults, even when controlling factors such as time of year [31]. In multiple studies, the aggravating effect of air pollution has only been observed on violent crimes, rather than nonviolent crimes [32]. This suggests that air pollution increases people's impulsivity, lowering their aggravation and aggression thresholds [32]. The researchers attributed this effect to the well documented ability of ozone to increase respiratory rate, lower serotonin levels in the blood, and alter blood flow to the areas of the brain related to impulse control, decision making, and aggression. Ssee Figure 49 above.

Environmental interventions, such as increasing tree canopy to reduce air pollution have been overlooked, but are showing themselves to be powerful, popular, scalable and applicable methods of air pollution mitigation and violent crime prevention [33, 34].

Implementation Strategies

Woodrow Wilson Corridor

CCSS is planning for a redesign of the streetscape along its upcoming retail corridor along Woodrow Wilson. This project is aimed at changing the nature of the street from a wide, polluting, unpleasant and dangerous high speed road, into a crossable, environmentally healthy, inviting, and safe conduit. This change will allow local residents on foot and bike easier access to neighborhood businesses, and attract people from both within and outside the community to frequent businesses and spend their time and money in Dexter-Linwood. CCSS plans achieve this change with a combination of interventions, including wider sidewalks, signage, street trees, protected bike lanes, curbside bioswales, rain gardens, and activated public spaces like connector alleys.

These interventions will reduce air pollution in several ways. Wider sidewalks, tree canopy, and protected bike lanes will encourage residents who live in the neighborhood to walk or bike rather than drive to access local businesses. reducing mobile pollution in the neighborhood. Bus stops along the corridor could be upgraded, with larger, heated/cooled shelters with solar panels. This will further encourage public transit use, cutting down on car dependency. Well selected and healthy street trees, and herbaceous garden plants will work around the clock to reduce particulate matter and smog entering the lungs of Dexter-Linwood residents [34]. Installing protected bike lanes also has the added benefit of directly and significantly reducing vehicle speeds and pedestrian crashes [35], which are a sadly prevalent subsection of violent crimes in Dexter-Linwood and Detroit as a whole [36].

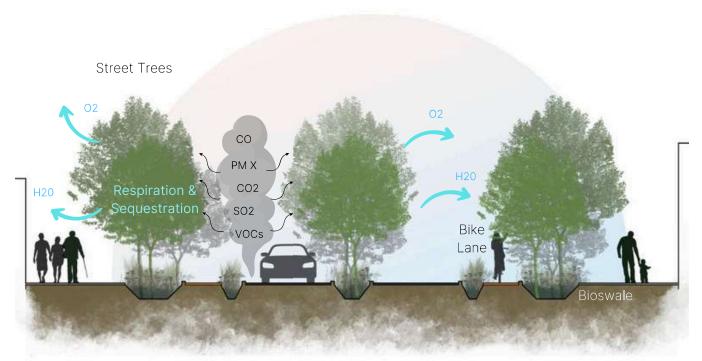


Figure 50. Section showing air pollution mitigation measures on the Woodrow Wilson Corridor. Credit: Nana Temple, Michael Grady



Figure 51. Rendering showing what a future Woodrow Wilson corridor could look like, with new businesses, wide sidewalks, fully planted tree canopy, native plantings and a cycle track. (Generated with Midjourney)

Webb Campus

CCSS is constructing a new campus on the 1945 block of web street. This campus will comprise the Fox Family Shelter, Seasons Shelter at 1986 Burlingame, and a Community Center to be constructed inside the vacant church at 1951 Webb. This campus will feature renewable energy installations, playspaces, community gardening, green stormwater infrastructure, pollinator habitat, and community gathering areas. This campus, just across from CCSS' main offices will serve as the heart of operations for its shelters, offices, jobs training, and business incubation roles, and will feature flexible spaces which allow for events such as clinics, job fairs, and farmers markets. By incorporating significant areas of urban forest space and preserving large diameter legacy trees, this project will work to reduce local air pollution.

Newly planted specimen trees, new forests made up of native canopy species such as oak, maple, hickory and sycamore, and preserved canopy species will act as living scrubbers, helping protect people who live in and around Webb Campus from PM 2.5 pollution and VOCs.

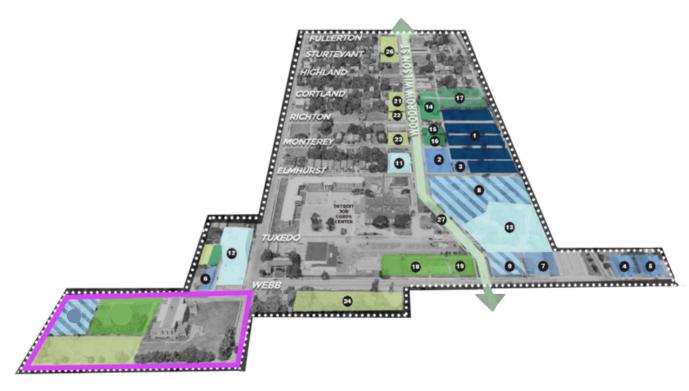


Figure 53. Map of Webb Campus Showing Current Properties and Woodrow Wilson Corridor [71].

Webb Campus



Figure 51. Map showing existing trees on Webb Campus, from Webb Campus Planning Study, See Appendix D



Figure 52. Map showing new urban forests and preserved legacy trees for air pollution mitigation, Image Credit: Michael Grady

Goal 2: Reduce urban heat island effect

Urban heat island (UHI) refers to a phenomenon in which urban areas have significantly higher daytime and nighttime summer temperatures than their rural counterparts. Cities are consistently 1-6 degrees Fahrenheit warmer than their rural surroundings during the day, and up to 22 degrees Fahrenheit warmer at night [37]. This phenomenon is consistently observed and caused by multiple related factors [38]. The removal of natural vegetation to build infrastructure removes the evapotranspiration and shade that cools ambient air temperatures. Brick, stone, asphalt and concrete soak up solar radiation and ambient heat during the day, becoming much hotter than the surrounding air (see Figure 53 below). These building materials gain and hold on to heat all day, and release it at night, raising ambient temperatures over long stretches of time. Industrial facilities, automobiles, and air conditioning units all radiate significant amounts of waste heat as well, contributing to the problem. Temperatures can vary significantly from neighborhood to neighborhood, depending on the intensity of the built environment and coverage of trees, water, and vegetative cover.

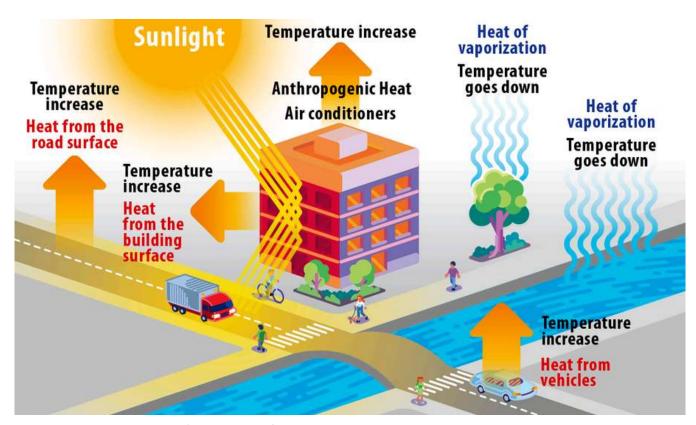


Figure 53. Diagram showing the dynamics of urban microclimate [72]

Often, lower income and minority neighborhoods have the least green infrastructure, and experience the worst effects during the hottest parts of the year. Studies from across the country show that low income neighborhoods can be as much as 10 degrees hotter than the wealthiest [39]. All this extra heat can stress human health, animals, and plants, and leads to more severe and longer lasting heat waves in urban areas [40]. People without homes or access to cooling in these neighborhoods are in the most danger from urban heat waves.



Figure 54. Diagram showing daytime and nighttime temperatures across the urban-rural gradient [73]

Current Challenges

Urban Heat in Detroit

A 2022 analysis of UHI effect within cities across the United States ranked Detroit as the 9th most unequal out 44 cities for the difference in temperature between its coolest and warmest neighborhoods, just behind Phoenix [41]. Figure 55 shows the summertime temperature differential between Dexter-Linwood and other neighborhoods in the city [42]. This difference is largely dependent on differences in density of the built environment, and the percentage of canopy coverage. In the figures, the canopy cover percentage and temperature differential across neighborhoods is visible.

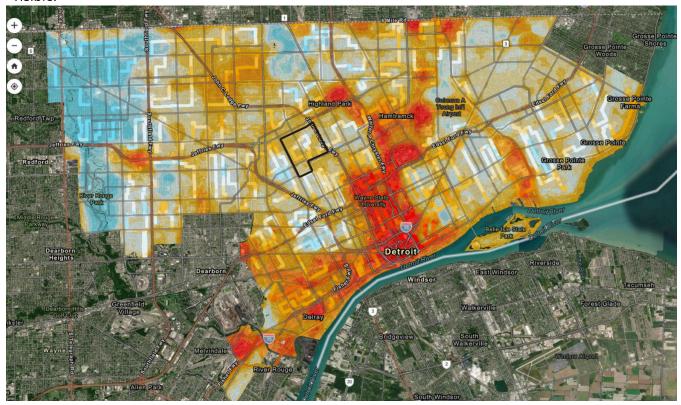


Figure 55. August urban hot spots in Detroit. Red indicates hotter summer temperatures, while blue indicates cooler temperatures. Temperatures range from a minimum of 70 degrees fahrenheit to a max of 85 degrees fahrenheit. [42]

Urban Heat and Generational Poverty

UHI is a socioeconomic issue in addition to being an environmental one. Repeated extreme heat events put financial strain on households, by increasing cooling costs and utility bills. High air conditioning demand during extreme heat can strain DTE's grid causing dangerous blackouts [43]. Pregnant women, young children and the elderly are vulnerable to serious heat related illnesses [44]. Heat makes it harder for children to focus and retain information, and lowers standardized test scores [45]. High pressure systems, such as the 'Heat Domes' Detroit experienced in the summer of 2023, create a stagnant, recirculating air column, trapping multiple days or weeks worth of air pollution at ground level, and making outside activity dangerous [46]. Hot days physiologically and psychologically stress people, impairing decision making and make violent crime more likely [47]. Climate change will make heatwaves in Detroit more frequent, & more intense in the coming years [48]. Protecting the city's most vulnerable residents and communities is therefore vital.

Opportunities

Given the open lots, lack of street trees, and wide road corridors in the Dexter-Linwood, there is a tremendous opportunity to cool summertime temperatures in the neighborhood using green infrastructure (see Figure 56). In a future with protection from extreme heat, Dexter-Linwood could thrive. Shady streets could reduce home heating and cooling costs by 15-35% [49]. With natural refuge from extreme events, heat related health emergencies among the homeless could be greatly reduced [50]. Infants, seniors, and school age children would be in less danger of heat stroke, & dehydration [51]. Research has shown that environmental conditions such as canopy cover and access to green space play a large part in where people choose to live [52], and can significantly increase home values [53]. Shaded outdoor plazas could provide inviting places for people to meet, hold events and participate in the life of the community.

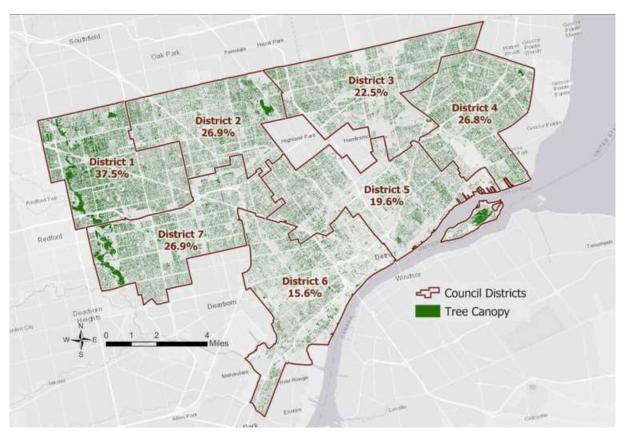


Figure 56. Tree Canopy in Detroit as of 2020. The green areas visualize tree canopy, the white areas depict less tree canopy. Dexter Linwood is Outlined in black [74].

Woodrow Wilson Corridor

The interventions along Woodrow Wilson will reduce urban heat in several ways. Reducing unshaded road surface in favor of lightly colored sidewalk and bike lanes shaded by trees will immediately reduce the heat being emitted from the street [54]. A densely planted streetscape with a tree canopy, & curbside rain gardens can cool the thermal comfort of the sidewalk by 15 degrees Fahrenheit on hot days [55]. Shade structures could be constructed at bus stops along the corridor, and benches along the sidewalk can provide children and the elderly places to rest while walking. Public fountains could be installed to allow people, especially the most vulnerable, to get a drink on the hottest days. Wider sidewalks and bike lanes will encourage local residents to walk or bike rather than drive to access local businesses, reducing waste heat from idling cars. Multiple alleys of street trees could be installed, one in front of business, to shade them and the sidewalk, and one in the bioswale between the bike lanes and the street. This will create a complete canopy over those walking and biking, and partially shade the street as well, reducing the surface temperature of the asphalt. Food Truck plazas with trees and permanent shade structures will allow for community life, and economic activity to continue even on the hottest days.

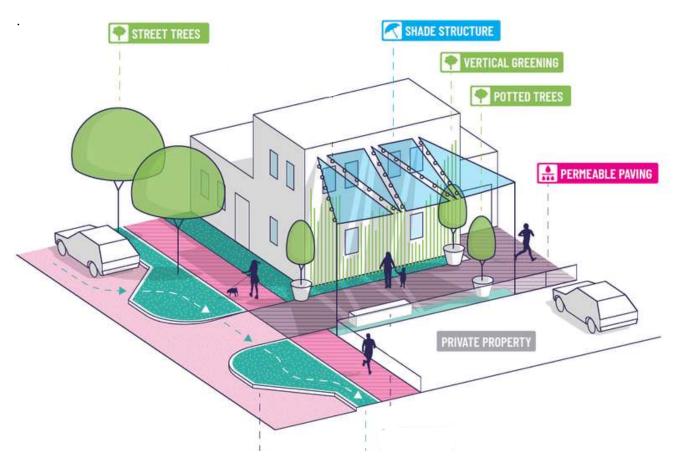


Figure 57. Diagram showing interventions that can be made along the Woodrow Wilson Corridor to reduce Urban heat Island [75]

Webb Campus

Given its size and location, the Webb Campus presents opportunities to mitigate urban heat with green infrastructure, and provide spaces for the community to adapt to heatwaves. With over 20 acres of open space, a significant part of the Webb Campus could be planted with street trees, and patches of urban forest in order to mitigate summer temperatures for residents of Fox Family Shelter, Seasons Building, and visitors to the Community Center. Planting canopy trees on the South and West side of the three buildings can reduce interior heating and cooling costs for CCSS. Solar installations are to be installed over the parking lot at the Fox Family Shelter, preventing hot cars from becoming hazards to children.

Installing a green roof on the Seasons shelter could also greatly reduce interior heating in summer.



Figure 58. Map showing potential urban heat mitigation strategies on Webb Campus. Credit: Michael Grady

Goal 3: Manage stormwater runoff

Stormwater runoff occurs when rain falls on impermeable surfaces such as roofs, roads, driveways, and parking lots [56]. Urban runoff is problematic for the natural environment and infrastructure of cities because of the high volume of impermeable surfaces. In less urban places covered predominately by vegetation, and bare soil, the energy of rainfall is slowed and dispersed by branches and leaves, and as it hits the ground is quickly absorbed. This water then moves slowly underground, being physically and biologically filtered & cooled, before flowing into lakes and recharging aguifers [57]. Natural processes slow the stormwater's journey to these bodies of water, preventing damaging floods in all but the most powerful storms [58]. Under these natural conditions, only 10-20% of rainfall becomes runoff.

Urban development dramatically alters this natural water cycle, leading to a myriad of issues. Over 90% of rain the falls on a hardened surface like concrete becomes runoff [59]. Instead of a slow, purifying journey into the nearest body of water, stormwater is directed off hot and dirty surfaces directly into sewers. One inch of rain falling on an acre of pavement produces 27,000 gallons of runoff [61].

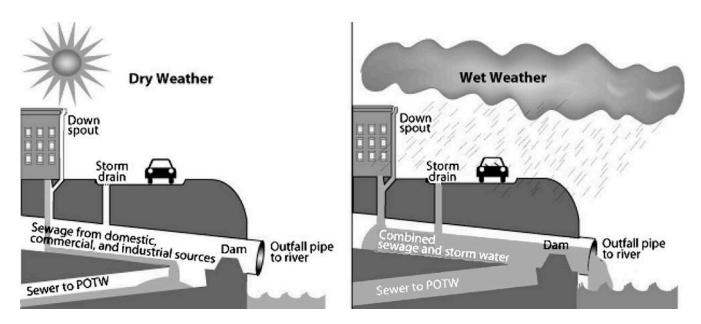


Figure 59. Stormwater dynamics in the Detroit sewage and wastewater system. [76]

Current Challenges

In Detroit, stormwater runoff is mixed with sewage before being treated at a plant and released into the Detroit or Rouge rivers [60]. When sewer grates get clogged, or pumps at the treatment facility breakdown, as happened in the summers of 2014 [62] and 2021[63], rainwater has nowhere to go, and rapidly begins to flood streets, homes, businesses and basements. To clear the way for stormwater, and prevent underground pipes from exploding, treatment plants simply release masses of untreated sewage directly into the Detroit river [64].

This creates dangerous algal and bacterial blooms, kills wildlife, closes beaches, and threatens fisheries and drinking water supplies [65]. For lower income families, repeated flooding presents immediate health risks, such as mold induced respiratory illnesses [67]. The recurrent flooding of homes and basements is a serious financial trauma for households [68], threatening the stability of communities around the city, including Dexter-Linwood. While workable in the past, our current system for managing stormwater is now inadequate. The catch basins, pipes, and treatment facilities that make up our current infrastructure are not able to keep up with the intense storms the Detroit region will continue to see with climate change [70].



Figure 60.Cars flooded on a residential street during a flooding event in the summer of 2021. [77].



Figure 61. Detroit Homeowner assesses damage after flooding in 2021. [78]

Opportunities

In their new projects, CCSS can do their part in ushering in a new and better model, combining traditional infrastructure with green infrastructure to manage and treat urban runoff.

Green infrastructure solutions are designed to store, transport, and treat rainwater before it becomes runoff. At its most basic, the problem of urban flooding and waterway pollution is that the built environment represents a barrier between the sky and the earth. Roads, buildings, and paved surfaces redirect water away from the natural underground filtration and distribution system. The solution in most cases is not to remove the infrastructure, but rather to funnel runoff into specially designed places where it can slowly infiltrate into the ground, and get filtered by plant roots, fungi and soil.

The places that are designed for this purpose collectively fall under the category of green infrastructure. detention ponds, bioswales, and rain gardens are all forms of green stormwater infrastructure(GSI). They work by collecting runoff and slowly infiltrating it. In the case of rain gardens and bioswales, native riparian plants and wildflowers are planted inside to further filter the water, and beautify the site and perform vital ecosystem services. Trees are another form of GSI. they help prevent flooding by dispersing the energy of rainwater as it falls and allow more time for it to soak into hard packed urban soils, rather than running off. GSI solutions have been shown to significantly reduce urban flooding risk in Detroit [70], and CCSS can help prevent local flooding by utilizing these solutions in their upcoming projects.



Figure 62. Curbside bioswales during dry weather [79].



Figure 63. Curbside bioswales after a rainstorm. [80].

Woodrow Wilson Corridor

The Woodrow Wilson corridor represents an opportunity for CCSS to reduce stormwater runoff with a combination of gray and green infrastructure interventions. Currently stormwater runoff is handled by a series of catch basins, which collect and ferry it to the underground storm drainage system. To prevent this, a median in the road can be installed, with a bioswale system, in order to handle runoff from either side of the road. The road would need to be regraded so that stormwater flows off toward the median, with curb cutouts to allow it to enter the bioswale (see Figure 64). At regular intervals along this median, overflow inlets would be placed, with connections to the sewer system. This prevents rain events from causing street flooding in an emergency. Along either curb of the road, a long bioswale filled with street trees could be installed with regular curb cuts, protecting the bike lane and sidewalk from passing vehicles and acting to slow down and infiltrate rainwater, from the sidewalk and bike lane. See Figure 64. The sidewalk and bike lane would need to be graded so that water flows from the building frontage toward the bioswale.

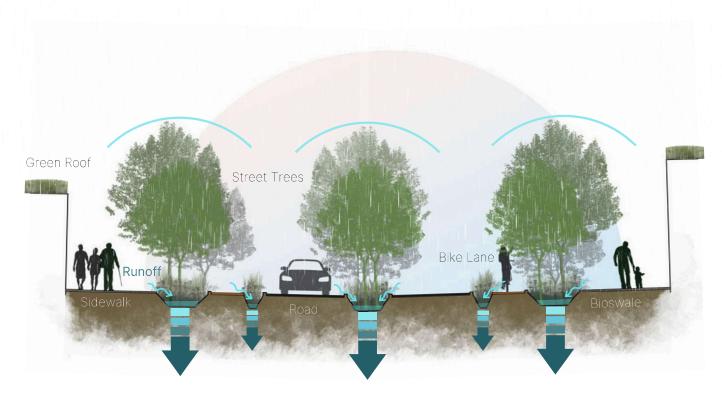


Figure 64. Section showing air pollution mitigation measures on the Woodrow Wilson Corridor. Credit: Nana Temple, Michael Grady

Webb Campus

Often, new construction of buildings and paved surfaces increases the amount of runoff entering existing stormwater infrastructure. This increases the risk of system failures, and flooding events. There are however multiple ways to mitigate the impact that this new construction has. Reducing the amount of impervious surface and increasing the percentage of land dedicated to green space is highly effective at reducing runoff. At Webb Campus, CCSS should maximize planted green space areas, and minimize building footprints, to prevent flooding. When designing new buildings, such as the Seasons Shelter, a green roof could significantly reduce runoff created by the building.

Additionally, water from the roofs of the Seasons Shelter, and Community Center can be directed to a planted retention area with an overflow inlet, allowing rain water to be kept out of the combined sewer while creating aesthetic benefit and wildlife habitat. (See Figure 65). Lastly, in designing significant paved areas, such as parking lots, CCSS could consider utilizing low maintenance permeable paving, and/or routing water to planted detention areas. (see Figure 65). Retention areas hold onto water for a short period, allowing it to be filtered and infiltrated into ground water rather than contributing to urban flooding issues.

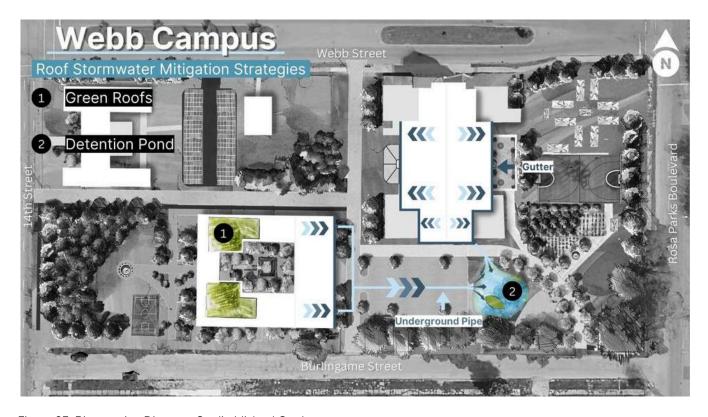


Figure 65. Bioretention Diagram. Credit: Michael Grady.

Exploring Opportunities for Clean Energy



"Lighting the way towards renewable energy"

Climate change presents new challenges for urban communities, necessitating a shift towards clean and renewable energy sources. Cass Community Social Services (CCSS) is embracing solar energy as a sustainable and abundant option. This move aligns with CCSS's commitment to environmental stewardship and economic empowerment. Integrating solar energy into campus infrastructure not only reduces carbon footprints but also exemplifies responsible energy practices, fosters educational opportunities, and sets a precedent for sustainable community development.

Relationship to Sustainable Development

CCSS is committed to achieving clean and renewable energy in its neighborhood to meet its environmental sustainable goals, as outlined in the United Nations' Sustainable Development Goals [1]. Currently, CCSS relies on DTE for electricity, but renewable energy is only a small fraction of Detroit's total energy mix [2]. Investing in clean energy infrastructure with battery storage is crucial.

Connection to CCSS Mission

CCSS is committed to expanding clean energy, but faces a major barrier in solar energy expansion due to the age of its roofs. A feasibility analysis by an engineering firm revealed that some roofs cannot support the added load of solar panels. To continue solar development, CCSS must invest in roof improvements with structural engineering assistance or explore ground-mounted solar energy options in the campus.

Detroit Energy Mix

Detroit's energy portfolio is primarily based on coal, natural gas, and nuclear power, contributing to the majority of electricity generation in the region. In 2022, Detroit's energy mix included coal (54.16%), nuclear (18.16%), natural gas (14.22%), oil (0.20%), hydroelectric (0.15%), and renewables (13.11%), with biofuel, biomass, solar, wind, and wood fuel accounting for 0.09% and 0.60% respectively [3].

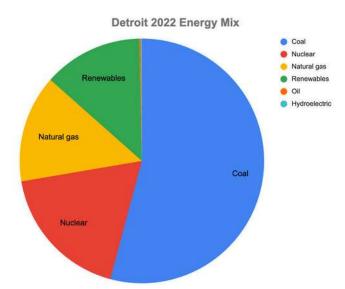


Figure 66. Detroit energy mix in 2022 indicating the heavy reliance on traditional fossil fuels. Credit: CCSS team [3].

Implementing the Sustainability Roadmap

The following three goals outline key opportunities for exploring clean energy:

- Expand CCSS Solar Energy Efforts
- Design for Energy Efficiency
- Install Security Lighting around CCSS Campus

CCSS's exploration of solar energy opportunities not only aligns with the city's gradual shift towards cleaner energy but also amplifies the call for a more rapid and committed transition to sustainable power sources. As Detroit continues to evolve its energy portfolio, efforts like those of CCSS will play a critical role in reshaping the city to become resilient and environmentally-responsible.

To avoid the most severe impacts of climate change, it is critical to transition to clean and renewable energy to minimize CO2 emissions. Clean and renewable energy offers numerous benefits to traditional fossil fuel energy generation. For example, renewable energy sources such as solar and wind utilize natural processes to provide energy to the end-user. In addition, installing renewable energy in communities provides high-paid employment opportunities to local residents and trains them to work in this fast-growing sector [4].

Another benefit of renewable energy is that it provides an alternative to burning fossil fuels to produce electricity. As a result - there are no pollutants or emissions at the energy production source. In contrast - burning fossil fuels releases nitrogen oxides into the atmosphere - known pollutants that lead to smog and acid rain [5]. Further - in many cases renewable energy is becoming less expensive than traditional fossil fuel energy [6]. CCSS is committed to a vibrant and sustainable Detroit and incorporating clean energy is one of the key pillars in their strategy to achieve these goals.

CCSS has already installed renewable solar energy in parts of their campus. For example each of their Tiny Homes includes its own solar energy ground-mounted system that partially supplies the energy requirements [7]. Also - the CCSS headquarters at the World Building feature an awning-type solar array that supports a portion of the property's electricity needs. Looking to the future - CCSS plans to expand its solar energy initiatives and has identified strategic properties that are suitable for solar energy installations.



Figure 67. CCSS Tiny Homes in Detroit w/ ground-mounted solar panels to supply energy. Each Tiny Home has a 1.8 kW solar array [8].

However - not all properties are suitable for roof-mounted solar energy systems for a variety of reasons including structural integrity of roofs, shading from trees, and building electrical systems that are incompatible or inadequately-sized to handle the solar energy systems. Another future avenue could be installing solar energy on vacant lots in the CCSS neighborhood [9]. Currently - this type of solar energy development is permitted in the City of Detroit but the situation is complicated. For instance, community solar in Michigan is legal - but electric utility companies need to set up and manage the solar arrays [10]. CCSS could work to set up community solar programs in their campus but it would require coordinating with DTE Energy, Detroit's energy supplier, and other key stakeholders.

CCSS has established bold environmental sustainability goals for its campus in Detroit. Part of these efforts includes increasing the percentage of renewable energy that it utilizes to power its operations and facilities. The team acquired three project proposals from renewable energy consultants in the metro Detroit area. The companies we selected to provide project proposals were: Ecojiva, NOVA Consultants, and Michigan Solar Solutions (see Appendix E, table 1). After reviewing the proposals, CCSS selected Ecojiva to install the solar panels on the four properties listed below. The properties that CCSS has selected for solar installations include: the warehouse building located at 12025 Woodrow Wilson, Scott Building located at 11850 Woodrow Wilson, World Building located at 11745 Rosa Parks, and the Fox Center located at 2015 Webb St. CCSS plans to install roof-mounted solar panels at the warehouse and Scott Buildings, side-mounted solar panels at the World Building, and 2 solar carports at the Fox Center (see Appendix E, figure 1).

Current challenges

CCSS faces challenges in expanding solar energy systems due to aging infrastructure, inadequate electrical systems, differing energy demands, political and legal landscapes, and zoning restrictions. Currently, DTE and zoning restrictions limit the installation of solar panels in vacant lots. Also, not all properties are suitable for roof-mounted solar energy systems due to poor structural integrity, shading from trees, and incompatible electrical systems. CCSS could consider installing solar energy on vacant lots in the neighborhood, but electric utility companies need to manage the solar arrays. Currently - CCSS could work on community solar programs in the future, but coordination and permitting approval with DTE Energy and other key stakeholders is required.

Future opportunities

Because CCSS has additional funding beyond what is required for this project to install solar energy in their campus, we suggest additional solar panel installations once CCSS acquires new properties. One example of a site CCSS is considering for solar installations is the 1-cup car wash located on the corner of Woodrow Wilson and Monterey Street. Another way that CCSS could generate solar energy would be installing solar carports in parking lots (see Figure 68). CCSS could also build bus stops that feature solar panels on the roof (see Figure 69). DTE-approved local and state community solar farms serve as additional renewable energy resources that CCSS could consider utilizing. Also - CCSS could purchase wind energy offset credits or install geothermal energy systems to diversify its energy mix and further support its environmental sustainability goals.



Figure 68. Possible AI design for a commercial solar-energy carport in the CCSS campus. (DALL-E 3)



Figure 69. Al rendering of a solar energy-generating bus stop that would benefit the CCSS campus. (Midjourney)

CCSS can achieve its environmental sustainability goals by focusing on energy efficiency, which reduces energy usage and limits fossil fuel consumption. This can lead to cost-savings for both CCSS and community residents [11]. Implementing energy-efficient technologies like motion-detecting lighting and electrification of gas-consuming buildings can help achieve these goals. However, formal staff training seminars and fundraising efforts are needed to purchase new equipment and technologies. CCSS can also improve its facilities and operations by implementing ground-mounted solar panel arrays, passive solar heating/cooling, and renovation strategies like heat pumps and responsive lighting. Investing in energy-efficient renovations to key properties can help CCSS achieve its sustainability goals and save money.

Current challenges

CCSS focuses its efforts and resources on serving the residents of its campus. However, many of its buildings and properties are aging and inefficient from an energy-use viewpoint. One key property in the CCSS campus is the warehouse - the current site for the CCSS document shredding and recycling center - and the future site of the "eco gym." Currently it is too expensive to heat the building in the winter due to the inefficient building design. CCSS could utilize the building year-round with renovations including improved insulation and energy-efficient technologies. In order to renovate key buildings, CCSS would need to continue fundraising - utilizing the message that modernizing buildings would allow them to save money, reduce its carbon footprint, and improve the comfort of building occupants.

Future opportunities

The property located at 1945 Webb is slated to become the CCSS community center in the future as part of the Webb Campus. The first design element is tree siting to reduce energy costs. This includes planting deciduous trees on the south and east sides of the buildings to shade them in summer and reduce A/C costs. These deciduous trees allow sun in winter as well - decreasing heating costs. Also, planting evergreen trees along the north and west side of the property to block north winter winds additionally reducing heating costs in winter.

Another example of a property that would greatly benefit from renovations is the warehouse located at 12025 Woodrow Wilson. This building is one of the properties that CCSS will utilize for its solar energy development efforts. To further expand upon its sustainability initiatives, CCSS could retrofit the property to save on energy costs and improve the comfort of occupants in the space. Currently, this building also serves as the recycling center where CCSS employs individuals with disabilities to shred sensitive documents [12]. The combination of reduced energy costs and improved occupant comfort is a win-win opportunity for CCSS to consider.



CCSS plans to install 20-25 solar security flood lights on their campus to deter crime and align with their environmental sustainability goals. The installation of these lights can signal efforts to manage neighborhood decline, crime, and fear [13]. An example is the Greenshine solar security lighting project in Berkeley, CA, which involved the installation of 6 Brighta systems in 2019. This project led to a 40% reduction in crime [14]. The team recommends CCSS to identify strategic areas on the campus and work with solar security lighting installation companies to oversee the project. Solar street lights offer environmental and economic benefits, reducing reliance on fossil fuels and carbon emissions. Their low operational and maintenance costs make them an economically viable option for CCSS, freeing up

resources for other public safety measures [15].

Current challenges

Crime surveys indicate that crime and the fear that it generates impairs the quality of life across communities. Communities that experience power outages are frequently exposed to dark surroundings due to unreliable power for neighborhood lighting. To address these concerns, CCSS could explore possibilities for reducing crime by installing solar security lighting in strategic locations.



Figure 70. Al-created design for solar security lighting to reduce crime in the CCSS campus. (Canva Al)

Future opportunities

Improving Security Through Solar Lighting and Emergency Call Boxes

CCSS is considering the installation of solar lighting and emergency call boxes to improve security and enhance residents' quality of life. Solar lighting would be beneficial in areas with limited lighting, such as the Green Corridor, World Building, and Tiny Homes. Emergency phones could be installed across the campus, providing residents with direct access to the Michigan police dispatch center for emergencies. The call boxes would be powered by solar power, improving energy efficiency and providing reliable power in areas vulnerable to power outages. The team recommends CCSS to inquire about the "K1 blue light towers" offered by "Case" to integrate solar energy-powered security equipment.

Enhancing Road Safety

Road safety is another area where solar street lights make a significant impact. Poor lighting conditions contribute to accidents by reducing visibility for drivers, cyclists, and pedestrians. By providing consistent and reliable lighting through solar street lights, CCSS not only enhances visibility on roads and pedestrian pathways, but also provides steady power sources to locations where power outages are frequent and visibility is especially important.

Strengthening Community Vibrancy



"We can begin the process of making community wherever we are."

-bell hooks

Vacant property, widespread neighborhood blight, and a long legacy of depopulation is a prevailing obstacle in Detroit. The ramifications of this legacy are highly visible across neighborhoods, much like the one where CCSS resides. Nevertheless, Detroit is a prominent case study in the ongoing narratives of 'comeback cities,' exhibiting waves of rejuvenation and reinvestment in the past several years. As a city on the brink of great revival, there is tremendous opportunity to reimagine the resurgence of communities across the city, now and in the future. In Detroit's Dexter-Linwood neighborhood there is immense potential to reimagine the reciprocity between people and humanland relationships, and how this can be cultivated through the design and retrofitting of shared open space. As CCSS continues to plan for their future, and the future of the surrounding neighborhood, there are strategies to envision the transformation of shared public spaces as activated, sustainable places that serve as catalysts for community vibrancy and social cohesion.

Dimensions of Community Vibrancy

Community vibrancy is an extremely multidimensional concept. Most often, it highlights a community's capacity to meet the overall wellness of the people who reside there by cultivating lively, social, safe, and opportunityrich environments [1] and emphasizes a strong connection between the built environment and social processes [2]. Additionally, vibrancy constitutes a reflection of people, their activities in spaces, and the magnitude to which these manifest [3]. The critical tenets of a vibrancy aim to create a harmonious relationship between people and places that allow a community to foster an atmosphere where everyone can lead an abundant life. These tenets of community vibrancy can furthermore be thought of as the intersection of hard (the tangible, physical components of the community) and soft elements (intangible, people-oriented components that relate to behavior, feelings and connections to places) that contribute to a resilient, sustainable place (see Fig. 71) [4]. The vital aspects of a vibrant community typically encompass: spaces for gathering, connecting, and socializing; civic engagement and participation; economic and entrepreneurial opportunities; inclusivity and equity;

environmental sustainability initiatives; and other built and social infrastructure to help contribute to individual and collective quality of life. Vibrancy plays a pivotal role in the sustainability and longevity of places. By cultivating a system of processes, places, and opportunities, there is extraordinary potential to heighten the cohesiveness of the community's social fabric, and therefore, should be approached with intentionality as opportunities are planned and designed for.

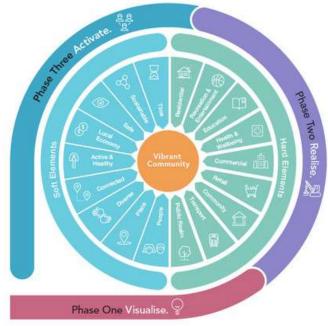


Figure 71. Vibrant Community Wheel [4]

Relationship to Sustainable Development

Community vibrancy and social cohesion serve as integral components of sustainable redevelopment. Sustainable cities and communities now, and in the future, will rely on vibrant and socially cohesive places that emote a sense belonging, empowerment, connection, and engagement. Simultaneously communities that are more vibrant and cohesive will be able to adapt and cultivate resiliency when faced with the task of mitigating an ever-changing climate, both environmentally, economically, and socially.

Connection to CCSS Mission

The concept of community vibrancy goes beyond aesthetics, demonstrating the unique interplay of diverse activities that help breathe life into a space. An important facet of a vibrant community is social cohesion, alluding to the bonds that bring people together, cultivates their sense of community, shared values, and initiates mutual support. Together, these elements contribute to healthy, resilient neighborhoods. Sustaining a vibrant community where individuals thrive involves addressing their basic needs and exceeding them by providing spaces for engagement and overall well-being. As an organization committed to meeting the needs of vulnerable people, identifying a framework to incorporate the essence of a vibrant and socially cohesive community should remain a pinnacle of the devisement of any future plans.

Implementing the Sustainability Roadmap

The following three goals outline key opportunities for strengthening community vibrancy

- Engage community on future projects and initiatives through participatory planning
- Create accessible public spaces for social connection
- Foster social cohesion through enhanced community programming



Community engagement, stakeholder liaising, and the involvement of residents in planning is fundamental to successful neighborhood development. Residents, when viewed as the experts of their own communities, lead to effective strategies [5]. Long term planning that is informed by residents and input leads to lasting solutions that can help ensure resident's goals and needs are met [6]. Benefits of engagement efforts go beyond plans and the built environment. Ensuring everyone has a right to participate in decision making processes that affect their lives enhances human rights and can empower groups and people to shape outcomes. Access to participation from everyone in the community can help build capacity and allow for further engagement and empowerment [7].

Current Challenges

Engagement practices and participatory planning should value and include all community members. This means that outcomes should be inclusive, which is crucial to effective planning that benefits all people [8], and that input from all members of the community should be taken into account regardless of age, gender, education status, income level, and race. People should be able to participate regardless of the resources they have and should have access to all information. People can use this access to help them engage in different methods and empower them to participate in planning processes that affect their lives. All of these processes should be transparent and the community should be informed of what can be achieved. Without this transparency, there is no true access to decision making participation [9]. Any practitioner that is involved in engagement efforts needs to communicate all of the information, what outcomes can realistically be seen, and how the decisions will be made in order to maintain the principles of participatory planning efforts [10].

Opportunities

Grocery Store

Based on findings from the grocery store study, the team highly recommends planning for extensive community engagement as the top planning priority. In addition to the recommended market study and financial analysis, a robust engagement strategy will need to be deployed to help build a community-informed grocery model, operating procedures, and product inventory. This can be done through a combination of surveys, focus groups, community-oriented planning meetings, and local community representatives on the grocery planning task force. Throughout this process, the team recommends the implementation of participatory planning tools and strategies to recruit and enable the full participation of community members.



Webb Campus

The community center that is planned for development on Webb Campus is a great opportunity for CCSS to engage the community further. The interior spaces and programming that will be provided in the future should be informed by residents in both the CCSS Tiny Homes and the surrounding areas. The center's viability and long term success will be determined by the amount of visitors it receives. If the center offers spaces and programs that the community wants, it will help to build and sustain the use of the center by residents. The ability for the continuation of engagement and for people to have access to give feedback throughout the time the community center is in use will help increase its lifespan and ensure it is always focused on the needs of the neighborhood as they continue to change.

Economic Development

CCSS wants to bring more jobs and businesses to the neighborhood. In order to ensure businesses last, and can provide tangible benefits to the community, it is important to know if the businesses are needed or desired. If a business is not wanted by the residents in the neighborhood, it will not be visited and will be unsuccessful. Developing a store or restaurant that is based on the desires and needs of the community will allow for a sustainable business that can create positive change in the neighborhood.

The projects this roadmap reflect the value of resident-informed decision making by emphasizing on the importance of aligning new amenities and business ventures with community needs and desires, ensuring long-term sustainability and relevance to CCSS's target audience.

Public space matters in communities. The integration of public space in design efforts serves as an integral component in the fabric of the community, becoming the focal point for critical social interactions and community building [11] particularly as vital conduits for neighborhood health and safety, physical and geographical connectivity, community revitalization and activation, and much more. Intentionality with design strategies and interventions ensures that CCSS, and its broader campus, has a landscape that helps sustain their mission while simultaneously promoting the regeneration of the community. For CCSS there is an excellent opportunity to leverage a variety of spaces that can be retrofitted (i.e. modified and updated to align with needs) into vibrant spheres of public life. As an organization, we can help CCSS identify what space typologies (e.g. vacant lots, alleyways, sidewalks, streets, etc.) can serve as design impetus, and how these spaces can be mobilized as catalysts for space activation that enrich vitality and social cohesion throughout the neighborhood.

