



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 St. Louis, Global Green used the tool as a means to evaluate existing conditions and plans for the Near North Side 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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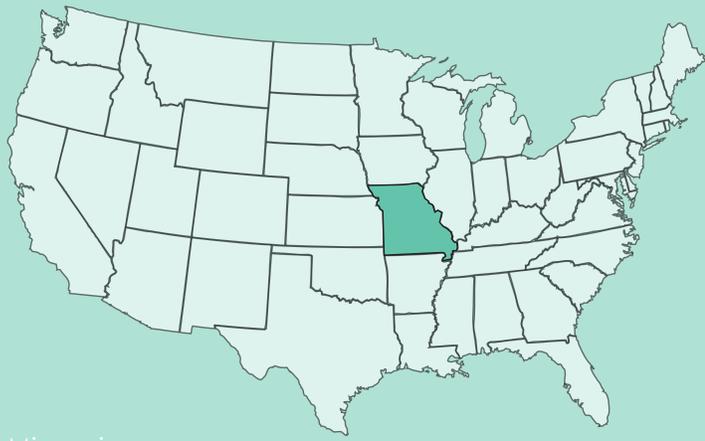
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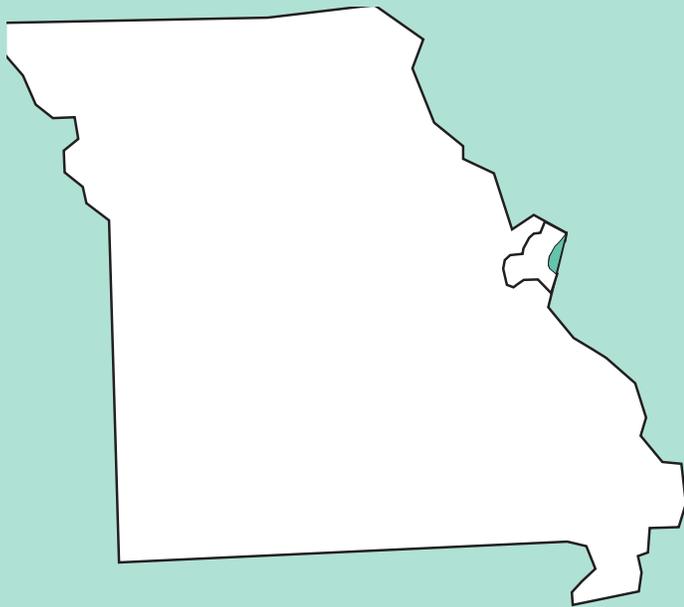
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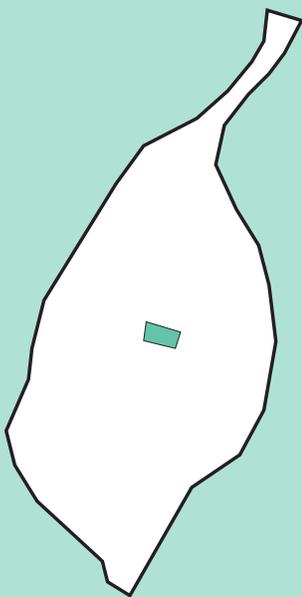
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Missouri



