



## Sustainable Neighborhood Assessment

Through the Sustainable Neighborhood Assessment Tool developed by Global Green USA, public officials and local government staff are using the LEED for Neighborhood Development (LEED-ND) rating system to determine ways for future development in their communities to achieve high levels of environmental, economic, and social sustainability. LEED-ND integrates the principles of smart growth, walkable urbanism and green building into the first national rating system for neighborhood design. In Memphis, Global Green used the tool as a means to evaluate existing conditions and plans for the South City neighborhood, in order to identify opportunities to augment current revitalization efforts and develop recommendations to increase the neighborhood's overall level of sustainability.

## Assessment Team + Funding

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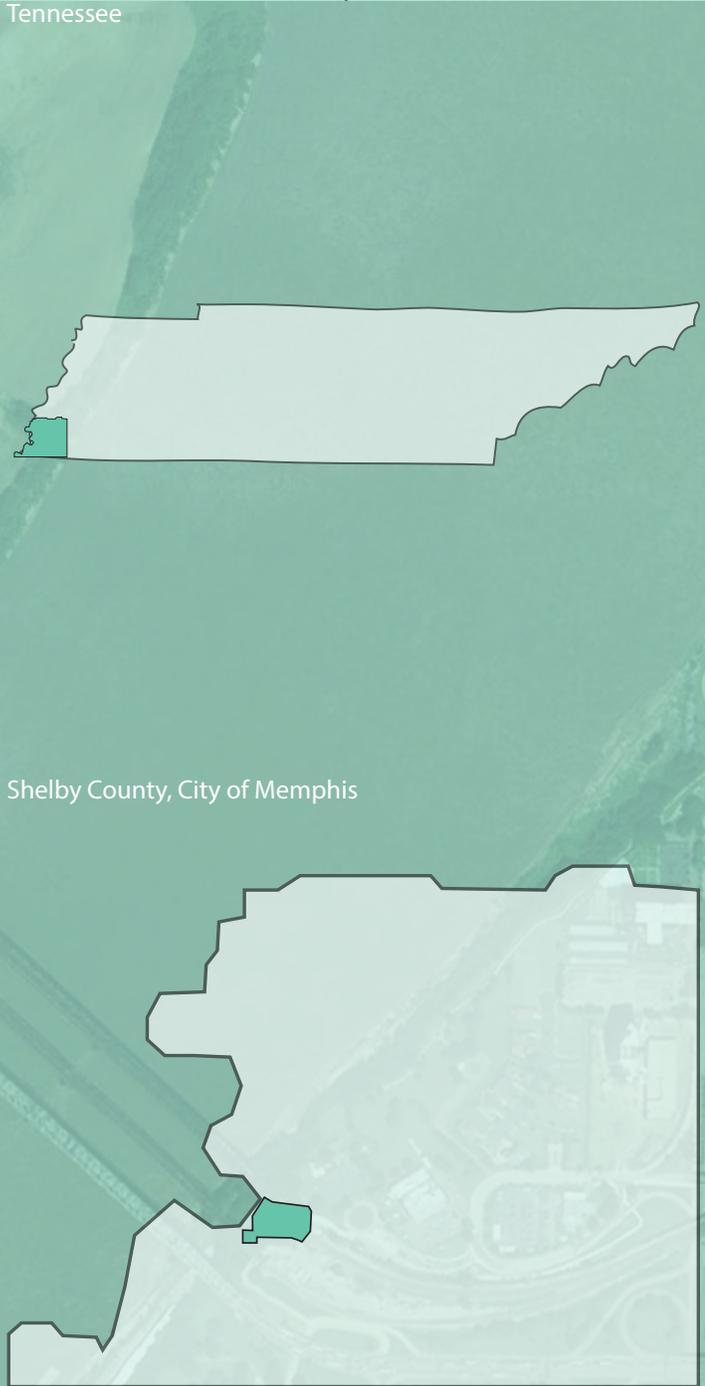
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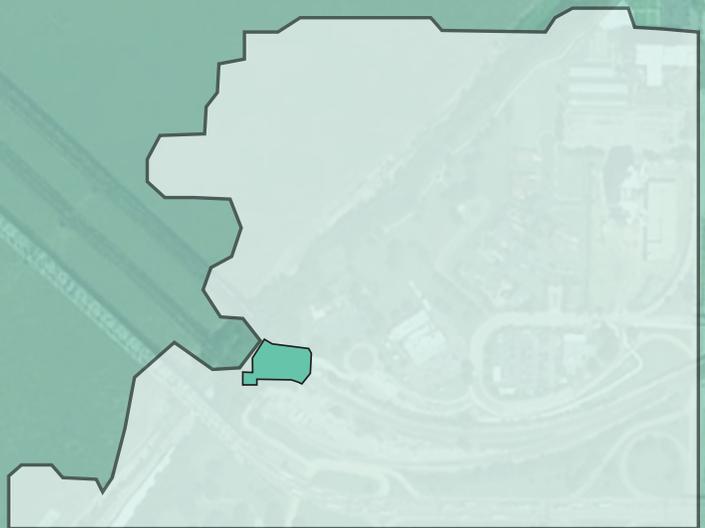
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Tennessee