Public Space x Social Cohesion

What is the nexus between the design, function, and use of public spaces as it relates to the ability to champion social cohesion for a neighborhood, and what is the rationale for communities? A few examples include:



Gathering + Interaction

Public spaces facilitate the physical environments or spaces where activities related to public life can occur (i.e. gathering, interacting with one another, engaging etc.).



Sense of Belonging

A comfortable and welcoming environment helps encourage 'place-attachment' [12], or, the affective bonds that can occur between people and place (i.e. a person's emotional connection, meaning, understanding of a place). Quality spaces help reinforce how one might identify with their community, engage with other people, and feel as if they have a place to belong.



Engagement + Shared Experiences

Public space provides the perfect canvas for a wide range of activities (both formal and informal) to be curated. Developing a dynamic exchange between the physical environment and multifunctional/diverse programming allows a community to define how the space and what its identity within the neighborhood fabric is. As people collectively use and congregate in these places, it generates a greater opportunity to bond over shared experiences that can lead to a sense of unity among the neighborhood.



Beautification + Neighborhood Pride

The transformation of neighborhood spaces (through re-design, adaptive reuse, retrofitting, and similar interventions) actively helps bolster the look and feel of a community. Spaces that are particularly seen as undesirable or underutilized serve as wonderful opportunities to create more vibrant spaces that people will enjoy, utilize, and appreciate in their communities [13].



Security + Saftety

As spaces implement strategic designs, become more attractive, and garner greater community participation, it champions the sense of ownership and responsibility a neighborhood feels for these shared places and can even discourage crime. Additionally, well-designed spaces facilitate regular opportunities for people to engage which can help build mutual trust and support which can be connected to one's sense of safety in public spaces [14].



Climate Resilient Oases

Public spaces that plan and design for climate resiliency, which can include creating microclimates, planting strategies that buffer stormwater/rain, creating shade for during heat events, as well as other site interventions assures areas for respite, comfort, and refuge that increase participation during a range of climate and seasonality changes [15].

Current Challenges

Three significant challenges for CCSS to mitigate have been outlined below, but extend an exciting invitation to help build a more vibrant, cohesive, and resilient community:

Campus Disconnect

CCSS's current campuses, along Webb Street and Woodrow Wilson Street, are disjointed. There is a tremendous need to heighten connectivity between each of these locales that allow for ease of access for the people they service as well as the existing neighborhood residents.

Woodrow Wilson Street

The current layout of Woodrow Wilson Street, particularly the combination of the road's width and length, lacks the design initiative to foster a safe and easily-traversable network for both vehicular and pedestrian flows. The existing street infrastructure, as well as the street edge and sidewalk, is currently not well-adapted for people-centric activity. This street, and possibly other adjacent roads, needs to be re-designed to accommodate better streetscape components for both aesthetic, safety, and pragmatic purposes.

Underutilized Space(s)

Widespread vacancy, blight, and underutilization of land in the neighborhood in the immediate context of CCSS's campuses have created an untapped opportunity to revitalize space for both heightened ecological/greening endeavors, as well as a myriad of people-oriented activities. The lack of infrastructure to champion the physical and social linkages of public space has contributed to a disconnected community. Through the redesign of public space design interventions, activations, and programming, there is great potential for renewed unification throughout the community.

Future Opportunities

There is a diverse scope of opportunities and considerations that CCSS can prioritize now, in the near future, and beyond in an effort to reinvision the overall physical and social cohesiveness of the landscapes in the community. Below is a list of recommendations:



Prioritize open space when/where possible, and utilize a connected, activated network of spaces for community engagement

CCSS can actively seek out and prioritize the use of open spaces within the neighborhood to encourage community engagement and to turn public spaces into vibrant arenas for public life. By designing these spaces with flexibility in mind and establishing an ongoing system of programming in these places, they can accommodate a variety of uses such as social gatherings, public forums, cultural events, and recreational activities. This prioritization also involves reimagining underused or vacant lots as potential community gardens, parks, or event venues, thereby infusing life into every corner of the neighborhood. Transforming these spaces into vibrant places will enhance residents' quality of life and contribute to building strong, interconnected social networks.

2

Develop, build and sustain "legacy" spaces in the community

By investing in the revitalization and beautification of spaces that have both immediate appeal and long term significance, CCSS can build an enduring sense of place that the residents will value. This might include park improvements and the creation of city wall mural projects that helps beautify the city while addressing illegal graffiti. In fact, 19 murals were completed and more than 40 are planned involving 25 artists in Detroit [16] . A core objective in developing these legacy spaces is to make them easily accessible in order to emphasize their role in providing respite and enrichment, especially for those who experience economic hardships. Such spaces can become cherished parts of the community's shared history and a symbol of its aspirations for the future which ties back to CCSS's mission of creating a vibrant community.

3

Nurture and ethos of placemaking within the neighborhood to leverage and sustain the community's vibrancy and cohesiveness.

Through participatory design processes, CCSS can work alongside residents to create spaces that reflect the community's needs. Placemaking initiatives encourage ownership and stewardship by the community, leading to sustained engagement and care for these spaces. Moreover, by anchoring these efforts in local culture and history, placemaking can contribute substantially to a shared sense of identity and community pride [17]. CCSS can nurture an ethos of placemaking initiatives by encouraging community members to take an active role shaping their environment. This includes fostering local leadership, offering education on design and sustainability, and providing platforms for community voices to be heard. By integrating art, culture, and sustainable practices into the development of public spaces, placemaking initiatives can reinforce CCSS's mission to developing a vibrant, healthy, and engaging community.



Understand the importance of good social networks + social capital in times of crisis (e.g. in situations where folks may be experiencing poverty/homelessness, etc.).

Placemaking and the careful design of social spaces can also significantly contribute to the development of robust social networks, which are crucial during times of crisis [18]. Social capital, the network of relationships among people who live and work in a particular society, is an invaluable resource, particularly for individuals experiencing poverty. By fostering spaces where these networks can thrive, placemaking efforts aid in building resilience within the community. Good social networks can lead to mutual aid, shared resources, and collective action, key elements in overcoming challenges and ensuring the longevity and cohesiveness of the community [19].



Continue to update and reiterate on the current state of the neighborhood and analysis of the local context to help inform future directions to head toward.

To implement these strategies successfully, CCSS must continually assess the current state of the neighborhood and gather contextual information through analysis and dialogue with residents. By doing so, CCSS can ensure that the community's evolving needs are met and that the interventions remain relevant and impactful over time. The integration of these strategies within the broader framework of CCSS's mission will not only address the immediate needs of community vibrancy but also contribute to a resilient and cohesive social ecosystem.

Design Catalysts

Three primary areas have been identified as the focal points for the initial stages of design interventions. CCSS can prioritize and integrate these catalyst areas into their current and future planning efforts to bolster community vibrancy as part of a broader mission for their organization and the community:



Neighborhood + Community "Greening"

- Augmenting green space throughout the neighborhood and campus spaces
- Fostering multifunctional design interventions that promote connectivity and networks to existing green spaces and community amenities throughout the neighborhood
- Retrofitting streetscapes as avenues for green design and spheres of public life
- Capitalizing on interstitial spaces to shape and reinforce green spaces (e.g. alleyways, streets, vacant/abandoned lots)



Road Systems + Infrastructure Redesign

- Identifying road diet and traffic calming strategies for neighborhood street systems
- Exploring possibilities for new or adapted networks and nodes to heighten neighborhood connectivity throughout the campus



Social Optimization Considerations

- Identifying programming and placemaking interventions in and throughout the community to activate space and curate opportunities for the community to gather and engage
- Leveraging for space activation interventions through design and programming that create an essence of neighborhood pride

Design Catalysts Explored

Below is a vision for where the design catalysts fit – in situ– through various space typologies– and how CCSS the context of the neighborhood to accomplish community vibrancy and social cohesion:

Road Diet + Streetscape

A road diet is broadly referred to as the narrowing, removal, and/or overall reconfiguration of vehicle lanes that simultaneously adapt the streets for other modes of transportation, users, and functions [20]. This design approach closely aligns with the concept of 'complete streets' which advocates for safer, more accessible streets for a diverse range of users, such as cyclists and walking pedestrians [21]. This intervention shifts the design paradigm from car-oriented networks to people/multimodalcentric places (See Appendix F for more information) and creates spatial opportunities (e.g. along sidewalks) to re-imagine the streetscapes as avenues for public activity. In tandem with road diets, introducing traffic calming measures, such as speed tables, street medians, and vegetation, can help promote slower traffic movement that creates safer navigation for pedestrians [22].



Figure 72. Ground truth image showing the wide width of Woodrow Wilson Street [23]



Figure 73. Ground truth image showing lack of crosswalks and bike lanes for pedestrians on Woodrow Wilson Street [23]



Figure 74. Ground truth image showing lack of street edge design on Woodrow Wilson Street [23]

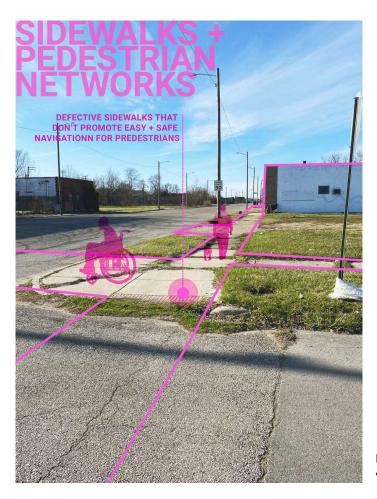


Figure 75. Ground truth image showing the wide width of Woodrow Wilson Street [23]

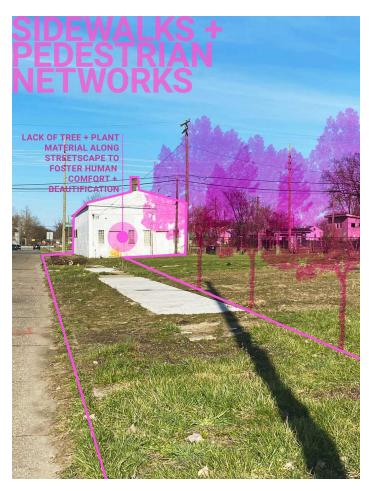


Figure 76. Ground truth image showing the wide width of Woodrow Wilson Street [23]

CCSS Road Diet + Streetscape Goals:

- Reduce the width of Woodrow Wilson to mitigate traffic concerns
- Introduce interventions for traffic calming that create safer experiences for pedestrians and residents that integrate well with proposed vehicular re-design
- Propose design ideas for re-imagined streetscapes that activate space and create beautiful and comfortable streets



Figure 77. Woodrow Wilson Street masterplan for road diet concept [23]



Figure 78. Section diagram of proposed road diet re-design; the proposed road diet allows for more peoplecentric activities [23]

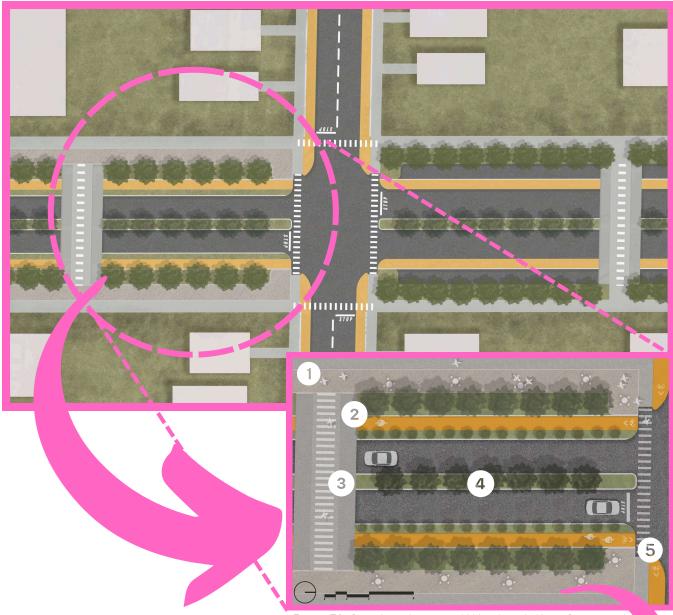


Figure 79. Site plan of proposed Woodrow Wilson Street road diet designs [23]

LEGEND

- WIDENED SIDEWALK FOR BETTER PEDESTRIAN FLOWS AND STREET EDGE **ACTIVATION**
- PLANTING BUFFERS AND BIKE LANES FOR BETTER AND SAFER BICYCLING
- SPEED TABLE WITH CROSSWALK FOR SAFER PEDESTRAIN FLOWS AND SLOWER TRAFFIC PATTERNS
- STREET MEDIAN TO CALM TRAFFIC, REDUCE WIDTH OF LANES +MITIGATE UHI
- CROSSWALKS AT EVERY INTERSECTION TO PROMOTE SAFER PEDESTRIAN FLOWS

Green Corridor

A green corridor is a linked network of landscapes that facilitate a diverse range of benefits across environmental, social, and physical realms ensuring that the connectivity and conservation of open space in urbanized areas is sustained [24]. Capitalizing on a variety of open space typologies throughout a community's landscape can help support the planning, design, and development of the green corridor infrastructure.



Figure 81. Collage visioning for proposed green corridor design [23]

CCSS Green Corridor Goals:

- Utilize Woodrow Wilson as the 'hub' of the corridor intervention and build a system of connections outwards from this centralized location, cultivating a 'Cass Commons Corridor'
- Leverage streets, proposed bike paths, sidewalks, under-utilized alleyways, and other space typologies to develop linked, unified, and multifunctional 'green' pedestrian network across the neighborhood
- Propose design scenarios (temporary and permanent) for nodes (critical points on CCSS campuses, along the streetscape, and/or in vacant lots) to help activate and build a growing system of green spaces that the community will benefit from



Figure 82. Site analysis for a green corridor [23]



Figure 82. Green corridor concept plan [23]



Figure 83. Green corridor concept plan showing Woodrow Wilson Street as the primary hub for green corridor design, and a matrix of linked landscapes using connecting/adjacent streets and properties [23]

SITE DESIGN SCENARIOS

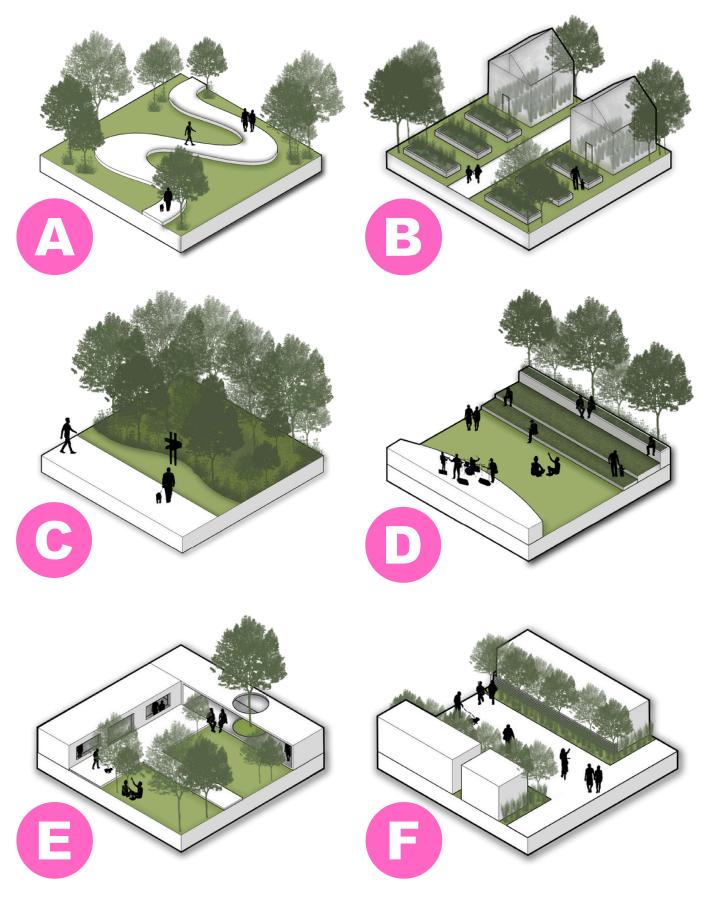


Figure 84. Diagrams outlining site-specific interventions along green corridor nodes and networks [23]



Trails + Micro-Parks

This scenario includes implementing a series of linked trails and pedestrian networks that could use street networks, vacant lots, and alleyways as the means of travel. Additional design elements, such as seating, planting material, and trail wayfinding signage would help create a series of pocket parks/mico-parks throughout the neighborhood. The trails and mico-parks can serve as the foundation for improving ecological, social and physical health, while creating better multimodal, pedestrian-friendly linkages throughout the community.



Community Gardens

Several vacant lots can be leveraged to build and sustain a system of urban gardens for community use and programming. Sites can include raised garden beds, fruit trees, and greenhouses for additional growing activities. Programming, such as food and gardening education, could take place at these sites year round. Several of the proposed site elements could be temporary interventions (i.e. moved or adapted to meet organizational and community goals) or can be implemented permanently/more long term.



Establishing an array of planting material, particularly trees, is an excellent way to promote beautification, reduce heat island, and foster environmental health benefits (among other perks for the physical, social, and environmental realms). By including native trees, shrubs, flowers, and groundcovers there is immense potential to educate the community on the importance of these plants, and can be bolstered by the use of educational/informational signage posted along the edge of urban forest boundaries.



Community Event Space

Creating community is of upmost importance as site designs are explored. Through the creation of flexible open spaces for public use, in tandem with a wide range of events and programming, there is a unique opportunity to leverage the myriad of available spaces for the neighborhood to engage regularly. Events could be organized activities such as concerts, movie screenings, educational services, and community block parties, to more informal activities that are dictated by people's personal preferences.



Climate Shelters

As communities continue to be confronted with the responsibility to adapt to climate change issues, climate shelters are one way to leverage underutilized spaces to mitigate climate-related problems such as heat and cold temperatures. These types of interventions can include built structures (both temporary/mobile and permanent) as well as plant material and programming to help communities respond to pressing climate challenges.



Green Alleyways

Activating alleyways through various mechanisms, such as clean-ups, greening, and designing for multimodal networks, is an area of consideration for reviving and retrofitting an often overlooked space. Retrofitting these spaces to accommodate for better greening efforts and infrastructure for people-oriented use is an additional strategy for transforming space for better and stronger community vitality.

Goal 3: Foster social cohesion through enhanced community programming

Along with fighting poverty and creating opportunities, building community is a core tenet to CCSS's mission. Through implementation of programming and additional social services, CCSS can foster community vitality and capacity through improved social cohesion and sense of belonging. Through targeted community programming initiatives, such as educational workshops, health and wellness programs, cultural exhibitions, or community celebrations, public spaces become multifunctional assets that contribute to improved social health and a flourishing community.

Intertwining programming with public spaces is rooted in the principle that vibrant public spaces are essential for facilitating connections among community members, promoting well-being, and fostering a sense of belonging. This concept of "place-making as a process" takes into consideration the interplays among the roles of actors, along with physical-spatial elements of places. Research and case studies support the idea that when residents engage with their environment and each other through active programming, social networks are strengthened and community resilience is built. This goes hand in hand with active public spaces that serve as a platform for peer exchange, learning, social support, and collective action; crucial components for building a cohesive community [25].

Strategies

Design multifunctional + flexible spaces

Ranging from open community gardens that double as outdoor classrooms to indoor facilities with movable partitions for workshops or small gatherings, designing for multifunctionality allows for transformation of spaces into hubs for learning, growth, and community building, aligned with CCSS's mission of fostering self-reliance and community involvement.

Develop community media

Community media efforts have been demonstrated to be an effective strategy for building community capacity and social cohesion [26]. Examples include community newsletters and radio shows, which can provide opportunities to highlight community members and advertise upcoming events. Residents who engage with community-produced media report an increased sense of belonging and investment in their community [27]. In addition to creating a publicly accessible calendar of event, CCSS has expressed interest in a potential recording studio in the future community center, which could be an excellent change to respond to community desires for the space, and serve as a catalyst for community media projects that engage neighborhood residents further improve social health.

Train local residents as program facilitators Local residents should play a key role in developing programming initiatives that align with the wishes of the community. By training and providing residents with resources to develop and facilitate their own programs, CCSS can support community-led initiatives while strengthening community capacity.

Monitor and evaluate program impact

By leveraging tools and metrics such as tracking attendance and conducting post-event surveys to assess participant satisfaction, CCSS can ensure their programming events embody the principles of co-creation, collaboration, adaptability, inclusivity, and above all, responsiveness to the needs of the vibrant community it serves.

Public Space Programming

The selection of sites for public space programming must consider geographic access, cultural significance, and physical suitability within the neighborhood. Potential spaces include:



Community centers or halls that can offer indoor programming year-round

- Webb Campus Community Center
- The World Building



Public parks, gardens, or squares that can be used for outdoor educational activities, fitness classes, or cultural festivals

- Taylor Park
- Dog Park
- Community Center Green Space
- Fox Family Shelter Green Space



Streets and vacant lots that can be temporarily converted for events like street fairs or markets, promoting local commerce and enhancing pedestrian experiences

- World Building Parking Lot
- Webb Street
- Parking lots of Antisdel, Wesley, and Thomasson Apartments, Scott Building
- Other undeveloped vacant lots



Areas near local landmarks or significant cultural sites that can host programs to celebrate and educate about the community's heritage

Opportunities

Food education programming through Grocery Store and Community kitchen

Through the development of new initiatives such as a potential grocery store project, which may find a home within the future Webb Campus Community Center, CCSS is presented with new opportunities to create programs that enrich the community. Examples include hosting community dinners, developing nutrition workshops, providing cooking classes, and allowing residents to rent out to space for special events. Several of the case studies explored in the grocery study (see Appendix C1) incorporated food programming into their operations, designing spaces such as community kitchens or gathering areas with the intent to be publicly accessible, and frequently holding events that drew in community members. In addition to increasing traffic to the grocery store, which is especially important to sustain its operation through a consistent customer base, it allows for community building that strengthens community cohesion, builds social capital, and contributes to neighborhood health and wellness.

Webb Campus Community Center Programming

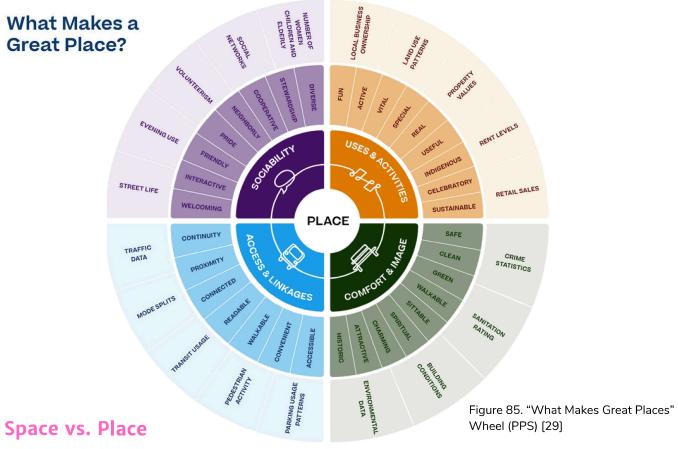
The acquisition of the Webb Campus provides ample space for a variety of community programming initiatives and space activation within the future community center. With a combination of large, open spaces, such as the main atrium of the former cathedral or upstairs gallery seating, and a handful of smaller classrooms and storage rooms, the building provides a variety of spaces that can be developed for community programming.

Placemaking A Tool for Community Vibrancy

Placemaking is a unique opportunity and natural phenomenon that transforms spaces into meaningful places. As CCSS continues towards their mission of making a positive impact on people's lives and across the landscape of their community, ensuring that the design of public spaces - particularly the recommendations and visions previously outlined - become meaningful and widely used places that help contribute to the vibrancy of the community will be a fundamental priority.

Project for Public Spaces (PPS) defines placemaking as the following:

Strengthening the connection between people and the places they share, placemaking refers to a collaborative process by which we can shape our public realm in order to maximize shared value. More than just promoting better urban design, placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution [28].



Through the practice and process of placemaking, there is an ongoing evolution from space to place. In the midst of this transition, space begins to reflect the 'personality' of the people who use them and inextricably becomes embedded with the character of the surrounding community context.

SPACE PLACE

- Geographical specific location(s)
- Physical, and tangible
- Measurable

- Space infused with meaning [30]
- Shaped by the experiential and sensory elements linked to various human experiences and human senses [31]
- Identity and connection ascribed to a space or locale [32]



Placemaking can become an asset that builds, reinforces, and sustains a vibrant community and the social cohesion among the people who live there. As it relates to the three aforementioned goals for CCSS, placemaking interfaces with each in the following ways:

Goals



Goal 1:

- Emphasizes the need to channel participatory/collaborative practices to understand what a community values and where/how these ideas can be incorporated into vibrant, socially-driven places
- Utilizes participatory planning and community expertise to drive future efforts and priorities



Goal 2:

- Helps provide a framework for the design and space activation potential of the neighborhood's spheres of public places
- Identifies what elements would help spaces become places that people will love, feel inherently connected to, and want to spend time in



Goal 3.

- Allows CCSS to craft/devise effective community programming efforts that could be implemented in public places
- Establishes how spaces can be adapted to create formal and informal programming that resonates with the community's needs and builds a lasting rapport between people and place

Identifying, Building, and Maintaining Strong Partnerships



Working together towards a just and sustainable future.

Strong partnerships and collaborations are a facet of development that has received increased focus in recent years [1]. We believe CCSS can benefit from fostering current and new partnerships that will help achieve their overall goal of providing for people's needs and bringing and keeping people out of poverty. The partnerships should be integrated or tangential to the CCSS area of service and Detroit.

Dimensions of Partnerships

Partnerships can be formal or informal, but formal partnerships have the potential for greater impacts as it can allow for greater collaboration and can be assessed at every stage of a project. The ability for assessment at every step of a project is important to ensure partnerships benefit the organizations and community [2]. Partnerships can be defined as informal collaborations, which are mutually beneficial and defined relationships between two organizations. Informal collaborations and partnerships among groups are the building blocks of all systems aimed at creating social improvements. They need to occur before they become formal organizations [3]. Similarly, an informal partnership has the potential to become a formal partnership and all working relationships between two or more organizations begin as informal talks before a formal definition is established.

Relationship with Sustainable Development

Formal partnerships have become such a focus of development and sustainability that the United Nations established it as a Sustainable Development Goal, all of 17 of which were adopted by member states in 2015 [4]. The UN states that it is important for partnerships to occur as organizations can utilize their own resources and expertises, while working with other organizations to provide a more collective use of resources and allow others' resources to help you achieve your own goals [5]. This suggests that development benefits when organizations share resources and work to learn from each other, rather than compete against each other.

Connection to CCSS's Mission

The negative effects of competition can be seen in the nonprofit sector, where nonprofit organizations regularly compete against each other for funding, because the demand for resources is typically larger than that of the supply [6.] Our aim is to reframe this perception of competition and for CCSS to benefit from other's resources and expertise in order to achieve their own goals. Partnerships can create a cycle of mutually beneficial programs which have the potential to reach a larger population and create more opportunities for people's lives to improve. In this chapter we will establish and examine different types of partnerships that could be beneficial to CCSS.

Implementing the Sustainability Roadmap

The following four goals outline key opportunities for partnerships:

- 1. Foster connections with the local food system
- 2. Cultivate partnerships with greening and environmental organizations
- 3. Partner with organizations operating in neighborhood
- 4. Continue and develop institutional partnerships



Creating partnerships with the local food system can help support current and future programs implemented by CCSS. Currently, CCSS provides food and meals for residents in their shelters and housing and other people in need. This is done through Gleaners and Forgotten Harvest, two food assistance nonprofits [7]. Additionally, the Cass Free Medical Clinic, an arm of CCSS, provides 'prescriptions' to participants referred to the clinic by their primary care physicians for fresh produce and nutrition advice through a Wayne State student run organization called Fresh Rx [8]. Farmers and food based nonprofits partnerships can benefit CCSS, as it will allow them to increase their ability to buy and receive food and will be adding to the local economy by using local food sources. It will help provide for people's basic needs as CCSS has more access to a larger and more diverse pool of food resources.

Food system partnerships have the potential to increase the network of resources. Urban farmers and food nonprofits have the potential to provide donations themselves, but can also help point CCSS in the direction of potential resources, and vice versa. Any and all growers in the neighborhood and surrounding areas can benefit from having a new customer. This economic activity can in turn be used in the same area and can create a positive feedback loop of economic activity in the community. Additionally, a wider pool of food options can help support potential future projects and initiatives implemented by CCSS. The specific projects that could benefit from this partnership the most are the grocery store, community center, and economic development planning.

Opportunities

Grocery Store Study

If CCSS wants to pursue a future grocery project, they will need to consistently source food to supply their inventory. This will necessitate a larger connection to the food system in the local area and in the broader Detroit region. Focusing on sourcing food as locally as possible will help to promote sustainability, as transportation costs and time will be reduced. The grocery store can achieve this goal by purchasing food or working with organizations to receive donations. Locally, CCSS can utilize their existing partnership with Fresh Rx, while creating new connections including Michigan Farmers Market Coalition, Fair Food Network, and Michigan Good Food Fund.

Michigan Farmers Market Coalition will connect organizations and individuals to local food sources and also participate in produce prescription programs that operate similarly to Fresh Rx [9]. Fair Food Network is a nonprofit organization that invests in local food businesses and nutritional programs [10]. It also has a grocery incubator program in Detroit [11]. Lastly, Michigan Good Food Fund is an organization similar to Fair Food Network and provides loans and investments in food businesses that promote equitable food and nutrition access [12].

In addition to organizations that can help source food for the grocery stores, connecting with local farmers could be an opportunity for CCSS to source fresh food, connect with the community, and increase economic activity in the surrounding area. Detroit has one of the largest urban agriculture movements in the United States [13]. The City recently hired its first director of Urban Agriculture in September, 2023 [14]. We have compiled a list of Detroit farms located in proximity to CCSS's campus that could potentially partner to source fresh produce and connect CCSS with the urban agriculture movement. Please see Appendix C3 for a table of nearby farms.

Economic Development Planning

The economic development project could include possible businesses that will need to use food products in order to operate. Buying from local vendors also creates more economic development in the local area. Businesses can employ more local residents creating more jobs in the area. Locally owned businesses put more money back into local economies than larger corporations. Approximately 70% of dollars spent at local businesses return to the local economy, while that is contrasted to just over 40% of dollars spent at non-locally owned businesses returning to the economy. Local businesses also tend to donate more to charities, add to consumer choice, reduce environmental harms, and provide more tax revenue to cities which can in turn help provide more services to residents [15].

Webb Campus Design

The proposed community center for the neighborhood surrounding CCSS. Potential amenities include a community kitchen, cooking classes and events, and possibly businesses or retail operations located inside the community center that would sell food products. There is also the potential of holding pop up farmer's markets if there is interest from suppliers and residents. All of these create a need for more food and access to food markets in the area.

Identification of Potential Collaborations

Creating strong partnerships with surrounding organizations can help increase access to food resources that CCSS can use to serve those in need. We have identified potential partners that can help source food and be a supplier to a future grocery store. First, partnerships can be cultivated with the organizations discussed above in the grocery store project section. CCSS can partner with additional food nonprofits such as Keep Growing Detroit and Food Rescue US and its Detroit operations. Keep Growing Detroit works to promote the local food economy and helps people to purchase Detroit grown food [16]

Food Rescue delivers excess healthy food options to organizations that feed the food insecure [17] Some more potential partnerships include Urban Youth Agriculture, Detroit Community Markets, and Deeply Rooted Produce. Urban Youth Agriculture is a small business that teaches growing techniques and lessons about agriculture to youth in Detroit and the surrounding area [18]. Detroit Community Markets is a network of neighborhood locations where fresh, affordable, and locally grown food can be purchased [19]. Deeply Rooted Produce is a zero-waste mobile grocery store that both produces and distributes food [20].



Greening and environmental organizations can help to grow efforts by CCSS to create more green space and natural solutions to issues in the neighborhood. Enhancing the local ecosystem and learning about uses of different types of plants and trees is just one benefit of partnering with environmental organizations. Green stormwater management and reducing the reliance on gray infrastructure is another benefit of working with more greening organizations. Additionally, CCSS can leverage these partnerships to keep up with environmental trends and strategies that are always changing, including best native and naturalized plants to grow, best uses of different plants, and how to maintain them.

Currently CCSS has a strong relationship with Greening of Detroit which is already working to plant trees on areas owned by CCSS. Greening of Detroit works to build green infrastructure, plant trees and promote community forestry, and offers green space management and services [21]. CCSS also has connections with the City of Detroit which has many departments related or adjacent to greening and environmental services including the Buildings, Safety Engineering, and Environmental Department, Department of Public Works, Detroit Parks and Recreation, Planning and Development Department, and the Office of Sustainability [22].

Working to grow the relationship with the City and build a wider network of connections through different departments will allow for more knowledge and opportunities to get projects approved. CCSS can also leverage partnerships to get improvements on nearby City managed land. The City and other potential partnerships can add even more benefits beyond what has already been discussed. First CCSS can learn about how others are doing greening and environmental work. They can also connect to other green spaces in the area and in the wider Detroit area. Continuing to learn best maintenance practices is crucial to the long term success of any greening initiatives. The wider network of knowledge and expertise CCSS has access to, the better they can learn how to sustain any environmental initiatives. Lastly, CCSS can learn how best to message and communicate the details, benefits, and impacts of any and all environmental practices.

Opportunities

Woodrow Wilson Road Diet

The road diet project was developed to research how to create a center of commerce and activity along the Woodrow Wilson corridor. Implementing green stormwater infrastructure and environmental initiatives along Woodrow Wilson Street, will help make it more appealing to walk and participate in economic activity along. Trees can provide shade and, along with green stormwater infrastructure, will reduce flooding and help create a sense due to the aesthetics of the plants. Working with environmental organizations can help to establish plants in property owned by CCSS along the Woodrow Wilson corridor. Additionally, any changes to the road or the public right of way will

have to be in conjunction with the City. This can take the form of actively working to actually change the configuration of the road and traffic flow, or to help plant trees and other plants in the public right of way. Landscaping in the public right of way does need to adhere to City of Detroit Landscape Standards.

Webb Campus Design

Webb Campus and community center can use existing and potential partnerships to help with landscaping projects. Environmental organizations can help do the physical work, the planning, and provide funding for the work to be implemented. Greening organizations and the City can also help to connect any landscape projects to existing green space in the area, both

public and privately owned by CCSS. Lastly, the community center can be an area where environmental education and training can take place as well as environmental events for neighborhood residents.

Identification of Potential Collaborations

There are a number of environmental organizations where there is potential for relationships to be established and grown in order to receive the previously discussed benefits in this goal's overview section. In addition to building more and stronger relationships with environmentally related City departments, some potential organizations include Detroit Future City, The Green Door Initiative, and previously discussed Keep Growing Detroit. Detroit Future City is an organization whose goal is to improve equity and sustainability in the City of Detroit. Part of their work includes land use, lot transformations, and landscaping including a field guide for landscape designs in vacant lots [23]. The Green Door Initiative is focused on environmental and economic justice, while also implementing eco-friendly practices. They want to make a positive impact on the environment and people. Additionally, they want to make sure everyone is capable of understanding environmental impacts and living a sustainable life, regardless of where they live in the City, income level, and race [24]. Lastly, Keep Growing Detroit provides services related to gardening (both educational and resourcing) and sustainable education programming in addition to connecting people to Detroit grown food [25]. See Appendix G for more details on these organization's areas of work.

CCSS ideally wants its services and mission to extend to a wider population and create sustainable improvements in the neighborhood, both in environmental terms and in terms of longevity. Working to connect and engage with a wider population of residents outside of who they currently serve can help to ensure that development will cater to them and the goal of ensuring basic needs and improving human wellbeing reaches even more people. Formal organizations that already do this work in the area can help to facilitate engagement and might have goals that align with CCSS.

Currently, CCSS has monthly HOA meetings among their Tiny Homes residents that allows for feedback and is an opportunity to engage further on potential projects. Additionally, there is a strong relationship with Dream of Detroit, who are an organization utilizing community organizing in addition to land development to improve their neighborhood. Dream of Detroit works just a few blocks away from CCSS along the Woodrow Wilson corridor and is already working in community engagement and to host neighborhood events [26]. Another organization that operates along Woodrow Wilson Street is Powell & Son, a landscaping supplies and services business. CCSS has informed our team that both Dream of Detroit and Powell & Son are aligned with the goal of creating a vibrant commercial corridor along Woodrow Wilson. Leveraging these relationships to reach different segments of the population could help and provide more robust engagement efforts. Seeking out other nonprofit organizations, local businesses, and neighborhood organizations in the area will only improve this robustness and allow for more learning opportunities which can inform development projects chosen to pursue by CCSS.

Opportunities

Identification of Potential Collaborations

While researching organizations that could be potential new neighborhood partners for CCSS, we first examined block clubs. By examining data found on the City of Detroit's website, a list of all registered Detroit block clubs was found. We only looked at clubs that were listed in the same City district as CCSS. Each block club on this preliminary list had street boundaries listed of where they operated. Using these boundaries we identified three block clubs that work in the exact same area as CCSS, or in nearby areas that could benefit from developments CCSS pursues. These block clubs are Webb Block Club, West Buena Vista Block Club, and Central Detroit Christian CDC [27]. A former block club in the area, the Longfellow Block Club, is now a city-registered neighborhood association, the Dream Community Association, which works with Dream of Detroit [28]. In addition to block clubs, there are Detroit

wide nonprofit organizations focused on helping other local neighborhood focused nonprofits. Community Development Advocates of Detroit (CDAD) is one of the largest of these types of organizations and works to help connect neighborhood development organizations with resources and works to lobby for policy changes that will help neighborhoods and their residents [29]. CDAD also performs community engagement and can assist large and small organizations with engagement efforts [30]. Working with an organization like CDAD could allow CCSS to grow its connections in the neighborhood and identify even more partners to help reach people and provide services. See Appendix G for more information on CDAD and contact information for the block clubs.



There are institutional partnerships that can benefit organizations such as CCSS. Large institutions like universities and governments can provide funding for projects and initiatives. Secondly, there is an opportunity to learn about how similar organizations are completing work CCSS wants to participate in. Lastly, working with institutions such as universities, there is an opportunity for students and faculty to help research new ideas and create plans and strategies CCSS can use in the future.

This report and plan is the product of a partnership between the University of Michigan, SEAS and the SEAS Sustainability Clinic and CCSS. The SEAS Sustainability Clinic is committed to sustainability, economic and social health, and justice oriented solutions in the City of Detroit. The Clinic also aims to establish long term partners in Detroit [31]. This would be a partnership that CCSS could continue with and reach out for more ideas for projects for students at the University of Michigan to participate in.

CCSS is already working in partnership with other institutional ties. This includes the previously mentioned Fresh Rx program and working with the City of Detroit. Additionally, MDOT has jurisdiction over a highway near the Tiny Homes properties and other properties owned by CCSS and has prompet interaction between CCSS and MDOT officials. These partnerships have the potential to grow and develop more mutually beneficial outcomes that can help CCSS provide more to and serve more people.

There are many opportunities for CCSS to foster institutional partnerships. As previously stated, the SEAS Sustainability Clinic, Fresh Rx, City of Detroit, and MDOT have potential to create more opportunities for meaningful development spearheaded by CCSS. Through the SEAS

Sustainability Clinic, similar student groups to us or faculty could expand upon or narrow on this project, or work on something new that is needed by CCSS. Through Wayne State Fresh Rx, there are opportunities to expand and possibly connect with more student groups on campus. The City of Detroit Department of Neighborhoods could be a new department to connect with that has not been discussed in other sections of this report. Their focus is on work to enhance neighborhoods [32]. MDOT has programs such as Adopt-A-Highway, Adopt-A-Landscape, Pollinator Habitat Management, and Roadside Development that can improve the quality of the area around the John C. Lodge Highway that is near areas and residents CCSS is serving and aims to serve in the future [33].

There are potential untapped institutional partnerships that could also provide more opportunities for CCSS. Through the University of Michigan there are many programs and centers that could be of interest to CCSS. This includes Poverty Solutions, an initiative that aims to prevent and alleviate poverty [34] the School of Social Work, the School of Public Health, and the Urban and Regional Planning program through the Taubman College of Architecture and Urban Planning. There are other Universities in the area that could provide additional opportunities for unique and innovative projects and research to help CCSS. Outside, but near Detroit there is Eastern Michigan University, University of Michigan-Dearborn, and Michigan State University which has a center near downtown Detroit [35]. There are also Universities in Detroit that are potential partners. These include Wayne State University and University of Detroit Mercy, which are both located within 7 miles of the CCSS World Building.

Conclusion

The presented Sustainability Roadmap outlines key areas of priority for CCSS as they embark on a journey to expand their impact throughout the Dexter-Linwood neighborhood and the broader city of Detroit. Our six themes harmonize CCSS's mission statement with the goals of sustainable development, providing a framework that can be used to guide the nonprofit's strategic planning process. As the nature of sustainable development is highly interconnected, the goals and initiatives throughout this roadmap act in concert to meet multiple themes of sustainability and development.

After determining prime areas of interest to CCSS's leadership and community, our team compiled an array of potential initiatives that aligned with the organization's goals, along with implementation strategies and best practices to provide research-based recommendations to inform CCSS's next steps. This vision plan and roadmap is intended to be a living document, providing resources to aid CCSS in carrying out its mission, and presented with the intention that it will continue to be changed and developed to reflect the needs of the organization and the community it serves. We highly encourage that all next steps be grounded firmly in community engagement, allowing community needs to guide the path forward to ensure future endeavors are successful and contribute to a thriving community.