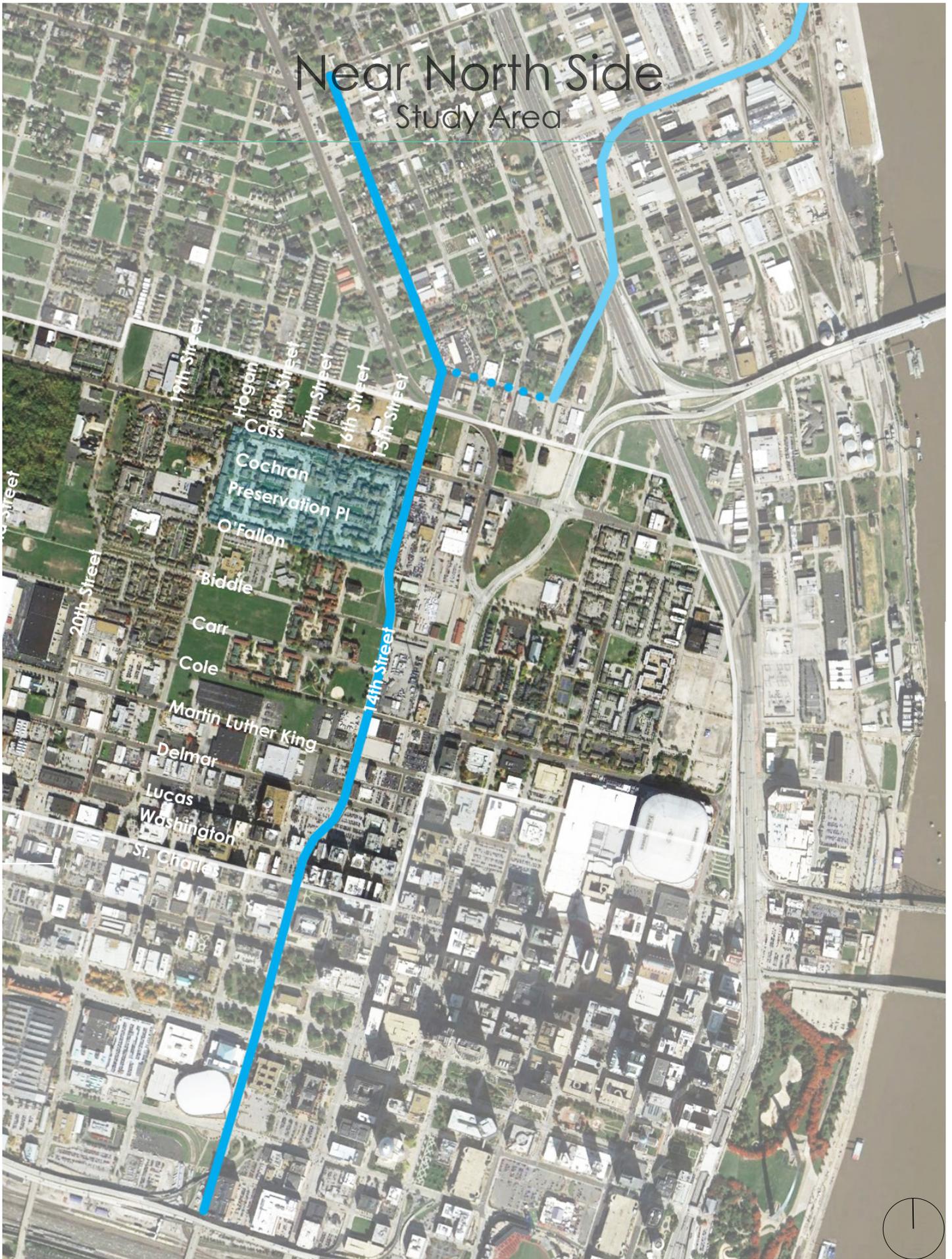
City of St. Louis



Near North Side



Near North Side Study Area



Sustainable Neighborhood Assessment Process

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 during future weather events. 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 each block of 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 Near North Side (NNS) neighborhood can be found on pages 18-21.

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 which aim to realize a more resilient and sustainable future for NNS. 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



1. Parks and Open Space 2. Proximity to Downtown 3. Neighborhood Schools 4. Walkable character and tree-lined streets

Neighborhood Background

The Near North Side (NNS) neighborhood is located in St. Louis, Missouri. Within it lies the Preservation Square housing development which is the focus of this assessment. Preservation Square developer, McCormack Baron Salazar (MBS) plans to seek Stage 1 LEED-ND Certification to complement the Choice Neighborhood Planning initiative currently being implemented by Urban Strategies, a national non-profit that implements place-based human capital development strategies in public housing communities that are undergoing comprehensive physical revitalization. In order to assess the neighborhood's sustainability as it directly affects the Preservation Square site, Global Green and MBS established a study area that is bounded by Mullanphy St. to the north, 14th St. to the east, St. Charles St. to the south, and Jefferson Ave. to the west. This report identifies specific LEED-ND prerequisites and credits that will require attention in the immediate to near-term in order to successfully meet certification.