Shelby County, City of Memphis



South City Neighborhood

Mississippi River

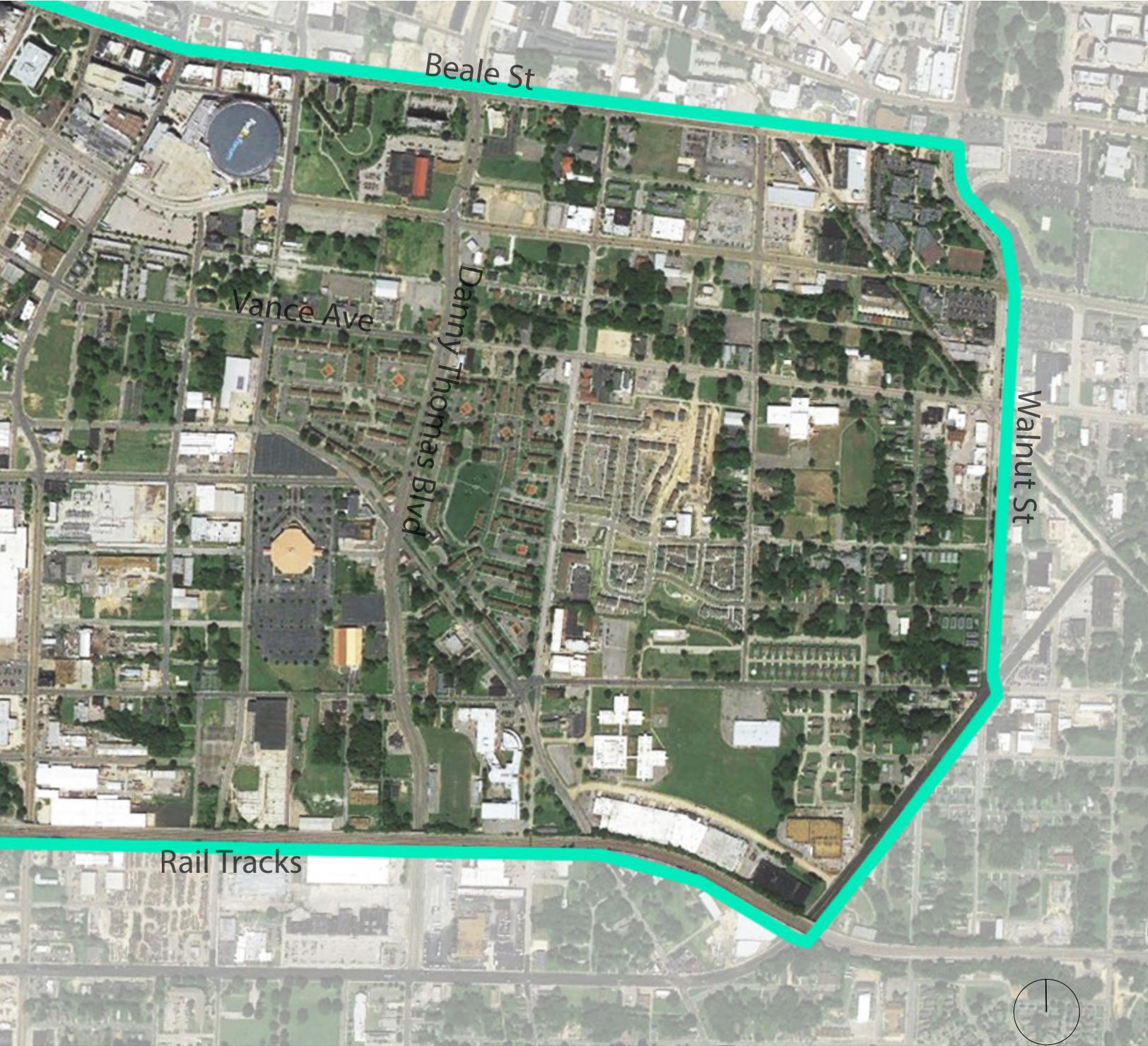


Front St

Main St

# South City

Memphis



# Sustainable Neighborhood Assessment Process

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The goal of the Sustainable Neighborhood Assessment process is to identify issues and places where focused policy or planning changes can promote sustainable urban development over the short and long term. The objective is to improve the neighborhood's day-to-day sustainability and increase its resilience. To define these focus areas, Global Green USA utilizes the Sustainable Neighborhood Assessment Tool, which is based on the LEED for Neighborhood Development (ND) criteria.

Prior to visiting the assessment area, the team conducted a review of existing planning documents, code requirements, maps, and stakeholder priorities. An initial assessment was then completed, with the credits in each of the three LEED-ND categories (Smart Location & Linkages, Neighborhood Pattern & Design, and Green Infrastructure & Building) marked as "achieved," "not achieved," "unknown," or "not applicable." Each credit is further ranked for the degree that it correlates to regional or local policy priorities, regulatory support, technical feasibility, market support, and stakeholder input.