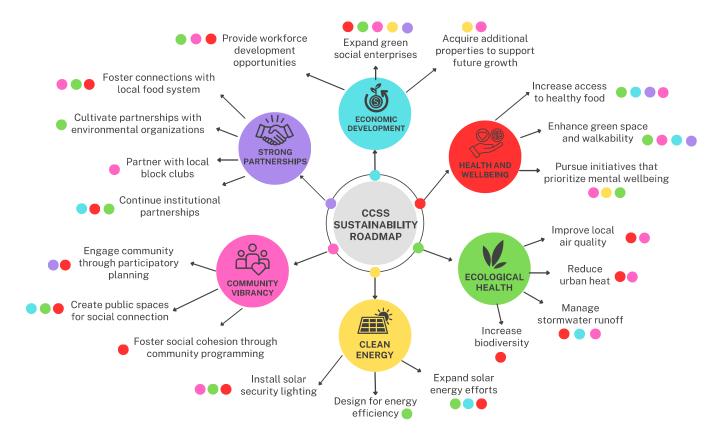


Figure 86. Diagram demonstrating how the 20 goals interconnect across the 6 themes

Notes

I. Introduction

- 1. "History," Cass Community Social Services, June 22, 2012, https://casscommunity.org/about/history/.
- 2. "Cass Community Social Services," Cass Community United Methodist Church (blog), May 29, 2015, https://cassumc.com/outreach/.
- 3. "Tiny Homes Detroit," Cass Community Social Services, January 30, 2013, https://casscommunity.org/tinvhomes/.
- 4. Nana Temple, Project Site Context in Detroit, Digital Graphic, 2024.
- 5. Susan C. Beachy, "Anatomy of Detroit's Decline," accessed March 31, 2024, https://www.nytimes.com/interactive/2013/08/17/us/detroit-decline.html.
- 6. Susan Ager, "Tough, Cheap, and Real, Detroit Is Cool Again," accessed March 31, 2024, http://www.nationalgeographic.com/taking-back-detroit/see-detroit.html.
- 7. Burton Historical Collection, accessed March 31, 2024, https://digitalcollections.detroitpubliclibrary.org/islandora/search?f%5B0%5D=mods_location_physicalLocation_ms%3A%22Burton%20Historical%20Collection%22.
- 8. Kait Fore, "A Mighty Long Way: How Black People Moved In & Out and Around Detroit," *New Detroit* (blog), February 23, 2021, https://www.newdetroit.org/a-mighty-long-way-how-black-people-moved-in-out-and-around-detroit/.; Elizabeth Applebaum, "What A Place This Was," *Jewish Telegraphic Agency* (blog), October 9, 2013, https://www.jta.org/2013/10/09/ny/what-a-place-this-was.
- 9. "Census Profile: Census Tract 5318, Wayne, MI," Housing Information Portal, accessed March 10, 2024, https://hip.datadrivendetroit.org/profiles/14000US26163531800-census-tract-5318-wayne-mi/.
- 10. Michael Grady, CCSS Campus Current Map, Digital Map, 2024
- 11. Nana Temple, CCSS Tiny Homes Community Sign, Photograph, 2024.
- 12. Michael Grady, Woods Cathedral, Photograph, 2024.
- 13. Walid Bamehriz, Sustainability Roadmap Strategic Flow, Digital Graphic, 2024.

II. Vision

- 1. "Cass Community Social Services," Cass Community Social Services, accessed March 31, 2024, https://casscommunity.org/.
- 2. Michael Grady, CCSS Campus Vision Map, Digital Map, 2024
- 3. "THE 17 GOALS | Sustainable Development," accessed March 31, 2024, https://sdgs.un.org/goals.
- 4. Ibid.
- 5. "Key Definitions," U.S. Economic Development Administration, accessed March 31, 2024, https://www.eda.gov/performance/key-definitions.

- 6. "Constitution of the World Health Organization," accessed March 31, 2024, https://www.who.int/about/accountability/governance/constitution.
- 7. Geof Rayner and Tim Lang, "ECOLOGICAL PUBLIC HEALTH: Leaders, Movements and Ideas to Shift the Boundaries Between the Normal and the Desirable," in *Health of People, Places and Planet*, ed. Colin D. Butler, Jane Dixon, and Anthony G. Capon, Reflections Based on Tony McMichael's Four Decades of Contribution to Epidemiological Understanding (ANU Press, 2015), 617–42, https://www.istor.org/stable/i.ctt1729vxt.58.
- 8. Milena Fermina Rosenfield, Liane Miedema Brown, and Madhur Anand, "Increasing Cover of Natural Areas at Smaller Scales Can Improve the Provision of Biodiversity and Ecosystem Services in Agroecological Mosaic Landscapes," *Journal of Environmental Management* 303 (February 1, 2022): 114248, https://doi.org/10.1016/i.jenvman.2021.114248.
- 9. "Cass Community Social Services Annual Report 2021," Annual Report, 2021.
- 10. Darian Stibbe and Dave Prescott, *THE SDG PARTNERSHIP GUIDEBOOK: A Practical Guide to Building High-Impact Multi-Stakeholder Partnerships for the Sustainable Development Goals* (The Partnering Initiative and UNDESA, 2020).

III. Implementing the Goals of the Sustainability Roadmap

Theme 1: Identifying Opportunities for Economic Development and Redevelopment

- 1. International Institute for Sustainable Development. "Sustainable Development." Accessed March 27, 2024. https://www.iisd.org/mission-and-goals/sustainable-development
- 2. Cass Community Social Services. "History," June 22, 2012. https://casscommunity.org/about/history/.
- 3. Cass Community Social Services. June 22, 2012. https://casscommunity.org
- 4. Housing Information Portal. "Census Profile: Census Tract 5319, Wayne, MI." Accessed April 16, 2024. https://hip.datadrivendetroit.org/time-series-profiles/14000US26163531900-census-tract-5319-wayne-mi/.
- 5. Housing Information Portal. "Census Profile: Census Tract 5313, Wayne, MI." Accessed April 16, 2024. https://hip.datadrivendetroit.org/profiles/14000US26163531300-census-tract-5313-wayne-mi/.
- 6. Detroit Mayor's Workforce Development Board. "Workforce Data." Accessed April 16, 2024. https://workforcedetroit.com/workforce-data/.
- 7. Detroit Mayor's Workforce Development Board. "Workforce Data." Accessed April 16, 2024. https://workforcedetroit.com/workforce-data/.
- 8. "City of Detroit Forecast | U-M LSA Department of Economics." Accessed April 17, 2024. https://lsa.umich.edu/econ/rsqe/forecasts/city-of-detroit-forecast.html.
- 9. Detroit Mayor's Workforce Development Board. "Workforce Data." Accessed April 17, 2024. https://workforcedetroit.com/workforce-data/.
- 10. Detroit Mayor's Workforce Development Board. "Workforce Data." Accessed April 17, 2024. https://workforcedetroit.com/workforce-data/.

- 11. EcoWorks. "Strategic Community Iniatives." Accessed April 16, 2024. https://www.ecoworksdetroit.org/copy-of-sci. Green Living Science. "RECYCLING." Accessed April 16, 2024. https://www.greenlivingscience.org/recycle.
- 12. "USTMA | U.S. Tire Manufacturers Association." Accessed April 16, 2024. https://www.ustires.org/.
- 13. "I3Detroit I3Detroit." Accessed April 16, 2024. https://www.i3detroit.org/.
- 14. Detroit Employment Solutions Corporation. "Home." Accessed April 16, 2024. https://descmiworks.org/.
- 15. Goodwill. "About Goodwill | Putting People with Employment Challenges to Work." Accessed April 16, 2024. https://www.goodwilldetroit.org/about/.
- 16. Creative, Zoyes. "Job Training." Focus: HOPE. Accessed April 17, 2024. https://www.focushope.edu/programs/job-training/.
- 17. "International Carwash Association." Accessed April 17, 2024. https://www.carwash.org.
- 18. "Michigan Department of Environment, Great Lakes & Energy (EGLE)." Accessed April 17, 2024. https://www.michigan.gov/egle.
- 19. "Wayne County Community College District." Accessed April 17, 2024. https://www.wccd.edu/. Mike Ilitch School of Business. "Mike Ilitch School of Business," January 9, 2024. https://ilitchbusiness.wayne.edu/.
- 20. "Detroit Food Policy Council." Accessed April 17, 2024. https://www.detroitfoodpc.org/.
- 21. Keep Growing Detroit. "Classes & Workshops." Accessed April 17, 2024. https://www.detroitagriculture.net/classes. NASM. "NASM Homepage." Accessed April 17, 2024. https://www.nasm.org. ACSM "Personal Trainer."
- 22. Accessed April 17, 2024. https://www.acsm.org/certification/get-certified/personal-trainer.
- 23. The Greening of Detroit. "Greeningofdetroit.Com." Accessed April 17, 2024. https://www.greeningofdetroit.com.
- 24. TechTown Detroit. "Flexible Workspaces." Accessed April 17, 2024. https://techtowndetroit.org/flexible-workspaces/.
- 25. Register, Susan Carpenter | Orange County. "Washing Cars, but without All That Precious Water." *Orange County Register* (blog), June 5, 2014. https://www.ocregister.com/2014/06/05/washing-cars-but-without-all-that-precious-water/.
- 26. "Why Should We Care about Food Waste? | USDA." Accessed April 17, 2024. https://www.usda.gov/foodlossandwaste/why. Cass Community Social Services.June 22, 2012. https://casscommunity.org
- 27. Magazine, E.-The Environmental. "Eco-Friendly Gyms: Seeking Out Earth-Friendly Fitness Communities." *Emagazine.Com* (blog), February 9, 2024. https://emagazine.com/eco-friendly-gyms-seeking-out-earth-friendly-fitness-communities/.
- 28. RecoveryParkTimeline. "Home." Accessed April 17, 2024. https://www.recoverypark.org. DBCFSN. "D-Town Farm." Accessed April 17, 2024. https://www.dbcfsn.org/dtownfarm.
- 29. Eastern Market. "Eastern Market." Accessed April 17, 2024. https://easternmarket.org/.

- 30. Michigan Good Food Charter. "Michigan Good Food Charter." Accessed April 17, 2024. https://www.canr.msu.edu/michiganfood.
- 31. Keep Growing Detroit. "Keep Growing Detroit." Accessed April 17, 2024. https://www.detroitagriculture.net.
- 32. City of Detroit. "Recycle Here! Drop-off Facility." Accessed April 17, 2024. https://detroitmi.gov/departments/department-public-works/refuse-collection/detroit-recycles/recycle-here-drop-facility.
- 33. Schlink, Alyssa. "Programs." *Forgotten Harvest* (blog). Accessed April 17, 2024. https://www.forgottenharvest.org/programs/. "Go Gleaners! | Gleaners Community Food Bank," October 28, 2022. https://www.gcfb.org/go-gleaners/.
- 34. SportsArt. "Home." Accessed April 17, 2024. https://www.gosportsart.com/. Technogym gym equipment and fitness solutions for home and business. "Environmental Sustainability," February 11, 2015. https://www.technogym.com/gb/who-we-are/environmental-sustainability-2/.
- 35. "Cali Bamboo Sustainable Bamboo Flooring, Fencing & Decking," March 17, 2016. https://elemental.green/cali-bamboo-sustainable-bamboo-flooring-decking/. "Green Building Supply, Safe, Non Toxic, Environmentally Friendly Materials." Accessed April 17, 2024. https://www.greenbuildingsupply.com/.
- 36. "Eco Touch Car Care Products: Waterless Car Wash: Eco Friendly: Green Car Wash." Accessed April 17, 2024. https://www.detailing.com/store/eco-touch.html. "Car Wash & Wax Atomizer Bundle with 2 Towel Set | Chemical Guys." Accessed April 17, 2024. https://www.chemicalguys.com/products/eco-friendly-waterless-car-wash-wax-sprayer-kit.
- 37. "PRODUCTS." Accessed April 17, 2024. https://optimumcarcare.com/page/products.
- 38. Green Business Benchmark°. "Sustainability News & Resources." Accessed April 17, 2024. https://www.greenbusinessbenchmark.com/resources.
- 39. "Simple Green Household Cleaning Site." Accessed April 17, 2024. https://simplegreen.com/cleaning-tips/automotive/vehicle-wash/. Detailers Products. "Home." Accessed April 17, 2024. https://www.detailersproducts.com.
- 40. The Greening of Detroit. "Greeningofdetroit.Com." Accessed April 17, 2024. https://www.greeningofdetroit.com. "Detroiters Working for Environmental Justice | Protecting Detroiters' Right to Clean Air, Safe Water and Healthy Neighborhoods." Accessed April 17, 2024. https://detroitenvironmentaliustice.org/.
- 41. Goodwill. "Goodwill Industries of Greater Detroit | Find Work, Hope, and Pride." Accessed April 17, 2024. https://www.goodwilldetroit.org/.
- 42. Creative, Zoyes. "Job Training." Focus: HOPE. Accessed April 17, 2024. https://www.focushope.edu/programs/job-training/.
- 43. SER Metro-Detroit. "Home." Accessed April 17, 2024. https://sermetro.org/.
- 44. International Disability Alliance. "Resource Page on Disability-Inclusive WASH." Accessed April 17, 2024. https://www.internationaldisabilityalliance.org/DisabilityInclusiveWASH.
- 45. "Michigan Rehabilitation Services." Accessed April 17, 2024. https://www.michigan.gov/leo/bureaus-agencies/mrs. "JAN Job Accommodation Network." Accessed April 17, 2024. https://askian.org/.

- 46. Cass Community Social Services. "Green Industries," June 22, 2012. https://casscommunity.org/green-industries/.
- 47. "NLIHC Releases The Gap: A Shortage of Affordable Homes | National Low Income Housing Coalition," April 3, 2024. https://www.nlihc.org/news/nlihc-releases-gap-shortage-affordable-homes-0.
- 48. Habitat for Humanity Detroit. "Habitat for Humanity Detroit." Accessed April 17, 2024. https://habitatdetroit.org/.
- 49. "Home | Detroit Riverfront Conservancy." Accessed April 17, 2024. https://detroitriverfront.org/.
- 50. The Greening of Detroit. "Greeningofdetroit.Com." Accessed April 17, 2024. https://www.greeningofdetroit.com.

Theme 2: Promoting Health and Wellbeing

- 1. "Constitution of the World Health Organization." *World Health Organization*. Accessed March 31, 2024. https://www.who.int/about/accountability/governance/constitution.
- 2. There have been many different takes on this model, adapted from Swarbrick, Margaret. "A Wellness Model for Clients." *Mental Health Special Interest Section Quarterly*, March 1, 1997, 1–4.
- 3. Image from Wellness | McKinley Health Center | University of Illinois at Urbana-Champaign. (n.d.). Retrieved February 21, 2024, from https://mckinley.illinois.edu/health-education/wellness
- 4. "Food and Nutrition Security | USDA." Accessed April 10, 2024. https://www.usda.gov/nutrition-security.
- 5. Ritchie, Hannah, Pablo Rosado, and Max Roser. "Environmental Impacts of Food Production." *Our World in Data*, December 2, 2022. https://ourworldindata.org/environmental-impacts-of-food.
- 6. "Preventing Disease through Healthy Environments: A Global Assessment of the Burden of Disease from Environmental Risks." *World Health Organization*. Accessed March 18, 2024. https://www.who.int/publications-detail-redirect/9789241565196.
- 7. Cellini, Stephanie Riegg, Signe-Mary McKernan, and Caroline Ratcliffe. "The Dynamics of Poverty in the United States: A Review of Data, Methods, and Findings." *Journal of Policy Analysis and Management* 27, no. 3 (June 2008): 577–605. https://doi.org/10.1002/pam.20337.
- 8. Dhruv Kullar and Dave A. Chokshi. "Health, Income, & Poverty: Where We Are & What Could Help." Project HOPE, October 4, 2018. https://doi.org/10.1377/hpb20180817.901935.
- 9. Ibid.
- 10. "Food and Nutrition Security | USDA." Accessed April 10, 2024. https://www.usda.gov/nutrition-security.
- 11. Hill, Alex B. and Amy Kuras. "Detroit Food Metrics Report 2020 (with 2021 Update)." *Detroit Food Policy Council*. November 3, 2022. Accessed April 10, 2024. https://www.detroitfoodpc.org/sites/default/files/pdfs/DFMR20-Report-20221103-CORRECTED.pdf
- 12. Ibid.
- 13. Garry, Margaret. "Grocery Stores: New Opportunities to Promote Fair Food in the Inner City." Fair Food Network. Accessed April 10, 2024. https://fairfoodnetwork.org/from-the-field/grocery-stores-new-opportunities-to-promote-fair-food-in-the-inner-city/.

- 14. Gerber, Elisabeth, Morenoff, Jeffery, and Smith, Conan. "Detroiters' Views on Transportation and Mobility," 2017.
- 15. Bastian, Elizabeth, and Jacob Napieralski. "Suburban Food Security: Walkability and Nutritional Access in Metropolitan Detroit." *The Professional Geographer* 68, no. 3 (July 2, 2016): 462–74. https://doi.org/10.1080/00330124.2015.1099447.
- 16. Ignaczak, Nina. "Composting, Water Access and Backyard Chickens: Detroit's Urban Farming Evolution." Planet Detroit, March 19, 2024. https://planetdetroit.org/2024/03/detroit-urban-farming-tepfirah-rushdan/.
- 17. "Detroit People's Food Co-Op Community-Owned Grocery." Accessed March 31, 2024. https://detroitpeoplesfoodcoop.com/.
- 18. FoodPrint. "Food Justice." Accessed March 31, 2024. https://foodprint.org/issues/food-justice/.
- 19. Schuck, Sammy. "Detroit's Status as 'Food Desert' Challenged as More Produce Options Emerge." Spartan Newsroom, January 21, 2022. https://news.jrn.msu.edu/2022/01/detroits-status-as-food-desert-challenged-as-more-produce-options-emerge/.
- 20. Terranella, Slone. "Detroit's 'food Deserts' Are a Burden for Many | Features | Thesouthend.Wayne.Edu." Accessed March 23, 2024. https://www.thesouthend.wayne.edu/features/article_ea5c3c08-46fd-11e8-b44a-bb0dd1413b54.html.
- 21. Dutko, Paula, Michele Ver Ploeg, and Tracey Farrigan. "Characteristics and Influential Factors of Food Deserts," ERR-140, *U.S Department of Agriculture, Economic Research Service,* August 2012. Accessed April 10, 2024. https://www.ers.usda.gov/webdocs/publications/45014/30940_err140.pdf
- 22. Walker, Jo. "'Food Desert' vs. 'Food Apartheid': Which Term Best Describes Disparities in Food Access?" (November 2023). Accessed March 31, 2024. https://seas.umich.edu/news/food-desert-vs-food-apartheid-which-term-best-describes-disparities-food-access.
- 23. Taylor Valentine, CCSS Campus Food Access Map, Screenshot taken from Google Maps, 2024.
- 24. Hill, Alex B. and Amy Kuras. "Detroit Food Metrics Report 2017." *Detroit Food Policy Council and Detroit Health Department*. (2017). Accessed April 10, 2024. https://www.dropbox.com/s/10yhmcym2lm68ap/DFMR17%20Report%20120717%20FINAL.pdf?dl=0
- 25. "An Updated Measure of Food Insecurity | Data Driven Detroit." Accessed March 19, 2024. https://datadrivendetroit.org/blog/2023/11/08/an-updated-measure-of-food-insecurity/.
- 26. Taken from previously-conducted CCSS community survey.
- 27. Midjourney. (2024). Midjourney (V5) [Text-to-image model]. https://www.midjourney.com/
- 28. Midjourney. (2024). Midjourney (V5) [Text-to-image model]. https://www.midjourney.com/
- 29. Midjourney. (2024). Midjourney (V5) [Text-to-image model]. https://www.midjourney.com/
- 30. Coventry, Peter A., Jennifer V. E. Brown, Jodi Pervin, Sally Brabyn, Rachel Pateman, Josefien Breedvelt, Simon Gilbody, Rachel Stancliffe, Rosemary McEachan, and Piran C. L. White. "Nature-Based Outdoor Activities for Mental and Physical Health: Systematic Review and Meta-Analysis." *SSM Population Health* 16 (December 1, 2021): 100934. https://doi.org/10.1016/j.ssmph.2021.100934.

- 31. Yang, Bo-Yi, Tianyu Zhao, Li-Xin Hu, Matthew H. E. M. Browning, Joachim Heinrich, Shyamali C. Dharmage, Bin Jalaludin, et al. "Greenspace and Human Health: An Umbrella Review." *The Innovation* 2, no. 4 (November 28, 2021): 100164. https://doi.org/10.1016/j.xinn.2021.100164.
- 32. Lee, Andrew Chee Keng, Hannah C Jordan, and Jason Horsley. "Value of Urban Green Spaces in Promoting Healthy Living and Wellbeing: Prospects for Planning." *Risk Management and Healthcare Policy* 8 (August 27, 2015): 131–37. https://doi.org/10.2147/RMHP.S61654.
- 33. Wang, Hao, and Yuqi Yang. "Neighbourhood Walkability: A Review and Bibliometric Analysis." *Cities* 93 (October 1, 2019): 43–61. https://doi.org/10.1016/j.cities.2019.04.015.
- 34. Lee, Soongbong, Myungjoo Han, Kyoungah Rhee, and Bumjoon Bae. "Identification of Factors Affecting Pedestrian Satisfaction toward Land Use and Street Type." *Sustainability* 13, no. 19 (January 2021): 10725. https://doi.org/10.3390/su131910725.
- 35. Zhu, Xuemei, Zhipeng Lu, Chia-Yuan Yu, Chanam Lee, and George Mann. "Walkable Communities: Impacts on Residents' Physical and Social Health." *World Health Design* 6, no. 3 (July 2013): 68–75. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8776244/.
- 36. Baobeid, Abdulla, Muammer Koç, and Sami G. Al-Ghamdi. "Walkability and Its Relationships With Health, Sustainability, and Livability: Elements of Physical Environment and Evaluation Frameworks." *Frontiers in Built Environment* 7 (September 30, 2021). https://doi.org/10.3389/fbuil.2021.721218.
- 37. Aman, Aini, Muhammad Rafiq, Omkar Dastane, and Asrar Ahmed Sabir. "Green Corridor: A Critical Perspective and Development of Research Agenda." *Frontiers in Environmental Science* 10 (August 30, 2022). https://doi.org/10.3389/fenvs.2022.982473.
- 38. Ibid.
- 39. Midjourney. (2024). Midjourney (V5) [Text-to-image model]. https://www.midjourney.com/
- 40. "Mental Health." *World Health Organization*. Accessed April 10, 2024. https://www.who.int/health-topics/mental-health.
- 41. Kumar, Anant, and K. Rajasekharan Nayar. "COVID 19 and Its Mental Health Consequences." *Journal of Mental Health* 30, no. 1 (January 2, 2021): 1–2. https://doi.org/10.1080/09638237.2020.1757052.
- 42. Choi, Yeon Jin, and Christina Matz-Costa. "Perceived Neighborhood Safety, Social Cohesion, and Psychological Health of Older Adults." *The Gerontologist* 58, no. 1 (January 18, 2018): 196–206. https://doi.org/10.1093/geront/gnw187.
- 43. Schneiderman, Neil, Gail Ironson, and Scott D. Siegel. "STRESS AND HEALTH: Psychological, Behavioral, and Biological Determinants." *Annual Review of Clinical Psychology* 1 (2005): 607–28. https://doi.org/10.1146/annurev.clinpsy.1.102803.144141.
- 44. Montpetit, Mignon A., and Stacey S. Tiberio. "Probing Resilience: Daily Environmental Mastery, Self-Esteem, and Stress Appraisal." *The International Journal of Aging and Human Development* 83, no. 4 (October 1, 2016): 311–32. https://doi.org/10.1177/0091415016655162.
- 45. CDC. "How Does Social Connectedness Affect Health?" Centers for Disease Control and Prevention, May 8, 2023. https://www.cdc.gov/emotional-wellbeing/social-connectedness/affect-health.htm.
- 46. "Brain Health." *World Health Organization*. Accessed April 10, 2024. https://www.who.int/health-topics/brain-health.

- 47. Avan, Abolfazl, Vladimir Hachinski, and Brain Health Learn and Act Group. "Brain Health: Key to Health, Productivity, and Well-Being." *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* 18, no. 7 (July 2022): 1396–1407. https://doi.org/10.1002/alz.12478.
- 48. Rosenfield, Milena Fermina, Liane Miedema Brown, and Madhur Anand. "Increasing Cover of Natural Areas at Smaller Scales Can Improve the Provision of Biodiversity and Ecosystem Services in Agroecological Mosaic Landscapes." *Journal of Environmental Management* 303 (February 1, 2022): 114248. https://doi.org/10.1016/i.ienvman.2021.114248.
- 49. Facebook post from Cass Community Social Services. Posted September 7, 2020. Accessed April 10, 2024.

https://www.facebook.com/CassDetroit/posts/drag-racing-on-woodrow-wilson-has-been-constant-on-the-weekends-but-in-the-last-/10157155100605286/.

- 50. "Southbound M-10 (Lodge Freeway) Exit to Elmhurst Street in Detroit to Close for Alert System Installation." Accessed April 10, 2024. https://www.michigan.gov/mdot/news-outreach/pressreleases/2021/04/30/southbound-m-10-lodge-freewa
- y-exit-to-elmhurst-street-in-detroit-to-close-for-alert-system-installa
- 51. Google Maps, "Street View from CCSS Tiny Homes Community." Accessed April 7, 2024. https://www.google.com/maps/@42.3904676,-83.1045503,3a,75y,334.11h,78.77t/data=!3m6!1e1!3m4!1s/hRvtl4JfjkalR4MtM8jT5g!2e0!7i16384!8i8192?entry=ttu
- 52. Baranyi, Gergő, Martín Hernán Di Marco, Tom C. Russ, Chris Dibben, and Jamie Pearce. "The Impact of Neighbourhood Crime on Mental Health: A Systematic Review and Meta-Analysis." *Social Science & Medicine* (1982) 282 (August 2021): 114106. https://doi.org/10.1016/j.socscimed.2021.114106.
- 53. "Road Diets (Roadway Reconfiguration) | FHWA." Accessed April 1, 2024. https://highways.dot.gov/safety/proven-safety-countermeasures/road-diets-roadway-reconfiguration.

54. Ibid.

- 55. Chalfin, Aaron, Benjamin Hansen, Jason Lerner, and Lucie Parker. "Reducing Crime Through Environmental Design: Evidence from a Randomized Experiment of Street Lighting in New York City." *Journal of Quantitative Criminology* 38, no. 1 (March 1, 2022): 127–57. https://doi.org/10.1007/s10940-020-09490-6.
- 56. Straight, Richard. "Using Agroforestry to Buffer Noise," AF Note-42. *USDA National Agroforestry Center.* (May 2011). Accessed April 10, 2024. https://www.fs.usda.gov/nac/assets/documents/agroforestrynotes/an42w05.pdf
- 57. Ow, Lai Fern, and S. Ghosh. "Urban Cities and Road Traffic Noise: Reduction through Vegetation." *Applied Acoustics* 120 (May 1, 2017): 15–20. https://doi.org/10.1016/j.apacoust.2017.01.007.
- 58. Nguyen, Thulan, and Makoto Morinaga. "Effect of Roadside Trees on Pedestrians' Psychological Evaluation of Traffic Noise." *Frontiers in Psychology* 14 (August 16, 2023): 1166318. https://doi.org/10.3389/fpsyg.2023.1166318.
- 59. Google Maps & Adobe Photoshop Generative Fill, "Manipulated street view from CCSS Tiny Homes Community showing greening elements for visual separation." Accessed April 7, 2024. https://www.google.com/maps/@42.3904676,-83.1045503,3a,75y,334.11h,78.77t/data=!3m6!1e1!3m4!1s hRvtl4JfikalR4MtM8iT5g!2e0!7i16384!8i8192?entry=ttu
- 61. Marcus, Clare. Untitled. 2013.

- 62. Growing Hope Gardens. Untitled. Undated.
- 63. Pevos, Edward. The Congregation Church in Detroit. 2020
- 64. Staver Matthew. Untitled. 2017.
- 65. Halkin Mason Photography. Bill Richards Center For Healing. Undated.
- 67. Staver Matthew. Providence at the Heights. 2017.
- 68. Lietz, Aaron. Path Home Family Village. 2019.
- 69. Shopworks Architecture Studio, Karis Apartments, 2020.
- 70. Contract Design Magazine, UNC Hospitals Hillsborough campus. Undated.
- 71. Bitterman, Jeremy. Meyer Memorial trust Headquarters. 2022.
- 72. Center for Active Design, AMLI Ponce Park. 2019.
- 73. Alterra Landscape Architects, untitled. Undated.
- 74. Adobe Stock, ID: 544371379. Undated.
- 75. Environmental Works, Bakhita Gardens. Undated.

Theme 3: Enhancing Ecological Health

- 1. Ecological Society of America. "What Does Ecology Have to Do with Me?" Accessed March 30, 2023. https://www.esa.org/about/what-does-ecology-have-to-do-with-me/.
- 2. Morgan G. I. Langille et al., "Predictive Functional Profiling of Microbial Communities Using 16S rRNA Marker Gene Sequences," *Nature Biotechnology* 31, no. 9 (September 2013): 814, https://doi.org/10.1038/nbt.2676.
- 3. Minnesota Pollution Control Agency, "Air Quality and Health," accessed March 30, 2023, https://www.pca.state.mn.us/air-water-land-climate/air-quality-and-health.
- 4. Tong, Shilu, Jason Prior, Glenn McGregor, Xiaoming Shi, and Patrick Kinney. "Building Healthy Communities: Urban heat: an increasing threat to global health." *The BMJ* 375 (2021).
- 5. Gibson, Lauren. "Examining the Impacts of Flooding on Public Health." (2022).
- 6 .gellison@mlive.com, Garret Ellison |. "Why Detroit Air Meets Ozone Standard but West Michigan Does Not." *Mlive*, 31 May 2023, www.mlive.com/public-interest/2023/05/why-detroit-air-meets-ozone-standard-but-west-michigan-does-no t.html.
- 7. "Heat Islands and Their Existence in Metro Detroit." Drawing Detroit. Accessed April 1, 2023. http://www.drawingdetroit.com/heat-islands-and-their-existence-in-metro-detroit/

- 8. Larson, Peter S., Carina Gronlund, Lyke Thompson, Natalie Sampson, Ramona Washington, Jamie Steis Thorsby, Natalie Lyon, and Carol Miller. "Recurrent home flooding in detroit, mi 2012–2020: Results of a household survey." *International journal of environmental research and public health* 18, no. 14 (2021): 7659.
- 9. City of Detroit, "Strategies," in *Parks and Recreation Strategic Plan*, Chapter 3 (Detroit, MI: City of Detroit, 2022), [page number], https://detroitmi.gov/sites/detroitmi.localhost/files/2022-04/PRSP_Chapter3_Strategies_Draft.pdf.
- 10. U.S. Department of Health and Human Services, "Environmental Conditions," Healthy People 2030, Office of Disease Prevention and Health Promotion, accessed [Access Date], https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/environmental-conditions.
- 11. World Health Organization, "Air Pollution," World Health Organization, last updated [Last Updated Date if available], accessed March 12, 2024, https://www.who.int/health-topics/air-pollution#tab=tab 1.
- 12. Manisalidis, Ioannis, Elisavet Stavropoulou, Agathangelos Stavropoulos, and Eugenia Bezirtzoglou. "Environmental and health impacts of air pollution: a review." *Frontiers in public health* 8 (2020): 505570.
- 13. "Understanding Air Pollution Patterns and Trends." Clarity Movement Co. Blog. Clarity Movement Co., n.d. https://www.clarity.io/blog/worst-times-for-air-quality-understanding-air-pollution-patterns-and-trends. Accessed March 20, 2024.
- 14. U.S. National Park Service, "Sources of Air Pollution," National Park Service, accessed April 5, 2023, https://www.nps.gov/subjects/air/sources.htm.
- 15. American Lung Association. "Disparities in the Impact of Air Pollution." American Lung Association, November 2, 2023. https://www.lung.org/clean-air/outdoors/who-is-at-risk/disparities.
- 16. Lee, Byeong-Jae, Bumseok Kim, and Kyuhong Lee. "Air pollution exposure and cardiovascular disease." *Toxicological research* 30, no. 2 (2014): 71-75.
- 17. Siddiqua, Ayesha, John N. Hahladakis, and Wadha Ahmed KA Al-Attiya. "An overview of the environmental pollution and health effects associated with waste landfilling and open dumping." *Environmental Science and Pollution Research* 29, no. 39 (2022): 58514-58536.
- 18. Community Action to Promote Healthy Environments (CAP-HE). "The Full Chapter on Westside Detroit." In *Public Health Action Planning Resource Manual*. Accessed April 16, 2024. http://caphedetroit.sph.umich.edu/wp-content/uploads/2016/10/Resource-Manual-6.15-Westside-Detroit-Website-Version-10-4-16.pdf.
- 19. Union of Concerned Scientists, "Cars, Trucks, Buses and Air Pollution," last modified July 23, 2008, http://www.ucsusa.org/resources/cars-trucks-buses-and-air-pollution.
- 20. "Large Trucks Are Biggest Culprits of Near-Road Air Pollution." ScienceDaily, September 10, 2018. https://www.sciencedaily.com/releases/2018/09/180910111237.htm.
- 21. State of Michigan. "Traffic Volume Archive 2006 to 2019." Michigan GIS Open Data. Accessed April 16, 2024.
- https://gis-michigan.opendata.arcgis.com/datasets/mdot::traffic-volume-archive-2006-to-2019/about?layer =13.
- 22. Mendy, Angelico, Xiao Wu, Jason L. Keller, Cecily S. Fassler, Senu Apewokin, Tesfaye B. Mersha, Changchun Xie, and Susan M. Pinney. "Air pollution and the pandemic: Long-term PM2. 5 exposure and disease severity in COVID-19 patients." *Respirology* 26, no. 12 (2021): 1181-1187.

- 23. Schulz, Amy J., Graciela B. Mentz, Natalie Sampson, Melanie Ward, J. Timothy Dvonch, Ricardo De Majo, Barbara A. Israel, Angela G. Reyes, and Donele Wilkins. "Independent and joint contributions of fine particulate matter exposure and population vulnerability to mortality in the Detroit metropolitan area." *International Journal of Environmental Research and Public Health* 15, no. 6 (2018): 1209.
- 24. First Street. "Press: First Street Releases 10th National Risk Assessment, 'Atrocious Air.'" First Street. Accessed April 16, 2024.

https://firststreet.org/press/first-street-releases-10th-national-risk-assessment-atrocious-air.

- 25. Hutchings, Hollis, et al. "Association of Air Quality with Incidence of Lung Cancer in a Large Urban/Suburban County." *American Association for Thoracic Surgery*, Department of Surgery, Henry Ford Health, 6 May 2023, ww2.aievolution.com/aats/index.cfm?do=abs.viewAbs&abs=4221.
- 26. Magnuson, Katherine, and Greg J. Duncan. "Can early childhood interventions decrease inequality of economic opportunity?." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 2, no. 2 (2016): 123-141.
- 27. Cserbik, Dora, Jiu-Chiuan Chen, Rob McConnell, Kiros Berhane, Elizabeth R. Sowell, Joel Schwartz, Daniel A. Hackman, Eric Kan, Chun C. Fan, and Megan M. Herting. "Fine particulate matter exposure during childhood relates to hemispheric-specific differences in brain structure." *Environment international* 143 (2020): 105933.
- 28. Ke, Limei, Yao Zhang, Yingyao Fu, Xinke Shen, Yu Zhang, Xindong Ma, and Qian Di. "Short-term PM2. 5 exposure and cognitive function: Association and neurophysiological mechanisms." *Environment International* 170 (2022): 107593.
- 29. Stafford, Tess M. "Indoor air quality and academic performance." *Journal of Environmental Economics and Management* 70 (2015): 34-50.
- 30. Burkhardt, Jesse, Jude Bayham, Ander Wilson, Jesse D. Berman, Katelyn O'Dell, Bonne Ford, Emily V. Fischer, and Jeffrey R. Pierce. "The relationship between monthly air pollution and violent crime across the United States." *Journal of Environmental Economics and Policy* 9, no. 2 (2020): 188-205.
- 31. Herrnstadt, Evan, Anthony Heyes, Erich Muehlegger, and Soodeh Saberian. "Air pollution as a cause of violent crime." *Unpublished manuscript, University of California, Davis (Muehlegger)* (2018).
- 32. Coccaro, Emil F., Jennifer R. Fanning, K. Luan Phan, and Royce Lee. "Serotonin and impulsive aggression." *CNS spectrums* 20, no. 3 (2015): 295-302.
- 33. Troy, Austin, J. Morgan Grove, and Jarlath O'Neil-Dunne. "The relationship between tree canopy and crime rates across an urban—rural gradient in the greater Baltimore region." *Landscape and urban planning* 106, no. 3 (2012): 262-270.
- 34. Ren, Feihong, Zhaowen Qiu, Zhen Liu, Hua Bai, and H. Oliver Gao. "Trees help reduce street-side air pollution: A focus on cyclist and pedestrian exposure risk." *Building and Environment* 229 (2023): 109923.
- 35. Dixon, K., Avelar-Moran, R. and Seyedeh, M.M., 2023. *Developing Crash Modification Factors for Separated Bicycle Lanes* (No. FHWA-HRT-23-078). United States. Federal Highway Administration. Office of Safety Research and Development.
- 36. "Traffic Crash Data." Southeast Michigan Council of Governments. Accessed April 16, 2024. https://www.semcog.org/traffic-crash-data.
- 37. Zhao, Lei, Xuhui Lee, Ronald B. Smith, and Keith Oleson. "Strong contributions of local background climate to urban heat islands." *Nature* 511, no. 7508 (2014): 216-219.

- 38. Environmental Protection Agency. "Learn About Heat Islands." Accessed April 16, 2024. https://www.epa.gov/heatislands/learn-about-heat-islands.
- 39. Anderson, Meg, and Sean McMinn. "As Rising Heat Bakes U.S. Cities, the Poor Often Feel It Most." NPR. September 3, 2019.
- https://www.npr.org/2019/09/03/754044732/as-rising-heat-bakes-u-s-cities-the-poor-often-feel-it-most.
- 40. Chen, Kaiyu, Jacob Boomsma, and Heather A. Holmes. "A multiscale analysis of heatwaves and urban heat islands in the western US during the summer of 2021." *Scientific Reports* 13, no. 1 (2023): 9570.
- 41. Tu, Lucy, Sammer Marzouk, Kimberly N. Dowdell, and Fatima Cody Stanford. "Reimagining Urban Spaces: Green Spaces, Obesity, and Health Resilience in an Era of Extreme Heat." *Journal of Urban Health* (2024): 1-5.
- 42. Rutledge, A., L. A. Brandt, M. Peters, F. Foen, A. Harrington, ANNAMARIE RUTLEDGE, and A. BRANDT LESLIE. "Detroit Region Vulnerability Assessment and Synthesis: A Report from the Urban Forestry Climate Change Response Framework. Report#." (2021): 3.
- 43. Stone Jr, Brian, Evan Mallen, Mayuri Rajput, Carina J. Gronlund, Ashley M. Broadbent, E. Scott Krayenhoff, Godfried Augenbroe, Marie S. O'Neill, and Matei Georgescu. "Compound climate and infrastructure events: how electrical grid failure alters heat wave risk." *Environmental Science & Technology* 55, no. 10 (2021): 6957-6964.
- 44. Woolf, Steven, et al. "The Health Care Costs of Extreme Heat." Center for American Progress. June 27, 2023. https://www.americanprogress.org/article/the-health-care-costs-of-extreme-heat/.
- 45. Hyndman, Brendon, Adora Shortridge, and Jennifer Vanos. "The Impact of Indoor and Outdoor Heat Extremes on Schoolchildren." In *The Impact of Extreme Weather on School Education*, pp. 18-37. Routledge, 2023.
- 46. Rao, Vennapu Lakshmana. "Effects of urban heat island on air pollution concentrations." *International Journal of Current Microbiology and Applied Sciences* 3, no. 10 (2014): 388-400.
- 47. Anderson, Craig A. "Temperature and aggression: ubiquitous effects of heat on occurrence of human violence." *Psychological bulletin* 106, no. 1 (1989): 74.
- 48. Sampson, Natalie, Kimberly Hill Knott, Dominic Smith, Leila Mekias, Joel Howrani Heeres, and Simone Sagovac. "Planning for climate change in legacy cities: The case of Detroit, Michigan." *Michigan Journal of Sustainability* 2 (2014).
- 49. Akbari, Hashem. "Shade trees reduce building energy use and CO2 emissions from power plants." *Environmental pollution* 116 (2002): S119-S126.
- 50. Kalkstein, Laurence S., David P. Eisenman, Edith B. de Guzman, and David J. Sailor. "Increasing trees and high-albedo surfaces decreases heat impacts and mortality in Los Angeles, CA." *International journal of biometeorology* 66, no. 5 (2022): 911-925.
- 51. Lanza, Kevin, Melody Alcazar, Deanna M. Hoelscher, and Harold W. Kohl. "Effects of trees, gardens, and nature trails on heat index and child health: design and methods of the Green Schoolyards Project." *BMC Public Health* 21 (2021): 1-12.
- 52. Kuo, Frances E., Magdalena Bacaicoa, and William C. Sullivan. "Transforming inner-city landscapes: Trees, sense of safety, and preference." *Environment and behavior* 30, no. 1 (1998): 28-59.