The Near North Side neighborhood of St. Louis arose out of the influx of European immigrants to St. Louis in the 1840s. The area remained primarily white European until post-civil war reconstruction when its population more than doubled with African-Americans migrating from the South. This area has a long history of public housing, including arguably the most infamous public housing project ever built in the United States, Pruitt-Igoe. The area experienced stark disinvestment over the 19th century, and today it remains primarily affordable housing developments of varying conditions, with the Preservation Square currently in greatest need of revitalization. As of 2013 census data, the population residing in the Near North Side is 96% Black, and the population of Preservation Square is 99.7% Black, which shows very low diversity and demonstrates the effects of physical and perceived isolation.

The neighborhood has a pleasant, walkable character composed of large and well-maintained street trees, continuous sidewalks, and building entrances facing the public right-of-way. Generally the area is well-kept and exhibits good maintenance of public spaces. The design and configuration of townhouse units in the developments adjacent to Preservation Square is more that of a single-family neighborhood than of a multi-family apartment community. The streetscapes in the overall neighborhood are not dominated by parking, due to the location of parking in the interior of parcels. Good connectivity through the neighborhood is provided for pedestrians and cyclists, but access for vehicles is highly constrained due to several closed streets and cul de sacs, particularly in Preservation Square.

The neighborhood benefits from having a number of schools in close proximity to the residential areas. These include the KIPP Charter school in the former Pruitt Middle School, Jefferson Elementary School, and the Early Learning Center. It also includes several parks that meet the needs of a range of ages, from play structures for young children to soccer fields for older children and young adults, but very little exists currently for indoor recreation or structured activities for teens or seniors. The parks and outdoor features would likely be utilized more if residents felt higher safety in the neighborhood. (continued on page 8)

Neighborhood Challenges



1. Poor recreation options 2. No crosswalks across 4-lane street 3. Physical, visual, and perceived barriers to downtown 4. No connections to and through neighborhood 5. Lack of a neighborhood center and space to gather

Neighborhood Background Continued

According to feedback from the community meeting and resident surveys responses compiled by Urban Strategies, crime and safety are the largest challenges facing the neighborhood, and prevent residents from participating in community efforts. The Near North Side is severely lacking in retail, services, and jobs within the neighborhood footprint. This leads to the leakage from the local economy to surrounding areas where necessary goods and services are located, out of walking or biking distance.

Recommendation Approach and Strategy

The recommendations presented over the following pages were developed through careful study of regional and local planning documents, city staff and 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.

Four key overarching themes guide the specific recommendations:

- 1) Strengthen Connections to Downtown St. Louis,
- 2) Neighborhood Center and Services,
- 3) Community Health & Safety,
- 4) Green Building Standard

Strengthen Connections to Downtown identifies opportunities to enable a more efficient connection to downtown through public transit, bicycle connections and pedestrian amenities. Neighborhood Center and Services highlights the need to forge cohesion amongst the residents of Preservation Square and throughout the Near North Side neighborhood through the creation of a neighborhood center and commercial corridor that would naturally allow interactions and relationships to form among residents. Community Health & Safety highlights the persistent feedback we received from residents with regard to their safety in Preservation Square. It focuses on immediate improvements that can be made to instill a better sense of safety in residents and introduces potential partnerships and programming that can take place, once the basic need of safety is met. Green Building Standard focuses on establishing criteria to integrate resource efficiency and health into the design and construction practices used for Preservation Square through energy and water efficiency, proper ventilation, and site planning strategies to capture stormwater and reduce the urban heat island effect.

Recommendations

1 Strengthen Connections to Downtown St. Louis	2 Neighborhood Center and Services
3 Community Health and Safety	4 Green Building Standard

Strengthen Connections to Downtown St. Louis

The NNS neighborhood is situated only four blocks north of Downtown; however, the character of development between the neighborhood and Downtown create a barrier for pedestrians and cyclists. On the eastern border of the Near North Side, 14th street provides access to multi-modal transit stops and to downtown, however existing streetscape conditions limit connectivity and walkability. Bus stops are currently in various states of disrepair, some completely lacking shelter. Cycling along 14th street is unprotected with a shared-lane marking alongside vehicular traffic speeds of 35 mph. The current vehicular access into Preservation Square isolates it from surrounding communities and neighborhood amenities. There is only one entrance, from the north, and the interior streets do not connect to the east or west. This creates an inward-orientated layout and sense of separation from the surrounding developments that is more like that of a suburban apartment community than of an urban neighborhood. The dead end streets, or cul-de-sacs, produce awkward residual public spaces that are not well-programmed or used and can serve as locations where unwanted or illicit activities could take place.