This initial assessment serves as the point of departure for the Global Green team's multi-day site visit and evaluation. During the visit, the team walks the target neighborhood, photographs examples of positive qualities and areas for improvement, and conducts a series of meetings with targeted stakeholders, city staff, and representatives of relevant public agencies. Throughout the process, a preliminary LEED-ND checklist is edited and refined to incorporate the team's visual observations and the contextual issues raised by stakeholders. The final checklist for the South City neighborhood can be found on pages 20-23.

This assessment process then enables the team to identify a series of recommendations based on LEED-ND credits to augment and increase the neighborhood's sustainability. Recommendations also cover policy, planning and development; changes that aim to realize a more resilient and sustainable future for the South City Neighborhood. Some recommendations can be implemented fairly quickly, while others will require policy or regulatory change and long-term collaboration among public agencies, local institutions, and private sector partners, as well as multiple sources of funding.

# Neighborhood Assets



# Neighborhood Background

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The South City neighborhood is located directly southeast of Memphis' Central Business District and is approximately 1.4 square miles. South City is the name that has been given to the area through a Choice Neighborhood Implementation grant application to distinguish it from the surrounding areas of historic Beale Street, the Riverfront, South Main Street, Washington Heights, South Memphis, and the Medical District. Global Green's study area is bordered by Front Street to the west, Beale Street to the north, Walnut and Crump to the east and Railroad tracks to the south.

The primary focus of the study area, and recipient of Choice Neighborhood Implementation Grant funding, is the redevelopment of the Housing Authority-owned Foote Homes development. It is designed to comply with the Memphis Unified Development Code standards for Sustainable Subdivisions, which reflect some LEED-ND prerequisites (though not as stringent), and it is designed to meet the Enterprise Green Communities 2015 Criteria. Global Green's assessment looked at the broader neighborhood surrounding this development, as the neighborhood character was significantly different than that within the scope of Foote Homes. Long-term disinvestment in the South City area has resulted in a lot of vacant properties, a lack of resources such as jobs, retail, and well-attended high-quality schools. There are a lot of former industrial, and existing industrial and light industrial uses.

The South City neighborhood is rich in black history and culture. The legendary Club Paradise, a blues club / music venue within the South City study area (now utilized as a Community Center) hosted artists such as B.B. King and Ike and Tina Turner from the 1960s onward. South City's schools, now facing closures and low attendance, were among the first public schools for African Americans in Memphis. LeMoyné-Owen, a historically black college, with roots dating back to the 1860s is located in South City. Many current residents were living in the South City area during the civil rights movement, including strikes for living wages. They were also present when Rev. Martin Luther King, Jr. came to support the movement and was assassinated at the Lorraine Motel located a mere mile from Foote Homes. Foote Homes holds a mixture of long-term residents and newer residents that moved to the area as the result of other public housing in Memphis being renovated. Due to this housing situation, there are a relatively small number of people in the development with a deep familiarity with the community. An adjacent community with a similar resident profile, Cleaborne Pointe at Heritage Landing, was recently re-developed, and faced difficulty retaining much of its pre-redevelopment population. Feedback during our assessment from long-time city residents revealed that while African Americans make-up the population majority of the city (63.3% at the time of the 2010 Census) many feel that agency and power in decisions that affect their lives still lies in white culture, and that this results in paternalistic interactions where whites include blacks but not in superior decision-making roles.

## Assets

In addition to cultural assets and history in South City, its proximity to downtown, central station, and other job centers is a plus. The protected bikeway on Danny Thomas is a key link in the alternative transportation system in this part of Memphis.

Vance Avenue has the potential to serve as the commercial corridor or main street for the revitalized area. Existing small businesses and federal and other public ownership of a number of parcels throughout the neighborhood provide even more potential for a network of investment to benefit the residents of South City.

Additionally, affordable housing is being redeveloped and developed in the neighborhood, which will help ensure quality permanent affordable housing is available and displacement is less likely with increased investment in the neighborhood.

# Neighborhood Challenges



1. Train track right-of-way isolates pedestrians within its bounds by creating unsafe-feeling underpasses with narrow sidewalks next to fast-moving traffic; 2. No grocery store in the neighborhood leaves residents to travel a long way to get fresh fruits and vegetables and choose unhealthy options from convenient stores more often; 3. Over-sized motorized vehicle right-of-ways produce wide crossings across high-speed roads; 4. Vacant or blighted lots are pervasive throughout the neighborhood and highlight long-term disinvestment in the neighborhood.

# Neighborhood Background Continued

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## Challenges

During our assessment residents and stakeholders told us Memphis is comparable to Detroit in many ways. Low population density, crime, and racial disparity are challenges that both cities face. Schools in the South City neighborhood have faced such marked decline in enrollment that children in the area are bussed to other parts of the city to attend class every day. A charter school occupies part of the underutilized Georgia Street School. Though great desire exists in the community for a grocery store, and need is high, grocery stores are reluctant to set-up shop due to perceived and real crime rates and low vehicle counts.