- 53. Lin, Jian, Bo Huang, Qiang Wang, Min Chen, Harry F. Lee, and Mei-Po Kwan. "Impacts of street tree abundance, greenery, structure and management on residential house prices in New York City." *Urban Forestry & Urban Greening* 94 (2024): 128288.
- 54. Wang, Yupeng, and Hashem Akbari. "The effects of street tree planting on Urban Heat Island mitigation in Montreal." *Sustainable cities and society* 27 (2016): 122-128.
- 55. Mballo, S., S. Herpin, M. Manteau, Sabine Demotes-Mainard, and P. E. Bournet. "Impact of well-watered trees on the microclimate inside a canyon street scale model in an outdoor environment." *Urban Climate* 37 (2021): 100844.
- 56. Environmental Protection Agency. "Urbanization and Stormwater Runoff." Accessed April 16, 2024. https://www.epa.gov/sourcewaterprotection/urbanization-and-stormwater-runoff.
- 57. Berland, Adam, Sheri A. Shiflett, William D. Shuster, Ahjond S. Garmestani, Haynes C. Goddard, Dustin L. Herrmann, and Matthew E. Hopton. "The role of trees in urban stormwater management." *Landscape and urban planning* 162 (2017): 167-177.
- 58. Calder, Ian, Thomas Hofer, Sibylle Vermont, and Patrizio Warren. "Towards a new understanding of forests and water." *Unasylva* 58, no. 229 (2007): 3-10.
- 59. Chesapeake Bay Foundation. "Runoff Pollution." Accessed April 16, 2024. https://www.cbf.org/issues/polluted-runoff/index.html.
- 60. Coffey, Suzanne, Great Lakes Water Authority, Majid Khan, Ed Hogan, Wade Trim, and Imad Salim. "7.44 Combined Sewer Overflow Controls in Southeast Michigan." *CHECKUP*: 357.
- 61. Chesapeake Bay Foundation. "Runoff Pollution." Accessed April 16, 2024. https://www.cbf.org/issues/polluted-runoff/index.html.
- 62. Siacon, Aleanna. "Heavy Rain Causes Flooding and Sewage Overflow in Metro Detroit." Detroit Free Press, February 21, 2018.
- https://www.freep.com/story/news/local/michigan/2018/02/21/rain-flooding-sewage-overflow-detroit/36061 7002/.
- 63. "Crain's Forum Flooding: Why Metro Detroit Is Flooding More Often During Rainstorms." Crain's Detroit Business. Accessed April 16, 2024.
- https://www.crainsdetroit.com/crains-forum-flooding/why-metro-detroit-flooding-more-often-during-rainstorms.
- 64. Kast, Brett. "Flooding Impact: How Diluted Raw Sewage Gets into Metro Detroit Waterways." WXYZ 7 Action News Detroit. June 29, 2021.
- https://www.wxyz.com/news/region/wayne-county/flooding-impact-how-diluted-raw-sewage-gets-into-metro-detroit-waterways
- 65. Al-Quraishi, Muthana Abdul Hussain. *Estimating the Impact of Urban Runoff on Harmful Algal Bloom Formation in Lake Erie*. The University of Toledo, 2020.
- 66. Beltran-Mayen, Pamela. "Progress and Neglect Within the Same City: Analyzing the Perspective of the Community in Southwest Detroit on Gentrification." (2023).
- 67. Larson, Peter S., Carina Gronlund, Lyke Thompson, Natalie Sampson, Ramona Washington, Jamie Steis Thorsby, Natalie Lyon, and Carol Miller. "Recurrent home flooding in detroit, mi 2012–2020: Results of a household survey." *International journal of environmental research and public health* 18, no. 14 (2021): 7659.

- 68. Wilbanks, T., Steven Fernandez, G. Backus, P. Garcia, K. Jonietz, P. Kirshen, M. Savonis, W. Solecki, and L. Toole. "Climate change and infrastructure, urban systems." In *And Vulnerabilities: Technical Report for the US Department of Energy in Support of the National Climate Assessment.* 2013.
- 69. Carlyle-Moses, Darryl E., Stephen Livesley, Mariana D. Baptista, Jasmine Thom, and Christopher Szota. "Urban trees as green infrastructure for stormwater mitigation and use." *Forest-Water Interactions* (2020): 397-432.
- 70. Steis Thorsby, Jamie, Carol J. Miller, and Lara Treemore-Spears. "The role of green stormwater infrastructure in flood mitigation (Detroit, MI USA)—case study." *Urban Water Journal* 17, no. 9 (2020): 838-846.
- 71, Cass Community Social Services. Fall Neighborhood Update. 2020
- 72. Pavement Technology, Inc. "Uhi Mitigation." Last modified January 22, 2024. https://www.pavetechinc.com/uhi-mitigation/.
- 73. "Urban Heat Hot Spots." Climate Central. Accessed April 23, 2024. https://www.climatecentral.org/climate-matters/urban-heat-islands-2023.
- 74. Katz, Daniel SW, Stuart A. Batterman, and Shannon J. Brines. "Improved classification of urban trees using a widespread multi-temporal aerial image dataset." *Remote Sensing* 12, no. 15 (2020): 2475.
- 75. "SCAG Urban Heat Island Reduction Strategies." Alta Planning + Design. Last modified June 14, 2022. https://altago.com/projects/scag-urban-heat-island-reduction-strategies/.
- 76. Environmental Protection Agency. "Combined Sewer Overflow (CSO) Basics." Accessed April 23, 2024. https://www.epa.gov/npdes/combined-sewer-overflow-basics.
- 77. Rahal, Sarah, James David Dickson, and Ben Wilson. "'It's Happening Again': Floods Soak Metro Detroit Homes, Roadways." The Detroit News. July 17, 2021.
- https://www.detroitnews.com/story/news/local/wayne-county/2021/07/16/flood-advisories-issued-wayne-washtenaw-a mid-heavy-rain/7990468002/.
- 78. Davidson, Kyle, Janelle James, and Nour Rahal. "Detroiters Devastated by Flooding: 'Certain Things You Can't Replace.'" Detroit Free Press. June 28, 2021.
- https://www.freep.com/story/news/local/michigan/detroit/2021/06/27/detroiters-devastated-flooding-its-going-rain-again/5365814001/.
- 79. Davidson, Kyle, Janelle James, and Nour Rahal. "Detroiters Devastated by Flooding: 'Certain Things You Can't Replace." Detroit Free Press, June 28, 2021.
- https://www.freep.com/story/news/local/michigan/detroit/2021/06/27/detroiters-devastated-flooding-its-going-rain-again/5365814001/.
- 80. Profita, Cassandra. "Audit Flags Problems with Portland's Environmental Agency." OPB. June 3, 2020. https://www.opb.org/news/article/portland-oregon-environmental-agency-audit-green-streets/.
- 81. Martenies, Sheena E., Chad W. Milando, Guy O. Williams, and Stuart A. Batterman. "Disease and health inequalities attributable to air pollutant exposure in Detroit, Michigan." *International journal of environmental research and public health* 14, no. 10 (2017): 1243.

Theme 4: Exploring Opportunities for Clean Energy

- 1. United Nations. 2023. "Goal 7 | Department of Economic and Social Affairs." Sdgs.un.org. United Nations. 2023. https://sdgs.un.org/goals/goal7.
- 2. "Michigan's Statewide Energy Assessment Fact Sheet." 2019. https://michigan.gov/-/media/Project/Websites/mic/Other/Michigan_Statewide_Energy_Assessment.pdf?rev=aa63634fa02845efa4913541f4e02340.
- 3. "Fuel Mix | DTE Energy." n.d. Www.dteenergy.com. https://www.dteenergy.com/us/en/business/community-and-news/environment/fuel-mix.html.
- 4. Office of Energy Efficiency & Renewable Energy. n.d. "Clean Energy Job Creation and Growth." Energy.gov. https://www.energy.gov/eere/clean-energy-job-creation-and-growth.
- 5. US EPA. 2013. "The Sources and Solutions: Fossil Fuels." US EPA. March 12, 2013. https://www.epa.gov/nutrientpollution/sources-and-solutions-fossil-fuels#:~:text=transportation%20and%20industry.-.
- 6. Roser, Max. 2020. "Why Did Renewables Become so Cheap so Fast?" Our World in Data. December 1, 2020. https://ourworldindata.org/cheap-renewables-growth.
- 7. "Tiny Homes Detroit Solar Installation Project." n.d. Strawberry Solar. https://www.strawberrysolar.com/solarstories/tinyhomes.
- 8. "Take a Look at These Tiny Homes in Detroit." n.d. Detroit Free Press. https://www.freep.com/picture-gallery/news/local/michigan/2019/08/29/tiny-homes-taking-detroit/2153907 001/.
- 9. "Detroit Solar Toolkit Solar 101." n.d. https://detroitmi.gov/sites/detroitmi.localhost/files/2021-03/ELE-4%20Detroit%20Solar%20Project%20toolkit-solar101-v6-AH.pdf.
- 10. "MI Solar Communities." 2024. Michigan.gov. 2024. https://www.michigan.gov/egle/about/organization/materials-management/energy/renewable-energy/mi-solar-communities#:~:text=Michigan%20currently%20does%20not%20have.
- 11. US EPA, OAR. 2017. "Local Energy Efficiency Benefits and Opportunities." Www.epa.gov. July 5, 2017.

https://www.epa.gov/statelocalenergy/local-energy-efficiency-benefits-and-opportunities#:~:text=Using%20energy%20more%20efficiently%20is.

- 12. "Document Destruction." 2013. Cass Community Social Services. June 11, 2013. https://casscommunity.org/document-destruction/.
- 13. Painter, Kate. 1996. "The Influence of Street Lighting Improvements on Crime, Fear and Pedestrian Street Use, after Dark." Landscape and Urban Planning 35 (2-3): 193–201. https://doi.org/10.1016/0169-2046(96)00311-8.
- 14. "Berkeley Solar Security Lighting Project Greenshine New Energy." n.d. www.streetlights-Solar.com. https://www.streetlights-solar.com/solar-street-lights-improve-homeless-encampment.html.
- 15. "The Role of Solar Street Lights in Enhancing Public Safety." n.d. www.streetlights-Solar.com. www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% <a href="https://www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating% <a href="https://www.streetlights-solar.com/solar-street-lights-in-enhancing-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:~:text=Illuminating-public-safety.html#:

- 1. "How It Works Creating Vibrant Communities." n.d. https://creatingvibrantcommunities.com/how-it-works/.
- 2. Fu, Runde, Xinhuan Zhang, Degang Yang, Tianyi Cai, and Yufang Zhang. 2021. "The Relationship Between Urban Vibrancy and Built Environment: An Empirical Study From an Emerging City in an Arid Region." International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health 18 (2): 525. https://doi.org/10.3390/ijerph18020525.
- 3. Xia, Chang, Anthony Gar-On Yeh, and Anqi Zhang. "Analyzing spatial relationships between urban land use intensity and urban vitality at street block level: A case study of five Chinese megacities." *Landscape and Urban Planning* 193 (2020): 103669.
- 4. "How It Works Creating Vibrant Communities." *Tribus Process*. n.d. https://creatingvibrantcommunities.com/how-it-works/.
- 5. Samer Saliba, "Ten Urban Planning Principles Every Humanitarian Should Know," International Institute for Environment and Development, November 10, 2015, https://www.iied.org/ten-urban-planning-principles-every-humanitarian-should-know.
- 6. Urban Land Institute, "ULI Community Catalyst Report Number 1: Involving the Community in Neighborhood Planning," 2004.
- 7. United Nations Office of the High Commissioner for Human Rights, "Guidelines for States on the Effective Implementation of the Right to Participate in Public Affairs," n.d.
- 8. Saliba, "Ten Urban Planning Principles Every Humanitarian Should Know."
- 9. United Nations Office of the High Commissioner for Human Rights, "Guidelines for States on the Effective Implementation of the Right to Participate in Public Affairs."
- 10. Urban Land Institute, "ULI Community Catalyst Report Number 1: Involving the Community in Neighborhood Planning."
- 11. Low, Setha M. Why public space matters. Oxford University Press, 2023.
- 12. Purwanto, Edi, and Arnis Rochma Harani. 2020. "Understanding the Place Attachment and Place Identity in Public Space Through the Ability of Community Mental Map." IOP Conference Series. Earth and Environmental Science 402 (1): 012024. https://doi.org/10.1088/1755-1315/402/1/012024.
- 13. Stewart, William P., Paul H. Gobster, Paul H. Gobster, John Strauser, Douglas A. Williams, and Carena J. Van Riper. 2019. "Resident-led Beautification of Vacant Lots That Connects Place to Community." Landscape and Urban Planning 185 (May): 200–209. https://doi.org/10.1016/j.landurbplan.2019.02.011.
- 14. Rupp, Laney, Marc A. Zimmerman, Kathleen W Sly, Thomas M. Reischl, Elyse J. Thulin, Thomas A. Wyatt, and John Jack P Stock. 2019. "Community-Engaged Neighborhood Revitalization and Empowerment: Busy Streets Theory in Action." American Journal of Community Psychology 65 (1–2): 90–106. https://doi.org/10.1002/ajcp.12358.
- 15. Orsetti, Eleonora, Nicola Tollin, Martin Lehmann, Vanessa Agudelo Valderrama, and Jordi Morató Farreras. 2022. "Building Resilient Cities: Climate Change and Health Interlinkages in the Planning of Public Spaces." International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health 19 (3): 1355. https://doi.org/10.3390/ijerph19031355.

- 16. "City Walls Mural Project Helps Beautify City While Addressing Illegal Graffiti | City of Detroit." 2001. City of Detroit. October 23, 2001.
- https://detroitmi.gov/news/city-walls-mural-project-helps-beautify-city-while-addressing-illegal-graffiti.
- 17. Grabow, Steven H., Todd W. Johnson, and University of Wisconsin-Extension Community Vitality + Placemaking Team. 2017. "What Is Community Placemaking? 'The Wauwatosa Papers #1." https://economicdevelopment.extension.wisc.edu/files/2021/09/What-is-Community-Placemaking-Tosa-1.pdf.
- 18. Wheele, Theresa, Clara Weber, Lukas Windlinger Inversini, Tore Haugen, and Carmel Lindkvist. 2023. "A Narrative Literature Review Using Placemaking Theories to Unravel Student Social Connectedness in Hybrid University Learning Environments." Buildings 13 (2): 339. https://doi.org/10.3390/buildings13020339.
- 19. "Why The Art of Place-making Can Lift Our Cities." 2022. World Economic Forum. May 20, 2022. https://www.weforum.org/agenda/2021/08/whv-the-art-of-place-making-can-enlighten-our-cities/.
- 20. "Road Diet Informational Guide Safety | Federal Highway Administration." n.d. https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/ch1.cfm#s11.
- 21. "Complete Streets Smart Growth America." 2024. Smart Growth America. January 4, 2024. https://smartgrowthamerica.org/what-are-complete-streets/.
- 22. Global Designing Cities Initiative. 2022. "Traffic Calming Strategies Global Designing Cities Initiative." September 13, 2022. https://globaldesigningcities.org/publication/global-street-design-guide/designing-streets-people/designing-for-motorists/traffic-calming-strategies/.
- 23. Nana Temple. (2024). Misc. Project Graphics Generated by Nana Temple
- 24. Aman, Aini, Muhammad Rafiq, Omkar Dastane, and Asrar Ahmed Sabir. 2022. "Green Corridor: A Critical Perspective and Development of Research Agenda." Frontiers in Environmental Science 10 (August). https://doi.org/10.3389/fenvs.2022.982473.
- 25. Akbar, Poeti Nazura Gulfira, and Jurian Edelenbos. 2021. "Positioning Place-making as a Social Process: A Systematic Literature Review." Cogent Social Sciences 7 (1). https://doi.org/10.1080/23311886.2021.1905920.
- 26. Lewis, Peter M. (2008) Promoting social cohesion : the role of community media. Project Report. Council of Europe, Strasbourg.
- 27. Bruce, David W, Katrina Ellis, and Nancy Delury. 2006. "The Role and Impact of Community Newsletters in Fostering Social Cohesion and Community Development." June 5, 2006. https://iournals.brandonu.ca/ircd/article/view/26.
- 28. "What Is Placemaking? | Category Project for Public Spaces." n.d. https://www.pps.org/category/placemaking.
- 29. "What Makes a Successful Place?" n.d. https://www.pps.org/article/grplacefeat.
 30. Tuan, Yi–Fu. 1979. "Space and Place: Humanistic Perspective." In Springer eBooks, 387–427. https://doi.org/10.1007/978-94-009-9394-5 19.
- 31. Blaschke, Thomas, Helena Merschdorf, Pablo Cabrera-Barona, Song Gao, Emmanuel P. Papadakis, and Anna Kovács-Győri. 2018. "Place Versus Space: From Points, Lines and Polygons in GIS to Place-Based Representations Reflecting Language and Culture." ISPRS International Journal of Geo-Information 7 (11): 452. https://doi.org/10.3390/ijgi7110452.

32. "Space and Place." n.d. Obo.

https://www.oxfordbibliographies.com/display/document/obo-9780199766567/obo-9780199766567-0170.xml.

Theme 6: Identifying, Building and Maintaining Strong Partnerships

- 1. Anne Vestergaard et al., "Partnerships for Development. Assessing the Impact Potential of Cross-Sector Partnerships," *World Development* 143 (2021): 105447-, https://www.sciencedirect.com/science/article/pii/S0305750X21000590?via%3Dihub.
- 2. Vestergaard et al., "Partnerships for Development. Assessing the Impact Potential of Cross-Sector Partnerships."
- 3. Raymon P. Fisk et al., "SDG Commentary: Collaboration Services for Sustainable Development Goal (SDG) Partnerships," *The Journal of Services Marketing* 38, no. 2 (2024): 238–46.
- 4. "THE 17 GOALS | Sustainable Development."
- 5. Darian Stibbe and Dave Prescott, *THE SDG PARTNERSHIP GUIDEBOOK: A Practical Guide to Building High-Impact Multi-Stakeholder Partnerships for the Sustainable Development Goals* (The Partnering Initiative and UNDESA, 2020).
- 6. Ashley Shena and Lewis Faulk, "Nonprofit Competition in the Grants Marketplace," *Nonprofit Management and Leadership* 21, no. 1 (2010): 43–47, https://doi.org/https://onlinelibrary-wiley-com.proxy.lib.umich.edu/doi/epdf/10.1002/nml.20011.
- 7. "Feeding Hungry People," Gleaner's Community Food Bank, March 4, 2024, https://www.gcfb.org/.; "What We Do," Forgotten Harvest, March 11, 2024, https://www.forgottenharvest.org/.
- 8. Darlene A White, "Wayne State Students' Fresh Rx Program Delivers Produce to People in Need," *The Detroit News*, November 26, 2021, https://www.detroitnews.com/story/life/2021/11/26/wayne-state-students-fresh-rx-program-delivers-produce-people-need-who-have-chronic-health-condition/6386417001/.
- 9. "Home," Michigan Farmers Market Association, October 14, 2023, https://mifma.org/.
- 10. "Home," Fair Food Network, February 16, 2024, https://fairfoodnetwork.org/.
- 11. Fair Food Network, "Detroit Grocery Incubator: Increasing Grocery Stores in Detroit Neighborhoods," n.d., https://fairfoodnetwork.org/wp-content/uploads/2016/10/Brochure DetroitGroceryIncubator.pdf.
- 12. "Michigan Good Food Fund," Michigan Good Food Fund, accessed March 30, 2024, https://migoodfoodfund.org/.
- 13. Nina Ignaczak, "Composting, Water Access and Backyard Chickens: Detroit's Urban Farming Evolution," Planet Detroit, March 19, 2024, https://planetdetroit.org/2024/03/detroit-urban-farming-tepfirah-rushdan/.
- 14. "Mayor Names Tepfirah Rushdan as City's First Director of Urban Agriculture," City of Detroit, September 11, 2023,

 $\underline{https://detroitmi.gov/news/mayor-names-tepfirah-rushdan-citys-first-director-urban-agriculture.}$

15. Nandi Robinson, "Why Buy Local? An Assessment of the Economic Advantages of Shopping at Locally Owned Businesses" (Michigan State University Center for Community and Economic Development, 2010).

- 16. "Keep Growing Detroit," Keep Growing Detroit, accessed March 30, 2024, https://www.detroitagriculture.net.
- 17. "Be The Rescue | Rescue Food," December 2, 2020, https://foodrescue.us/rescue-food/.
- 18. UYA Detroit Webpage, "UYA Detroit Webpage," UYA Detroit Webpage, accessed March 30, 2024, https://uvadetroit.com/.
- 19. "Detroit Community Markets," detroitmarkets, accessed March 30, 2024, https://www.detroitmarkets.org.
- 20. "Detroit's First Zero Waste Mobile Grocery Store," accessed March 30, 2024, https://www.deeplyrootedproduce.com/.
- 21. "Greeningofdetroit.Com," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com.
- 22. "Departments," City of Detroit, accessed March 30, 2024, https://detroitmi.gov/departments.
- 23. "Detroit Future City: Think Tank, Policy Advocate, Innovation Engine," Detroit Future City |, July 14, 2017, https://detroitfuturecity.com/.
- 24. "The Green Door Initiative Official Website | Building a Community for Environmental Equity," accessed March 30, 2024, https://www.greendoorinitiative.org/.
- 25. "Keep Growing Detroit."
- 26. "About," Dream of Detroit (blog), accessed March 30, 2024, https://dreamofdetroit.org/about/.
- 27. "Department of Neighborhood Block Clubs List," March 4, 2024, https://detroitmi.gov/sites/detroitmi.localhost/files/2024-03/March%202024%20updated%20Block%20Club%20List.pdf.
- 28. "Community Organizing," *Dream of Detroit* (blog), accessed March 30, 2024, https://dreamofdetroit.org/community-organizing/.
- 29. "Who We Are | Community Development Advocates of Detroit," accessed March 31, 2024, https://cdad-online.org/who-we-are/.
- 30. "Community Engagement | Community Development Advocates of Detroit," accessed March 31, 2024, https://cdad-online.org/community-engagement-2/.
- 31. "SEAS Sustainability Clinic | University of Michigan School for Environment and Sustainability," accessed March 31, 2024, https://seas.umich.edu/clinic.
- 32. "Department of Neighborhoods," City of Detroit, March 28, 2024, https://detroitmi.gov/departments/department-neighborhoods.
- 33. "Highway Programs," accessed March 31, 2024, https://www.michigan.gov/mdot/programs/highway-programs.
- 34. "Poverty Solutions | University of Michigan," accessed March 31, 2024, https://poverty.umich.edu/.
- 35. "Home," MSU Detroit Center, accessed March 31, 2024, http://detroitcenter.msu.edu:80/.

Appendices

•	Appendix A: United Nations SDG Targets	131
•	Appendix B: Economic Development Supplemental Materials	132
•	Appendix C: Grocery Store Supplemental Materials	
	 Appendix C1- Grocery Case Studies Report 	154
	 Appendix C2- Grocery Funding Sources 	176
	 Appendix C3- Table of Local Farms 	178
•	Appendix D: Webb Campus Planning Study	180
•	Appendix E: Solar Energy Supplemental Materials	235
•	Appendix F: Road Diet and Green Corridor Supplemental Materials	237
•	Appendix G: Partnerships Supplemental Materials	256

Theme 1: Economic Development

The main SDGs addressed in this theme include SDG1 (No Poverty), SDG8 (Decent work and Economic Growth), SDG9 (Industry Innovation and Infrastructure) and SDG12 (Responsible Consumption and Production). The introduction of skill training programs and green social enterprises facilitates economic resource access (Target 1.1) and supporting ownership over various forms of property (Target 1.4), which ultimately uplifts living standards (Target 1.5) by bolstering the resilience of the vulnerable. CCSS's job training programs help people develop useful skills that lead to good jobs and financial growth (Target 8.5) and supports a sustained and inclusive economic boost for the community (Target 8.1). By starting training in innovative and sustainable fields, CCSS is working towards creating long-lasting solutions that improve industry, innovation, and infrastructure (Target 9.4 and 9.b), which makes the community more dynamic and competitive. CCSS's commitment to green social enterprises ensures smart use of resources and reduces waste (Target 12.2), while also teaching the community about responsible consumption (Target 12.8).

Theme 2: Health and Wellbeing

Current and future health initiatives at CCSS cover SDG2-Zero Hunger and SDG3-Good Health and Well-being by expanding access to nutritious food (Targets 2.1), providing quality essential health-care services (Target 3.8), and promoting preventative lifestyles that reduce chronic disease burden (Target 3.4). As with this entire sustainable redevelopment plan, these health-focused initiatives ultimately seek to eliminate poverty (SDG1) and reduce inequalities (SDG10).

Theme 3: Ecological Health

The ecological health scope contributes to SDG 13 (Climate Action) through climate change mitigation efforts (Target 13.2) and SDG 6 (Clean Water and Sanitation) by promoting sustainable water management (Target 6.6). It aligns with SDG 15 (Life on Land) to protect natural habitats (Target 15.5) and SDG 11 (Sustainable Cities and Communities) for resilient infrastructure (Target 11.b). Initiatives within this theme additionally reduce health risks posed by hazardous chemicals and air, water and soil pollution and contamination (Target 3.9).

Theme 4: Clean Energy

CCSS's expansion of solar operations supports SDG 7 (Affordable and Clean Energy) by increasing renewable energy use (Target 7.2) and aligns with SDG 9 (Industry, Innovation, and Infrastructure) by modernizing infrastructure for sustainability (Target 9.4). Furthermore, this work addresses SDG 13 (Climate Action) for low-carbon development (Target 13.2), and SDG 12 (Responsible Consumption and Production) by promoting sustainable practices (Target 12.2).

Theme 5: Community Vibrancy

CCSS's community vibrancy initiatives reflect SDG 11 (Sustainable Cities and Communities) by promoting inclusive and safe urban environments (Target 11.7) and align with SDG 3 (Good Health and Well-being) by encouraging active lifestyles (Target 3.4) and reducing injuries from road traffic accidents (Target 3.6). Activities such as increasing green recreational spaces also support SDG 15 (Life on Land) by integrating natural environments into urban spaces (Target 15.1). Community programming initiatives can also be implemented to address a sustainable development agenda, such as through promoting wellbeing education (Target 4.7). Engaging the community in participatory planning initiatives to help ensure responsive, inclusive, participatory and representative decision-making at all levels (Target 16.7).

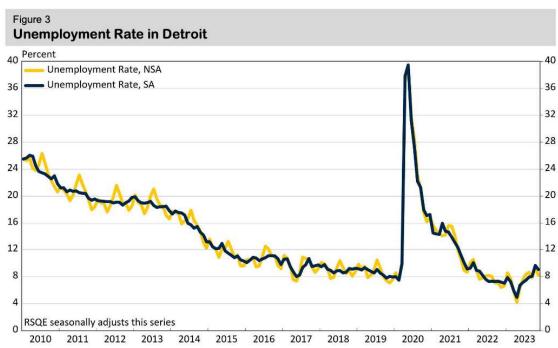
Theme 6: Strong Partnerships

CCSS's dedication to establishing strong partnerships across diverse sectors embodies SDG 17 (Partnerships for the Goals), leveraging partnerships for shared expertise and goals achievement (Targets 17.16, 17.17). These partnerships facilitate the advancement of broader sustainability targets.

Learn more about the United Nations' Sustainable Development Goals and their corresponding Targets and Indicators here: https://sdgs.un.org/goals

B1. Figures (Graphs, Maps, Reports)

City of Detroit Forecast | U-M LSA Department of Economics



- Figure 3 shows the seasonally adjusted unemployment rate among Detroit residents alongside the published rate. The Bureau of Labor Statistics (BLS) does not provide a seasonally adjusted version of this series. As with the monthly employment data, we have calculated the seasonally adjusted unemployment rate ourselves.
- During the 2010's, Detroit's unemployment rate fell steadily from 25.5 percent in January 2010 to just under 8 percent in December 2019.
- When the pandemic struck, unemployment skyrocketed nationwide due to mass business closures and halted production. Detroit saw a dramatic rise in joblessness, jumping from 7.5 percent in February to 39.5 percent by May 2020, notably higher than Michigan's peak of 22.6 percent and the national crest of 14.8 percent, both recorded in April 2020.
- Detroit's unemployment rate dropped quickly over the remainder of 2020, falling to 17.3 percent by that December as residents returned to work.
- Progress continued over the next two years.
 Detroit's unemployment rate fell below its prepandemic level in July 2022, ending the year at 7.0 percent.

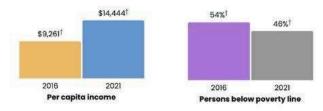
- The decline in the unemployment rate from the second half of 2021 through 2022 can be largely explained by a gradual decline in the city's labor force. Much, though not all, of the improvement came from unemployed residents exiting the labor force rather than gaining new jobs.
- The unemployment rate in Detroit fell dramatically in the spring of 2023, reaching a historic low of 4.9 percent in April. While household employment in Detroit also saw gains during this time, the city's labor force again experienced a significant decline.
- The good news is that Detroit's labor force has rebounded strongly since the spring of 2023.
 Between April and November, the city's labor force gained back over 15,000 people, rising well above its pre-pandemic level.
- The resurgence in the labor force in 2023 has also led to a rise in the city's unemployment rate as workers look for new jobs.
- Detroit's unemployment rate reached 9.1 percent in November 2023. Although that puts it back above the pre-pandemic rate, the recent improvement in the labor force is a good sign looking forward. We expect to see the unemployment rate resume its long-term downward trend over the forecast horizon.

City of Detroit University Economic Analysis Partnership

Appendix B: Economic Development Supplemental Materials

Housing Information Portal: Census Profile: Census Tract 5319, Wayne, MI.

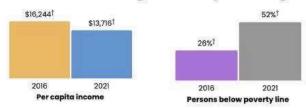
CCSS's Tiny Homes Region



Per Capita Income 2016: \$9000 Per Capita Income 2021: \$14,000 Persons below poverty line 2016: 54% Persons below poverty line 2021: 46%

The increase in income and reduction in poverty levels over the years could be attributed to the increase of access to economic resources for Low Income Individuals; such as tiny home ownership incentives. Thus, increasing access to economic resources such as the introduction of new job training programs can lead to an increase in income and a reduction in poverty level

CCSS's World Building & Fox Family Center Region



Per Capita Income 2016: \$16,000 Per Capita Income 2021: \$14,000 Persons below poverty line 2016: 26% Persons below poverty line 2021: 52%

The decline in income and increase in poverty levels over the years in this region could be attributed to insufficient accessibility to economic resources for Low Income Individuals. Thus, CCSS should consider targeting this region of their neighborhood and provide more accessibility to economic resources in this region

CCSS 2021 Campus Neighborhood Vision

CASS COMMUNITY SOCIAL SERVICES (CCSS)

CCSS EXISTING NEIGHBORHOOD ASSETS:

- Single Family Housing
- Supportive Housing
- Supportive Housing and Programs
- Programs

CCSS FUTURE NEIGHBORHOOD INVESTMENTS:

- CCSS Owned Property
- Proposed Aquisitions From Private Owners
- Proposed Aquisitions From P&DD/DLBA
- Green Corridor Eco Retail, Bike Lanes, Greening, Art & Walkability

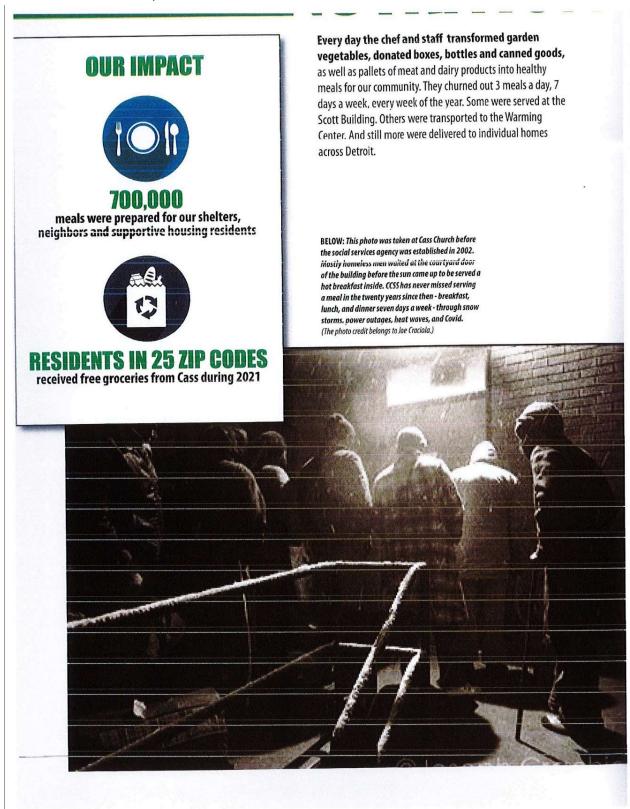
PUBLICALLY HELD PROPERTIES:

- Michigan Land Bank Authority& Detroit Land Bank Authority
- DEVELOPMENT AREA OF INTEREST



CCSS LAND USE FRAMEWORK

CCSS 2021 Annual Report





ABOVE: Homelessness is especially hard on children and parents. Cass is anxious to move the Family Shelter into the renovated convent on Webb Street. In the meantime, the staff has been adding extra activities to make their time in the shelter a more positive experience - Yoga classes, art sessions, swimming lessons, playground time. Plans are underway to introduce childrare once the program moves, as well.

It was a year unlike any other for the Cass Outreach Team and Emergency Housing (family shelter, rotating shelter, and warming center). Outreach workers reached out seven nights a week to individuals and families living on the streets, staying under bridges, in abandoned buildings, and in parked automobiles. The emergency housing programs were at maximum capacity and more throughout the year because the churches couldn't accommodate rotation. People slept head to foot, foot to head in an attempt to maintain six feet of social distancing.

In many cases, residents in the permanent supportive housing units dealt with issues related to isolation, unemployment and/or addiction. Extra emphasis was placed on mental health counseling, conflict resolution, and Narcan training.

The Tiny Homes project started construction on 5 new homes in September, meaning that in 2022 there will be 25 homes completed.





204 CHILDREN

and the adults related to them were invited to participate in parenting sessions with counselor Jovan Burkes.



4 YEARS

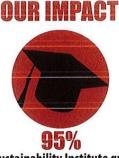
of the seven years needed were completed by the first group of Tiny Homes residents.



The Sustainability Institute was launched in 2021. It is a 6month educational and vocational training program to prepare students for green jobs. The sessions cover everything from global warming and carbon footprint to recycling and renewable energy. The students also received hands-on experience installing solar arrays, setting up rain barrels, making natural cleaning and weed-killing products, and recycling paper, cardboard, and metals.

The newest Green Industries "business," Trading Spaces, was especially busy cleaning out homes and businesses for folks who were relocating. A loyal team of volunteers led by Claudia Nickel came to the Cass World Building each week to organize the truckloads of furniture and office supplies for both distribution to people moving out on their own and for rummage sales to serve the larger community

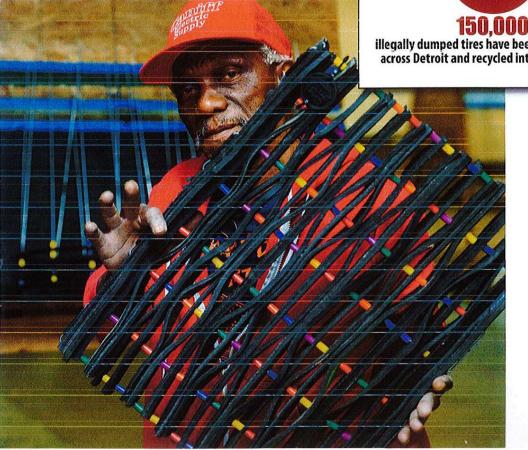
BELOW: For most of the year, only one Green Industries staff member worked each day to minimize the chances of spreading Covid-19. Maximo (KiKi) Jorrin posed with one of his finished mud mats.



of the Sustainability Institute graduates secured employment



illegally dumped tires have been collected from across Detroit and recycled into new products



Appendix B: Economic Development Supplemental Materials

B2. Summer Internship Work with CCSS

1) Food Industry:

External:

- Community Gardens
- Food Rescuers (Forgotten Harvest Metro Detroit)
- Food Bank (Gleaners South-East MI)
- Churches
- Schools
- Sororities
- Hunters (Northern Michigan)

Internal:

- CASS Kitchen + Catering (Matt Prentice)
- Freight Farms
- 2) Housing Industry:
- Brady Building Apartments
- Mom's Place I and II
- Tiny homes
- The Cass House
- 3) Health Industry:
- Oasis Detroit
- 4) Employment:
- The green Industries (Mud Mats, Coasters, Document Destruction)
- 5) Accreditation:
- Commission of Accreditation for Rehabilitation Facilities

Economic Plan for the Purchase of New Properties Part I - Project's Summary

Primary Roles of CDOs

- Low-Income Resident engagement and empowerment
- Low-Income Resident support
- Economic development
- Community planning/advocacy
- Submission of proposals to The Mayor and City Council of the City of Detroit to determine how grant funds (e.g. CDBG) will be spent

Main Use of Properties

- A. 10 out of 13 (76%) of existing neighborhood assets are used to provide access to Affordable Housing
- B. 5 out of 10 (50%) of affordable housing assets are used to provide Supportive Housing
- C. Tiny Homes Single family Homes, occupancy is expected to increase over the years



What the EDP covers

- Goal: Understanding up-to-date redevelopment incentives for Detroit Based-CDOs and how they facilitate
 the development of Affordable Housing for low Income residents
- Three key areas EDP covers to achieve our goal:
 - 1. Research
 - 2. Community Engagement
 - 3. Expertise and Innovation
- Strategy: Prioritizing neighborhood assets and developing a list of future neighborhood investments for CCSS
- Method: Recommending advanced toolkits to facilitate the acquisition of properties (e.g. walkthrough of property acquisition process in Detroit, DLBA Opportunities Map, Funding Sources)

List of Future Neighborhood Investments

- 1. Proposed acquisitions to Private Owners:
 - a. COVID-19 Shelter & Support
 - b. Dog Park for Sheltered Residents
 - c. Web Home & Single Family Homes
- Proposed acquisitions of properties to DLBA and P&DD :
 - a. 3 Multi-family Apartments
 - b. Eco/Green Gym
 - c. Sandwich Shop or Bread Store
 - d. Vacant Land for Future Development
- Existing Properties currently owned by CCSS and willing to mobilize:
 - Eco Store → Repurposing Furniture and Job Creation
 - b. Food Pantry and Coffee Shop or Shipping Container Construction
 - One cup car wash → Job Creation for cass clients
 - d. Single family homes



CCSS FUTURE NEIGHBORHOOD INVESTMENTS

Proposed Aquisitions

Proposed Aquisitions from Palvate Owners

CCSS Owned Properties

Current Existing Neighborhood Assets

- 1. Single Family Homes:
 - a. 24 Tiny Homes
- 2. Market Rate Apartments
 - a. Wesley House
 - b. Shaw Building
- 3. Supportive Housing
 - a. Arthur Antisdel Apartments
 - b. Littleton Apartments
 - c. Brady Apartments
 - d. Thomasson Apartments
- 4. Supportive Housing & Programs:
 - a. Scott Building
 - b. Warming Shelter Support
 - c. Family Shelter and Warming Center
- Arthur Articles

 Apartments

 Cass Recycling

 A Warehouse

 Building

 Cass Scott

 Building

 Cass Scott

 Building

 Cass Scott

 Building

 Cass Warehouse

 Apartments

 Supportive Housing

 Apartments

 Supportive Housing

 BuilLing

 B
 - **CCSS EXISTING NEIGHBORHOOD ASSETS**
- Supportive Housing
- Supportive Housing
 Single Family Assets

- 5. Other Programs:
 - a. CASS Recycling & Warehouse → Storage, Paper Shredding & Operations
 - World Building → Administrative Services, Offices, Furniture repurposing, Food pantry & Meal Delivery
 - c. Taylor Park → Outdoor Recreation & Event Space

Investments Categories

Making Future Investments in Affordable Housing Assets

- 1. Investment/Acquisition of Multi-Family Apartments (DLBA)
- 2. Investment/Acquisition of Web Homes & Single Family Apartments (*Private*)
- Investment/Acquisition of Vacant Land for development of affordable housing (DLBA)

Making Future Investments in Assets Tied to Job Creation and Recreational Activities

- Studying feasibility of Grocery Store Launch
- 2. Investment/Acquisition of Eco/Green Gym (DLBA)
- 3. Investment/Acquisition of Sandwich Shop (DLBA)
- 4. Investment/Acquisition of **Dog Park** (*Private*)

Mobilizing Existing Assets

- Finalizing construction of Tiny Homes single family housing
- 2. Mobilizing the One Cup

 Car Wash
- 3. Following up with Food Pantry/Coffee Shop Project

ACHIEVING PRIORITIES 1 2 & 3

Detroit's Redevelopment Policies Aligned with CCSS



Methodology

Uses of Properties

Redevelopment Incentives

Maps of Vacant Lands and Property for Sale

- Prioritizing affordable housing projects/properties with CCSS
- Identifying DLBA past sales that have impacted the community
- Understanding what incentives apply to the areas/properties of interest (e.g. NRSAs benefits, 0% Home Loan Program)
- Using the City of Detroit's
 Detroit Development
 Opportunities map to locate
 properties for sale and vacant lands
- DLBA works with individuals, groups, and businesses to sell land and structures for a variety of uses (gardens, green space, construction, residential developments)

Part II- Research

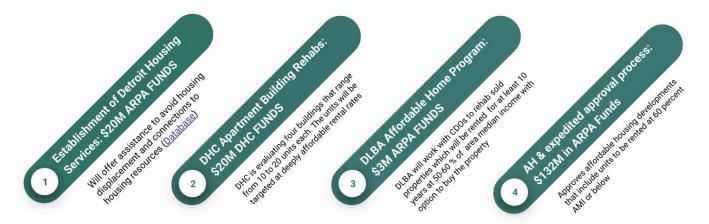
Redevelopment Policies and Affordable Housing Projects in Detroit

Affordable Housing For Detroiters: 7 Point, \$203 Million Plan (2022)

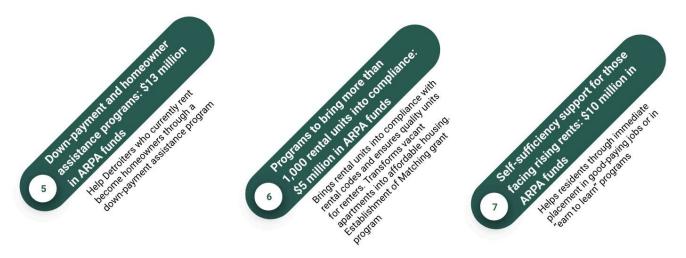


- Converting vacant apartments and Land Bank homes into affordable rental housing
- Getting faster City approval for affordable housing projects
- Down payment assistance to increase home ownership
- Help for landlords to bring their rental properties into compliance
- Rapid-placement for good-paying jobs

Affordable Housing For Detroiters: 7 Point, \$203 Million Plan for 2022



Affordable Housing For Detroiters: 7 Point, \$203 Million Plan for 2022



HRD & HUD Steward The Sale Of City-Owned Land To CDO-Freedom House Detroit



- Nonprofit now owns building in Southwest Detroit
- Can continue to provide community housing and supportive services to refugees
- HUD's partnership with the City of Detroit was integral to making this happen
- Freedom House would not have reached this goal were it not for the City's stewardship of the process

Detroit Housing for the Future Fund's Woodward West



- Woodward West features 204 apartments and 25,000 square feet of retail space
- 20% of the apartments are offered below market rate as affordable housing for those with qualifying incomes at 80% of the area median income (AMI)
- Features "Art at Woodward West," a collection of 41 works by artists of color with roots in Detroit

Second Completed Detroit Housing For The Future Fund Project in Midtown



- Completion of \$2.9M renovation to The Belnord
- Offering 29 rental units at affordable rates for those with qualifying incomes at 50% AMI

Part III - Community Engagement: Key Stakeholders & Main Sources of Funding

Stakeholders - Housing Development Plan

Housing and Revitalization
Department (HRD)

Assistance navigating City and State development processes

Assistance accessing public financing tools, acquiring public land and pursuing tax abatements

Direct financial assistance and pre-development support to move projects forward

Detroit Housing Commision (DHC)

Provides 4,000 safe, decent, and affordable housing units for seniors and families or the low and moderate-income people

Plans to create 2,500 more affordable housing units over the next five years by partnering with private developers

Main source of funding from

Housing and Urban Development Department (HUD)

Provide employment and job training for low and very low income persons and contracting opportunities to businesses which provides economic opportunities to low and very low income persons in connection with projects and activities in their neighborhoods

Detroit Land Bank Authority (DLBA)

Offers Detroit residents an abundance of home and land ownership opportunities

Designed their sales programs to make buying property in Detroit more accessible and affordable

Compliance program: requires renovation and occupancy to improve neighborhoods and combat real estate speculation

Funding - Housing Development Plan

Community Development American Rescue Plan Act The Detroit Housing for the Affordable Housing Leverage Block Grant Funds (CBDG) (ARPA) Future Fund (DHFF) Fund (AHLF) Operated by the U.S. LISC managed private housing Provide developers and Detroit received \$826.7M as Department of Housing and investment fund of the Detroit owners with access to loans, part of the American Rescue **Urban Development** Affordable Housing Leverage grants that are designed to Plan Act passed by Congress address housing challenges in in March 2021 to combat the \$15M over the next five years **Detroit neighborhoods** negative effects of the for emergency senior home LISC Strategic Investments COVID-19 pandemic. repair works closely with LISC \$50M in CDBG, HOME, and Detroit to manage general funds. Plans to grow Zero Percent (0%) Housing philanthropic funds & the fund to \$250M, which will Repair Loan Program as a low-cost debt to encourage unlock \$765M in total. credit enhancement deeply affordable housing Expected to preserve 10,000 units of existing affordable housing and the development of 2,000 units

Establishment of NRSAs and Strategic Areas for Affordable Housing Development

ECONOMIC DEPRESSION IN DETROIT

At the time the City was undergoing a post-bankruptcy restructuring and was in severe economic distress including an inability to retain residents due to a lack of capital that was flexible enough for home repair.