Using LEED-ND as a guide reveals opportunities to improve pedestrian, cyclist, and transit rider accommodations along 14th street, parallel streets to the north and south, and within Preservation Square. The following action items would create stronger and safer physical links for the residents of the Near North Side to jobs and amenities of Downtown St. Louis.



Improved transit facilities are needed especially on 14th Street to increase connectivity to downtown.

Action Items

- 1. Transit Facilities:** the LEED-ND credit values safe, convenient, and comfortable transit waiting areas. Shelters must be covered, be at least partially enclosed to buffer wind and rain, have seating and illumination, and have signage displaying transit schedules and route information.
- 2. Bicycle Facilities:** In order to comply with the LEED-ND credit and to support citywide bicycling efforts of partners such as TrailNet and Great Rivers Greenway, Preservation Square should be located on an existing or planned bicycle network extending at least 3 continuous miles and connect to diverse uses such as jobs, grocery stores and restaurants.
- 3. Planned retail corridor along 14th Street:** should adhere to LEED-ND prerequisite and credit: Walkable Streets requirements to ensure an engaging streetscape, connectivity, and continuous sidewalks. Prerequisite requirements include:
 - 90% of new buildings having a functional entry connected to a sidewalk onto the circulation network.
 - At least fifteen percent of the block length has a minimum building-height-to-street-centerline ratio of 1:1.5.
 - Continuous sidewalks at least 8 feet wide are provided along both sides of 90% of the circulation network block length within the project.
 - No more than 20% of the block length of the circulation network may be faced directly by garage and service bay openings.
- 4. Walkable Streets:** credits to pursue for Preservation Square include:
 - Functional entries to the building occur at least at an average of 75 feet or less.
 - All ground-level retail, service and trade uses that face a public space have clear glass on at least 60% of their façades between 3 and 8 feet.
 - No more than 40% or 50 feet (the lesser of the two) of the façade along a sidewalk is blank.
 - Windows facing the circulation network must be kept unshuttered at night (stipulated in covenants, conditions, and restrictions).



14th Street
looking toward
downtown.

Neighborhood Center and Services

The predominant land use in the Near North Side neighborhood is residential and is organized in a series of individual developments. While there is cohesion in the design and connections among the residential areas, the neighborhoods lack a well-defined, shared, central space, in addition to the previously discussed severe lack of retail, services, and jobs. A neighborhood center, such as “the beating heart” described in the design plans provided by Urban Design Associates (UDA) at 16th Street and Preservation Place, if established, would provide a natural location for residents to both create a stronger sense of community identity and to gather for events, festivals, and informal gatherings. Action items below highlight specific LEED-ND credits to consider early in the planning of neighborhood improvements such as the neighborhood center and proposed retail corridor.



The Innovative Concepts Academy is one of many educational institutions in the NNS

Action Items

- 1. Access to Civic and Public Space:** this credit requires that 90% of planned and existing dwelling units and nonresidential use entrances be within a ¼ mile walk of at least one civic and passive use space. In the Near North Side neighborhood there are several spaces that provide civic functions such as providing places for meetings or events. These include the Flance Center and Innovative Concept Academy. However there is not a space that is designed specifically for use by the larger neighborhood, thereby perpetuating the sense of disconnection amongst the smaller housing developments within NNS. The redevelopment of Preservation Square provides potential to incorporate space that can connect the entire NNS neighborhood, through “The Beating Heart” concept described in UDA’s plans.
- 2. LEED-ND awards proximity to jobs for projects with affordable housing:** whose geographic center is within ½ mile walking distance of existing full-time equivalent jobs whose number equals or exceeds the number of dwelling units in the project. Despite proximity to Downtown St. Louis, the Near North Side is not within the ½ mile walking distance buffer of most of those jobs and significant barriers keep residents from safely walking or biking out of Preservation Square. The revitalization of Preservation Square has the opportunity to provide jobs and services through the commercial corridor plans along 14th Street.
- 3. Mixed-Use Neighborhoods:** this credit ensures that at least 50% of dwelling units are within ¼ mile walking distance of at least 4 diverse uses. For Preservation Square, the vital uses that are currently lacking nearby include grocery store, bank, pharmacy, and community center.