The low population density also negatively impacts the ability for the Memphis Area Transit Authority (MATA) to provide additional service routes through South City and as well in other communities around Memphis. Overall mobility within the neighborhood and to adjacent areas with jobs such as Downtown, South Main, and the Medical District is a challenge. The pedestrian environment, particularly on Danny Thomas Blvd. and where rail rights-of-way pass over the street poses safety concerns both in crossing wide, multi-way intersections and in utilizing narrow sidewalks close to traffic under a poorly-lit rail overpass.

# Recommendation Approach and Strategy

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The recommendations presented over the following pages were developed through careful study of regional and local planning documents, city and county staff, stakeholder interviews, and a thorough on-the-ground analysis of community characteristics. Each of the resulting recommendations have been informed by best practices as identified by LEED-ND and have been produced with specific attention given to long-term sustainability and resilience.

Five key overarching themes guide the specific recommendations:

(1) Adaptive Reuse / Development Policy

(2) Housing

(3) Access

(4) Infrastructure

## Recommendations

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1 Adaptive Reuse / Development Policy	2 Housing
3 Access	4 Infrastructure

# Adaptive Reuse / Development Policy

Currently, South City residents do not have adequate access to fresh food. There is no grocery store within a reasonable walking or biking distance. According to the USDA, a food desert is a low-income community without ready access to healthy and affordable food. LEED-ND recommends that at least 4-7 diverse land uses, especially community-serving retail such as a supermarket, grocery store with a produce section, or farmer's market be located within a quarter-mile walk distance of at least half of all dwelling units in a neighborhood. It also recommends that growing of produce, including in greenhouses, any portion of residential front, rear, or side yards be established in covenants, conditions, and restrictions as not prohibited. One way to encourage the availability of fresh fruits and vegetables is to incentivize local small businesses like convenient stores to stock fresh produce.

While the new Foote Homes development may meet the threshold for open space, the remainder of the neighborhood possesses an abundance of vacant land and a dearth of programmed park and particularly recreational space. This space often takes the form of courts, fields, and gymnasiums. LEED-ND gives credit for neighborhoods where 90% of dwelling units are within a quarter-mile walk of a civic and passive use space at least 1/6 acre in area. Additionally, at least 1 acre of outdoor or 25,000 square feet of indoor recreational facility should be accessible within a half-mile walking distance from 90% of dwelling units.

The adaptation of Club Paradise into a community center is a great example of adaptive reuse that preserves a cultural landmark in the neighborhood. Adaptively reusing underutilized neighborhood amenities such as the local schools, vacant small businesses, and grass lots with the goal of serving the low-income people-of-color in the neighborhood. A way to engage residents in the process of deciding what is best done with vacant and underutilized spaces is by conducting creative placekeeping. For example, a pop-up event accessible to all age groups could be held in a vacant lot and in exchange for fun, music, games, food, and/or prizes, feedback could be obtained as to how neighborhood residents see the parcel best being utilized.

Vance Avenue has the potential to serve as the commercial corridor or main street for the revitalized area, if appropriate development is encouraged and inappropriate uses are removed or transitioned to better serve the community.

Federal and other public ownership of a number of parcels creates an opportunity for a coordinated development effort focused on creating community assets and meeting specific needs related to health, education, financial services, or recreation.

Small businesses need support and financial assistance through modest loans, manageable loan terms, and the recognition that conventional forms of collateral may not be in place. Several efforts, including Advance Memphis, are underway to address these needs, which are essential to encouraging local individuals in creating jobs and economic opportunities that enhance the neighborhood while building wealth locally.

There is a general need for additional employment opportunities within the study area or close by in combination with reliable public transportation.

## Action Items

1. Explore the possibility of creating new green spaces in currently blighted areas through placemaking that incorporates murals or other forms of art.
2. Underutilized Vance and Georgia Street schools offer a unique opportunity for adaptive reuse, creation of additional public parks space, or expanding education opportunities in the neighborhood through charter or other schools of choice that meet specific needs or interests, such as STEAM or vocational programs.
3. Incentivize small grocery stores to provide fresh food. An example of a successful program is the “Healthy Neighborhood Market Network” in Los Angeles. Engage with store owners to build interest and gain understanding of their business. Offer training events to existing neighborhood markets and food entrepreneurs and offer project-based technical assistance for “market makeover” projects. Provide assistance in procuring foods from distributors at a competitive rate. Perhaps aided by Shelby County Health Dept., The Food Trust, or another Healthy Food Financing Initiative.
4. In order to ensure that community needs are met and investment can occur without displacement and other negative aspects of gentrification, conduct an evaluation for the potential to form a community development corporation in South City to oversee and guide future development in the area.
5. Through a combination of the Blight Authority and the Shelby County Land Bank, vacant or underutilized lots can be purchased and sold to develop community-serving retail and resources along Vance.
6. A combination of access to education and improved transit service is needed so that South City and Foote Homes residents can access the employment opportunities in the Medical District.
7. Creating a format to connect and foster coordination among the many groups that area active in South City is a must to access the knowledge that already exists about neighborhood need and engagement.