2020-2024 NRSA

The city decided to renew the NRSA designation plan to continue the revitalization of its neighborhoods



The Benefits of a HRD approved NRSA Plan

1	Job Creation/Retention as Low/Moderate Income Area	Eliminates the need for a business to track the income of potential employees
2	Aggregation of Housing Units	All eligible housing assistance such as home repair, new construction and home purchase assistance are allowed
3	Aggregate Public Benefit Standard Exemption	Increase a grantee's flexibility for program design as well as reducing its record-keeping requirements
4	Public Service Cap Exemption	Public services carried out in the NRSA are exempt from the 15% public service cap thus, more services offered & better leveraging of public service funding

Part IV - Innovation and Expertise Required To Transform Vacant Lands Of Detroit

Method

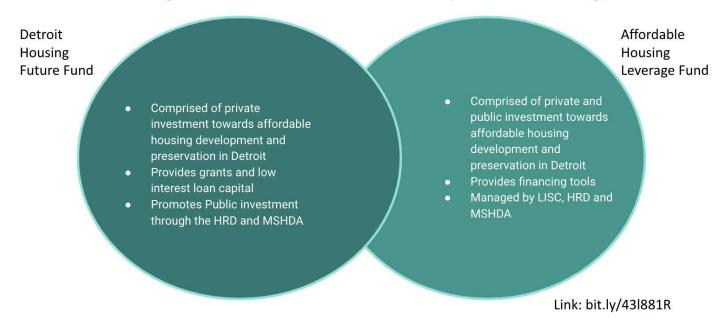
Uses of Properties Redevelopment Incentives Maps of Vacant Lands and Property for Sale

- Prioritizing affordable housing projects/properties with CCSS
- Identifying DLBA past sales that have impacted the community
- Understanding what incentives apply to the areas/properties of interest (e.g. NRSAs benefits, 0% Home Loan Program)
- Using the City of Detroit's
 Detroit Development
 Opportunities map to locate properties for sale and vacant lands
- DLBA works with individuals, groups, and businesses to sell land and structures for a variety of uses (gardens, green space, construction, residential developments)

Toolkit For Affordable Housing Developers

Name		Organization	Program	Services Offered	
1	The Detroit Housing for the Future Fund		/	 Nonprofit and for-profit developers Preservation and development of units that serve households below 60% AMI 	
2	Detroit Land Bank Authority	/		 Selling houses and vacant lands Offers Side and Neighborhood Lots Requires compliance (renovation of structures) 	
3	Rapid Rehousing Program		/	 Short-term emergency housing for the homeless Housing identification assistance, financial assistance, case management and supportive services 	
4	Permanent Supportive Housing Provider		/	 PSH providers should be receiving Continuum of Care funding PSH providers should take referrals via COC process 	

Detroit Neighborhood-Partnership Loan Programs



Tax Credits

The following example illustrates the value of the tax credit to a housing sponsor who, using taxable financing, acquires a 15-unit building for \$120,000, spends \$200,000 on substantial rehabilitation, and subsequently rents six of the units to low income residents:

Rehabilitation Credit			
Rehabilitation Costs	\$200,000		
Percentage of Low Income U	nits x 40%	Acquisition Credit	
Qualified Basis	\$80,000	Building and Land	\$120,000
Applicable Credit Percentage	x 9%	Less Land	-\$20,000
Annual Rehab Credit	\$7,200	Eligible Basis	\$100,000
Acquisition Credit	\$1,600	Percentage of Low Income Unit	s x 40%
Total Annual Credit	\$8,800	Qualified Basis	\$40,000
Period of Credit	x 10 Years	Applicable Credit Percentage	x4% Annual
Total Credit over 10 years	\$88,000	Acquisition Credit	\$1,600

Detroit Land Bank Authority's Role

Purchasing Properties Steps:

- A) Who owns the land: Use the City of Detroit's Detroit Development Opportunities <u>map</u> to locate the property of interest. Is it owned by the DLBA? City of Detroit? Someone else?
- B) **FAQs:** If the DLBA owns the property of interest, check out these <u>FAQs</u> to learn more about the process.
- C) Application: Complete the City Of Detroit Public Property Purchase Application Form. Once your Application is submitted, you can expect a call from a DLBA representative within 2-4 weeks, if DLBA owns the property.



DLBA Development Opportunities Map

- Targeted Multifamily Housing Areas areas of the city with stronger housing markets and active commercial corridors. Developers of both market-rate and affordable housing, are encouraged to focus in these areas
- Strategic Neighborhood Fund Investment Areas are areas that can access certain funding sources drawn from philanthropic contributions and public subsidies designed to improve Detroit neighborhoods
- Opportunity Zones are areas that can access certain federally funded incentives and economic tools to spur development

Rapid Rehousing Program

- Rapid Re-Housing programs are designed to help those who are experiencing homelessness transition
 into permanent housing. The primary goal is to stabilize a program participant in permanent housing
 as quickly as possible and to provide wrap-around services after the family or individual obtains
 housing.
- Once a participant is enrolled, Rapid Re-Housing programs should rely heavily on a case management
 plan to ensure long term stability for program participants. Providers are expected to implement a
 case management plan that will increase household incomes and/or increase access to mainstream
 benefits for program participants (SOAR, food stamps, TANF, Housing Choice Voucher etc.) HCVs,
 ensure the tenant leases up a unit to achieve long-term self-sufficiency. This is a key part of the case
 management.

Toolkit For Affordable Housing Developers

Name	Organization	Program	Services Offered	
6 American Rescue Plan Act		/	 Nonprofit and for-profit developers Preservation and development of units that serve households below 60% AMI 	
7 Green Capital Needs Assessment (GCNA)		/	 Offered by LISC Detroit to narrow down their pipeline of of Affordable Housing Projects that need funding 	
8 Detroit Housing Services Office	/		 Case management, vital document help, employment assistance and housing leads Includes Detroit Housing Resource HelpLine \$20M ARPA Funding 	
9 Michigan State Housing Development Authority	/		 Invests funds into affordable housing projects Provides useful tools for developers, renters, owners, homeless (e.g. Housing Grantee Section) 	

ARPA's Role in Development

DETROIT

Purpose/Project	Total Appropriated
Blight Remediation (Industrial/Commercial)	\$95,000,000
City Services & IT Infrastructure	\$250,175,290
Digital Divide	\$45,000,000
Employment and Job Creation	\$105,000,000
Intergenerational Poverty 1 - Home Repairs	\$30,000,000
Intergenerational Poverty 2 - Home Locator	\$7,000,000
Intergenerational Poverty 3 - Homelessness Prevention	\$30,000,000
Match Funds	\$30,000,000
Neighborhood Beautification	\$23,000,000
Neighborhood Investments 1 - Block Clubs, DONs	\$15,500,000
Neighborhood Investments 2 - CHC, Gun Violence Intervention	\$35,000,000
Neighborhood Investments 3 - Recreation Centers	\$30,000,000
Parks, Recreation, and Culture	\$41,000,000
Public Safety	\$50,000,000
Small Business	\$40,000,000
Grand Total	\$826,675,29



Green Capital Needs Assessment

LISC is administering a recoverable grant tool available to nonprofit and for-profit developers that covers the cost of a "Capital Needs Assessment" (CNA) or a "Green Capital Needs Assessment (GCNA)"

Goal:

- A CNA is a reporting tool that assesses current and projects future capital needs of multi-family properties
- A CNA allows real estate investors to mitigate risk and to plan for large capital expenses over a reserve term. It
 also provides an analysis of architectural and building systems, recommendations for specific improvements, and
 funding estimates for long-term capital repair and replacement activities.
- Additionally, CNA's also identify safety hazards and code violations that pose liability concerns, deferred
 maintenance items and items beyond useful life that require replacement

Link: bit.ly/43l881R

Housing Development Resources for CDOs

MSHDA

Housing Grantee Tools



The MSHDA Housing Grantee
Tools section assists Nonprofits
and Local Units of Governments
grantees by providing online
access to policy bulletins,
guidebooks, model documents,
trainings, webinars and more

Link to Resource:

MSHDA

MSHDA Mod Program



A financing mechanism for modular home builds that serve as a catalyst for future new homes at an attainable price and build local housing development capacity

Link to Resource: bit.ly/3rksj2w

MSHDA

Small-scale housing rental program



The \$2 million dollar grant program is designed to facilitate small-scale rental housing unit developments consisting of the construction of 2-12 new rental units within rural areas

Link to Resource: bit.ly/3XJQNOQ

MSHDA

Neighborhood Enhancement Program



Financially assist neighborhood housing-oriented activities that benefit low & moderate income areas and residents

Round 9 is anticipated to be released in August 2023

Link to Resource: bit.ly/43dB3ox

Toolkit for Low-Income Individuals in Detroit

Organization/Program		Organization	Program	Eligibility Criteria
1	DHC - Housing Choice Voucher Program	/	/	 50% of the area median income US Citizens and specified categories of non-citizens who have eligible immigration status
2	Pay As You Stay Program		/	 Residents in need of current year property tax relief can apply for the Homeowners Property Exemption (HOPE)
3	Coordinated Assessment Model (CAM Detroit)		/	 Provides access to housing resources Prioritize housing resources for the most vulnerable Provides referrals for housing resources
4	City Of Detroit - Affordable Housing Map		/	 Apply for AH units and find out about specific eligibility requirements and availability by contacting the property manager directly

Housing Choice Voucher Program administered by MSHDA

HCV Process

1 apply 3 pull! 5 briefing & voucher Streets where security appearance to MSDHA sends paperwork voucher security appearance to MSDHA sends paperwork voucher wolld for Ad days. 10 days voucher wolld for Ad days.

PAYS & HOPE

Do I qualify?

Eligibility for the HOPE is based on whether you own and occupy your home as your primary residence and your household income or circumstances. Please review the income levels listed below. Most homeowners whose income is below the guidelines are generally approved.

Only the Board of Review may approve an application.

2023 HOMEOWNERS PROPERTY EXEMPTION (HOPE)

Formerly Homeowners Property Tax Assistance Program (HPTAP)

INCOME GUIDELINES

Number in Household	Maximum Income for Full (100%) Exemption	Maximum Income for Partial (50%) Exemption	Maximum Income for Partial (25%) Exemption	Maximum Income for Partial (10%) Exemption
i	\$18,754.00	\$21,608.00	\$24,326.00	\$36,570.00
2	\$22,521.00	\$25,268.00	\$27,831.00	\$43,916.00
3	\$24,872.00	\$27,636.00	\$30,169.00	\$48,500.00
4	\$28,860.00	\$31,635.00	\$34,410.00	\$56,277.00
5	\$32,470.00	\$35,392.00	\$37,990.00	\$63,317.00
6	\$37,190.00	\$40,165.00	\$42,769.00	\$72,521.00
7	\$41,910.00	\$44,844.00	\$47,358.00	\$81,725.00
8	\$46,630.00	\$49,428.00	\$52,226.00	\$90,929.00

Link: bit.ly/3pEyduQ

City of Detroit Affordable Housing Map

Welcome to the City of Detroit Affordable Housing Map

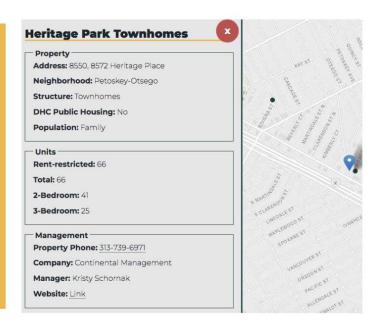
The map below shows regulated affordable housing in Detroit.

You can apply for these units and find out about specific eligibility requirements and availability by contacting the property manager directly.

Properties may or may not have units available, and rents may vary.

Property management contact information is continuously updated, as management may change. If you discover any information is not up to date, please submit a note using our online form.

START



Survey of Nonprofit Grocery Models in the US





















PREPARED FOR CASS COMMUNITY
SOCIAL SERVICES
AUGUST 2023

Taylor Valentine

University of Michigan
School for Environment and Sustainability

CASE STUDIES TABLE OF CONTENTS



Case Studies Overview	3
Community Food Club Grand Rapids, MI	5
The Bridge Food Center Midland, MI	6
The Grocery Spot <i>Atlanta, GA</i>	7
Jubilee Food Market North Waco, TX	8
Meiser's Fresh Grocery <i>Cincinnatti, OH</i>	9
Good Grocer Minneapolis, MN	10
MARSH Food Cooperative St. Louis, MO	11
Daily Table Dorchester, MA	12

Exodus Market Place Memphis, TN	13
Spoon Flower Grocer El Paso, TX	14
Fare and Square Chester, PA	15
Lakeshore Food Club Ludington, MI	16
Community Action House Holland, MI	17
Good Food Markets Washington D.C.	18
Southpoint Community Market Dallas, TX	19
DMG Foods Baltimore, MD	20
TROSA Grocery East Durham, NC	21

CASE STUDIES OVERVIEW



FUNDING

- Individual donations
 - One-time and monthly giving
 - Donor "share" programs
- Philanthropic foundation grants
- Local and state government grants
- Federal government grants (USDA)
- Corporate sponsors
- Hospital partners
- Healthcare organizations
 - American Heart Association
- Membership fees
- Sales revenue



SOURCING

- Distributor partnerships
- Wholesale vendors
- Local farms partners
- Food banks/pantries
- Food rescue partners
- Grocery store excess stock
- Drop-off donations
- Dollar stores and warehouse clubs
- On-site farms/greenhouses

KEY FEATURES AMONG MODELS



Volunteer Labor

12/17 of the models utilize volunteer labor at least partially. Most models used volunteers to supplement their paid operations and procurement staff, helping with tasks such as stocking, inventory, checkout, bagging and cleaning. Using volunteer labor significantly cuts operations costs, but requires additional management work and a committed team of regulars.



Memberships

7/17 stores utilize a membership model, several of which require memberships to shop, and others which are optional rewards programs.

4/17 models limit membership applications to low-income shoppers.



Sliding Scale and Pay-what-you-can

6/17 models utilize a sliding scale or pay-what-you-can model.

3/17 are fixed monthly fees based on member's reported income.

1/17 advertise "free" groceries with request for donation at checkout.

2/16 offer a pay-what-you can pricing for produce.

CASE STUDIES OVERVIEW



Able to accept EBT/SNAP Double-Up Food Bucks

10/17 stores accept EBT/SNAP benefits. This requires an online application to the USDA and completing the required training.

3/17 stores are participants in the Double Up Food Bucks Program, which matches benefits spent on fruits and vegetables. This requires an application process.



Digital Points System

3/17 stores use a digital points system, enabling a cash-free experience. Membership fees pay for a set amount of points each month depending on household size, which are spent in store and can carry over.



Prepared Foods Section

7/17 models offer a prepared foods section with grab-n-go lunches, sliced fruits and vegetables, and other ready-to-eat items that help to bring in customers as well as reduce food waste.



Online Ordering

5/17 models offer an online ordering service, with **3/17** offering delivery.

BEST PRACTICES



Nonprofits such as food banks and food rescue organizations, as well local growers, suppliers and distributors, sponsors, etc.

Community Engagment



Actively working with the community to develop relevant and culturally appropriate inventory, assess needs and desires, respond to feedback, build loyal customer base



Donor Engagement

Strong focus on compelling donors, such as with "shareholder" programs with incentives and decision involvement, subscription plans, providing multiple donation platforms

REASONS FOR CLOSING

- Grant funding dried up
- Business model never achieved self-sufficiency
- Small inventory resulted in customers looking elsewhere
- Projected product volume wasn't aligned with demand
- Inventory and pricing didn't fit community need





Grant funding

Community partnerships

Donations



SOURCING

Distributor purchases

Local farms



CUSTOMERS

Membership restricted to households at/under 2x federal poverty level

Income verification

STRENGTHS + BEST PRACTICES

- Sliding scale membership fee ranging from \$11-17/month
- Digital points systems eliminates cash flow
- Points increase with household size
- Fresh produce priced lower than processed foods
- DEI committee ensures inclusive and culturally relevant foods
- Monthly giving club provides incentives for regular donations

BARRIERS TO CONSIDER

- Digital points system would likely require external expertise to set up as well as additional technological resources to operate and maintain
- Income verification may disincentive and reduce potential customer base
- Points system increases complexity of ensuring adequate inventory and reduces flexibility of purchasing habits
- Relies on regular volunteer commitment
- Model requires extensive and continuous grant funding

GRAND RAPIDS, MI

Opened Jan 2015



Still operating



Oldest continually operating



Volunteer Labor supplements paid staff



Membership Model monthly fee



Donor Subscribtion



Sliding ScaleBased on income and household size



Points System *No Cash Flow*



Replicated Model

Model currently being replicated throughout Michigan (see p. 16 & 17)

CONTACT INFO

AJ FOSSEL

Executive Director ajfossel@communityfoodclubgr.org

LISA OWUSU SEKYERE

Communications & Development Manager lisa.owusu@communityfoodclubgr.org



communityfoodclubgr.org







Opened Dec 2016



Still operating



100% Volunteer Labor No paid positions



Wholesale prices marked up 5 pennies



Church-OperatedMessiah Church
Community Ministries



Membership Model Sign-up only, no fee



Uses key tagGathers data to improve inventory and impact



Food RescueNonprofit partner provides produce and baked goods

CONTACT INFO

thebridgemidland@gmail.com 989.444.8000



<u>@thebridgemidland</u>



thebridgemidland.com



FUNDING

5 cent markup on wholesale price

Grant funding

Community donors



SOURCING

Purchases directly from vendor and distributor partners

Food rescue partners

Drop-off donations



CUSTOMERS

Focuses on households making under \$64k/yr

Doesn't require income verification

STRENGTHS + BEST PRACTICES

- Maintains relationships with vendors and distribution centers to carry regular items including household and hygiene products
- Saves on labor costs by only using volunteer labor, mostly from church members
- Wholesale (+5c) pricing ensures competitiveness over other grocery options
- Partners with food rescue nonprofit for produce and baked goods donations
- Funded by a large number of charitable foundations

BARRIERS + LESSONS LEARNED

- Shifted away from doing food giveaways after feedback reported of a loss of customer dignity and personal choice
- Reliance on community donations leads to an inconsistent and unpredictable inventory
- Key tag system monitors purchasing habits to better inform product inventory and measure impact





Grant funding

Donations



SOURCING

Food rescue

Grocery store excess

Food banks

Donations



CUSTOMERS

Open to all

No requirements or applications

STRENGTHS + BEST PRACTICES

- · Pay-what-you can model
- Designated hours dedicated for 65+ and mobile-assisted customers
- Strong social media presence with many avenues/platforms for accepting donations and sponsoring shoppers
- Partners with other organizations fighting food insecurity in the city

BARRIERS + LESSONS LEARNED

- Pay-what-you can model increases access but leads to unpredictable income stream
- Reliance on donations and high demand results in small inventory that leads to frequent early closing
- Transportation is often a barrier for many community members and the store's insurance prevents delivery
- Customers are limited to one basket of food a day and some high-demand items have quantity restrictions

Opened 2021



Still operating



Volunteer Labor



Food Rescue

Nonprofit partner provides produce and baked goods



Pay-what-you-can Model Groceries are free, donations accepted at check-out



Grocery PartnersDonates excess stock



Food Pantry Partners



Former For-Profit

CONTACT INFO

info@thegroceryspot.org 404-969-2320



@thegroceryspot



thegroceryspot.org



Opened 2016



Still operating



Donor Shareholder Program Includes discount card and invite to annual meetings



Prepared Food Section



Focus on reducing food waste



Focus on stocking local products



University partnershipPublic heath research
and sustainability projects



Faith-based organization Mission Waco

CONTACT INFO

254,753,4900



@jubileefoodmarket



missionwaco.org/jubilee-market



FUNDING

Donor "shareholder" fundraising program

Grant funding



SOURCING

Supplier partnerships

On-site greenhouse



CUSTOMERS

Open to all

Some products catered to higher income customers

BARRIERS + LESSONS LEARNED

- Challenge of balancing the need to draw a wealthier customer base to support the store with the mission to serve the existing local community
- To financially support the store, customers would need to be drawn from outside the nearest neighborhoods, requiring large outreach to the greater Waco community
- Store has so far failed to be selfsustaining, requiring Mission
 Waco to cover the extra 10-15%
 needed to break even

STRENGTHS + BEST PRACTICES

- Strong focus on supplying local food products
- "Ugly" produce is used in the prepared foods section to reduce food waste
- Partnered with Baylor
 University on sustainability
 projects such as an
 aquaponics set-up and a
 composting program
- Intentional about providing products to meet the needs of a diverse community





Individual donations

Grant funding from city, corporate partners and charitable foundations



SOURCING

Traditional suppliers

Produce is all donated

Consigners selling products in-store

Focus on hyper-locally sourced foods



CUSTOMERS

Open to all but focused on the "hyperlocal" community of Lower Price Hill



Still operating

Operated by nonprofit
Your Store of the Queen City



Neighborhood-based design Engaged community in

Opened Nov 2021

Engaged community in planning process



Pay-what-can model for produce



Hosts weekly farmer's market with local farmers



Food Rescue



Prepared Food Section

STRENGTHS + BEST PRACTICES

- Invites local farmers and makers to weekly market
- Commitment to hiring neighborhood residents and incubating entrepreneurship
- Partners with food rescue nonprofits for donated items
- Employees are specifically trained in restorative practices of communication and character strengths in order to prioritize cultivating a community

LESSONS LEARNED

- Neighborhood Action Team helps engage local residents in planning and building a community around the store
- Deli, prepared foods, and hot drinks bar bring in customers and helps build community
- Pay-what-you-can model for all produce and donated items increases access and helps prevent food from spoiling
- Hosts weekly community meals and cooking classes

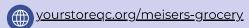


2023 Green Umbrella Sustainability INNOVATION Award

CONTACT INFO

Reba Hennessey (founder) reba@yourstoreqc.org (513) 399-7648

@meisersfresh





Opened 2015, Reopened Jan 2021



Still operating, closed 2018-2021



Volunteer DrivenReceive 20% discount in exchange for 2.5hr/mo



Weekly Food Outlet 70% discounts for those who apply and qualify



Sustainability Focus



Supervised Kids' Section *Allows parents to drop off*



Online Ordering *Pick-up in store*



Full Service Grocery 9,000 square-feet

CONTACT INFO

contactus@goodgrocer.org (612) 200-9337



<u>@goodgrocer</u>



goodgrocer.org



FUNDING

Corporate partners

Individual sponsors

Never received government funding



SOURCING

Traditional vendor partnerships

Local suppliers



CUSTOMERS

All encouraged

Food Outlet membership restricted to lowincome applicants

BARRIERS + LESSONS LEARNED

- Staff shared that fighting misconceptions about the store has been frequent challenge, such as it being member-only, not high-quality, or too expensive due to its contemporary design
- Founder first operated a food pantry in church basement and realized people wanted to give back what they could, hence the volunteer model
- Separated food outlet section might discourage shoppers from applying

STRENGTHS + BEST PRACTICES

- Distributes thousands of gift cards monthly to local residents via Community
 Outreach Team
- Outlet section with high discounts open to lowincome customers who apply, funded by 100% of store proceeds
- Strong social media presence that highlights sales and volunteers





Grant funding

Member shares program



SOURCING

Local farmers

On-site urban farm



CUSTOMERS

All welcome

Sliding Scale Model

STRENGTHS + BEST PRACTICES

- Acted as community gather space, hosted meetings, dinners, cooking classes
- Items are labeled with minimally marked-up wholesale price and customers are suggested to pay within 10% range
- Created easy-to-prepare meal bundles to ease meal planning and preparation
- Members give input on what items to stock

LESSONS LEARNED

- Grant funding eventually dried up after first couple of years
- Patronage never reached a sustainable level to allow for self-sufficiency
- Payroll costs needed to increase with costs of living, inflated store expenses
- Frequently short-staffed, unable to employ more people to work on projects
- Demands of running multiple enterprises reduced time spent on building and engaging community

Opened Aug 2021



Closed July 2023



Volunteers and Internships



Worker and memberowned cooperative



Sliding Scale Pricing



Farmer Network and CSA Program



Prepared Food Section and Hot Foods Diner



Online Ordering Pick-up in store

CONTACT INFO

bioculturalist@gmail.com (574) 238-4577



@marshlifeart



marshlife-art.org



Opened 2015



Still operating, opening additional locations



Volunteer Labor Supplements paid staff



Food RescueSuppliers donate their excess inventory



Double Up Food Bucks Program for SNAP users



Teaching Kitchen



Prepared Food Section



Online Ordering
Pick-up and delivery

CONTACT INFO

Online contact form (617) 506-0219



<u>@dailytablegrocery</u>



www.dailytable.org



FUNDING

Sales revenue

Corporate donors

Grant funding



SOURCING

Brand and manufacturer partnerships

Supplier deals

Food rescue

Farmer partnerships



CUSTOMERS

All encouraged

"Every shopper is a funder"

BARRIERS + LESSONS LEARNED

- Extensive network of supporters, including government, faith-based, healthcare, corporate, and higher education partnerships that would challenging to replicate
- Founder was former CEO of Trader's Joe, resulting in experience and connections not seen in other models
- Growth reduces reliance on philanthropy, but model still isn't self-sustaining

STRENGTHS + BEST PRACTICES

- Teaching kitchen program offers cooking and nutrition classes in partnership with health organizations
- Pricing is designed around SNAP budget, with extra deals for EBT users
- Prepared foods are priced to meet/beat "junk" food prices
- 70% of operating expenses are covered by sales revenue
- Dedicated procurement team constantly looks for supplier deals and rescues





Grant funding

Individual donors

Hospital sponsors

Corporate partners



SOURCING

Local farms

Food banks

Trader Joe's and other partnerships



CUSTOMERS

Open to all

Optional annual membership for monthly free grocery day and rewards program

STRENGTHS + BEST PRACTICES

- Includes coffee and juice bar, seating and meeting space, as well as cooking and gardening classes to create space for community
- Consists of four shipping containers renovated as an energy efficient storefront
- Optional annual membership includes free groceries once a month, 15% discount, weekly members specials, and loyalty rewards

BARRIERS + LESSONS LEARNED

- "Micro" grocery with limited inventory beyond produce will likely only supplement customer's regular grocery shopping habits and limit customer bases
- Monthly free grocery day likely would be challenging, especially ensuring access for all paying members
- Store is too new to further evaluate success or provide feedback on lessons learned

Opened July 2023



Still operating



Volunteer Labor



Membership Model
Optional, grants access to monthly discount day



Housed in refurbished shipping containers



Grocery and food pantry partnerships
Donates excess stock



Online Ordering *Pick-up and delivery*



Faith-based Organization *For The Kingdom*

CONTACT INFO

(901) 383-1802 info@ftkmemphis.com



@ftkmemphis



ftkmemphis.org/exodusmarketplace-2/



Opened May 2023



Still operating



Operated by nonprofitDesert Spoon Food Hub



100% organic



Double Up Food Bucks Program for SNAP users



Strong Partnerships Ex) American Heart Association and USDA Local Food Promotions Program



Online Ordering *Pick-up and delivery*



Farm Box Program
Customers sign-up to
receive subscription
farm box

CONTACT INFO

Info@desertspoonfoodhub.org (915) 209-7631



@desertspoonfoodhub



desertspoonfoodhub.org



FUNDING

Grant funding, including from El Paso county

Corporate partners

Donations



SOURCING

Local organic farms

Organic produce distributor



CUSTOMERS

Open to all

Additional discounts for SNAP users

BARRIERS + LESSONS LEARNED

- Starting as box delivery service enabled growth of customer base prior to opening a physical store
- Emphasis on selling only organic produce may influence perceptions of store's intended customer base and affordability
- Store is too new to further evaluate success or provide feedback on lessons learned



STRENGTHS + BEST PRACTICES

- Strong relationships with local organic growers to provide produce
- Serves as the regional lead of the Double Up Food Bucks Program, doubling benefits to enable more fresh produce for SNAP recipients
- Taster Space program developed for young children to expand early food experiences and increase comfort with unfamilar food and recipes





Government, corporate, foundation and individual contributions

\$7 million in start-up funding



SOURCING

Primarily through wholesaler

Supplemented with local suppliers



CUSTOMERS

Open to all

Intended to bring in healthier options to a low-income neighborhood

STRENGTHS + BEST PRACTICES

- Worked with local pastor to set up focus groups with local residents to inform inventory and access community needs
- Created programs to incentivize healthy purchases
- Adjusted inventory to align with community needs
- Recognized the need to stock "unhealthy," packaged foods in order to bring in customers

BARRIERS + LESSONS LEARNED

- Anticipated larger sales in the beginning, had to reorient to align product volumes with actual community demand
- Reflected on the importance of doing <u>market study</u> to inform types of products and produce to carry
- Struggled with incentivizing healthy foods, <u>produce in</u> <u>particular wasn't selling well</u>
- After start-up funding ran out, sales weren't enough to sustain operating costs

Opened 2014

Sold to for-profit in 2018



Operated by nonprofit *Philabundance*



Membership Model *Discounts and Rewards*



Full Service Grocery 16,000 square-feet



Health Incentives



Red-Yellow-Green Light
Tiered rewards program
based on healthy foods
Red-packaged/processed
Yellow- grains and meats
Green-fruits & vegetables

CONTACT INFO

Philabundance (215) 339-0900



<u>philabundance.org</u>



Opened 2017



Still operating



Volunteer Labor supplements paid staff



Membership Model monthly fee



Donor Subscribtion



Sliding Scale
Based on income and
household size



Points SystemNo Cash Flow



Replicated Model Based on Community Food Hub model (see pg. 5)

CONTACT INFO

O'Nealya Gronstal, Executive Director ogronstal@lakeshorefoodclub.org (231) 480-4334



<u>@lakeshorefoodclub</u>



<u>lakeshorefoodclub.org</u>



FUNDING

Grant funding

Community partnerships

Donations



SOURCING

Distributor purchases

Local farms

Drop-off donations



CUSTOMERS

Membership restricted to households at/under 2x federal poverty level

Income verification

BARRIERS + LESSONS LEARNED

- Summer 2023 has seen large upsurge in 60+ demographic, which make up 51% of members
- Funding has started to become scarce after pandemic relief, requiring increased calls for additional donors
- Reaching out directly to corporate sponsors to donate livestock to process
- Customer based limited by income requirements
- Points system limits purchasing

STRENGTHS + BEST PRACTICES

- Sliding scale membership fee ranging from \$11-17/month
- Membership model helps increase predictability and stability of product flow
- Digital points systems eliminates cash flow
- Budget has skyrocketed in o \$300k in 2023, compared to \$40k in 2023
- Membership at all-time high of 1,936 as of July 2023





Grant funding Community partnerships

Donations



SOURCING

Distributor purchases

Drop-off donations

Excess stock from grocery partners



CUSTOMERS

Membership restricted to households at/under 2x federal poverty level

Income verification

STRENGTHS + BEST PRACTICES

- Designed to support 1200 families each month
- More than 90% of members increased consumption of fruits & vegetables
- Fruits & vegetables represent 40% of purchased items
- Adjoining "Opportunity Hub provides additional resources and services

BARRIERS + **LESSONS LEARNED**

- Paid memberships changed the relationship with former clients, now customers, allowing for more dignity and freedom of choice
- Income verification may disincentive and reduce potential customer base
- Points system increases complexity of ensuring adequate inventory and reduces flexibility of purchasing habits
- Relies on regular volunteer commitment
- Model requires extensive and continuous grant funding

Opened Oct 2019



Still operating



Volunteer Labor supplements paid staff



Membership Model monthly fee



Operated by nonprofit Community Action House



Sliding Scale Based on income and household size



Points System No Cash Flow



Replicated Model Based on Community Food Hub model (see pg. 5) also seen at Lakeshore Food Club

(see pg. 16)

CONTACT INFO

hello@communityactionhouse.org (616) 392-2368



@communityactionhouse



communityactionhouse.org



WASHINGTON, DC

Opened 2015



Closed in 2022



Social Enterprise



Volunteer Labor



Operated by NonprofitOasis Community Partners



Nonprofit partners



Prescription Produce Program



Joint Cafe Serves Prepared Food

CONTACT INFO

(202) 248-8494 Info@goodfoodmarkets.com



goodfoodmarkets.com/



FUNDING

Local government grant funding

Private foundation grant funding



SOURCING

Traditional grocery suppliers

Partnership with nonprofit for prepared foods



CUSTOMERS

Open to all

Some claimed prices were too high and limited customer base to the more affluent

REASONS FOR CLOSURE

- Inflation contributed to high prices and low profit-margins
- Majority of grant funding went to start-up costs rather than labor and inventory which later became the primary expenses
- Produce was frequently overstocked, leading to a lot being given away or wasted
- Criticized for inventory and pricing that didn't match the needs of the community

STRENGTHS + BEST PRACTICES

- Local government was involved in providing funding support and fanfare
- Formed partnerships with various nonprofit organizations for prepared foods and prescription produce program
- Spent 2 years on planning, financial analysis, community engagement, and partnership formation





Partnership with community investment foundation

Church to cover additional costs



SOURCING

Shopping local grocery sales

Dollar stores and bulk stores (Sam's)

Donations



CUSTOMERS

Open to all

Opened June 2021



Still operating



Volunteer Labor supplements paid staff



Church-OperatedCornerstone Baptist Church



Double Up Food Bucks Program for SNAP users



Prepared Food Section



Community Kitchen
For education programs
Available for renting out



Caterer Partners Selling pre-made foods

STRENGTHS + BEST PRACTICES

- Successful social media campaign helped bring in new customers
- Working with local caterers to sell their pre-made meals in stores and partner for bulk grocery orders
- Grocery purchasing is informed by community requests + suggestion box
- Commercial kitchen brings in additional income from rental fees

BARRIERS + LESSONS LEARNED

- Salaries, utility costs and purchasing food adds up to operating costs of about \$300/day
- Proposed business plan expected profits of \$34,000/month, but independent university faculty reviewer states this is based on flawed calculations and unlikely to meet projected profit margins
- Fresh fruits and vegetables are highly discounted to encourage purchasing and reduce waste
- Actively encouraging food entrepreneurs to lease space in commercial kitchen to help subsidize the store

CONTACT INFO

Lead: Pastor Chris Simmons

(214) 646-4288



@southpointcommunitymarket



<u>southpoint-community-</u> market.business.site



Opened 2018



Closed in 2021



Operated by nonprofit *The Salvation Army*



Workforce Development Program



Educational ProgramsNutritional guidance and meal planning



Full Service Grocery 7,000 square-feet



Weekly food giveaways for SNAP recipients



Food Pantry Partners



FUNDING

*Unable to find information on funding sources



SOURCING

Maryland Food Bank

C&S Wholesale Grocers



CUSTOMERS

Open to all

Caters to beneficiaries of SNAP program

BARRIERS + LESSONS LEARNED

- Store wasn't turning any profit a year into operation
- Adjusted inventory based on customer feedback
- Very little information available on store's closing

STRENGTHS + BEST PRACTICES

- Ensured prices were lower than other local grocers
- Reputation and brand recognition of Salvation Army helped draw in additional shoppers and increase loyalty





FUNDING

Grant funding, including clty Neighborhood Revitalization Grant



SOURCING

Unknown



CUSTOMERS

Open to all

Opened 2010 Closed in 2012



Operated by nonprofit TROSA



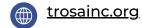
Work Skills Development Program

STRENGTHS + BEST PRACTICES

- Commissioned a strategic analysis from Duke University as part of a Masters project
- Weekly specials and door-todoor flyer drop-off were deployed to draw customers
- Employed TROSA workforce development program participants to provide employment and job skills

BARRIERS + LESSONS LEARNED

- Lost \$100,000 in operating costs before shutting down, despite rent-free arrangement
- Lacked the space to stock wider range of products, resulting in reduced customer base
- Majority of customers walked to the store due to limited transportation options in the area





References

- Alfini, Michelle. "Nonprofit Grocery Store Providing Healthy Food to Cincinnati Neighborhood." Accessed September 2, 2023.
 - https://spectrumnews1.com/oh/columbus/news/2021/05/17/nonprofit-grocery-store-feeding-neighborhood-as-it-awaits-opening-day.
- Amal Ahmed. "Market with a Mission: Non-Profit Grocery Stores Help Heal 'Food Deserts." *The Guardian*, April 3, 2022, sec. Environment.
 - $\underline{https://www.theguardian.com/environment/2022/apr/03/non-profit-grocery-store-food-desert-texas.}$
- Barrios, Luisa. "First Nonprofit Grocery Store Opens in Central EP." *KTSM 9 News* (blog), May 22, 2023. https://www.ktsm.com/news/first-nonprofit-grocery-store-opens-in-central-ep/.
- Benshoff, Laura. "A Nonprofit Grocer Tries To Sell More Healthful Food Without Going Under." NPR, July 6, 2016, sec. Social Entrepreneurs: Taking On World Problems.
 - https://www.npr.org/sections/thesalt/2016/07/06/484819718/a-nonprofit-grocer-tries-to-sell-healthier-food-without-going-under.
- Bonessi, Dominique Maria. "Salvation Army Opens Its First-Ever Supermarket, In Baltimore." *NPR*, March 27, 2018, sec. Eating And Health.
 - https://www.npr.org/sections/thesalt/2018/03/27/597304848/salvation-army-opens-first-grocerv-store-ever-in-baltimore
- Boss, Donna. "Nonprofit Grocer Fare & Square Opens Near Philly." Supermarket News, October 14, 2013. https://www.supermarketnews.com/retail-amp-financial/nonprofit-grocer-fare-square-opens-near-philly.
- Briggs, Shakari. "Southpoint Community Market Opens, Fills Void in South Dallas." Accessed September 4, 2023.
 - https://spectrumlocalnews.com/tx/south-texas-el-paso/news/2021/06/25/southpoint-community-market-opens--fills-void-in-south-dallas-
- Brones, Anna. "Karen Washington: It's Not a Food Desert, It's Food Apartheid." Guernica, May 7, 2018. https://www.guernicamag.com/karen-washington-its-not-a-food-desert-its-food-apartheid/.
- Carrington, Gus, and Devin Wood. "Non-Profit 'For the Kingdom' Addressing Food Deserts in Raleigh with New Micro-Grocery Store." localmemphis.com, July 7, 2023.
 - https://www.localmemphis.com/article/news/local/non-profit-for-the-kingdom-addressing-food-deserts-in-raleigh-with-new-micro-grocery-store-nutrient-locally-grown-vegetables-sourced-901-healthy-tn/522-ebfd8b9b-0647-4b4b-aa21-24b87a72bf63.
- Chandler, Jennifer. "Memphis Non-Profit For the Kingdom Opens Farm-to-Table Micro-Grocery Store in Raleigh." The Commercial Appeal. Accessed April 15, 2024.
 - https://www.commercialappeal.com/story/entertainment/dining/2023/07/03/memphis-nonprofit-for-the-kingdom-opens-farm-to-table-micro-grocery-store-in-raleigh/70373001007/.
- Community Action House. "Community Action House." Accessed April 15, 2024. https://www.communityactionhouse.org.
- Daily Table. "Daily Table." Accessed April 15, 2024. https://www.dailytable.org.
- Dand, Sujata. "Cornerstone Baptist Church Is Opening a Grocery Store to Address Food Insecurity in South Dallas." Dallas Free Press, May 6, 2021.
 - $\underline{https://dallasfreepress.com/south-dallas/cornerstone-baptist-church-is-opening-a-grocery-store-to-address-food-insecurity-in-south-dallas/.}$
- ——. "Cornerstone Baptist's Profitable Nonprofit Grocery Store 'Creates Dignity' in South Dallas." Dallas Free Press, February 24, 2022.
 - https://dallasfreepress.com/south-dallas/cornerstone-baptists-profitable-nonprofit-grocery-store-creates-dignity-in-south-dallas/.
- ——. "Jubilee Market, a Non-Profit Grocery Store in Waco, Seeks to Provide Affordable, Nutritious Foods in Low-Income Neighborhood." Dallas News, April 28, 2021.
 - https://www.dallasnews.com/news/2021/04/28/jubilee-market-a-non-profit-grocery-store-in-waco-seeks-to-provide-affordable-nutritious-foods-in-low-income-neighborhood/.