Community Health and Safety

The planning and renovation efforts for Preservation Square being completed through the Choice Neighborhoods Planning Grant are in-line with national best practices for sustainable neighborhood design. Gaining insight into the specific needs of the community, and thus being able to design for these needs, appears to be challenging due to residents' persistent concerns related to safety and crime. While several representatives of neighborhood organizations participated in the community workshop as part of the Sustainable Neighborhood Assessment, there was very little representation by residents. It will be critical to identify outreach methods that can engage the current residents of Preservation Square so that the design can best reflect the voices of the residents on what should be provided to improve the quality of the development and surrounding neighborhood. Workshop attendees reported that residents' sense of community and safety is dismal due to lack of property maintenance in and around the NNS, such as of sidewalk/security lighting, and lack of neighborhood services or programming. Small immediate investments in these areas would elicit larger returns going forward in terms of resident engagement and cohesion within the neighborhood. Improvements highlighted in the design plans presented by Urban Design Associates (UDA) include several elements that, if implemented, have the potential to gain points for LEED-ND Certification, technical requirements are included in the action items below.



Vacant lots on the north side of the neighborhood contribute to perceptions of unsafe conditions within the neighborhood as well as to outsiders.

Action Items

- 1. Address safety concerns through improved exterior lighting:** for optimal human safety and comfort while complying with GIB Credit: Infrastructure Energy Efficiency which requires all new infrastructure (e.g. traffic lights, street lights, water and wastewater pumps) to achieve a 15% annual energy reduction below an estimated baseline energy use for this infrastructure.
- 2. Access to Recreation Facilities:** LEED-ND requires that a publicly accessible outdoor recreation facility at least 1 acre in area or a publicly accessible indoor recreation facility of at least 25,000 square feet lies within ½ mile walking distance of at least 90% of new and existing dwelling units and nonresidential use entrances.
- 3. Local Food Production:** For this credit category, Option 1 calls for permanent and viable growing space of at least 60 square feet per dwelling unit within the project based on project density. It also requires resources such as fencing, watering systems, garden bed enhancements, secure storage space for tools, and pedestrian access for these spaces. If this credit will not be achieved through UDA's plans for a community garden located within "the beating heart", then explore Option 3, Proximity to Farmers Market: which calls for the the project's geographic center to be located within ½ mile walking distance of an existing or planned farmers market that will operate at least once weekly for at least 5 months annually.

Recommendation 4

Green Building Standard

Preservation Square developers, McCormack Baron Salazar, have committed to achieving Stage 1 LEED-ND Certification for Preservation Square. MBS utilizes Enterprise Green Communities (EGC) as their standard for all projects. The Choice Neighborhood Plan for Preservation Square poses some challenges in meeting the standards of Enterprise Green Communities, as only a portion of the units will be demolished and rebuilt, while the remainder will be renovated. The renovation plan will require careful attention to ensure that building systems meet minimum requirements of the standard. Additionally, at this time, Enterprise Green Communities is not an accredited rating system recognized by the LEED-ND Green Infrastructure and Buildings (GIB) prerequisite, Certified Green Building, which requires the project contain 1 whole building that is certified through a LEED or other approved rating system. USGBC and Enterprise are in the process of adapting Enterprise Green Communities to be an approved rating system, but the timeline for this is unknown. It is recommended to work closely with Enterprise staff on how to best apply the standard to the renovation projects and to ensure that minimum energy and water efficiency requirements under LEED-ND Green Infrastructure and Buildings are met.