Civil rights mural on Main Street

## Housing

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Ensuring a diverse stock of housing of various rents (but catering to existing neighborhood income levels first) is one way to enable residents from a wide range of economic levels, household sizes, and age groups to live in a community. LEED-ND recommends that a neighborhood at least achieve a Simpson Diversity Index Score of .5 in order to include a sufficient variety of housing sizes and types. The Simpson Diversity Index calculates the probability that any two randomly selected dwelling units in a neighborhood will be of a different type.

An additional strategy to ensure the equitability of the neighborhood's housing stock is to design new dwelling units to be accessible to all. LEED-ND recommends at least 20% of units in multiunit buildings be designed in accordance with ICC A117.1 Type C, VISIBLE Unit. Each unit must also have a kitchen, living area, bedroom, and full bath on an accessible level. For multiunit buildings with 4 or more dwelling units, 20% of the units should either include universal design features throughout the home, or kitchen features, or bedroom and bathroom features.

Fractured ownership is a challenge in assembling parcels for redevelopment. Past subdivision practices allowed very small lots. "Paper alleys" (throughways that appear on plan maps, but are not adopted or maintained by the City) are also difficult to redevelop. The off-site housing aspect creates an opportunity for infill development in surrounding blocks to create a more cohesive urban form and distribute the public investment more broadly in the community.

## Action Items

1. Physical redevelopment efforts should be coordinated with a people plan to manage tenant relocation, ability for residents to return, and to preserve aspects of the development that have unique cultural or historic value.
2. Policies should be put in place to ensure that as new development occurs there is a mixture of market rate and income-restricted, as well as a diversity of housing types, including artist and live-work housing, so that the neighborhood remains accessible to people of all income levels.
3. Design new dwelling units to include universal design features when appropriate, given the location in the building and in proximity to accessible routes of travel in the broader community, so that residents can age in place and not be reliant on a car for mobility. Refer to LEED-ND's Options 1-3 under the Visitability and Universal Design for options to increase the proportion of usable areas in each unit.
4. The Blight Authority of Memphis should aid in shoring-up the stock of permanent affordable housing in South City by acquiring, remediating or prepping properties, and selling properties to non-profit developers for affordable housing. This will allow residents to stay in place if demand for property in the neighborhood increases in the future. Properties could also be utilized for actively programmed park space.



## Access

LEED-ND emphasizes the importance of access in the built environment in order to equitably provide access to diverse land uses without the prerequisite of owning a car, to reduce vehicle miles traveled, and to improve public health by encouraging both utilitarian and recreational physical activity. It achieves this through incentivizing walkability, bikeability, and connectivity.

The protected bikeway along Danny Thomas Blvd. is a key link in the alternative transportation system. Improving bicycle connections through the South City neighborhood to this artery will get the neighborhood closer to LEED-ND's standards for Bicycle Networks: at least 50% of dwelling units should be located on a bicycle network extending at least 3 contiguous miles and connecting to at least a school, an employment center, or at least 10 diverse uses. LEED-ND recommends that long-term bicycle storage should be provided for at least 30% of residents in all new multi-unit housing developments, and at least 2 short-term bicycle parking spaces should be provided at each retail space. People are most likely to use their bicycles when they're easily and safely stored. LEED-ND recommends that long-term bicycle parking be located within 100 feet of a main entrance and best practice is to make the spaces secure and safe from theft.

The Sustainable Subdivision Code Standards contain many Walkable Streets strategies from LEED-ND. These should be extended to new development throughout South City when possible. The first priority of pedestrian improvements in the neighborhood should be to ensure complete sidewalks on both sides of all right-of-ways. Ensuring safe and frequent crossings not only increases connectivity through and out of the neighborhood, but also decreases pedestrian fatalities.



This right-of-way does not include continuous sidewalks and is in need of upgrade.

## Action Items

1. Apply Sustainable Subdivision Code Standards for walkability, bikeability, and connectivity to all new residential developments combining more than one parcel. A facade improvement program along Vance could help to implement some of these Standards, particularly the ground-level retail facade standards.
2. Additional connections in South City, to Downtown, and to the Medical District should be established to create a more robust network.
3. Augment the transit services at Central Station with car share, bike share, facilities for ride sharing services, and improved amenities for walking and biking or taking the MATA bus system to and from the station. Consider changing certain bus routes to better serve the revitalized neighborhood, with Vance serving as a “main street.”
4. Install new pedestrian signals with the “count down” to increase mobility and safety.
5. Transit system enhancements through re-routing, adding bus service, improving bike and pedestrian safety, and enhancing the services at Central Station.



The crossings along Danny Thomas Blvd are good candidates for countdown crosswalks and medians to provide a place for refuge for pedestrians crossing the street

## Infrastructure

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As part of our neighborhood assessment, we were witness to and heard stakeholder input on intermittent flooding and other stormwater management issues. To increase the durability of buildings and stormwater infrastructure, and to reduce runoff volume and improve water quality in the region (and further downstream on the Mississippi) incentives should be put in place for property owners to manage stormwater on their parcel. LEED recommends managing stormwater in a manner best replicating natural site hydrology processes for at least the 80th percentile rainfall event using low-impact development (LID) and green infrastructure.