- ———. "Seeds Of Hope Blossoming': New Community Market In Southern Dallas Makes Fresh Food Accessible." KERA News, June 16, 2021.
 - https://www.keranews.org/news/2021-06-16/seeds-of-hope-blossoming-new-community-marke t-in-southern-dallas-makes-fresh-food-accessible.
- "Desert Spoon Food Hub." Accessed April 15, 2024. https://www.desertspoonfoodhub.org/.
- Ed Hutchison. "The Bridge Food Center, Non-Profit Grocery Store, Serves the Community." Midland. Accessed July 21, 2023.
 - https://www.secondwavemedia.com/midland/features/bridge-food-center.aspx.
- ——. "El Paso's First Nonprofit Grocery Opens in Central." El Paso Inc., May 26, 2023. https://www.elpasoinc.com/news/local_news/el-paso-s-first-nonprofit-grocery-opens-in-central/article-72ae6588-fbd8-11ed-a2f2-a751fa324257.html.
- Esparza, David. "Non-Profit Grocery Store: Doing the Most Good (DMG) Foods." Engage3, June 2, 2019. https://www.engage3.com/2019/06/dmg-foods/.
- Gomez, Amanda. "Good Food Markets In Ward 8 Will Only Sell Prepared Food." *DCist* (blog). Accessed April 15, 2024.
 - https://dcist.com/story/22/11/17/dc-good-food-markets-closes-ward-8-grocery-store/.
- Good Grocer Good Grocer Do Good. Good Food." Accessed April 15, 2024. https://www.goodgrocer.org/about/.
- High Ground. "Grand Opening: Exodus Marketplace to Feature Healthy, Affordable Groceries in Raleigh." Accessed April 15, 2024. https://www.highgroundnews.com/devnews/Exodus-Marketplace.aspx.
- Horn-Muller, Ayurella. "Nonprofit Grocery Stores Rehab America's Food Deserts." Axios, May 2, 2023. https://www.axios.com/2023/05/02/nonprofit-grocery-stores-rehab-americas-food-deserts.
- Hunter, Kenya. "This Free Grocery Store Is Trying to Address Atlanta's Food Access Problems." Capital B News Atlanta, March 2, 2023. https://atlanta.capitalbnews.org/sjp-food-access-atl/.
- Hunter, Marcus. "New Micro-Grocery Fills Need in Raleigh Food Desert." Accessed July 19, 2023. https://wreg.com/news/local/new-micro-grocery-fills-need-in-raleigh-food-desert/.
- Jeziorowski, Jess. "Nonprofit Grocery Stores Are The Heroes Helping Save Food Deserts." Mashed, July 3, 2023.
 - https://www.mashed.com/1326035/nonprofit-grocery-stores-heroes-helping-save-food-deserts/.
- Kelley, Riley. "Lakeshore Food Club Seeks Help amid Surge in Seniors Facing Food Insecurity." Shoreline Media Group, July 28, 2023.
 - https://www.shorelinemedia.net/ludington_daily_news/news/local/lakeshore-food-club-seeks-help-amid-surge-in-seniors-facing-food-insecurity/article_af769e10-2d77-11ee-887d-074abb71a9c9.html.
- Lakeshore Food Club. "Lakeshore Food Club." Accessed April 15, 2024.
 - https://www.lakeshorefoodclub.org.
- March, Stephanie. "Sneak Peek: Good Grocer." Mpls.St.Paul Magazine, January 21, 2021.
 - https://mspmag.com/api/content/22f41998-5c34-11eb-ab47-1244d5f7c7c6/.
- MARSH. "MARSH," December 4, 2023. https://marshlifeart.wordpress.com/.
- Martinez, Shandra, October 25, and 2021. "Opening of Food Club Brings New Food Access Model to Holland." The Lakeshore. Accessed September 4, 2023.
 - https://www.secondwavemedia.com/lakeshore/features/Food_Club_opens.aspx.
- Mission Waco. "Jubilee Food Market." Accessed April 15, 2024.
 - https://missionwaco.org/our-programs/social-enterprise/jubilee-food-market/.
- Mullin, Andrew. "The Bridge Food Center to Move Its Location by End of Year." Midland Daily News, February 1, 2023.
 - https://www.ourmidland.com/news/article/bridge-food-center-move-location-end-year-1775411 4.php.
- Nelson. "Reopened Grocery Store Helps Put an End to Food Insecurity." Accessed April 15, 2024. https://spectrumnews1.com/oh/columbus/news/2021/12/09/re-opened-grocery-store-helps-but-an-end-to-food-insecurity-.
- Nelson, Gayle. "Funding the Nonprofit Grocery Store: A Variety of Models at Work." Non Profit News | Nonprofit Quarterly, April 1, 2016.
 - $\underline{https://nonprofit quarterly.org/funding-the-nonprofit-grocery-store-a-variety-of-models-at-work/.}$

- Nonko, Emily. "Finding the Sweet Spot for a Sustainable Nonprofit Grocery in D.C." Accessed August 15, 2023.
 - $\frac{https://nextcity.org/urbanist-news/finding-the-sweet-spot-for-a-sustainable-nonprofit-grocery-ind.c.}{d.c.}$
- O'Callaghan, Quinn. "Fixing Food Deserts in Chester, PA." The Philadelphia Citizen, May 5, 2017. https://thephiladelphiacitizen.org/fare-square-chester-pa/.
- Quillen, Alanna. "New Program to Help SNAP Recipients Buy Heart Healthy Produce in South Dallas." *NBC 5 Dallas-Fort Worth* (blog), March 28, 2023.
 - https://www.nbcdfw.com/news/local/program-helps-snap-recepients-buy-healthy-produce/3224845/.
- Ruatto, Maria. "Strategic Analysis of the TROSA Grocery Store in the Context of Durham's Food Deserts," April 19, 2012. https://dukespace.lib.duke.edu/dspace/handle/10161/5163.
- Severson, Kim. "The Freshest Ideas Are in Small Grocery Stores The New York Times." Accessed September 3, 2023. https://www.nytimes.com/2018/07/31/dining/grocery-store.html.
- Shaw, Iain. "MARSH Grocery Cooperative Celebrates Grand Opening in Carondelet This Saturday," August 20, 2021. https://www.stlmag.com/api/content/b0ebe98a-01cd-11ec-bb69-1244d5f7c7c6/.
- Slootmaker, Estelle, August 8, and 2023. "Michigan's Nonprofit Food Clubs Offer Healthy Foods at Low Costs to Combat Food Insecurity." Model D. Accessed September 3, 2023. https://www.modeldmedia.com/features/foodclubs08032023.aspx.
- Smith, Ernie. "How Nonprofit Grocery Stores Are Filling the Gap." Associations Now, February 11, 2019. https://associationsnow.com/2019/02/nonprofit-grocery-stores-filling-gap/.
- Thakker, Krishna. "How Brick-and-Mortar Nonprofit Grocers Combat Food Deserts." Grocery Dive. Accessed June 20, 2023.
 - https://www.grocerydive.com/news/how-brick-and-mortar-nonprofit-grocers-combat-food-deserts/548350/.
- "THE 17 GOALS | Sustainable Development." Accessed April 15, 2024. https://sdgs.un.org/goals.
- The Bridge. "The Bridge Food Center | Affordable Food in Midland." Accessed April 15, 2024. https://www.thebridgemidland.com.
- The Grocery Spot ATL. "The Grocery Spot ATL." Accessed April 15, 2024. https://thegroceryspot.org/.
- Totiyapungprasert, Priscilla. "Look inside Desert Spoon Food Hub's New Market in El Paso." El Paso Matters, June 12, 2023.
 - http://elpasomatters.org/2023/06/12/el-paso-texas-desert-spoon-food-hub-nonprofit-grocery-store/.
- Warren, Debby. "Nonprofits Seek to Bring Grocery Stores to Low-Income Neighborhoods." Non Profit News | Nonprofit Quarterly, February 6, 2019.
 - $\underline{https://nonprofitquarterly.org/nonprofits\text{-}seek\text{-}to\text{-}bring\text{-}grocery\text{-}stores\text{-}to\text{-}low\text{-}income\text{-}neighborho}}$
- WZZM13.com. "Local Food Club Working to Provide Access to Healthy Food," May 25, 2023. https://www.wzzm13.com/article/life/food/community-food-club-healthy-food/69-c78a4991-e7cf-4db8-ada5-bf63785fba2b.
- Your Store QC. "Meiser's Fresh Grocery & Deli | Your Store of the Queen City." Accessed April 15, 2024. https://www.yourstoreqc.org/meisers-grocery.

Potential Grants and Funding Sources for CCSS Grocery Project

America's Healthy Food Financing Initiative

→https://www.investinginfood.com/

"America's Healthy Food Financing Initiative offers <u>resources including grants</u>, <u>loans</u>, <u>technical assistance services</u>, <u>programming</u>, <u>and other forms of support</u> to eligible projects that will improve access to fresh, healthy foods in underserved rural and urban areas."

- The application window is now open for the 2024 HFFI Planning Grant Program. Applications are
 due at 11:59 PM ET on Monday, June 17 2024. Reinvestment Fund staff will be available to
 answer questions until Friday, June 14, 2024.
- The program could assist a variety of organizations, business models, and planning needs of ventures that seek to process, distribute, aggregate, market, and sell healthy, fresh, and affordable foods to underserved communities and markets. All applicants must be working towards improving food access for underserved communities through food retail.
- Eligible applicant entities include for-profit business enterprises (including a corporation, limited liability company, sole proprietor, public benefit corporation); cooperatively-owned businesses; tax-exempt nonprofit corporations; institutions of higher education; state and local governments and governmental agencies, authorities, commissions and food policy councils; tribal governments and tribal governmental agencies, authorities, and food policy councils.
- At least \$6,000,000 is available for grants for the 2024 HFFI Planning Grant Program. Grant awards will be between \$10,000 \$150,000.

USDA Community Food Projects Competitive Grant Program (CFPCGP)

 $\hspace{2.5cm} \hspace{2.5cm} \hspace{2.5cm}$

- Training and Technical Assistance (T&TA): multi-year grant for up to 4 years. Applicants request a budget commensurate with the proposed project. The T&TA award is capped at \$250,000 in any single year or \$1M in 4 years.
- Planning Projects (PP) applicants should request a budget commensurate with the proposed project. Average award is approximately \$25,000 for 12-36 months. Maximum award is \$35,000 over 12-36 months. This is a one-time award. The purpose of the PP is to complete plans toward the improvement of community food security. This grant is competed every year.
- Community Food Projects (CFP) applicants request a budget commensurate with their proposed project. Average award is approximately \$298,000 over 36 to 48 months. Applicants are to provide matching on a dollar-for-dollar basis for all federal funds requested at the time the application is submitted. The purpose of the CFP is to support the development of projects with a ONE-TIME infusion of federal dollars to make such projects self-sustaining. CFPs are designed to create community-based food projects with objectives, activities and outcomes that are in alignment with CFPCGP primary goals. Grantees of CFP will be required to participate in the CPPCGP program evaluation, including required project data collection, sharing of data with the T&TA entity. This grant is competed every year.

Robert Wood Johnson Foundation

→https://www.rwif.org/en/grants.html

"Our grantees and partners are critical in achieving our vision of a Culture of Health, rooted in equity, where every person has a fair and just opportunity to live their healthiest life possible."

• Has funded several grocery projects in the past, including Fare and Square (Appendix C1)

U.S. Department Agriculture Local Food Promotion Program

→https://www.ams.usda.gov/services/grants/lfpp

- The FY 2024 grant application period is open through May 14, 2024
- LFPP offers four types of projects, **24-month Planning**, **36-month Implementation**, **24-month Turnkey Marketing and Promotion**, **and 24-month Turnkey Recruitment and Training**. Planning projects range from \$25,000 to \$100,000, while implementation projects range from \$100,000 to \$500,000. Each of the turnkey project options is available for a defined set of activities, with funding amounts ranging from \$50,000 and \$100,000.
- The program requires matching fund contributions in an amount equal to 25 percent of the total Federal portion of the grant.

<u>Michigan Department of Agriculture and Rural Development Resilient Food Systems</u> <u>Infrastructure Program</u>

→https://www.michigan.gov/mdard/business-development/grantfund/resilient-food-systems-infrastructure

- The purpose of the RFSI program is to build resilience in the middle of the food supply chain, to provide more and better markets to small farms and food businesses, to support the development of value-added products for consumers, fair prices, fair wages, and new and safe job opportunities. Funds will support expanded capacity for the aggregation, processing, manufacturing, storing, transporting, wholesaling, and distribution of locally and regionally produced food products, including specialty crops, dairy, grains for human consumption, aquaculture, and other food products, excluding meat and poultry.
- Grants expected to open later in the year

National Sustainable Agriculture Coalition Community Food Projects Grant Program

 ${\color{red} } {\color{blue} }$

- Awards grants to eligible nonprofits, tribal organizations, and food program service providers to
 promote self-sufficiency and increase food security in low-income communities by developing
 comprehensive, community-based solutions. Projects vary in scope, ranging from community
 gardens with market stands to marketing and consumer cooperatives, but all must involve
 low-income participants.
- These one-time grants require a **dollar-for-dollar (1:1) match** in resources, which can include in-kind support.

Name of organization	Type of organization	Contact information	Location	Distance from CCSS	Distance from CCSS Nonprofit/For-profit
The Michigan Urban Farming Initiative	Hub and urban farm	313-444-6834 ; Support@miufi.org	7432 Brush St. Detroit, MI 48202	3.2 miles	nonprofit
ROI Urban Farms	Urban farm	(313) 340-9250; Jamie.roiurbanfarms@gmail.com; Andrea.roiurbanfarms@gmail.co m	7720 W Chicago, Detroit, MI 48204	3.7 miles	for-profit, family owned
Oakland Avenue Urban Farm	Urban farm	(313) 649-7756 ; info@oaklandurbanfarm.org	9227 Goodwin St, Detroit, MI 48211	2.5 miles	Nonprofit: Northend Christian Community Development Corporation (NECCDC)
Fisheye Farms	Urban farm	(313) 649-7026 ; fisheyefarms@gmail.com	2334 Buchanan St, Detroit, MI 48208	3.5 miles	
<u>Cadillac Urban</u> <u>Gardens</u>	Urban farm	313-842-1961 ; info@sdevweb.org	4601 Merritt Street, Detroit, MI 48209	6.7 miles	Nonprofit: Southwest Detroit Environmental Vision (SDEV)
Pingree Farms	Urban farm	313-564-1500 ; volunteerpingreefarms@gmail.co m	301 E Grixdale, Detroit, MI 48203	4.6 miles	nonprofit
Workin' Roots Farm	Urban farm	(313) 413-7796	20103 Danbury St, Detroit, MI 48203	5.4 miles	private, for-profit
Earthworks Urban Earm	Urban farm	313-579-2100 ; earthworks@cskdetroit.org	1264 Meldrum St, Detroit, MI 48207	8.1 miles	Nonprofit: Capuchin Soup Kitchen/Capuchin Social Services

D-Town Farm	Urban farm	313-345-3663 ; info@dbcfsn.org	14027 W. Outer Drive, Detroit, MI 48239	10.3 miles	Nonprofit: Detroit Black Community Food Security Network
Keep Growing Detroit Urban farm	Urban farm	313-656-4769	1445 Adelaide, Detroit MI 48207	7.7 miles	nonprofit
C.R.I.T.E.R.I.O.N. Urban Farm	Urban farm	criterion16@gmail.com	2911 Monterey St, Detroit, MI 48206	0.8 miles	nonprofit
WJP Urban Farms	Urban farm	586-925-9003	4827 Parker St, Detroit, MI 48214	8.0 miles	nonprofit
CWO Farms	Urban farm	cwofarmsinc@gmail.com ; (313) 690-3342	2070 Virginia Park St, Detroit, MI 48206	1.7 miles	private, for-profit
Beaverland Farms	Urban farm	(574) 339-9378 ; beaverlandfarms@gmail.com	15078 Beaverland St, Detroit, MI 48223	10.0 miles	private, for-profit
Brother Nature Produce	Urban farm	mrsbronature@gmail.com; gweg27@gmail.com	2913 Rosa Parks Blvd, Detroit, MI 48216	4.4 miles	private, for-profit
Greydale Farms	Urban farm	(313) 212-8851 ; greydalefarms@gmail.com	14654 Greydale St, Detroit, MI 48223	9.2 miles	do-oo
Coriander Kitchen & Farm	hell Kitchen and farm om	o@corianderkitchenandfarm.c	14601 Riverside Blvd, Detroit, MI 48215	15 miles	for-profit
Motor City Micro Farm	Urban farm	(248) 660-0843 mcmf@motorcitymicrofarm.com	10090 W. Chicago Detroit, MI 48204	4.7 miles	for-profit
Recovery Park Farms Urban farm	Urban farm	(313) 277-9900	5470 Chene St, Detroit, MI 48211	6.7 miles	non-profit
Sanctuary Farms	Urban farm	info@sanctuaryfarming.com	3171 Lakeview St, Detroit, MI 48215	10.8 miles	private, for-profit



BACKGROUND, AND PRECEDENTS

2023



BACKGROUND

Who is CCSS, and What is the Webb Campus?

Cass Community Social Services (CCSS) CCSS is a faith based non profit organization based in Detroit's Dexter Linwood Neighborhood. Through the work of staff, donors & volunteers, CCSS ameliorates the effects of homelessness and poverty for the people and residents that make up the community. The CARF accredited organization runs facilities and programs for food distribution, shelter & housing, free healthcare, workforce development and community investment. As CCSS expands the scope of its projects, they need assistance gathering information, performing research, and creating a roadmap and vision plan for sustainable redevelopment that ensures equitable outcomes for the community, and fulfills their needs and desires in a proactive way.

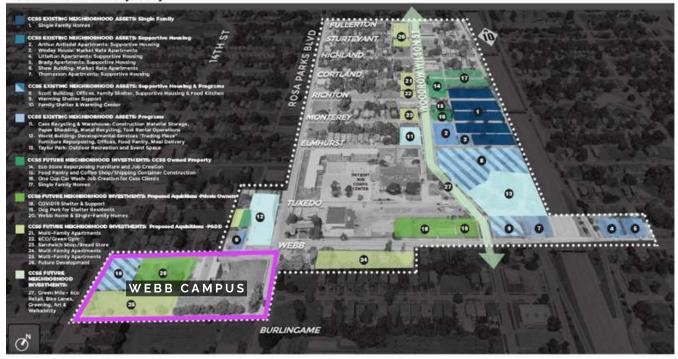
CCSS is currently redeveloping parcels to form a residential campus on the 2000 block of Webb Street, across from their Rosa Parks main office. This campus will include the Fox Family Center, a 75 room shelter for families experiencing homelessness, Seasons, a large new build shelter & warming center, and a Community Center, which will house multiple facilities and be a centerpoint for coordinating volunteer operations, interfacing with the broader neighborhood, and connecting people in need to employment and job training opportunities

As of June, 2023, the Fox Family Shelter is currently under construction, while Seasons and the Community Center are in advanced stages of planning, and are expected to be fully funded within the next 3 years through an upcoming \$15 million dollar capital campaign.



INTRODUCTION PAGE 02

CASS COMMUNITY SOCIAL SERVICES (CCSS)



CCSS DEVELOPMENT FRAMEWORK

Figure From 2021 CCSS Neighborhood vision

The Webb Residential Campus is an important part of a broader comprehensive vision for the sustainable redevelopment of the Dexter Linwood Neighborhood. Cass Community Social services hopes to revitalizae and reknit the community through housing, shelters, a small businesses corridor, parks, and greenways.



SITE ASSESMENTS

Current State of Properties



The Webb Campus is currently comprised of 10 residentially zoned R5 parcels along the 200 block of Webb street, and 1986 Burlingame Street.

These make up 4.2 acres of land in total along the 2000 block of Webb St. CCSS owns 1945 and 1951 Webb Street, which will house the Community Center.





COMMUNITY CENTER



in 2021, CCSS purchased the Woods Cathedral, a 50,000 square foot vacant church directly across the street from their world building headquarters, at 1951 Webb street. The church orginally opened as Visitation Catholic in 1919, and along with the adjacent catholic school came to be known affectionately as 'Visy'. Services were relatively progressive and and multicultural. In the early 1950s, the parish opened a large recreation center on 14th street which included an gymnasium, olympic swimming pool, and handball courts. After reaching peak attendance of roughly 3500 parishioners during the 1940s and 50s, church and school attendance sharply declined in the late 1960s as white flight took its toll on the city. The church was shuttered, and the adjacent school were demolished in 1983. In 1986, Visitation reopened as Woods Cathedral, home to a Black Pentecostal Congregation led by Amos L. Woods. After 30 years, this congregation too went through demographic and financial struggles and the Church closed its doors in 2008.

1951 Webb has housed community services continually over its life. As Visitation Catholic, children's education, food distribution, recreation and action in the community for peace were at the forefront of its mission. As Woods Cathedral, it housed job training programs, food distribution and and substance abuse treatment resources. CCSS plans to transform it into a community center continue this legacy of service.

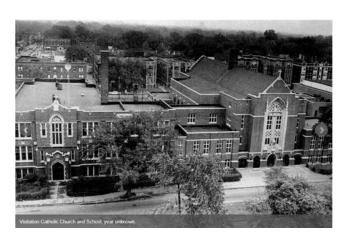


Photo courtesy of Detroit Urbex

AT A GLANCE

ADDRESS

1951 WEBB, DETROIT, MICHIGAN 213.683.0522

MANAGING ORGANIZATION

CASS COMMUNITY SOCIAL SERVICES REV. FAITH FOWLER, CHIEF EXECUTIVE OFFICER, CASSCOMMUNITY.ORG

APPROXIMATE SQUARE FOOTAGE

53,952 SF ON 1.16 ACRES

INTENDED USE

COMMUNITY GATHERING SPACE. EDUCATIONAL RESOURCE CENTER & JOB SKILLS TRAINING CENTER. STAFF OFFICES. LIBRARY, COMPUTER LAB, CLASSROOMS, TRAINING KITCHENS, RETAIL SPACE, RESTAURAUNT SPACE,

GROUND LEVEL



View of ground floor Atrium

Upon entering the Community Center's first floor from the Webb entrance, an inaccessibly steep flight of stairs takes visitors into the Atrium. Formerly the congregation's main worship space, it is roughly 10,000 square feet and is well lit by two rows of large windows and an airy 30' vaulted ceiling. The eaves adjacent to the pulpit house two ceiling mosiacs. Two side rooms frame the pulpit. The space was partially restored in 2012 to house a temporary art exhibit.

CCSS plans to keep this space open, and use it as a welcoming center, and community gathering space for meetings. If CCSS plans to retain the Webb street entrance, Entry to this space will have to be done using elevators. Alternatively an accessible entrance could be retrofitted from a side entrance.

Two rooms adjacent to the Atrium are in relatively good condition and could be repurposed for offices or other needs (next page).



View of pulpit from the center of the atrium

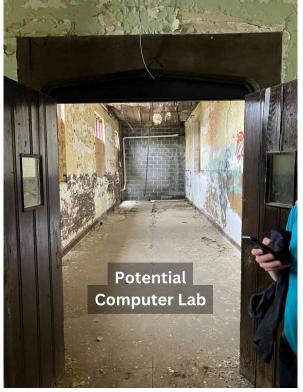


Left of pulpit side room looking toward doorway to pulpit



Right of pulpit side room looking toward outer wall

CCSS plans to house educational and resource spaces for adults within the community center, as well as for entrepreneurial pop ups. The first floor houses 5 rooms, 3 of which are large enough for classroom spaces. At the end of the leftside hall from the atrium sits this long room, which could be suited to house a computer lab and or digital resource center.



1st floor room, view from hallway entrance

SECOND FLOOR

The Second floor of the Woods Cathedral is occupied by classroom spaces, connected by an East-West hallway that runs along the North side of the building perpendicular to its length. These spaces are well suited to house the vocational and educational programs that CCSS is planning for.



classroom space on 2nd floor



classroom space on 2nd floor

SITE ASSESMENT PAGE 02

CCSS plans to retain the riser level above the entrance & It is unclear at this time whether the seating itself will be retained. Given that children will be utilizing the space, it would be nice to retain the semi open rooms on either side of the risers as 'reading nooks' or supervised play spaces for young children.



View of atrium looking toward entrance



View of atrium from riser seating

BASEMENT



View of basement stage and gym from entrance

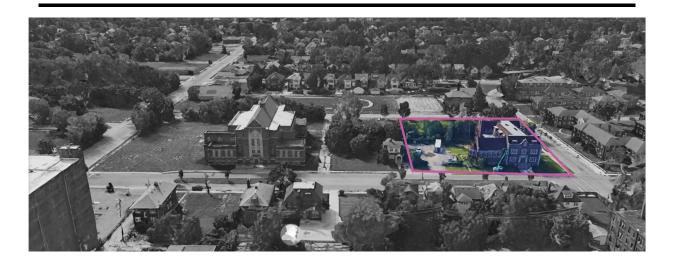
The Basement of the Woods Cathedral is accessible by a staircase at the west end of the building . The former gymnasium space is roughly 7,000 square feet. CCSS is planning to run programs in food service vocational training for people with disabilities. the spaces in the basement could be well suited to house training kitchens, and food preparation areas.

SITE ASSESMENT PAGE 02



View of basement stage behind the curtain

FOX FAMILY SHELTER



Down the Block from the Woods cathedral lies the Fox Family Shelter. The building, which is currently under construction, was originally the parish convent for Visitation catholic. The convent opened as part of the Visitation Catholic School complex in the 1925. Nuns who called the convent home taught in the school, and performed acts of service in the neighborhood and around the city. The nunnery served its original purpose, providing a home for sisters until the parish school closed in 1983. During the 1967 Detroit race riots, sisters living in the nunnery provided hot meals and shelter for displaced people. By the early 80s, the financial difficulties associated with a dwindling congregation forced the closure of visitation catholic church, and services were moved into the convent's chapel in 1983. Visitation carried on services there until 1989, when the parish officially disbanded. It was vacant from during the 90s, before being purchased by Detroit Resuce Mission Ministires, who ran a women's shelter there during the 2000s and 2010s. CCSS purchased 2015 Webb in 2021

2015 Webb has continually been a space for solemnity, rest, mercy and shelter for women, and a place for the faithful to serve the broader community. CCSS plans to reuse the chapel within the convent as a children's library. They hope their vision for the space will honor this legacy by providing help to those who most need it.



Sisters giving out hot meals to displaced residents during the 1967 riot Photo courtesy of Detroit Urbex

AT A GLANCE

ADDRESS

2015 WEBB, DETROIT, MICHIGAN 213.683.0522

MANAGING ORGANIZATION

CASS COMMUNITY SOCIAL SERVICES REV. FAITH FOWLER, CHIEF EXECUTIVE OFFICER, CASSCOMMUNITY.ORG

APPROXIMATE SQUARE FOOTAGE

20,000 SF ON 1/4 ACRE

INTENDED USE

REHABILIATATIVE SHELTER AND SUPPORTIVE HOUSING FOR WOMEN AND FAMILIES. PRIVATE ROOMS FOR 30 FAMILIES. STUDY AREA WITH INTERNET ACCESS

SITE PHOTOS

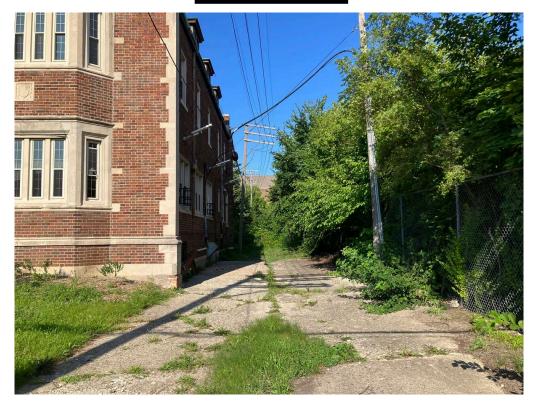


View of Webb Side of Building



View of Building from 14th Street

SITE PHOTOS



View of alley off 14th street adjacent to shelter



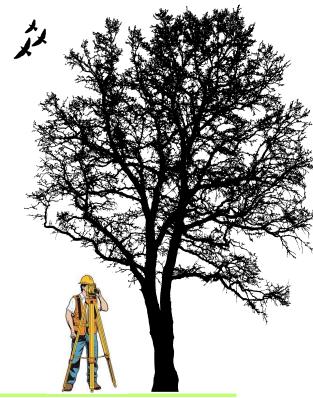
Zoomed view of alley

LANDSCAPE ANALYSIS

Landscape History, Conditions, and Constraints

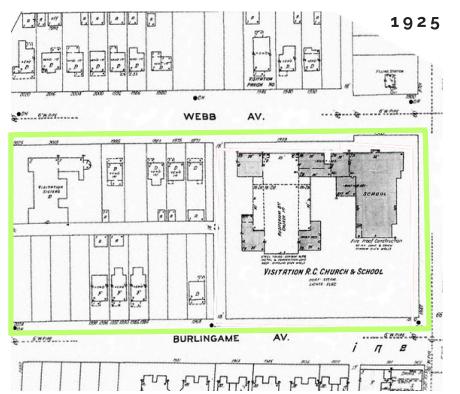


Before any design proposals can be made, environmental conditions in the landscape must be assessed, and constraints and opportunities identified. This section includes an analysis of the physical conditions at the community center, fox family shelter and seasons shelter sites. The site history, soil conditions, site ecology, noise & climate information will be conveyed through text, pictures, maps and diagrams. Data and information for this section comes from a variety of sources, including firsthand data gathering & observations, EGLE, the USDA and CCSS. At the end of this section, key takeaways will be deduced and utilized to craft responsive and successful designs.

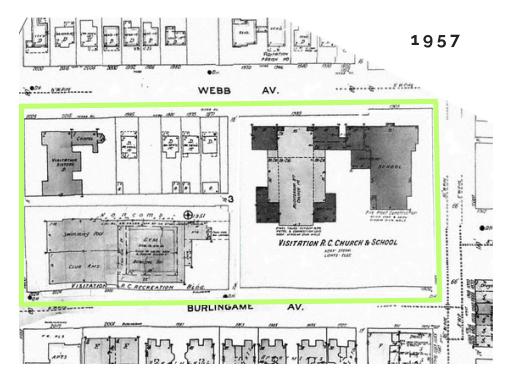


HISTORY

Historically relevant features and uses



What is currently the Webb Campus has undergone massive transformations in its recent history. After being cleared for farmland in the early 19th century, the land was absorbed into the city of Detroit and subdivided around the turn of the century. Visitation catholic school opened in 1919, and neighboring houses on what is now 1986 Burlingame were demolished during constrution of the Community Rec center between 1954 and 1956.



Notice the footprint of the now demolished houses, school, and rec center. The foundations, basements, and driveways associated with these buildings are still present underground, along with buried construction debris, artifacts, and likely toxins from building materials like lead paint (see following pages).

HISTORY

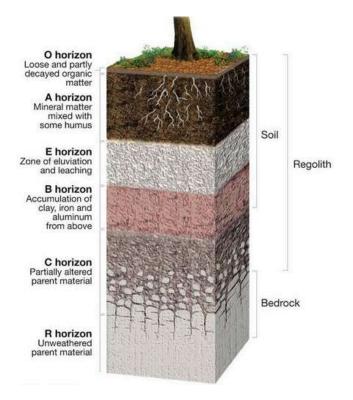
Buried hardscape and foundations



On urban sites, current infrastructure and historic uses and features have a pronounced impact on current conditions. Historical analysis is therefore necessary prior to the start of any project. Construction and demolition on Webb and demolition of buildings on Webb and Burlingame over the past 100 years has left semi buried alleyways and building foundations that will need to be rehabilitated and or removed prior to the construction of the new campus.

Because of the added costs of soil & debris removal, historic demolitions in the city of Detroit often involved bulldozing demolition debris into the ground, as well as the use of contaminated fill material. Areas marked in burgundy on the map above represent the footprints of past building foundations, where demolition debris are likely to be found. This debris can pose environmental risks, and may increase man hours and construction costs associated with the new campus.

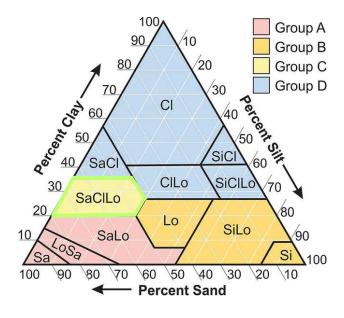
SOILS



Gathering data on soil conditions is crucial to any landscape planning effort. The soil type and subsurface conditions can have a large impact on construction methods and costs, and ultimately determine what uses and design elements can be built. According to USDA soil survey, the soils underlying the Webb street campus are type C, heavily modified sandy clay loam. This soil type is composed of layers of sandy loam and sand, bisected by a layer of clay loam, with a clay lens between 30 to 50 inches down. This clay lens prevents water infiltration, making for mesic, calcium rich, poorly drained soils.

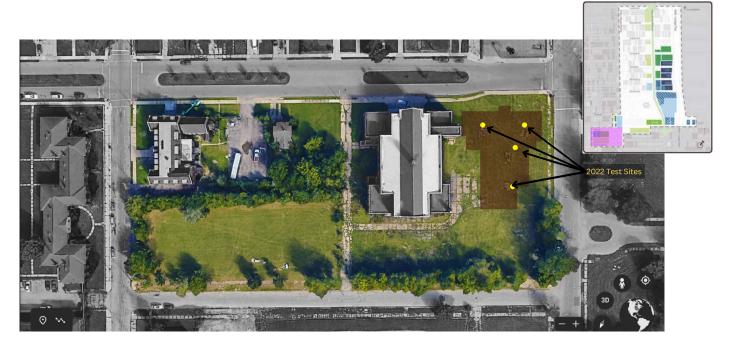
Due to their previous lives as foundations, driveways, and parking lots, significant areas of 1945 and 1951 Webb and 1986 Burlingame have a layer of weathered concrete and/or asphalt at the surface (see map above).

Previous construction, demolition, and illegal dumping activities have left all the Webb campus sites with heavy debris including bricks, asphalt chunks, glass and pottery.



SOILS

Hazards

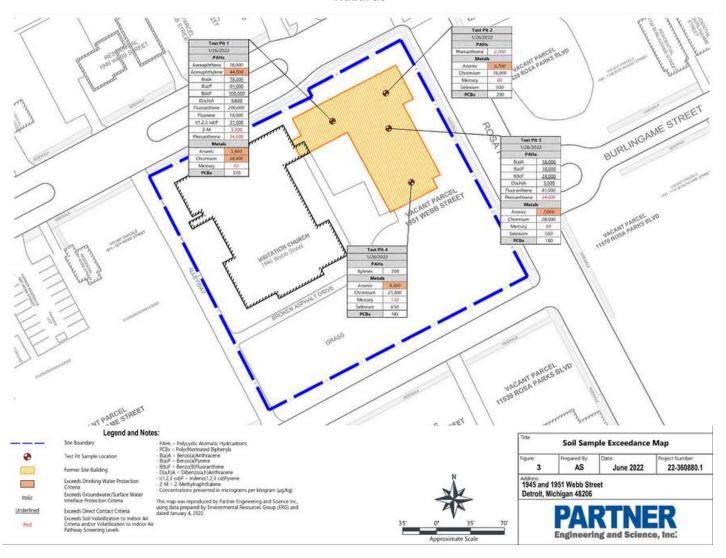


In addition to buried hardscape and building debris, soils at the Webb site have also been subject to contamination. Over the course of the 20th century, toxic building materials, illegal dumping and nearby industrial spills have left hazardous chemicals in the soil subsurface. The 2022 BEA report found that the backfill soil at 1945 Webb contained levels of aromatic hydrocarbons, chromium, mercury and arsenic above those deemed safe by EGLE. (see next page). The chemicals present at 1945 Webb pose varying levels of risk to human health, due to their compostion, concentration, and how mobile they are in the soil subsurface.

Some hydrocarbons detected at the site, such as xylene, cause reversible skin, nose and throat irritation, and can temporarily interfere with the central nervous system. Others, like Bezoanthracene are carcinogenic in humans and can damage the reproductive system. Due to the clay soils present at the site, the risk of these chemicals migrating into the water table or independently becoming airborne is currently low. however, Ample care will need to be taken by contractors to keep workers and community members safe during construction at 1945 Webb (see Key takeaways section).

SOILS

Hazards



The 2022 BEA report found that the backfill soil at 1945 Webb contained levels of aromatic hydrocarbons, chromium, mercury and arsenic above those deemed safe by EGLE. (see graph below). The chemicals present at 1945 Webb pose varying levels of risk to human health, due to their charachter, concentration, and how mobile they are in the soil subsurface.

Note the legend in the diagram above. Due to their varying concentrations, some of the chemicals present in the soil at 1951 Webb are only dangerous if they come into direct contact with the skin, while others pose risks through drinking, inhalation and volatilization into indoor air. The collective risk posed by these chemicals to human health and the environment precludes certain uses of the 1951 Webb site, and must be considered in the design of any new construction. (See key takeaways for details).

ECOLOGY

Trees





The Webb Campus is a heavily modified urban environment. One would assume that there is no ecology worth saving in this setting. This is not true however. The perimeter of 1945 1945 Webb and 1986 Burlingame are home to many small to medium sized invasive tree species typical of disturbed suites, as well as some native shade and fruiting trees. several individuals on the campus are in excess of 30 feet tall. These trees can serve as a privacy screen, aesthetic buffer, shade, and as settings for education & recreation. In the fields at Webb and Burlingame, wildflowers, including milkweed, queen Ann's lace and Aster support ample native butterfly and bee populations. There is a thicket of shade trees at 1965-1981 Webb that should be considered as well. See the species list and map, at right.

NON NATIVES



FRUITING

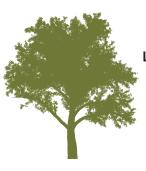


SHADE

SPECIES

CRACK WILLOW TREE OF HEAVEN SIBERIAN ELM NORWAY MAPLE

> APPLE MULBERRY CRAPBAPPLE



LONDON PLANE TREE BLACK LOCUST AMERICAN ELM COTTONWOOD

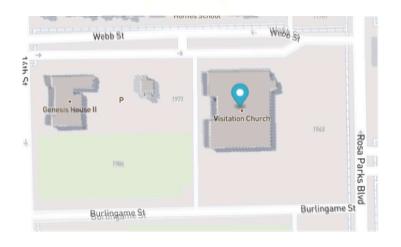
ECOLOGY

Climate



Certain portions of the Webb campus receive ample solar radiation in both summer and winter. During summer, the campus grounds receive between 12 and 15 hours of sunlight each day. The solar installations could be viable on south facing sides of buildings, as well as ground mounted solar arrays. On the map above, the arc of the sun in June is marked by the yellow line. To the left is a composite of shadowed areas from 8am to 8pm during June.