Cahill Senior Center

Action Items

- 1. To meet LEED-ND Certified Green Building prerequisite:** design, construct, or retrofit one whole building within the project to be certified through a LEED rating system or through a green building rating system requiring review by a third-party certifying body that is accredited by an IAF-accredited body to ISO/IEC Guide 65. For Preservation Square specifically, a plan for designing 1 building to LEED standard is recommended, until it is determined if EGC is an approved building standard under LEED-ND.
- 2. Design/renovate 90% of all nonresidential, mixed-use, and multi-unit residential buildings four stories or more:** to comply with an average improvement of 5% for new buildings, 3% for major renovations, or 2% for core and shell buildings over ANSI/ASHRAE/IESNA Standard 90.1-2010, with errata if pursuing Option 1: Whole-Building Energy Simulation. If pursuing Option 2: Prescriptive Compliance ASHRAE 50% Advanced Energy Design Guide or Option 3: Prescriptive Compliance Advanced Buildings Core Performance Guide, comply with the mandatory and prescriptive provisions of ANSI/ASHRAE/IESNA Standard 90.1-2010, with errata. 90% of new single-family residential buildings and new multi-unit residential buildings three stories or fewer, must meet requirements of LEED for Homes v4 EA Prerequisite: Minimum Energy.
- 3. Design/renovate nonresidential, mixed-use, and multi-family residential buildings four stories :** or more to reduce indoor water usage by an average of 20% from a baseline. All newly installed toilets, urinals, private lavatory faucets and showerheads must be WaterSense labeled. Design 90% new single-family and multi-unit residential buildings three stories or fewer to use a combination of fixtures and fittings that would earn 2 points under LEED for Homes v4 WE Credit: Indoor Water Use.



Current Residence in Preservation Square

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, and 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 Preservation Square and the surrounding Near North Side neighborhood. 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 by pursuing the high-priority recommendations described in this report.

The summary table listed below shows the numeric values extrapolated from the percentage of credits identified as “Achievable”. 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 each of 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 34, and those listed as “Possible with Effort”, are aggressively pursued and achieved, affording an additional 24 points, the analysis shows that the Preservation Square/Near North Side neighborhood would likely earn a rating of silver from the USGBC.

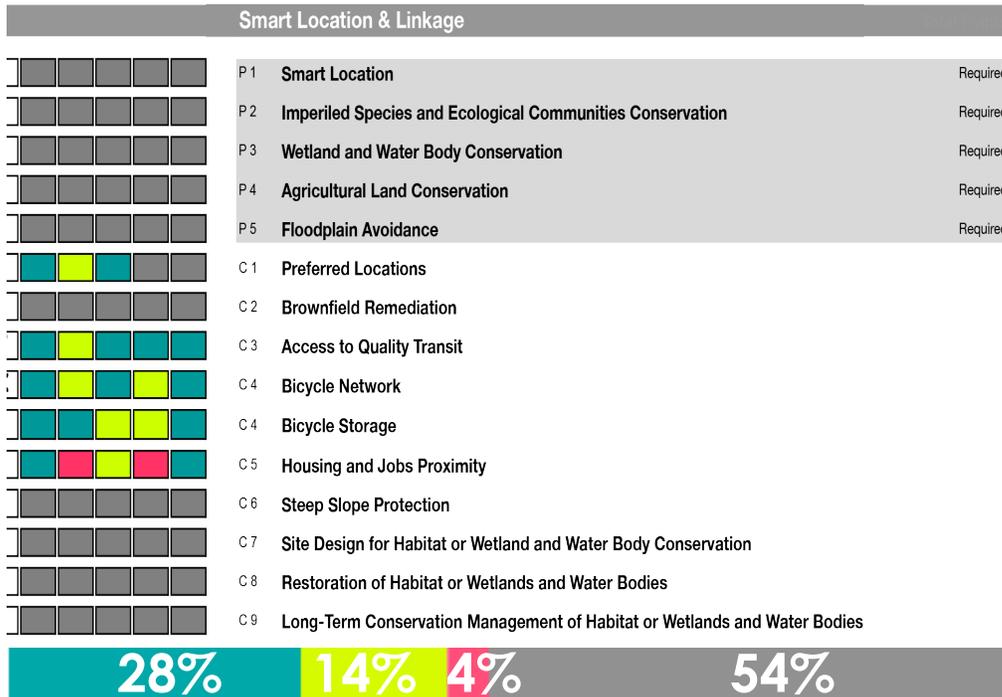
	Total	Achievable with Current Conditions	Possible with Effort
Smart Location And Linkage	27	8	4
Neighborhood Pattern and Design	44	28	10
Green Building and Infrastructure	29	13	12
	100	48	26
LEED-ND Certification Thresholds:			
	Certified: 40-49	Silver: 50-59	Gold: 60-79
			Platinum: 80+