Brownfields are a concern in the South City neighborhood, with many known and suspected sites that are contaminated. As the neighborhood is located in a high-priority redevelopment area, it is particularly important to pair brownfield remediation with redevelopment efforts. At sites identified as brownfields or where soil or groundwater contamination has been identified, perform remediation to the satisfaction of whatever authority that has jurisdiction over that parcel.

## Action Items

1. Explore the potential to offer relief from the stormwater tax as an incentive for expanding green infrastructure in the area and as a way to address intermittent flooding and other stormwater management issues.
2. Coordinate with the City and State agencies to inform developers, property-owners, and residents about safe methods to remediate hazards including lead paint and asbestos in homes and to clean up brownfields on former industrial properties. Residents should be educated about soil contaminants before establishing vegetable and herb gardens, and given resources for testing for contaminants.
3. Design standards for the public rights of way in and around the Foote Homes site, including planting standards for street trees. LEED-ND recommends providing trees at intervals of no more than 50 feet.



Large surface parking lots contribute to stormwater runoff, as they are paved with impermeable asphalt.

# Sustainability Assessment

The Sustainable Neighborhood Assessment tool includes an annotated LEED-ND checklist created by Global Green. It is a key component of the process used to document and compare the assessment area against the LEED-ND prerequisites and credits. Each credit within the three credit categories (Smart Location & Linkage, Neighborhood Pattern & Design, and Green Infrastructure & Building) is marked as “achieved,” “not achieved,” “unknown,” or “not applicable” under baseline conditions. Additional analysis has been done based on local planning policy, regulatory support, technical feasibility, market support and stakeholder input. The preliminary checklist analysis was edited after site visits, stakeholder meetings, and conversations with city staff. This information was then translated into an overall assessment of sustainable neighborhood performance.

Based on the in-field assessment, planning document review, various stakeholder meetings, the Global Green team estimated which LEED-ND credits were “Likely,” “Possible with Effort,” “Unlikely” to be achieved, or “Not Applicable,” considering existing conditions, technical feasibility, policy readiness, financial burden, and applicability to neighborhood conditions. The bar graph summary identifies the overall level of sustainable neighborhood performance for South City. Many credits fall into the “Likely” category, and of the remaining credits, a significant percentage fall within the “Possible with Effort” category, which shows the large potential for improving the sustainability of the neighborhood, specifically by pursuing the high-priority recommendations described in this report.

The summary table below shows the numeric values extrapolated from the percentage of credits identified as “Achievable” below. The recommendations listed in the previous pages are largely a response to LEED-ND criteria which achieving was identified as “Possible with Effort” by the assessment team. While these values do not correlate exactly to specific LEED-ND points, they provide an estimate of the neighborhood’s potential level of future achievement. It should be noted that this is a rough measure of performance and not an exact representation of the neighborhood’s level of possible certification. It should also be noted that all the prerequisites must be achieved if certification will be pursued. While recognizing these constraints, the categories generated through the assessment serve as a useful metric for estimating formal LEED-ND certification. Given the presumption that all those designated as “Achievable” would be met, providing a baseline point tally of 43, and those listed as “Possible with Effort”, are aggressively pursued and achieved, affording an additional 37 points, the analysis shows that the South City Neighborhood would likely earn a rating of Gold from the USGBC.

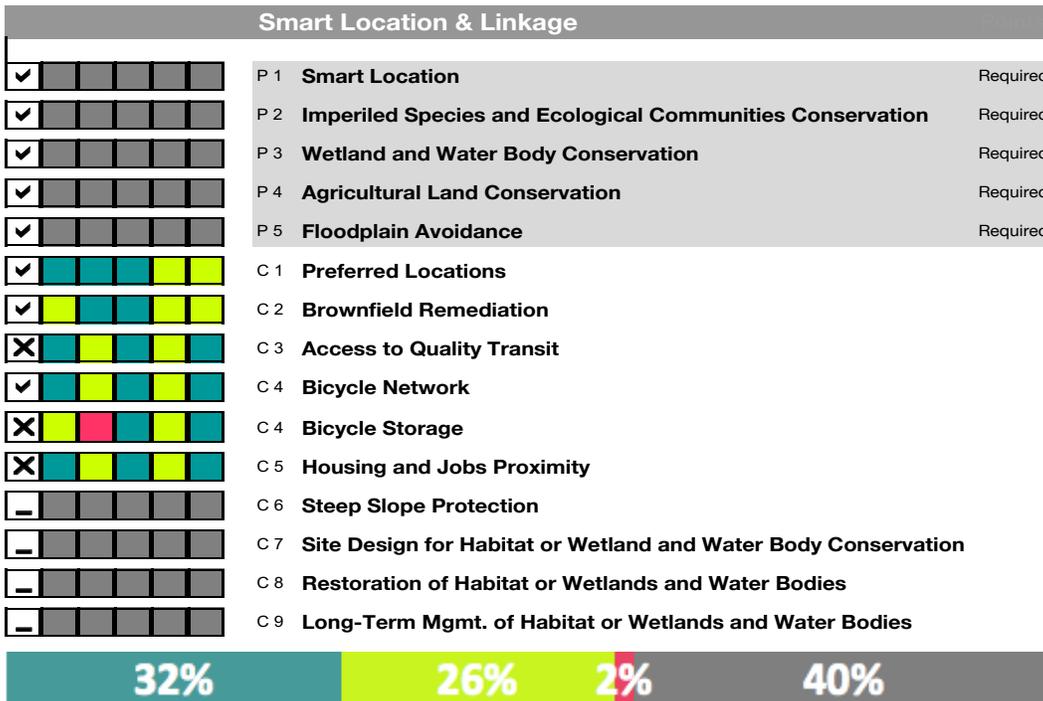
	Total	Achievable with Current Conditions	Possible with Effort
Smart Location And Linkage	27	9	7
Neighborhood Pattern and Design	44	25	13
Green Building and Infrastructure	29	9	17
	100	43	37
<u>LEED-ND Certification Thresholds:</u>			
	Certified: 40-49	Silver: 50-59	Gold: 60-79
			Platinum: 80+

# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical Feasibility
Market Support
Neighborhood Need/ Stakeholder Input

## South City, Memphis, Tennessee

Legend	
✓	Achieved
?	Unknown
X	Not Achieved
-	Does not exist/ NA
■ (Teal)	Explicit support/ no technical issues
■ (Yellow)	Lack of explicit support/ minor technical issues
■ (Red)	Opposition/ significant technical issues
■ (Grey)	Not Applicable



### Smart Location and Linkage

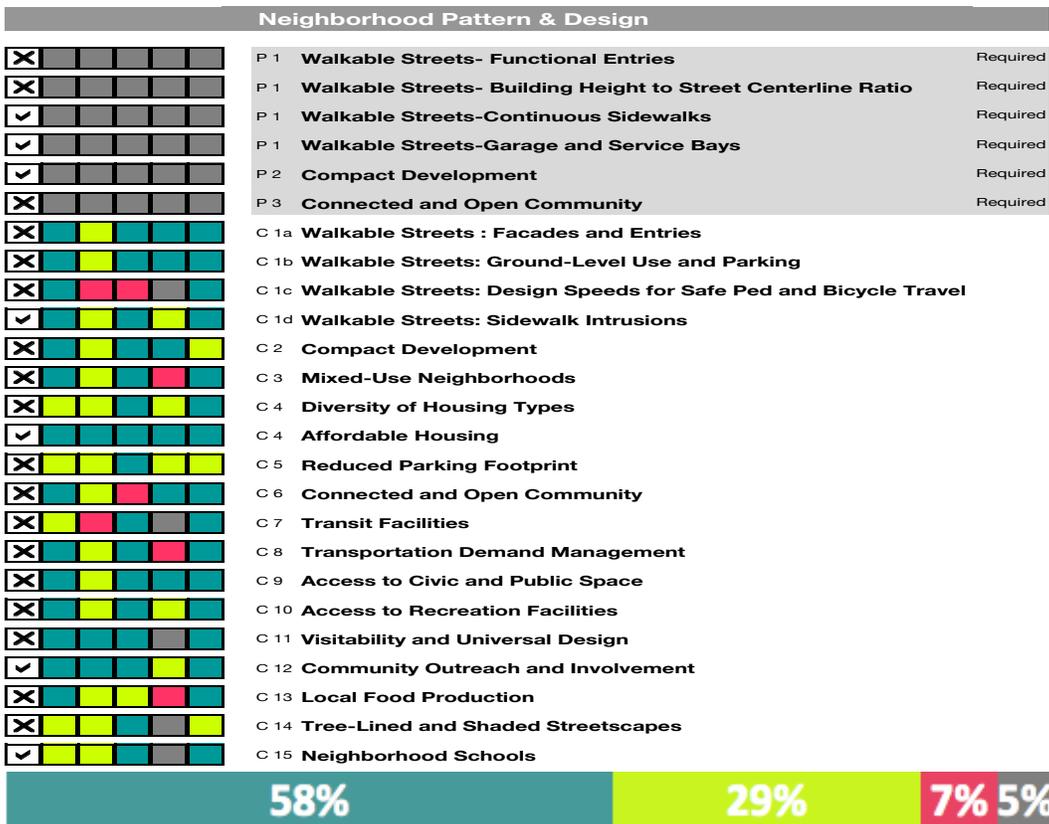
Smart Location and Linkage focuses primarily on existing site conditions to ensure that developments are not located in floodplains, on steep slopes or cause damage to ecological communities or local water bodies. Because nearly all of the South City neighborhood is previously developed, and no sensitive habitats to conserve lie within the study area, many of the goals of this credit category will be met with limited intervention. One challenge that will take much more effort is ensuring the clean-up of brownfields in the neighborhood.

# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical Feasibility
Market Support
Neighborhood Need/ Stakeholder Input

## South City, Memphis, Tennessee

Legend	
✓	Achieved
?	Unknown
X	Not Achieved
—	Does not exist/ NA
■ (Green)	Explicit support/ no technical issues
■ (Yellow)	Lack of explicit support/ minor technical issues
■ (Red)	Opposition/ significant technical issues
■ (Grey)	Not Applicable



### Neighborhood Pattern and Design

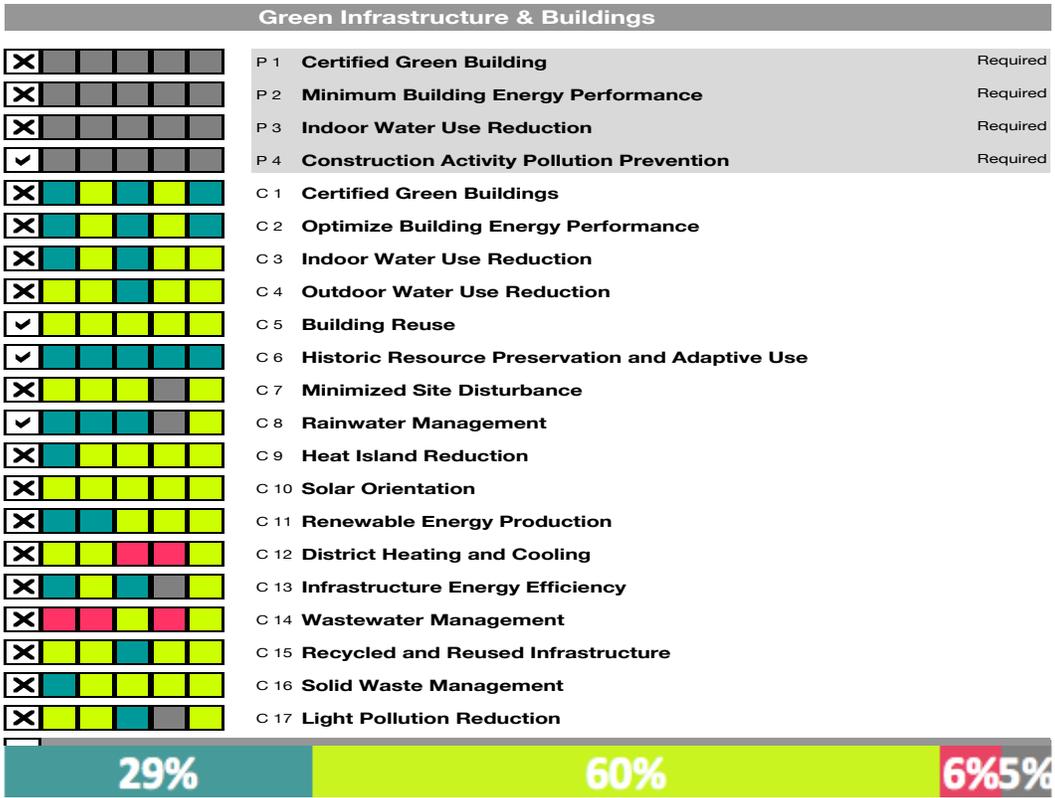
Neighborhood Pattern and Design aims to influence the physical layout and design of the community to yield walkable neighborhoods with a variety of land use types.

# Sustainability Assessment

Baseline Conditions
Local/Regional Planning Priority
Regulatory Support
Technical Feasibility
Market Support
Neighborhood Need/ Stakeholder Input

South City, Memphis, Tennessee

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X	Not Achieved
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■ (Red)	Opposition/ significant technical issues
■ (Grey)	Not Applicable



## Green Infrastructure and Buildings

Green Infrastructure and Buildings seeks to optimize individual buildings and surrounding infrastructure systems to reduce their energy and water consumption and associated emissions.

# Appendix

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## A. LEED for Neighborhood Development Credit Categories

### Smart Location and Linkage [SLL]:

SLL focuses on preserving the environmental characteristics inherent to the site such as water body and steep slope protection and influencing development patterns to reduce sprawl and automobile dependence. Credits in this category encourage locating new developments near city centers with robust public transportation options and sites that have been previously developed or are immediately adjacent to existing development.

### Neighborhood Pattern and Design [NPD]:

NPD influences the physical layout and design of the community in question through minimum thresholds for density, internal and external connectivity, and characteristics of a walkable community such as continuous sidewalks or building frontages that face public streets. Credits in this category reward projects that have nearby civic, educational and recreational facilities, limited surface parking and have transportation facilities complete with maps and bicycle racks.

### Green Infrastructure and Buildings [GIB]:

GIB emphasizes the importance of the optimized performance of structural systems and city infrastructure through minimum building energy and water efficiency, water-efficient landscaping and on-site renewable energy production. Credits in this category promote the adaptive reuse of existing buildings, on-site stormwater management, recycled content in infrastructure such as roadbeds and energy efficient traffic lights, street lights and water pumps.

For more information, please visit [www.usgbc.org](http://www.usgbc.org)

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