Plantings, berms and buildings on the Webb campus can be oriented to take advantage of southern sun during winter, while blocking cold north westerly winds. During summer, air conditioning costs can be significantly reduced through technological and design elements, like window shades, and heat pumps. As well as the considered placement of deciduous trees. (see next page).





ECOLOGY

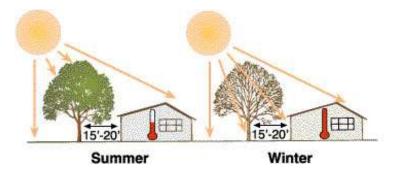
Climate

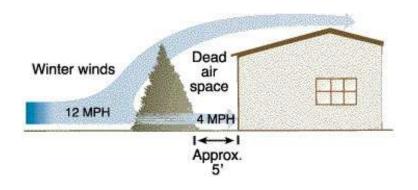


Planting deciduous shade trees such as Sycamore, Catalpa, and Red Oak on the South and East sides of buildings can prevent a greenhouse effect inside. According to the USDA, this can reduce summer cooling costs by up to 30%. During the winter months, these trees lose their leaves, allowing sunlight into windows, helping to warm the building, reduce seasonal depressive symptoms and reduce heating costs by up to 50%.

On the North and West sides of buildings, berms and dense plantings of conifer species like Norway spruce, White Pine, and Red Pine block frigid Northwesterly winds, helping to provide extra insulation, lower heating costs, and make outdoor spaces more comfortable.

In addition to their energy cost benefits, canopy trees have a myraid of other benefits, including reducing crime, increasing aesthetics and property values, decreasing urban flooding, attracting wildlife, and improving human health.





KEY TAKEAWAYS

Lessons that can be Incorporated into Webb Campus

HISTORY

• Past Demolitions have likely left heavy construction debris on all the Web campus parcels

SOILS

- legacy building foundations may present a hurdle for construction
- the subsurface at 1945 Webb contains hydrocarbons which may aerosolize during excavation, care should be taken to protect workers
- Certain uses of 1945 Webb, such as rain gardens, bioswales, urban farms and detention ponds should be precluded
- · The construction debris pile at 1945 Webb could be utilized for garden borders

ECOLOGY

- There is a good potential for photovaltaic, and passive solar heating/cooling on the Webb Campus
- Several large native shade trees should be preserved
- There is great opportunity for low maintenance forested and prairie landscapes which would provide year round beauty
- Buildings and plantings should be placed to let in south facing sunshine, and to block northwest winds in winter

CASE STUDIES

Design for the Unhoused: Framework, Examples & Implications



FRAMEWORK

Designing for Dignity

The word crisis is overused to describe the state of our national problems, but the state of Homelessness in America demands our attention. According to the National Alliance to End Homelessness, over 500,000 Americans lack a safe place to sleep at night, a number which has ticked up slightly since the pandemic. According to the state of Michigan, as of 2018, 65,000 Michiganders experienced homelessness. Of those, 17,000 were children, and 8,300 were 65+. In Detroit, almost 1700 people lack a place to sleep.

Given the large number of unsheltered people who need immediate help, policymakers, government agencies and organizations have focused primarily on increasing the quantity of affordable housing units, shelter beds, and facilities providing supportive care. this is laudable and has been absolutely crucial in significantly reducing the number of people sleeping on the streets since statewide efforts began in 2006. Building on this progress to permanently end homelessness will require a more targeted and granular approach. People who experience homelessness, especially repeated homelessness, often undergo traumas and develop coping mechanisms that can reduce their independence and threaten their ability to secure housing and participate in society.

Cass Community Social Services emergency and family shelters and community center will primarily serve populations that are vulnerable to chronic homelessness.

Research and experience has shown that these populations require not just beds to sleep, and access to care. They need safe, stable and welcoming environments in which to process their experiences, develop social trust, build healthy relationships, and redevelop agency over their lives. Trauma informed design can help facilitate these desired outcomes.

The following case studies showcase shelters, supportive housing facilities, and community centers which utilize design cues to help facilitate residents' dignity and self esteem, personal autonomy, sense of security and privacy, ability to manage stress, sense of community, and creation of beauty and meaning. While these cases focus mostly on interior design, the lessons learned are also applicable to landscape design, and will be applied in the design proposals in the next section of the document.

NEW GENESIS

Supportive Housing, Los Angeles California



The central atrium at New Genesis, showing it's open corridors and abundance of natural light. Design Resources for Homelessness

Developed in 2012 by the Skid row Housing Trust, a Los Angeles based housing non profit, New Genesis is a 106 unit supportive housing complex built to serve people suffering from chronic mental illness, as well as low income residents and artists. The 56,000 square foot building houses community common spaces and kitchen, a medical clinic, staff offices, and case management. On the ground floor, two street facing retail spaces house an ice cream shop and restaurant.

New Genesis' design is geared toward reintegrating formerly homeless people back into the fabric of life. this is accomplished with design cues which communicate care, foster routine positive interaction, and prompt normalcy. Open sightlines, natural light, integration of unit types, central atrium and inviting community spaces all help foster calm and aid in routine building and socializing.

AT A GLANCE

ADDRESS

456 S MAIN, LOS ANGELES, CALIFORNIA 213.683.0522

MANAGING ORGANIZATION

SKID ROW HOUSING TRUST MIKE ALVAREZ, CHIEF EXECUTIVE OFFICER, SKIDROW.ORG

ARCHITECT

KILLEFER FLAMMANG ARCHITECHTS WADE KILLEFER, FAIA, PRINCIPAL, KFLOSANGELES. ORG

INTERIOR DESIGNER

COLLABORATIVE HOUSE
SUZANNE FURST AND ROBERT NIETO
WWW.COLLABORATIVEHOUSE.COM

CLIENTS

MIXED POPULATION. 752 OF UNITS FOR THOSE EXPERIENCING HOMELESSNESS WHO HAVE CHRONIC MENTAL HEALTH CONDITIONS, 25% OF UNITS FOR LOW INCOME HOUSEHOLDS. ARTISTS ARE INVITED TO RENT A PORTION OF THESE UNITS.

AT A GLANCE

FACILITY TYPE AND CAPACITY

PERMANENT SUPPORTIVE HOUSING 106 UNITS (98 STUDIOS, 8 ONE BEDROOM APARTMENTS)

APPROXIMATE SQUARE FOOTAGE

56,525

ADMISSION

30-60% AREA MEDIAN INCOME

COST

2012 / \$36,000,000.00

ON-SITE SERVICES AND AMENITIES

MULTIPLE EXTERIOR COMMUNITY SPACES, COMMUNITY KITHCEN, COURTYARD GARDENS, RETAIL SPACE, MEDICAL CONSULATATION, LAUNDRY, CONFERENCE ROOM; ADMINISTRATION OFFICES; CASE MANAGER OFFICE

DESIGN: OPENESS

Mental Wellbeing



the constant presence of natural light is therapeutic for individuals coping with depression and PTSD, conditions which disproportionately affect those who've experienced homelessness.

"MY NEIGHBOR SPENDS MOST OF HIS TIME OUTSIDE OF HIS APARTMENT- HE'LL COME DOWN HERE TO THE ATRIUM AND SIT. IT'S A PRODUCTIVE WAY FOR HIM TO SPEND HIS TIME RATHER THAN VEGGING OUT IN FRONT OF THE TV. HE GETS SOME INTERACTION WITH PEOPLE."

DESIGN: COMMON SPACE

Community & Agency





The community room was designed with medium height ceilings, movable furniture and two sources of soft natural light. Potted Plants, views of the courtyard, and warm, varied materials invite lingering and interaction

"IT'S NOT ABOUT WHERE YOU LIVE, IT'S SOCIAL CONNECTIONS BASED ON MY DOMINOES PARTNER OR THAT PERSON I SEE IN THE MINDFUL MEDITATION CLASS. SOCIAL RELATIONSHIPS ARE WHAT PEOPLE VALUE THE MOST"

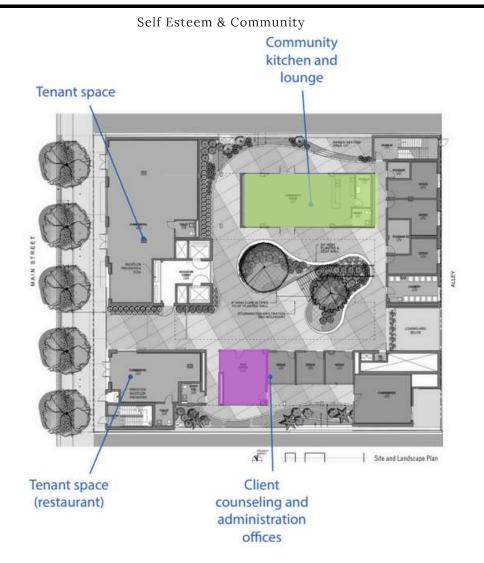
LAYOUT: SHARED SPACE

Agency & Mental Wellbeing



Everyone experiences social overwhelm occasionally, and has preferred places to rest and recuperate. For those who have mental health issues or who are recovering from traumas, the threshold for social interaction can be lower, and thus access to quiet and privacy are crucial. Just outside the community room are small, sheltered patio areas. These 'away spaces' are another trauma informed design choice that lower anxiety associated with socializing, by giving residents choice in how much they interact with others. These away spaces also allow for the natural formation of closer knit groups who are still engaged with he broader residential community.

LAYOUT: INTEGRATION



The physical placement of residential units and staff offices at New Genesis was carefully considered to enhance social wellbeing, and increase resident's feeling of community and social agency. Crucial to this goal was the integration of supportive housing units with affordable and artists units. This diffuses stigma, and "coaxes residents back into positive participation with their neighbors and the larger world". Rather than placing staff offices right at the gated entrance, they are placed inside the complex, facing the atrium. This avoids the feeling of a 'sentry', and prompts a feeling of both security, agency and normalcy among residents.

"IF YOU'RE LIVING IN A DUMPY PLACE—SO WHAT—
WHAT AM I LOSING IF I GET KICKED OUT OF HERE? IF IT'S
NICE, IT'SIMPORTANT AND WORTH PRESERVING. YOU'RE
MORE WILLING TODO THE WORK TO STAY THERE."

KEY TAKEAWAYS

Lessons that can be Incorporated into Webb Campus

DESIGN CUES

- Open sightlines foster a sense of security and community
- Big windows, natural light, and views to the street ease mental health symptoms
- Potted plants, and views of gardens reduce stressors and antagonism

LAYOUT

- · Staff offices placed back from main entrance to avoid feeling of a sentry or guard
- Centrally locate community spaces with open sightlines to all other areas
- Provide away spaces, to allow for reduced social interaction
- Place businesses and public services on street frontage, to invite in community and foster interaction with public

BAKHITA GARDENS

Supportive Housing & Women's Shelter, Seattle, Washington



Bakhita Gardens, from the street entrance side. Design Resources for Homelessness

Developed in 2010 by Catholic housing services, a faith based housing non profit, Bakhita Gardens is a transitional and permanent supportive housing complex built to serve single women who have endured homlessness. The 38,000 square foot building houses 50 SRO units, 20 shelter beds, and 20 supportive housing units. Facilities include a Library, computer lab, laundry and kitchen, a medical clinic, staff offices, and case management. Retail spaces occupy the ground floor.

Bakhita Gardens' is designed to give women dignity, & mental wellbeing. Residential facilities were designed with client input to help women feel connected to one another while also allowing for ownership and privacy. Large windows, organic materials, away spaces and art all help foster calm and stability. The building itself conforms to the state of Washington's evergreen development standards which encompass urbanity, safe materials, environmental remediation, water conservation, energy sourcing, and embodied carbon metrics.

AT A GLANCE

ADDRESS

118 BELL STREET, SEATTLE WASHINGTON 206.456.3102

MANAGING ORGANIZATION

CATHOLIC HOUSING SERVICES
EILEEN MCCOMB, PROGRAM DIRECTOR,
NOEL HOUSE PROGRAMS

ARCHITECT

ENVIRONMENTAL WORKS COMMUNITY DESIGN CENTER BILL SINGER, DIRECTOR OF ARCHITECTURE, WWW.EWORKS.ORG

INTERIOR DESIGNER

ENVIRONMENTAL WORKS COMMUNITY DESIGN CENTER BILL SINGER, DIRECTOR OF ARCHITECTURE, WWW.EWORKS.ORG

CLIENTS

SINGLE ADULT HOMELESS WOMEN. **NOEL HOUSE PERMANENT HOUSING:** WOMEN PAY 20% OF THEIR
INCOME FOR PERMANENT HOUSING. AVERAGE AGE IS 53.
MOST ARE 30 OR OLDER. CLIENTS HAVE BEEN HOMELESS
FOR 1 YEAR OR MORE. **ROSE OF LIMA:** WOMEN PAY 30% OF THEIR INCOME.

DESIGN: ENTRANCE

Dignity & Self Esteem



The resident entrance at Bakhita, from the sidewalk. Photo by Ben Benschnieder, Enviornmental Works

The entrance is designed to look inviting and aesthetically pleasing. Attractive limestone frames a wooden doorway housed within a large modern glass transom. A wall trellis grows climbing vines nearby. The entrance is not hidden from passerby, neglected, or over fortified, rather it is appealing and self assured. This design announces the entrance as a point of pride, and it complements the entrances to other apartment buildings in the neighborhood.

This choice reflects to both residents and passerby the fact that the people who live here are to respected and valued as members of the community. Thus, this design choice serves as a tacit acknowledgement of dignity that begins to positively impact residents' psychology before they even enter.

"THESE WOMEN HAVE BEEN MARGINALIZED FOR MUCH OF THEIR LIVES, SO- THE ENTRANCE SEQUENCE IS INTENTIONAL, AND DESIGNED TO SAY 'YOU'RE HOME'".

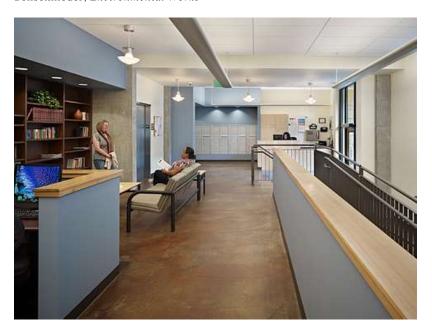
-Bill Singer, Project Architect

DESIGN: ENTRANCE

Dignity, and Security



Above: the front check in desk. Design Resources for Homelessness Below: interior foyer, showing the check in desk. Photo by Ben Benschnieder, Environmental Works



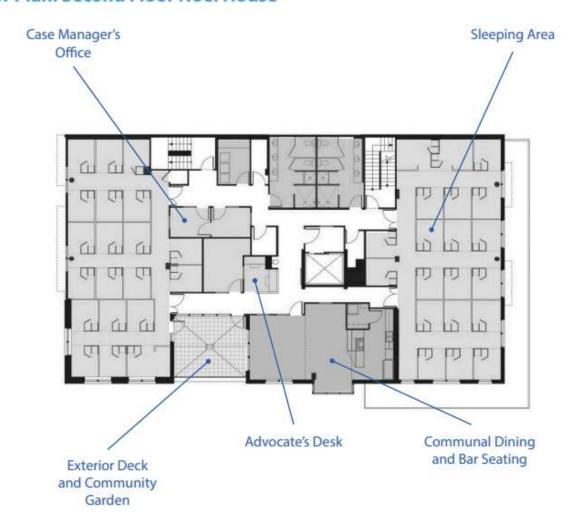
Directly inside the doorway, the foyer houses the front check in desk, and just beyond, the mailroom, media room and library. Upon entering, residents are greeted by soft lighting, high ceilings, cool washed concrete and warm bronze colored flooring. Staff at the check in desk are not separated from residents by glass, or an intercom. Rather, a wooden wall and open sightlines to the street and community spaces provide security while easing communication.

The material, spacing and lighting choices provide an instant contrast with the harsh sunlight and street noise outside. This consciously and subconsciously cues physiological calm. The design of the check in desk is important. Having a familiar face at the entrance creates an immediate sense of safety. The lack of separation cues to residents that staff are accessible allies, reducing antagonism and increasing trust.

LAYOUT: COMMON SPACE

Wellbeing & Community

Floor Plan: Second Floor Noel House



On the second floor, directly above the entrance foyer, is the communal kitchen and dining room. It is centrally located, with residential beds down either hallway. Residents can pass by the case managers offices and advocates desk before entering. This space is open, bright, and warm. it has high ceilings, and is lit by large windows, diffuse lighting, furnished with wood and painted in a light yellow. Inside are long, movable communal tables, small group tables, and bar seating facing the large bay window.

DESIGN: COMMON SPACE

Wellbeing & Community



This space is designed to promote individual mental wellbeing, and a strong sense of community. The central location, large windows, warm lighting, and sunny color palate are intentional, helping to ease depressive symptoms and feelings of isolation that are worsened by the darkness of Seattle winters. The removable furniture allows this space to double as a gathering space for events such as art classes.

Left: the front check in desk. Design Resources for Homelessness Right: interior foyer, showing the check in desk. Photo by Ben Benschnieder, Environmental Works



The placement and variety of seating options allows residents choice in how much to socialize, which is important for reducing social anxiety and chronic stress. Bar seating is placed so that residents are able to be alone while still being able to easily turn around and talk with each other. The windows allow for passive engagement with the outside world, which is important for mental health.

DESIGN: ART

Beauty & Meaning



 $Interior\ hallway,\ showing\ work\ of\ a\ local\ artist.\ Photo\ by\ Ben\ Benschnieder,\ Environmental\ Works$

Art is a crucial element of Bakhita which uplifts residents and strengthens individual and communal wellbeing. Pieces which depicts and celebrates women can be found throughout the facility.

DESIGN:ART

Beauty & Meaning





Left: Artwork near the elevator. Design Resources for Homelessness Right: Artwork in hallway, Photo by Ben Benschnieder, Environmental Works

[PAMELA] ASKED HER CASE MANAGERS "CAN
I JUST DIE HERE?" HER CASE MANAGERS SMILED AND
RESPONDED, "AS LONG AS YOU FOLLOW THE RULES AND
PAY THE RENT." PAMELA LAUGHED AS SHE RECALLED THIS
EXCHANGE. "I NEEDED TO KNOW THAT, YOU KNOW?"

KEY TAKEAWAYS

Lessons that can be Incorporated into Webb Campus

DESIGN CUES

- Entrance and exits are attractive and dignified
- Big windows, natural light, and views to the street ease mental health symptoms
- Natural materials, light wall coloring and warm lighting provide a cue to relax upon entering
- Art work celebrating resident's identities is placed throughout

LAYOUT

- · Check in and security does not incorporate barriers that seperate staff from residents
- Dining space is centrally located, while supplying a range of movable seating options
- Provide away spaces, to allow for reduced social interaction
- Staff offices are placed so that residents pass by when walking to and from communal spaces

THE BOOTH CENTRE

Supportive Housing, Southampton, UK



The Booth Centre from the street entrance side. Design Resources for Homelessness

The Booth Centre is a transitional housing complex run and managed by the UK Salvation Army. It was constructed in 2010 within the shell of a historic boarding house for sailors. It's mission is to provide housing and support for people at risk of chronic homelessness who are ready for semiautonomous living. A significant portion of the people it serves suffer from mental health or substance abuse issues.

The Booth Centre accomplishes its goals utilizing an ethos of trauma informed care and personal autonomy. Care is taken by staff to treat residents with respect, cultivate their agency and free will, and offer support when they ask for it. Substance abuse meetings, arts programs, skills training, and work shifts are optional but highly encouraged. This ethos is reflected and reinforced through numerous interior design cues and elements.

AT A GLANCE

ADDRESS

57 OXFORD STREET, SOUTHAMPTON, UK 023.8033.0797

MANAGING ORGANIZATION

SALVATION ARMY
MAATTHEW SMITH, SERVICE MANAGER

ARCHITECT

CULLEN CARTER AND HILL ARCHITECTS

CLIENTS

ADULTS EXPEREINCEING HOMELESSNESS AND/OR MENTAL HEALTH ISSUES WHOVE BEEN REFREERED FROM OTHER AREA HOSTELS

FACILITY TYPE AND CAPACITY

TRANSITIONAL SUPPORTIVE HOUSING WITH AN AVERAGE STAY OF EIGHT MONTHS. 43 APARTMENTS WITH EN SUITE BATHROOMS AND SHARED LIVING-DINING SUITES

ADMISSION

COSTS ARE PREDOMINANTLY COVERED BY THE STATE BENEFITS SYSTEM, IN ADDITION TO A SMALL PERCENT FEE FOR RESIDENTS

AT A GLANCE

ON-SITE SERVICES AND AMENITIES

MULTIPLE INTERIOR COMMUNITY SPACES, SHARED KITCHENS AND LIVING ROOMS, CAFE WITH INTERIOR AND EXTERIOR DINING, FURNITURE UPCYCLING AND SALE, GYM, CASE MANAGEMENT, GROUP MEETINGS, LAUNDRY

ELEMENT: CARE CUES

Care & Dignity



Booth Centre reading room. Design Resources for Homelessness

From their first arrival at the Booth Centre, care is taken to ensure that residents feel at ease. New move ins will always begin with a sit down over tea, and a discussion of where the person is, and where they hope to be by the end of their stay. The environment in which this first impression takes place is crucial. Many residents report having a good feeling immediately upon entering.

This good feeling is cultivated by carpeted floors, warm, home-like furnishings, art, potted plants, and an aquarium which sits in the lobby. The inclusion of plants and pet fish sends a signal that this is a place where people too will be cared for. In the evenings, lights in the common areas dim, providing a subtle cue that aids in building healthy routines.

ELEMENT: ART

Beauty & Meaning



Resident made collage in Booth Centre gym, Design Resources for Homelessness



Resident made oragami art in Booth Centre hallway, Design Resources for Homelessness

Art is essential. Art heals. Art allows those without voices to speak, and conveys meaning far faster and more deeply than words can. Art announces who a person is, where they've been, and who they want to be. Art comes from the soul. Making art calms the mind. Viewing art stimulates the heart. Art connects us. Art highlights meaning where it is usually hidden or ignored. Art connects people to each other. Art connects people with themselves. Art is essential.

ELEMENT: CAFE

Autonomy & Self Esteem



Booth Cafe. Design Resources for Homelessness

Residents at the Booth Centre are encouraged to take shifts working at the in house cafe, which is open to the public. The cafe is located on the first floor. It is adorned with art work made by residents, and features an outdoor patio area in the building's courtyard. Though routine low stakes socializing and work, both with the public, and with other residents, it is hoped that residents gain crucial life skills and build trust in themselves and their own agency

The cafe courtyard is another great example of trauma informed design. The space is quiet, with dappled sunlight. Three attractive brick walls enclose potted plants and trees. Resident made tables and chairs make up the seating. Art pieces and wall planters made by residents adorn the walls. A covered metal rack creates a prominent and attractive place to store bikes. The popularity of the space reflects its successful celebration of resident's needs, autonomy, and creativity.

ELEMENT: COURTYARD

Self Esteem & Community



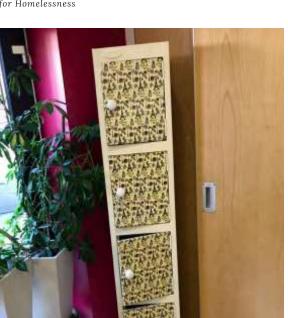


ELEMENT: UPCYCLING

Autonomy & Self Esteem



Furniture refurbished and sold by residents. Design Resources for Homelessness $% \left\{ \mathbf{r}_{i}^{H}\right\} =\mathbf{r}_{i}^{H}$



For people who have absorbed toxic messaging about their worth to society, and the worth as human beings, the act of refurbishing something, of creating something beautiful and valuable out of something broken or tossed away, can be profoundly healing. This is why the Booth Centre encourages residents to learn carpentry, and prominently displays their restored furniture.

KEY TAKEAWAYS

Lessons that can be Incorporated into Webb Campus

DESIGN CUES

- Soft, warm lighting, and carpeting are present throughout
- Inviting furniture is placed in common areas
- · Lights dim in the evenings to provide cues for residents to wind down
- · Art work made by residents is placed throughout to foster a sense of agency and ownership
- Furniture made by residents is placed throughout
- Potted plants and aquaria tended to by residents are placed throughout

LAYOUT

- Coffee Shop is placed so that both residents and public can easily access it
- · Kitchens and living rooms are shared among suitemates to help with social interaction and agency
- Enclosed courtyard provides and attractive respite for both residents and passerby

SOCIAL CUES

- Residents and staff sit down for coffee at the beginning of each stay to asses where they are, and where they want to be by the time they leave
- · Residents take shifts at coffee shop to practice soil interaction and working expectations

Appendix E: Solar Energy Supplemental Materials

Table 1: Pro/con comparison of solar energy company proposals.

Solar company	Pro/con of proposals
Company 1	 Full vertical wall mount for the World building Lowest Cost Total System Size: 238 kW Short proposal (no info on DC, AC capacity, no risks and payment plans)
Company 2	 25 year warranty for PV modules and racking, 10 years for inverter Detailed Proposal No details on ROI and savings Design did not include vertical-mounted panels on the World building, instead a small awning with little solar capacity
Company 3	 Provided wrong design rendering Inaccurate system sizing Missing cost for the World Building carport system
Company 4	 Incomplete Proposal Unwilling to install vertical mount on World Building

Figure 1. Proposed 62 kW vertical wall-mounted solar array at the World Building, 54 kW dual solar carport at the Fox Building, 29 kW roof-mounted solar array at the Scott Building, and 93 kW roof-mounted solar array at the Warehouse Building. Credit: Ecojiva.



ROAD DIET + GREEN CORRIDOR PROJECT

INTRODUCTION

Design efforts for a road diet and green corridor serve an important function in the urban context, such as Detroit, particularly as vital conduits for neighborhood health and safety, physical and geographical connectivity, community revitalization and activation, and much, much more. Intentionality with these interventions through design ensures that Cass Community Social Services and its broader campus has a landscape that helps sustain their mission and programming while promoting the regeneration of community.

The road diet and green corridor project provides a unique opportunity to re-imagine the landscape of the community and how approaching this project from a design inquiry perspective provides a canvas that can help bolster all of the sustainable redevelopment themes outlined in the roadmap.

SITE CONTEXT

The first component of this project was to ground truth our project site: This is an essential part of any designer's toolkit. It involves getting your boots on the ground, visiting the project site, gathering contextual information, and assessing what the challenges and opportunities might be.

Based on insight and feedback from CCSS, we know that Woodrow Wilson is a significant source of concern and frustration within the community. Currently, the infrastructure design perpetuates vehicular speeding and racing which cause for safety issues and neighborhood disturbances. With this information in mind, this street serves as the impetus for road diet interventions and design inspiration within the CCSS community. Work is being done to identify what best practices can be implemented and where these designs make sense within the context of this neighborhood. Additional goals will be to articulate where space can be activated to reimagine the vitality of the neighborhood and support greening efforts throughout the community.

The first component of this project was to ground truth our project site. This involves getting boots on the ground, visiting the project site, gathering contextual information, and assessing what the challenges and opportunities might be so that we can make relevant and informed design decisions.

This process actively revealed several issues with both vehicular/road networks as well as sidewalk/pedestrian flows that needed to be considered as part of the road diet design. One of the biggest problems revealed by this method was a) the excessively wide width of Woodrow Wilson, which causes significant vehicular speeding on a major road network that interfaces with much of the neighborhood and CCSS's campus properties; b) broken, dilapidated, and missing infrastructure such as sidewalks and crosswalks; and c) street edge designs that would help build a cohesive link between the social and physical environments.

Additional challenges that were uncovered as it relates to consider a green corridor included: a) a major disconnect between Webb Campus and the Campus sites along Woodrow Wilson that need to be bridged; b) little to no infrastructure to help support connected and safe flows for pedestrians; and c) untapped potential to activate and retrofit a variety of underutilized spaces that could help contribute to a linked matrix for a proposed green corridor.

Primary Focus Areas

Using an interconnected and integrated approach of observation, research, direct insight from our client, CCSS, and our own creative brainstorming, there are three primary areas that can serve as design catalysts (i.e. the impetus for change and action) in the neighborhood:

Road Systems + Infrastructure

- Identifying road diet and traffic calming strategies for neighborhood street systems
- Exploring possibilities for new or adapted networks and nodes to heighten neighborhood connectivity throughout the campus

Neighborhood Greening

- Augmenting green space throughout the neighborhood and campus spaces
- Fostering multifunctional design interventions that promote connectivity and networks to existing
 green spaces and community amenities throughout the neighborhood
- Retrofitting streetscapes as avenues for green design and spheres of public life
- Capitalizing on interstitial spaces to shape and reinforce green spaces (e.g. alleyways, streets, vacant/abandoned lots)

Public + Social Considerations

- Identifying programming and placemaking interventions in and throughout the community to activate space and curate opportunities for the community to gather and engage
- Leveraging for space activation interventions through design and programming that create an essence of neighborhood pride



Figure 1. Ground-truthing image showing the wide width of Woodrow Wilson Street [1]

Appendix F: Road Diet and Green Corridor Supplemental Materials

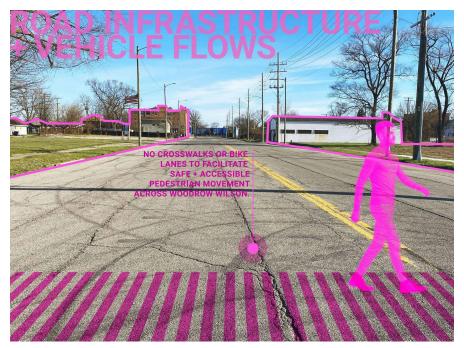


Figure 2. Ground-truthing image showing lack of crosswalks and bike lanes for pedestrians on Woodrow Wilson Street [1]



Figure 3. Ground-truthing image showing lack of street edge design [1]

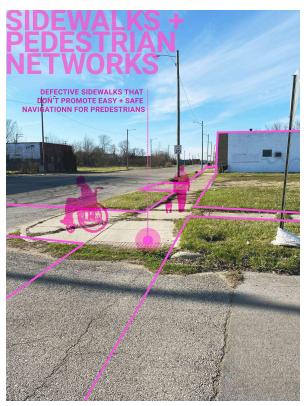


Figure 4. Ground-truthing image showing dilapidated + defective sidewalks [1]

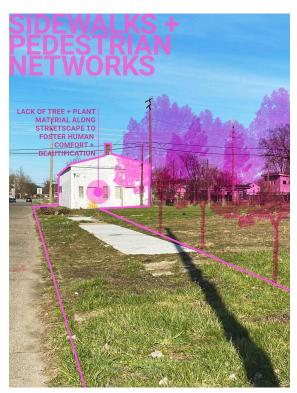


Figure 5. Ground-truthing image showing lack of plant and landscape along streetscapes [1]



Figure 6. Analysis diagram of project site to show areas of concern + opportunity for green corridor [1]

ROAD DIET

What is a Road Diet?

A road diet is broadly referred to as the narrowing, removal, and/or overall reconfiguration of vehicle lanes that simultaneously adapt the streets for other modes of transportation, users, and functions [2]. This design approach closely aligns with the concept of 'complete streets' which advocates for safer, more accessible streets for a diverse range of users, such as cyclists and walking pedestrians [3]. This intervention shifts the design paradigm from car-oriented networks to people/multimodal-centric places (see fig x. (below)) and creates spatial opportunities (e.g. along sidewalks) to re-imagine the streetscapes as avenues for public activity. In tandem with road diets, introducing traffic calming measures, such as speed tables, street medians, and vegetation, can help promote slower traffic movement that creates safer navigation for pedestrians [4].

Tenets of a Road Diet

There are various themes or trends that can be considered when planning a road re-design that would help with fostering safer, healthier, and activated streets. A few key components are:

1. Traffic Calming

Implementing traffic calming measures is one approach to managing vehicular speeds to create a safer, more pedestrian-friendly environment along streets and roadways [5]. A few examples include design elements such as speed tables, curb extensions, lane reductions, and planting/using landscape alongside roadways and medians [6]. All these serve as tactics to both force and visually cue drivers to slow down.

Appendix F: Road Diet and Green Corridor Supplemental Materials



Figure 7. Example of Speed Table [7]



Figure 8. Example of Curb Extension [7]



Figure 9. Example of using landscape along roadways [8]

2. Complete Streets

Complete streets, as defined by the National Complete Streets Coalition, is "an approach to planning, designing and building streets that enables safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities," [9] and challenges the traditional role of streets to meet motor vehicle needs and instead to shift towards a pedestrian-friendly approach [10].

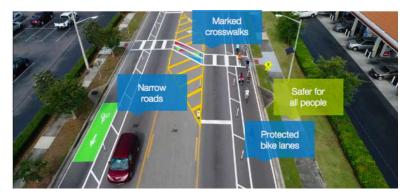


Figure 10. Example of Complete Streets [11]

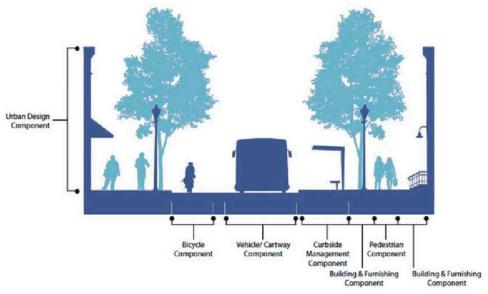


Figure 11. Section diagram outlining a components of a complete street [12]

3. Living Streets

Living streets is a design approach that recognizes the streetscape as public space, serves as vital components of the physical realm that connect people to places and one another, and help people to move through the environment with ease [13]. Much like complete streets, it reinforces the need to facilitate better road designs that elevate useability for all multimodalities, but are hyper-focused on healthier, walkable and livable space for pedestrians and cyclists [14].

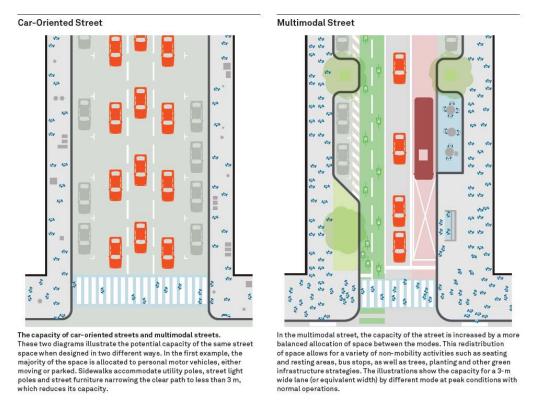


Figure 12. Example of differences in street designs for car-oriented and multimodal-oriented concepts [15]

Other Principles of Good Street Design

The National Association of City Transportation Officials (NACTO) has compiled a detailed array of various street design interventions in their *Urban Street Design Guide* that can serve as design impetus and inspiration moving forward towards a road diet and green corridor plan. See examples below:

Appendix F: Road Diet and Green Corridor Supplemental Materials

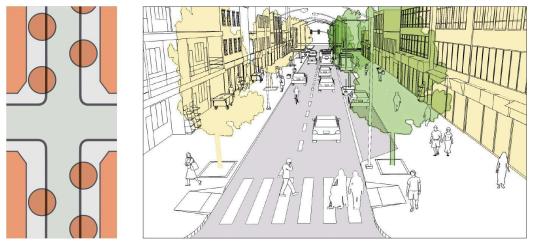


Figure 13. NACTO Concept that illustrates trees along streetscapes [16]



Figure 14. NACTO Concept that illustrates speed tables along roadways [16]



Figure 15. Diagrams illustrating traffic calming strategies [16]

Appendix F: Road Diet and Green Corridor Supplemental Materials

Street Design Principles



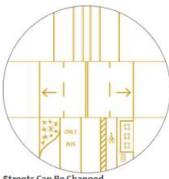
Streets Are Public Spaces

Streets are often the most vital yet underutilized public spaces in cities. In addition to providing space for travel, streets play a big role in the public life of cities and communities and should be designed as public spaces as well as channels for movement.



Great Streets are Great for Businesses

Cities have realized that streets are an economic asset as much as a functional element. Well-designed streets generate higher revenues for businesses and higher values for homeowners !



Streets Can Be Changed

Transportation engineers can work flexibly within the building envelope of a street. This includes moving curbs, changing alignments, daylighting corners, and redirecting traffic where necessary. Many city streets were built or altered in a different era and need to be reconfigured to meet new needs. Street space can also be reused for different purposes, such as parklets, bike share, and traffic calming.



Design for Safety

In 2012 in the U.S., over 34,000 people were killed in traffic crashes, which were also the leading cause of death among children aged 5-14. These deaths and hundreds of thousands of injuries are avoidable. Traffic engineers can and should do better, by designing streets where people walking, parking, shopping, bicycling, working, and driving can cross paths safely.



Streets Are Ecosystems

Streets should be designed as ecosystems where man-made systems interface with natural systems. From pervious pavements and bioswales that manage storm- water run-off to street trees that provide shade and are critical to the health of cities, ecology has the potential to act as a driver for longterm, sustainable design.



Implementing projects quickly and using low-cost materials helps inform public decision making. Cities across the U.S. have begun using a phased approach to major redesigns, where interim materials are used in the short term and later replaced by permanent materials once funding is available and the public has tested the design thoroughly.

Figure 16. Street Design Principles [17]

Design Approaches

A road re-design for Woodrow Wilson Street would prioritize traffic calming, better measures for pedestrian safety and navigation, and greening along the streetscape. The following design elements would be key components to plan for:

Vehicle Lanes:

- Reducing the number of lanes
- Narrowing (when possible) the width of each lane
- Including traffic calming strategies to make streets safer for vehicle motors, cyclists, and pedestrians

Bike Lanes

- Planning for bike lanes along major roadways
- Including safety measures for bicyclists such as buffers along lanes that divide vehicle and bike flows

Sidewalks + Crosswalks

- Widening sidewalks when and where possible
- Updating dilapidated and/or missing infrastructure to make these pedestrian networks accessible and safe for all
- Including crosswalks at important intersections for ease of accessibility and safety for pedestrians
- Using the sidewalks to champion 'living' streets and as spheres for public space

Green 'Buffers'

 Including landscapes (e.g. planting islands along roadways and in medians) to help cue reduced traffic speeds

Design Concepts + Schematics



Figure 17. Context map of project site in Detroit [1]

Appendix F: Road Diet and Green Corridor Supplemental Materials



Figure 18. Masterplan of road re-design of Woodrow Wilson Street [1]



Figure 19. Schematic design (typ.) of road re-design along Woodrow Wilson Street [1]

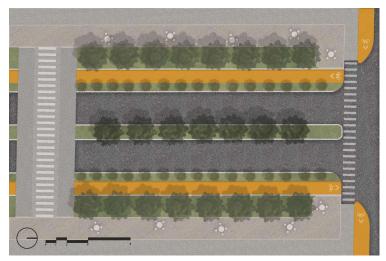


Figure 20. Scaled site plan of road re-design schematic to show various traffic calming + complete street/living street elements [1]

GREEN CORRIDORS

What is a Green Corridor?

A green corridor is a linked network of landscapes that facilitate a diverse range of benefits across environmental, social, and physical realms ensuring that the connectivity and conservation of open space in urbanized areas is sustained [18]. Capitalizing on a variety of open space typologies throughout a community's landscape can help support the planning, design, and development of the green corridor infrastructure.

Design Approaches

A proposed green corridor would assess available networks and nodes throughout the neighborhood that could be an opportunity to establish a green corridor, and to start thinking about site specific interventions that help create building blocks for space activation in the neighborhood.

Networks

Networks are the connected, linked system of streets, pedestrian networks, and other similar spatial characteristics that are intertwined/interface with the context of any given site. This is typically represented by streets, sidewalks, and in the case of CCSS, also considers alleyways as an integral component of the neighborhoods network.

Nodes

Nodes are the points of intrigue that can serve as social hubs, gathering places, or focal areas for activities. For CCSS, nodes can manifest as site-specific interventions and areas of interest, engagement, respite, and programming throughout the community.. Specifically, we can begin to strategize how to leverage opportunities to activate a myriad of space typologies (e.g. vacant, underutilized, and interstitial spaces) as a route for green corridor connectors.

A Brief Overview of Space Typology Jargon:

1. Vacant Land

Vacant land is broadly considered to be land that has little to no buildings or is completely free of structures and occupancy, and appears to not be in use and/or is abandoned.

2. Underutilized Spaces:

Underutilized space, sometimes synonymous with terms like 'urban voids,' 'residual space,' or 'in-between space,' can be defined as "the empty voids and gaps between every solid of the urban fabric (i.e., buildings, infrastructures, etc.)," [19] and event "inadequate use of outdoor spaces, which leads to the loss and meaning of space," [20].

3. Interstitial Spaces:

Interstitial spaces, similar to underutilized spaces, are often 'leftover' areas on the fringe of or amongst functional places that often serve as the zones that fuse our natural and built environments together [21].

Design Concepts + Schematics

By using design inquiry to strategically integrate these various types of spaces together, we can begin to craft a conceptual plan of how to develop a connected, safe, and spatially activated green corridor.



Figure 21. Green corridor concept plan [1]

PUBLIC SPACE CONSIDERATIONS

Transforming Space Into Place

Transforming space (i.e. the geographical, physical, and tangible parts of a landscape) into place (i.e. space that is infused with meaning and linked to human experience)[22][23] can manifest by strategizing how to convert nodes into opportunities to serve as 'hubs' or vital resources for community use, which would furthermore mobilize these spaces as pathways to creating a more vibrant, resilient, and cohesive neighborhood.