Sustainability Assessment

Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

Near North Side, St. Louis, Missouri

Legend	
✓	Achieved
?	Unkown
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

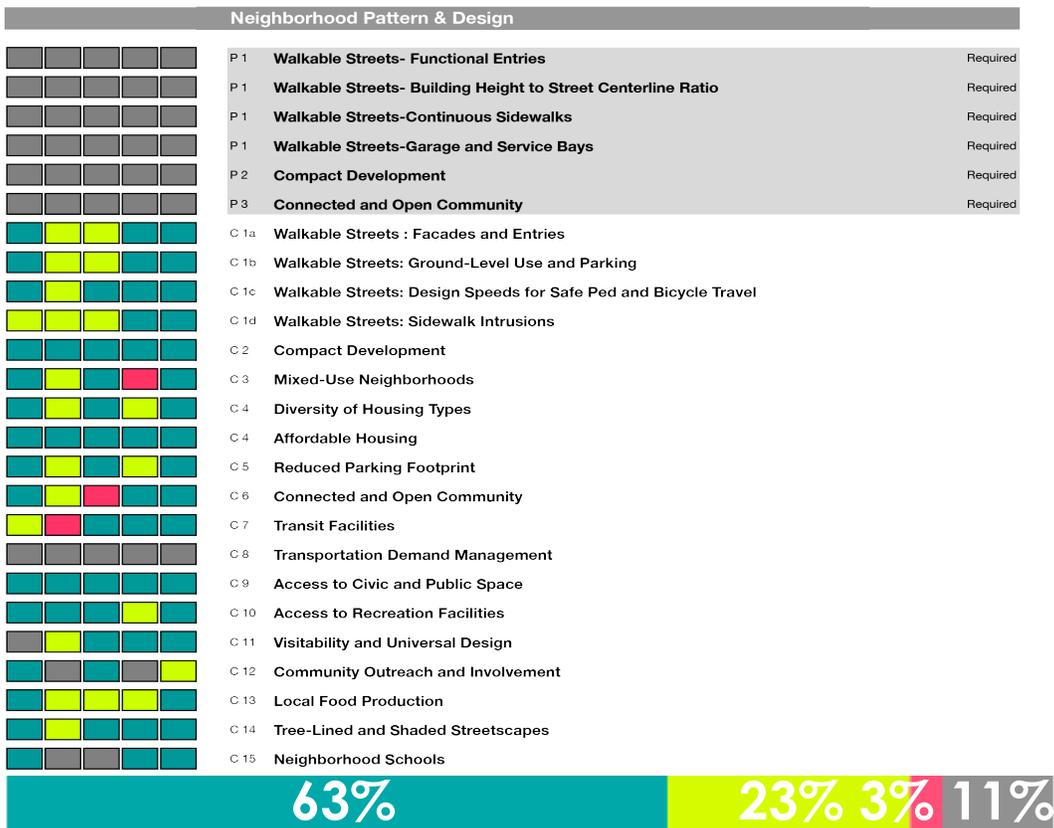
Smart Location and Linkage focuses primarily on existing site conditions to ensure that developments are not located in floodplains, on steep slopes or cause damage to ecological communities or local water bodies. Because nearly all of the NNS neighborhood is previously developed many of the goals of this credit category are met with existing conditions. One challenge highlighted, however, is the difficulty is the neighborhood's disconnect between housing and jobs.

Sustainability Assessment

Local/Regional Planning Priority
Regulatory Support
Technical feasibility
Market Support
Neighborhood Need/ Stakeholder Input

Near North Side, St. Louis, Missouri

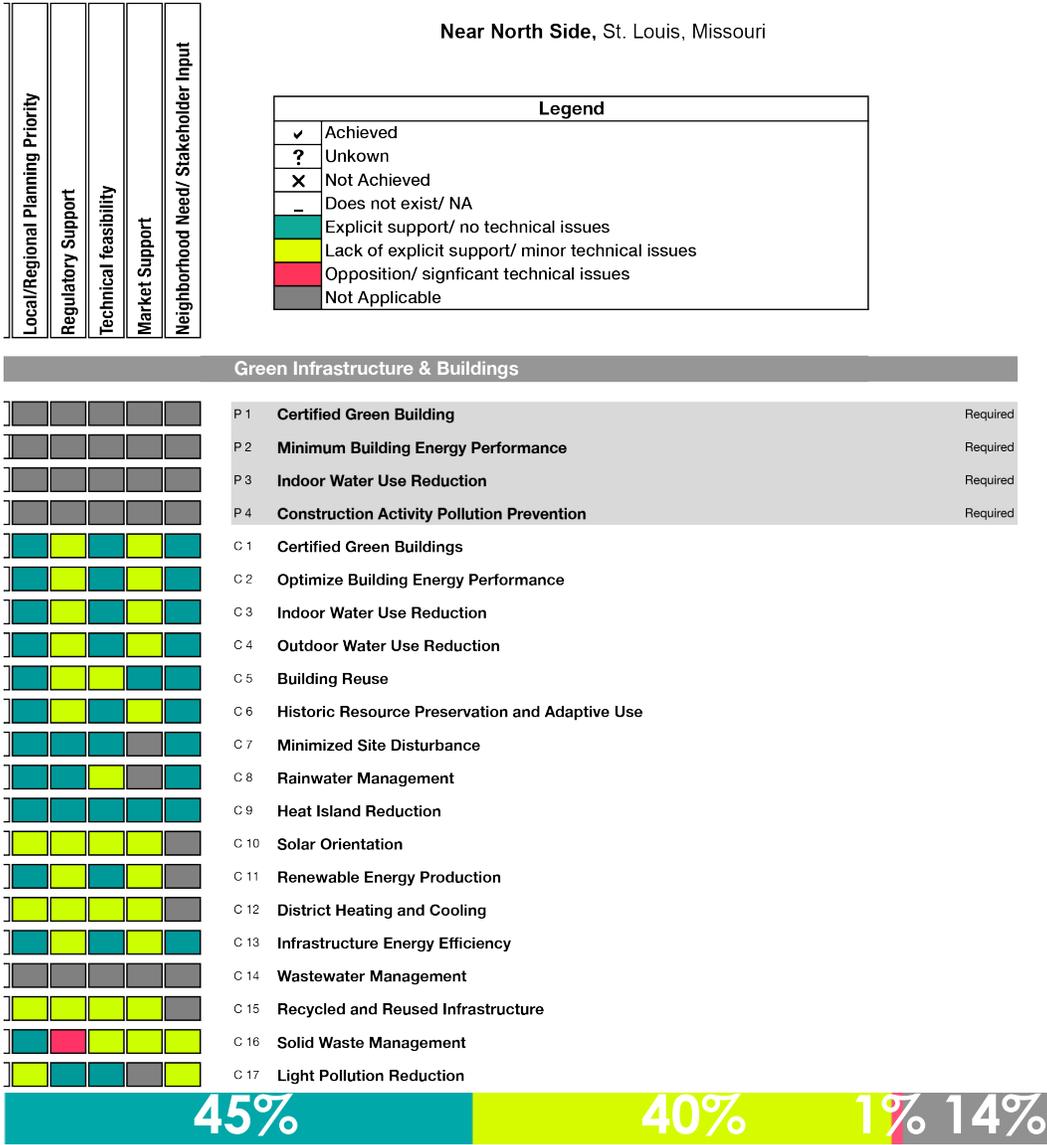
Legend	
✓	Achieved
?	Unkown
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-	Does not exist/ NA
Teal	Explicit support/ no technical issues
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Red	Opposition/ significant technical issues
Grey	Not Applicable



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. An analysis of the NNS neighborhood reveals many opportunities to improve walkability, connectivity, and access to diverse uses.

Sustainability Assessment



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. Particular attention should be given to optimizing water and energy efficiency strategies for all new buildings and streetscape improvements in the neighborhood. The redevelopment of Preservation Square using a Green Building Standard as a framework is a good example for future development in the neighborhood.

Appendix

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

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