Common strategies and themes for transforming a 'space' into a 'place' include:

1. Beautification

Beautification, often resident or city-led, is actively removing or finding ways to screen anything that may be construed as ugly or displeasing (e.g. discarded trash and junk) and making spaces more attractive [24] that can lead to more environmentally, economically, and socially attractive places for a community.

2. Space Activation

Space activation is primarily focused on how to establish community-building using public space or open space as the impetus and foundation and can fosters 'spatial stewardship' which "treats the public realm as a public resource and promotes responsible use, management and management of this space by communities," [25].

3. Placemaking

Project for Public Spaces, a well-known placemaking organization, outlines placemaking as a process that allows people to reimagine public spaces as vital parts of a community that can strengthen the linkages between places, places, and shared resources, and helps support the collective understanding of what makes places great for communities [26].



Figure 22. PPS Elements of 'Great Places' diagram [27]

Tactical Urbanism

Tactical urbanism (also commonly referred to as urban acupuncture or urban prototyping) is all about neighborhood building and the metamorphosis of space using "short-term, low-cost, and scalable interventions to catalyze long-term change," [28]. These types of interventions can capitalize on temporary interventions and solutions problems or opportunities identified in the community that can be modular, flexible and adaptable, and lead to more permanent solutions.

INTERSECTION OF PUBLIC SPACE + COMMUNITY VIBRANCY

Public space, in all forms, matters in the shaping and the sustaining of community vibrancy.

What is the nexus between the design, function, and use of public spaces as it relates to the ability to champion social cohesion for a neighborhood, and what is the rationale for communities? A few examples include:

1. Gathering + Interaction

Public spaces facilitate the physical environments or spaces where activities related to public life can occur (i.e. gathering, interacting with one another, engaging etc.).

2. Sense of Belonging

A comfortable and welcoming environment helps encourage 'place-attachment' [29], or, the affective bonds that can occur between people and place (i.e. a person's emotional connection, meaning, understanding of a place). Quality spaces help reinforce how one might identify with their community, engage with other people, and feel as if they have a place to belong.

3. Engagement + Shared Experiences

Public space provides the perfect canvas for a wide range of activities (both formal and informal) to be curated. Developing a dynamic exchange between the physical environment and multifunctional/diverse programming allows a community to define how the space and what its identity within the neighborhood fabric is. As people collectively use and congregate in these places, it generates a greater opportunity to bond over shared experiences that can lead to a sense of unity among the neighborhood.

4. Beautification + Neighborhood Pride

Appendix F: Road Diet and Green Corridor Supplemental Materials

The transformation of neighborhood spaces (through re-design, adaptive reuse, retrofitting, and similar interventions) actively helps bolster the look and feel of a community. Spaces that are particularly seen as undesirable or underutilized serve as wonderful opportunities to create more vibrant spaces that people will enjoy, utilize, and appreciate in their communities [30].

5. Security + Safety

As spaces implement strategic designs, become more attractive, and garner greater community participation, it champions the sense of ownership and responsibility a neighborhood feels for these shared places and can even discourage crime. Additionally, well-designed spaces facilitate regular opportunities for people to engage which can help build mutual trust and support which can be connected to one's sense of safety in public spaces [31].

6. Climate Resilient Oases

Public spaces that plan and design for climate resiliency, which can include creating microclimates, planting strategies that buffer stormwater/rain, creating shade for during heat events, as well as other site interventions assures areas for respite, comfort, and refuge that increase participation during a range of climate and seasonality changes [32].

POTENTIAL COMMUNITY ENGAGEMENT STRATEGIES

How can community engagement be incorporated with design efforts? Recommended approaches:

1. Build Relationships

Take time to develop and build relationships, rapport, and mutual trust with community members, residents, and other key stakeholders.

2. Assess Community Needs

Consider conducting a survey that allows community members, residents, and other stakeholders to voice any concerns and compile insights that might help highlight what needs should be addressed in the neighborhood.

3. Co-Create with Community

Recognize and champion the expertise of the community and leverage their knowledge and insight to help drive planning and ideation. Use a variety of different activities to help facilitate participatory planning efforts. This could include: design charrettes, design-thinking exercises, community asset mapping, photostories, and other workshop setups. Use this as an opportunity to connect people who will be impacted by the designs to the process and to make them feel empowered to be solution-oriented.

4. Design + Iterate

Take time to create intentional designs that reflect the needs, desires, and creative decision-making expressed by the community. Show a variety of options, be open to making changes based on community feedback, and iterate as needed.

5. Communication

Use various forms of community (written (e.g. fliers), verbal (e.g. announcements at community meetings) and digital (social media) to provide regular project updates, to sustain transparency, and inspire continued enthusiasm about the project efforts.

Works Cited

- 1. Nana Temple. (2024). Misc. Project Graphics Generated by Nana Temple
- 2. "Road Diet Informational Guide Safety | Federal Highway Administration." n.d. https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/ch1.cfm#s11.
- 3. "Complete Streets Smart Growth America." 2024a. Smart Growth America. January 4, 2024. https://smartgrowthamerica.org/what-are-complete-streets/.
- Global Designing Cities Initiative. 2022. "Traffic Calming Strategies Global Designing Cities Initiative." September 13, 2022. https://globaldesigningcities.org/publication/global-street-design-guide/designing-streets-people/designing-for-motorists/traffic-calming-strategies/.
- "Vertical Speed Control Elements | National Association of City Transportation Officials." 2015.
 National Association of City Transportation Officials. July 24, 2015.
 https://nacto.org/publication/urban-street-design-guide/street-design-elements/vertical-speed-cont-rol-elements/.
- "Narrowing | Center for Transportation Research and Education." n.d. Center for Transportation Research and Education.
 https://ctre.iastate.edu/research-synthesis/rural-speed-management/narrowing/.
- 7. "Street Design Elements | National Association of City Transportation Officials." 2015. National Association of City Transportation Officials. July 24, 2015. https://nacto.org/publication/urban-street-design-quide/street-design-elements/.
- 8. Wolfe, K.L. 2010. "Safe Streets:: Green Cities: Good Health." https://depts.washington.edu/hhwb/Thm SafeStreets.html.
- 9. "Complete Streets Smart Growth America." 2024a. Smart Growth America. January 4, 2024. https://smartgrowthamerica.org/what-are-complete-streets/.
- 10. Gregg, Kelly, and Paul M. Hess. 2018. "Complete Streets at the Municipal Level: A Review of American Municipal Complete Street Policy." International Journal of Sustainable Transportation 13 (6): 407–18. https://doi.org/10.1080/15568318.2018.1476995.
- 11. "Complete Streets Smart Growth America." 2024a. Smart Growth America. January 4, 2024. https://smartgrowthamerica.org/what-are-complete-streets/.
- 12. Gregg, Kelly, and Paul M. Hess. 2018. "Complete Streets at the Municipal Level: A Review of American Municipal Complete Street Policy." International Journal of Sustainable Transportation 13 (6): 407–18. https://doi.org/10.1080/15568318.2018.1476995.
- 13. "About Living Streets Alliance." n.d. Living Streets Alliance. https://www.livingstreetsalliance.org/about.

- 14. Heal the Bay, Green LA Coalition, Climate Resolve, Stephanie Taylor former staff, and Holly Harper former staff. 2015. "Living Streets: A Guide for Los Angeles." Living Streets: A Guide for Los Angeles.
 - https://www.healthebay.org/sites/default/files/pdf/fact-sheets/final%20living streets Guide final-0 11916.pdf.
- 15. 2022d. "Multimodal Streets Serve More People Global Designing Cities Initiative." October 25, 2022.
 - https://globaldesigningcities.org/publication/global-street-design-guide/defining-streets/multimodal-streets-serve-people/.
- 2022e. "Traffic Calming Strategies Global Designing Cities Initiative." September 13, 2022.
 https://globaldesigningcities.org/publication/global-street-design-guide/designing-streets-people/designing-for-motorists/traffic-calming-strategies/.
- 17. "Street Design Principles | National Association of City Transportation Officials." 2015. National Association of City Transportation Officials. July 24, 2015. https://nacto.org/publication/urban-street-design-guide/streets/street-design-principles/.
- Aman, Aini, Muhammad Rafiq, Omkar Dastane, and Asrar Ahmed Sabir. 2022a. "Green Corridor: A Critical Perspective and Development of Research Agenda." Frontiers in Environmental Science 10 (August). https://doi.org/10.3389/fenvs.2022.982473.
- 19. Covatta, Alice, and Vedrana Ikalović. 2022. "Urban Resilience: A Study of Leftover Spaces and Play in Dense City Fabric." Sustainability 14 (20): 13514. https://doi.org/10.3390/su142013514.
- Wilson, Torina and Hajrasouliha, Amir. "Examples of lost spaces in San Francisco." FOCUS 6, no. 1 (1986): 3.
 https://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1421&context=focus#:~:text=Examples%20of%20lost%20spaces%20in.%2C1986%2C%20P%203.
- 21. Pintos, Hana Abdel & Paula. 2022. "Interstitial Spaces and Public Life, the Overlooked Interventions That Weave Our Built Environment." ArchDaily. April 18, 2024. https://www.archdaily.com/984818/interstitial-spaces-and-public-life-the-overlooked-interventions-that-weave-our-built-environment.
- 22. Tuan, Yi-Fu. 1979. "Space and Place: Humanistic Perspective." In Springer eBooks, 387–427. https://doi.org/10.1007/978-94-009-9394-5 19.
- 23. Blaschke, Thomas, Helena Merschdorf, Pablo Cabrera-Barona, Song Gao, Emmanuel P. Papadakis, and Anna Kovács-Győri. 2018a. "Place Versus Space: From Points, Lines and Polygons in GIS to Place-Based Representations Reflecting Language and Culture." ISPRS International Journal of Geo-Information 7 (11): 452. https://doi.org/10.3390/ijgi7110452.
- Stewart, William P., Paul H. Gobster, Paul H. Gobster, John Strauser, Douglas A. Williams, and Carena J. Van Riper. 2019a. "Resident-led Beautification of Vacant Lots That Connects Place to Community." Landscape and Urban Planning 185 (May): 200–209. https://doi.org/10.1016/j.landurbplan.2019.02.011.

Appendix F: Road Diet and Green Corridor Supplemental Materials

- 25. District of Columbia. 2018. District of Columbia Public Space Activation & Stewardship Guide. https://planning.dc.gov/sites/default/files/dc/sites/op/page_content/attachments/2018.12%20DC%20Public%20Space%20Activation%20Stewardship%20Guide_web.pdf
- 26. "What Is Placemaking? | Category Project for Public Spaces." n.d. https://www.pps.org/category/placemaking.
- 27. "What Makes a Successful Place?" n.d. https://www.pps.org/article/grplacefeat.
- 28. "Tactical Urbanism." n.d. https://tacticalurbanismguide.com/about/.
- 29. Purwanto, Edi, and Arnis Rochma Harani. 2020a. "Understanding the Place Attachment and Place Identity in Public Space Through the Ability of Community Mental Map." IOP Conference Series. Earth and Environmental Science 402 (1): 012024. https://doi.org/10.1088/1755-1315/402/1/012024.
- Stewart, William P., Paul H. Gobster, Paul H. Gobster, John Strauser, Douglas A. Williams, and Carena J. Van Riper. 2019a. "Resident-led Beautification of Vacant Lots That Connects Place to Community." Landscape and Urban Planning 185 (May): 200–209. https://doi.org/10.1016/j.landurbplan.2019.02.011.
- 31. Rupp, Laney, Marc A. Zimmerman, Kathleen W Sly, Thomas M. Reischl, Elyse J. Thulin, Thomas A. Wyatt, and John Jack P Stock. 2019a. "Community-Engaged Neighborhood Revitalization and Empowerment: Busy Streets Theory in Action." American Journal of Community Psychology 65 (1–2): 90–106. https://doi.org/10.1002/ajcp.12358.
- 32. Orsetti, Eleonora, Nicola Tollin, Martin Lehmann, Vanessa Agudelo Valderrama, and Jordi Morató Farreras. 2022a. "Building Resilient Cities: Climate Change and Health Interlinkages in the Planning of Public Spaces." International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health 19 (3): 1355. https://doi.org/10.3390/ijerph19031355.

Potential Non-Profit and Private Partners

DREAM of Detroit

Dream of Detroit is a non-profit organization whose goal is to revive and develop their neighborhood into a thriving, sustainable community on the east side of the Dexter-Linwood neighborhood Detroit. They operate in the same local area as CCSS. Dream of Detroit primarily operates in the areas of community organizing, economic and land development, and housing. Similarly to CCSS they see Woodrow Wilson St as an economic corridor in their neighborhood. CCSS already has a relationship with them and there is potential for the relationship to grow.¹

Areas of Work

- DREAM Center a proposed community hub²
 - Digital literacy lab
 - o Co-working studio
 - Community courtyard
 - Innovation space
- Housing³
 - Housing Rehabs
 - 15 homes that have been purchased and rehabbed to be sold or turned into rental units. Additionally some homes have been sold to families who wanted to rehab the houses themselves and join the effort
 - Community Land Trust
 - They are working to create a community land trust. Currently several of the parcels planned for it are used in other ways such as green spaces.
 - Indus Detroit Artist Residency
 - They house an artist-in-residence created in partnership with the University of Michigan Stamps School of Art & Design
- Community Organizing⁴
 - Training for volunteers
 - Coalition for Property Tax Justice
 - Helps to prevent over-assessment of property values that drive up property taxes and can lead to foreclosures and forced displacements of homeowners
 - Dream Community Association
 - Formerly Longfellow Block Club, which started over 5 years ago.
 - Currently a city-registered neighborhood association which holds monthly meetings
 - Independent from Dream of Detroit, but works in close partnership with them
- Economic Development⁵
 - ProsperUS Detroit Entrepreneurship Training

^{1 &}quot;About," Dream of Detroit (blog), accessed July 16, 2023, https://dreamofdetroit.org/about/.

² "DREAM Center," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/dream-center/.

³ "Housing," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/housing/.

⁴ "Community Organizing," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/community-organizing/.

⁵ "Economic Development," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/economic-development/.

- Dream of Detroit is a host site for the ProserUS Detroit Training Program⁶
- They have 65 graduates of the 11 instruction sessions and 10 hours of one-on-one sessions with trainers
- DREAM Street Fair
 - Each August they invite vendors and organizations involved and have performances from local artists
 - Last fair had over 60 vendors and 2000 attendees
- They see Woodrow Wilson as a future economic corridor
- Project Homecoming⁷
 - A transitional house that can house up to four residents at one time for formerly incarcerated individuals
 - Includes social services and life-skills training to help people integrate back into society
- DREAM Storytelling Project⁸
 - Effort to capture the neighborhood's history and learn from experienced community organizers and long-time residents

The existing relationship should be further developed with specific interest in the following areas:

- Collaborate on DREAM Center and CCSS proposed community center to ensure there is no overlap or redundant services
- Utilize their community organizing training and relationship with the Dream Community Association to help with engagement efforts
- Explore the possibility of helping to start a community land trust

⁶ "Training - ProsperUs Detroit," December 19, 2021, https://prosperusdetroit.org/training/.

⁷ "Project Homecoming," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/project-homecoming/.

⁸ "DREAM Storytelling Project," *Dream of Detroit* (blog), accessed July 17, 2023, https://dreamofdetroit.org/dream-storytelling-project/.

Community Development Advocates of Detroit (CDAD)

CDAD is a membership organization that has over 100 members. Each member is a neighborhood organization in Detroit. They are policy advocates and try to help non-profits, block clubs, and resident-led groups get the resources they need to develop and promote quality of life and neighborhood development and stability.⁹

Areas of Work¹⁰

- Capacity Building
- Public Policy and Advocacy
- Community Engagement
- Ecosystem Building
- Strategic Initiatives¹¹
 - Collaborative efforts such as Detroit Residents First Fund Initiative and Tax Credit Awareness Campaign that are centered around community engagement and empowerment

There are opportunities to connect and work best with CDAD in the following areas:

- Become a member
- Utilize their community engagement expertise
- Get connected to other organizations and open the door to more potential partners throughout Detroit

⁹ "Who We Are | Community Development Advocates of Detroit," accessed September 19, 2023, https://cdad-online.org/who-we-are/.

¹⁰ "Community Development Advocates of Detroit | Community Development Advocates of Detroit," accessed September 7, 2023, https://cdad-online.org/.

¹¹ "Strategic Initiatives | Community Development Advocates of Detroit," accessed September 16, 2023, https://cdad-online.org/strategic-initiatives/.

Detroit Training Center (DTC)

DTC aims to train workers in Detroit to have marketable skills and allow them to have good-paying, in-demand jobs upon completion of training courses. They hope that by training Detroiters they can keep residents here and contribute to the long-term sustainability and success of Detroit. They can connect individuals who choose to enroll in a course with funding opportunities to cover the cost of the classes. They are a general workforce development organization and will accommodate individuals with disabilities upon request.¹²

Classes they offer:13

- Blight Removal Program
- CDL A Commercial Driver's License Program
- CDL B Concrete Mixer Driver Training Program
- CDL B Training Program
- Drywall Finishing Training Program
- Heavy Equipment Operator Program
- Masonry Restoration Training Program with Asbestos
- Welding Production Worker
- Home Renovation Workshops
- Career Navigation Services
- Drywall Hanging Training Class
- Drywall Finishing Class
- Painting Training Class
- Real Estate Salesperson Training Program
- Diesel Mechanic Program

Equipment Certifications Offered

- Aerial, Scissor, and Boom Lifts
- Backhoe and Loader
- Bobcat and Skidsteer
- Excavator and Mini Excavator
- Forklift and Hi-Lo
- Telehandler and Material Handler

Safety and Licenses Offered

- Asbestos Abatement
- Asbestos Inspector
- Asbestos, Cadmium, and Lead Awareness
- EPA Lead RRP and Online Refresher
- Fall Protection
- First Aid and CPR
- Hazwoper 24 & 40
- Lead Abatement
- OSHA 10 & 30 Construction & General Industry

¹² "Learn More About DTC," Detroit Training Center, accessed September 1, 2023, https://www.detroittraining.com/about.

^{13 &}quot;Learn More About DTC."

Appendix G: Potential Collaborations

CCSS could collaborate with DTC via many avenues. First, they could connect residents who are looking to improve their careers with their resources and classes. They could also sponsor an individual or create a program where they send residents who are seeking career opportunities to DTC. Lastly, they could use them for any inhouse employee development opportunities.

Brilliant Detroit

Brilliant Detroit is a non-profit organization that wants to promote educational development of children aged 0-8. They use empty homes to become hubs for programming at sites that are centered around families and kids. Each hub is within a 20 minute walking distance of children and families they serve. They want to ensure grade level reading by third grade and increase kindergarten readiness.¹⁴

They offer a variety of programs based on the location and needs of neighbors. Many upcoming programs include drop-in reading programs, tutoring, family and children exercise classes, computer lab open hours, arts and crafts events, and English as a second language courses. These are just a few of the many programs offered throughout Detroit.¹⁵

There are hubs all throughout Detroit, including one near CCSS's campus in the Dexter-Linwood neighborhood.¹⁶ Due to the proximity to the hub, there are many opportunities for CCSS to partner with Brilliant Detroit. The areas of highest priority are below:

- Inform residents with young children of Brilliant Detroit, its programming, and location in order to allow residents to use their services if desired
- Use the hub's network and engagement efforts to assist in CCSS community outreach and engagement efforts
- Explore joint, larger events for young children and families

^{14 &}quot;Who We Are," Brilliant Detroit, accessed July 24, 2023, https://brilliantdetroit.org/who-we-are/.

¹⁵ "Programming Calendar," Brilliant Detroit, accessed April 17, 2024, https://brilliantdetroit.org/programming-calendar/.

¹⁶ "Where We Are," Brilliant Detroit, accessed September 3, 2023, https://brilliantdetroit.org/where-we-are/.

SAY Detroit

Say Detroit is a non-profit organization that wants to provide for Detroiters in need. They primarily work in the areas of housing, health, and education. Additionally it helps raise funds for other charities and similar organizations.¹⁷

Areas of Work

- Play Center at Lipke Park¹⁸
 - Established a motivational learning center for Detroit youth
 - Provides after school programming to students who want to succeed and enjoy academic, athletic, and arts programs
- Better Together¹⁹
 - Initiative that seeks to connect citizens and local police in order to create more community and trust within neighborhoods
- Dream Scholars²⁰
 - Scholarship fund for Detroit students to attend College for Creative Studies
- SAY Clinic²¹
 - Free health clinic in Highland Park, MI, which borders the Dexter-Linwood neighborhood
- Working Homes/Working Families²²
 - Program that allows donation of unused homes, refurbishes homes, provides the homes to families
 - Recipients and residents receive social services
- A Time to Help²³
 - Monthly volunteer opportunities
- A Hole in the Roof²⁴
 - Fund for those in need of emergency home repairs

CCSS already has a relationship with this organization, and there are many opportunities to collaborate on housing, healthcare, and education programs either through sending people to each other for different services and helping provide each other with resources.

¹⁷ "About SAY Detroit | SAY Detroit," accessed August 7, 2023, https://saydetroit.org/about/.

¹⁸ "SAY Play | SAY Detroit," accessed August 7, 2023, https://saydetroit.org/play/.

¹⁹ "Better Together | SAY Detroit," accessed August 7, 2023, https://saydetroit.org/better-together/.

²⁰ "Detroit Dream Scholars | SAY Detroit," accessed August 8, 2023, https://savdetroit.org/dream-scholars/.

²¹ "SAY Detroit Family Health Clinic | SAY Detroit," accessed August 8, 2023, https://saydetroit.org/clinic/.

²² "Working Homes/Working Families | SAY Detroit," accessed August 8, 2023, https://saydetroit.org/working-homes-families/.

²³ "A Time To Help | SAY Detroit," accessed August 8, 2023, https://saydetroit.org/time-to-help/.

²⁴ "A Hole In The Roof Foundation | SAY Detroit," accessed August 8, 2023, https://saydetroit.org/hole-in-the-roof/.

Greening of Detroit

Greening of Detroit is a non-profit organization that wants to use greening initiatives, trees, job training, and environmental education opportunities to enhance the quality of life. They seek to inspire a sustainable and healthy urban community in Detroit.²⁵

Areas of Work

- Green Infrastructure²⁶
 - Community Forestry
 - Protect and enhance urban forests
 - Walter Meyers Nursery
 - Tree sapling nursery for future trees to be installed in public spaces
 - Services
 - Lawn and landscaping services
- Lafayette Greens²⁷
 - Green space and garden grown without chemicals
 - Pollinator garden
 - Provides education programming
- Workforce Training²⁸
 - o Certified Tree Artisan Course
 - Snow Removal Course
- Green Corps²⁹
 - Youth focused employment opportunities
 - Maintain and care for trees while getting paid
 - Opportunities for crew members and crew leaders
- Tree Planting³⁰
 - o Plant trees in Detroit, Highland Park, and Hamtramck
 - First service they provided

CCSS already has a relationship with Greening of Detroit who would like to plant trees on CCSS's campus. This relationship could be further developed and residents could engage with education and employment opportunities if they would like to learn more about caring for the environment.

²⁵ "Greeningofdetroit.Com," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com.

²⁶ "Green Infrastructure," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com/services-1.

²⁷ "Greenspaces," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com/greenspaces.

²⁸ "Adult Training," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com/adult-training.

²⁹ "Green Corps," The Greening of Detroit, accessed April 11, 2023, https://www.greeningofdetroit.com/green-corps.

³⁰ "Tree Planting," The Greening of Detroit, accessed April 17, 2024, https://www.greeningofdetroit.com/tree-planting.

Green Door Initiative

The Green Door Initiative is a non-profit who wants to rebuild and restore neighborhoods in Detroit and achieve environmental and economic justice. They want everyone to be environmentally literate and have the capacity to live healthy and sustainable lives. They believe in eco-friendly practices, try to empower communities, and develop the workforce for a sustainable future.³¹

Programming

- Motor City to Solar City³²
 - New project on the northeast side of Detroit.
 - Houses a renewable energy training facility
 - o Includes a resilience and resource hub
 - Builds community capacity and partnerships
 - Houses a solar assembly and installation operation
- Air Quality Monitoring³³
 - Connects people with resources to monitor air quality and mitigate risk factors that lead to unhealthy outcomes
- Workforce Development³⁴
 - Environmental career Worker Training Program
 - Renewable Solar Energy Education Program
- Youth Program³⁵
 - Green Landscaping Training
 - o Agriculture
 - Advocacy and grassroots lobbying
 - Policy and environmental justice education
- Tech Hub³⁶
 - Users can use cutting edge technology
 - Space rentals
 - Digital Literacy Workshops

³¹ "The Green Door Initiative Official Website | Building a Community for Environmental Equity," accessed July 24, 2023, https://www.greendoorinitiative.org/.

³² "Motor City to Solar City Initiative," Green Door Initiative, accessed April 17, 2024, https://www.greendoorinitiative.org/post/the-green-door-initiatives-plan-to-revitalize-detroit-through-renew-able-energy.

³³ "Air Quality Monitoring," Green Door Initiative, accessed July 25, 2023, https://www.greendoorinitiative.org/programming/air-quality-monitoring.

³⁴ "Workforce Development," Green Door Initiative, accessed July 25, 2023, https://www.greendoorinitiative.org/programming/workforce-development.

^{35 &}quot;Youth Program," Green Door Initiative, accessed July 25, 2023,

https://www.greendoorinitiative.org/programming/youth-program.

³⁶ "Tech Hub," Green Door Initiative, accessed July 25, 2023, https://www.greendoorinitiative.org/programming/tech-hub.

Detroit Future City (DFC)

DFC is a non-profit organization that was founded to help implement the Detroit Strategic Framework - a 50-year vision for the City of Detroit. They want to promote economic and racial equity and environmental sustainability through research and stakeholder engagement to improve the life of all Detroiters. They focus on strategies that develop neighborhoods and disrupt systemic racism and other inequities.³⁷

Areas of Work

- Center for Equity, Engagement, and Research (The Center)³⁸
 - o Produces reports and policy briefs
 - o Research is informed by engagement and collaboration
- Equitable Neighborhood Planning³⁹
 - Backbone of the Detroit Neighborhood Housing Compact
 - o Promote strategies for equitable redevelopment and reparations in Detroit neighborhoods
- Land use and Design⁴⁰
 - o Offers training and technical assistance for using open space
 - o Promotes green stormwater infrastructure

³⁷ "About Detroit Future City | Detroit Future City," Detroit Future City |, July 13, 2017, https://detroitfuturecity.com/about/.

³⁸ "Center for Equity, Engagement, and Research | Detroit Future City," Detroit Future City |, December 9, 2021, https://detroitfuturecity.com/what-we-do/the-center-for-equity-engagement-and-research/.

³⁹ "Equitable Neighborhood Planning | Detroit Future City," Detroit Future City |, December 9, 2021, https://detroitfuturecity.com/what-we-do/equitable-neighborhood-planning/.

⁴⁰ "Land Use and Design | Detroit Future City," Detroit Future City |, December 6, 2021, https://detroitfuturecity.com/what-we-do/land-use-and-design/.

Keep Growing Detroit (KGD)

Keep Growing Detroit is an organization that wants to create a food sovereign Detroit. Through events and programming they offer education and resources for individuals to start growing food and help growers sell fruits and vegetables. They also operate a farm which doubles as a teaching facility.⁴¹

Services Provided

- Garden Resource Program (GRP)⁴²
 - o Provides seeds, transplants, and personalized assistance to gardens
 - o Connects gardens to others in the agriculture space
 - o Participants can request fee waivers or reduced payments if necessary
 - Includes an option for Spanish speakers⁴³
- Garden Development Support⁴⁴
 - o Growers can request soil testing
 - Consultations, raised beds, and information and support from KGD staff also available
 - o Provides a soil testing guide
- Land & Policy Support⁴⁵
 - Provides information on land, such as ownership, zoning, purchasing process,
 land plans, changing use, and understanding City ordinances
- Education opportunities
 - Most education programs are free and/or exclusive to GRP participants
 - Beekeeping⁴⁶
 - Construction and Carpentry⁴⁷
 - Paid construction apprenticeship
 - Classes and Workshops⁴⁸
 - Included recordings on YouTube
 - Gardening and cooking classes
 - Early Childhood Programs⁴⁹
 - Offers guidance and assistance for teaching young children about gardening

⁴¹ "Mission & Impact," Keep Growing Detroit, accessed January 23, 2024, https://www.detroitagriculture.net/mission.

⁴² "Detroit Urban Garden Resource Program | Keep Growing Detroit," Keep Growing Detroit, accessed January 23, 2024, https://www.detroitagriculture.net/grp.

⁴³ "GRP En Español | Keep Growing Detroit," Keep Growing Detroit, accessed April 17, 2024, https://www.detroitagriculture.net/espanol.

⁴⁴ "Garden Development Support Form," Keep Growing Detroit, accessed January 23, 2024, https://www.detroitagriculture.net/support.

⁴⁵ "Land Access & Policy," Keep Growing Detroit, accessed January 23, 2024, https://www.detroitagriculture.net/landaccess.

⁴⁶ "Beekeeping," Keep Growing Detroit, accessed January 24, 2024, https://www.detroitagriculture.net/beekeeping.

⁴⁷ "Construction & Carpentry," Keep Growing Detroit, accessed January 24, 2024, https://www.detroitagriculture.net/construction.

⁴⁸ "Classes & Workshops," Keep Growing Detroit, accessed April 17, 2024, https://www.detroitagriculture.net/classes.

⁴⁹ "Early Childhood," Keep Growing Detroit, accessed January 24, 2024, https://www.detroitagriculture.net/earlychildhood.

- Garden and Farm Infrastructure⁵⁰
 - Hoophouses to extend growing season
 - Water collection and conservation
 - Irrigation
- Garden Guides⁵¹
 - Quick and short instructions on best practices for all things gardening in Detroit
- Garden Leadership Training⁵²
 - Urban Roots community Garden Training Program
 - Six week training program offered every fall
 - For community leaders interested in urban and community gardens
- Medicinal Plants⁵³
 - Training on wild grown herbs and their medicinal properties
- Youth Programs⁵⁴
 - Training and volunteer opportunities for individuals aged 14-19
 - Can request KGD to engage with a youth group, teach a class, or provide a speaker

⁵⁰ "Garden & Farm Infrastructure," Keep Growing Detroit, accessed January 30, 2024, https://www.detroitagriculture.net/infrastructure.

⁵¹ "Garden Guides," Keep Growing Detroit, accessed April 17, 2024, https://www.detroitagriculture.net/gardenguides.

⁵² "Garden Leadership Training," Keep Growing Detroit, accessed January 30, 2024, https://www.detroitagriculture.net/gardenleadershiptraining.

⁵³ "Medicinal Plants," Keep Growing Detroit, accessed January 30, 2024, https://www.detroitagriculture.net/medicinalplants.

⁵⁴ "Youth," Keep Growing Detroit, accessed January 30, 2024, https://www.detroitagriculture.net/youth.

Urban Youth Agriculture (UYA)

Urban Youth Agriculture is a small, black owned business. It was started by a Detroiter and has provided farming education opportunities to children in and around Detroit.⁵⁵ The business aims to connect children and youth back to food and the ground and teach young people about agriculture.⁵⁶

Services Offered⁵⁷

- Lessons and Programming
 - Weekly, biweekly, or monthly agriculture lessons to children as young as 3 through the Detroit metropolitan area
- Field Trips and In-School Activities
 - UYA can come to a school, event, or bring people to a garden or farm
- Products and Services
 - Developing youth-focused agriculture curriculum and activities
 - Small-scale tiling
 - Maintenance
 - Raised garden bed installation
 - o In-ground ground garden bed installation

⁵⁵ UYA Detroit Webpage, "UYA Detroit About Us," UYA Detroit Webpage, accessed March 30, 2024, https://uvadetroit.com/about-us.

⁵⁶ UYA Detroit Webpage, "UYA Detroit Webpage," UYA Detroit Webpage, accessed March 30, 2024, https://uyadetroit.com/.

⁵⁷ UYA Detroit Webpage, "UYA Detroit Webpage," UYA Detroit Webpage, accessed March 30, 2024, https://uvadetroit.com/products.

Block Clubs and Neighborhood Organizations

Block clubs and other neighborhood organizations can be great resources for help with community engagement efforts. Their connection to the community and ongoing engagement efforts can be leaned on by other organizations to ensure they can actually provide residents with what they need. I have identified four block clubs that operate near the campus of CCSS and am highlighting two non-profit organizations from the section above as potential partners that could be leaned on for community engagement efforts and to collaborate with people and organizations who have a specific interest in the northeast area of the Dexter-Linwood neighborhood and surrounding areas.

The four block clubs are registered with the City of Detroit⁵⁸ and contact information can be found by clicking on the links to their webpage or to the City of Detroit's webpage that is next to each name:

- West Buena Vista Block Club < contact information >
- Webb Block Club <contact information>
- Longfellow Block Club < contact information >
 - As stated under the information about DREAM of Detroit, this block club now calls itself the Dream Community Association. There is an option to contact DREAM of Detroit to work with the community association.
- Central Detroit Christian <contact information>
 - o Main Webpage

Partnering with Dream of Detroit and/or Brilliant Detroit's Dexter-Linwood Hub are other avenues that should be explored for engagement purposes as they do community organizing⁵⁹ and work to create a network of local families.⁶⁰

⁵⁸ "Department of Neighborhood Block Clubs List," March 4, 2024, https://detroitmi.gov/sites/detroitmi.localhost/files/2024-03/March%202024%20updated%20Block%20Club%20List.pdf.

^{59 &}quot;Community Organizing."

^{60 &}quot;Who We Are."

Institutional Collaborations

University of Michigan (UM)

This project has been started out of a partnership between CCSS, the UM School for the Environment and Sustainability (SEAS), and the SEAS Sustainability Clinic. The Sustainability Clinic seeks to advance equity, environmental justice, and climate resilience in Detroit. It aims to put community needs first and work with historically underserved communities. The clinic will complete supporting its fourth capstone project in the spring of 2024 and has three more for that will be completed in the spring of 2025. ⁶¹

Looking for ways to continue projects with the SEAS sustainability clinic is an avenue of possible partnerships, but there are other partners associated with UM that could help to promote the overall mission of CCSS and like-minded organizations in Detroit. The most promising partners are listed below:

- UM Poverty Solutions⁶²
 - Interdisciplinary research initiative that aims to partner with communities to alleviate poverty
- UM School of Social Work⁶³
 - The UM School Social Work wants to educate students to help create a more just society, ensure people receive all basic human needs, and work to create a more equitable society
- UM School of Public Health⁶⁴
 - School that wants it students to work to make sure there are equitable and just health outcomes for everyone
- UM Master of Urban and Regional Planning⁶⁵
 - Urban planning program that wants its students to learn how to engage with communities and work to make cities better for everyone

⁶¹ "SEAS Sustainability Clinic | University of Michigan School for Environment and Sustainability," accessed March 31, 2024, https://seas.umich.edu/clinic.

^{62 &}quot;Poverty Solutions | University of Michigan," accessed March 31, 2024, https://poverty.umich.edu/.

^{63 &}quot;Mission," School of Social Work UM, accessed April 18, 2024, https://ssw.umich.edu/about/ssw-advantage/mission.

⁶⁴ "U-M School of Public Health: Our Mission and Culture," accessed April 18, 2024, https://sph.umich.edu/about/mission.html.

⁶⁵ "Master of Urban and Regional Planning," Taubman College, accessed April 18, 2024, https://taubmancollege.umich.edu/academics/urban-and-regional-planning/master-of-urban-and-regional-planning/.

Other Universities in the Area

CCSS could lean on other universities in and around Detroit. This could allow them to expand the pool of research, partners, and students and learn from more people who want to help in Detroit. Below you can find a list of a few promising potential universities that can be potential partners for organizations in Detroit.

- Wayne State University⁶⁶
 - CCSS currently has a partnership with a student group at Wayne State called Fresh Rx, which gives people in Detroit a 'prescription' for fresh produce and allows them to receive fresh produce from participating vendors.⁶⁷
- University of Detroit Mercy⁶⁸
- Michigan State University (MSU) and the MSU Detroit Center⁶⁹

⁶⁶ "Wayne State University," Wayne State University, December 26, 2023, https://wayne.edu.

⁶⁷ Darlene A White, "Wayne State Students' Fresh Rx Program Delivers Produce to People in Need," *The Detroit News*, November 26, 2021,

https://www.detroitnews.com/story/life/2021/11/26/wayne-state-students-fresh-rx-program-delivers-produce-people-need-who-have-chronic-health-condition/6386417001/.

⁶⁸ "University of Detroit Mercy | Detroit, Michigan | University of Detroit Mercy," accessed April 18, 2024, https://www.udmercy.edu/.

^{69 &}quot;Home," MSU Detroit Center, accessed April 18, 2024, http://detroitcenter.msu.edu:80/.

City of Detroit

- Complete Streets Program⁷⁰
 - Aims to put people first
 - Want Detroit streets to promote a sense of community
 - Want streets that work for everyone and all kinds of transit, not just drivers
 - Could be helpful in CCSS long term goal of creating an economic corridor in Woodrow
 Wilson and reducing the racing that occurs on Woodrow Wilson Road
- Department of Neighborhoods⁷¹
 - Assist with the formation of block clubs
 - o Performs vacant lot cleanups
 - Neighborhood beautification grants
 - Partners with organizations to help drive community engagement for neighborhood level development
- Other Departments of Note⁷²
 - Buildings, Safety, and Environmental Department
 - Civil Rights, Inclusion and Opportunity Department
 - Department of Public Works
 - Detroit Parks and Recreation
 - Doing Business in Detroit
 - o General Services Department
 - Housing and Revitalization Department
 - Planning and Development Department

https://detroitmi.gov/departments/department-public-works/complete-streets.

⁷⁰ "Complete Streets," City of Detroit, November 1, 2023,

⁷¹ "Department of Neighborhoods," City of Detroit, March 28, 2023, https://detroitmi.gov/departments/department-neighborhoods.

^{72 &}quot;Departments," City of Detroit, accessed March 30, 2024, https://detroitmi.gov/departments.

Michigan Department of Transportation (MDOT) Highway Programs

Much of CCSS campus is near the John C. Lodge Freeway, which is owned and maintained by MDOT. Below are lists of ways they can work to make that stretch of highway less of a nuisance to residents on and around their campus.

- Roadside Development⁷³
 - Help to include aesthetic, environmental, and cultural aspects on the side of highways
- Adopt-A-Highway⁷⁴
 - o Program that allows organizations to take ownership of the cleanliness of state highways
 - Potential volunteer activity
 - Signage along highway stretch could provide more exposure for CCSS
- Adopt-A-Landscape⁷⁵
 - Organizations can plant wildflowers, trees, and shrubs along the side of state highways
 - o Implement landscaping along the roadside
 - Potential volunteer activity
 - Can utilize partnerships with greening organizations to effectively manage the landscapes on roadsides

⁷³ "Roadside Development," accessed June 14, 2023,

https://www.michigan.gov/mdot/programs/highway-programs/environmental-efforts/roadside-dev.

⁷⁴ "Adopt-a-Highway," accessed June 14, 2023,

https://www.michigan.gov/mdot/programs/highway-programs/roadside-property-management/adopt-a-highway

⁷⁵ "Adopt-A-Landscape," accessed April 18, 2024,

https://www.michigan.gov/mdot/business/permits/adopt-landscape.

Examples

Successful Neighborhood Development and Neighborhood Development Organizations in Detroit

Throughout my research I identified four primary examples of organizations and development efforts that CCSS could look to for inspiration. Throughout all of these is a common theme of community engagement. The engagement process is long, but aims to ensure resident buy-in and that their needs are met. Therefore, enhancing the long term success of the development efforts. Below are four examples from the eastside of Detroit that CCSS could look to for both development inspiration and successful community engagement strategies:

- Jefferson East, Inc. (JEI)⁷⁶
 - Housing Services
 - Housing Sustainability
 - Financial Literacy & Opportunity
 - Property Tax Assistance
 - Mortgage Delinquency & Default Prevention
 - Clean and Safe Corridors
 - Small Business Development
 - Tenant and lease support
 - Collaboration
 - Referrals for services
 - Business Corridor organizing
- McDougall-Hunt Community Association (MDHNA)⁷⁷
 - Association that has created a community informed and collaborative sustainable redevelopment plan for the McDougall-Hunt neighborhood, which is east of Downtown Detroit.
- Eastside Community Network (ECN)⁷⁸
 - Climate Equity
 - Community Economic Development
 - o Community Organizing, Resources, & Engagement
 - Sustainable Homes
- Bailey Park Neighborhood Development Corporation (BPNDC)⁷⁹
 - o Partnered with MDHNA to help develop plan
 - Has established a resilience hub that is a good example of how best to get necessary resources to the local community. The hub has become the staging point for all of BPNDC programming and services

⁷⁶ "Jefferson East, Inc.," Jefferson East, Inc., accessed May 23, 2023, https://www.jeffersoneast.org.

⁷⁷ McDougall-Hunt.org, "McDougall-Hunt Neighborhood Association," McDougall-Hunt.org, accessed May 24, 2023, https://mcdougall-hunt.org/.

^{78 &}quot;ECN," ECN, accessed May 24, 2023, https://www.ecn-detroit.org.

⁷⁹ "About," Bailey Park NDC, accessed February 5, 2024, https://www.baileyparkndc.org/about.