Long Beach, CA
Sustainable Neighborhood Assessment

September 29 - 30, 2014

GLOBAL GREEN USA®

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 Long Beach, Global Green used the tool as a means to evaluate existing conditions and plans for the Virginia Village / Market Street 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

Global Green USA
Walker Wells | Tim Bevins | Krista Frank

Technical Assistance made possible with funding from EPA's Office of Sustainable Communities' Building Blocks for Sustainable Communities Grant Program.

Contents:

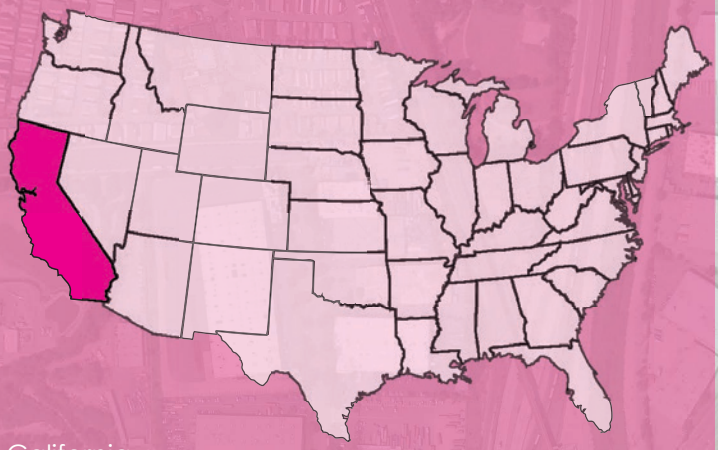
Process p.04

Neighborhood Background p.06

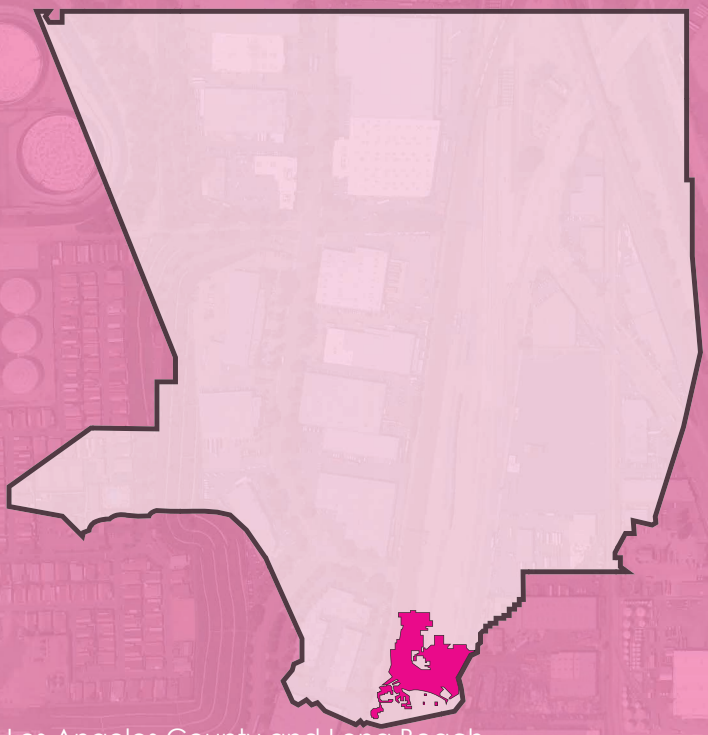
Recommendations p.08

Assessment p.18

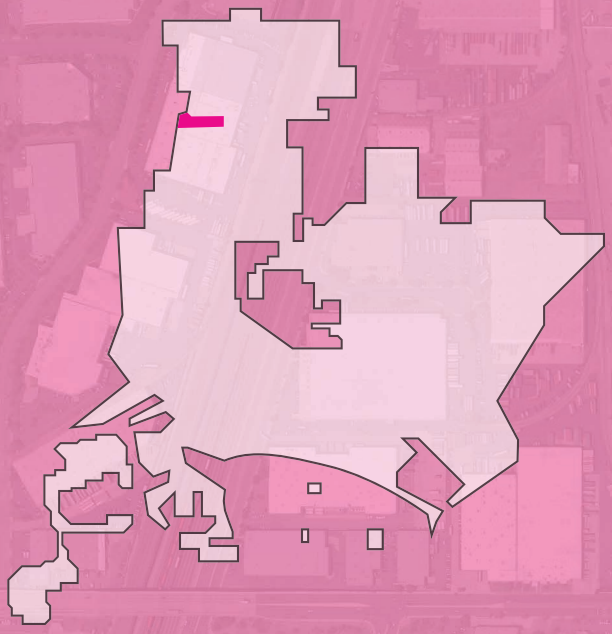
Appendix p.22



California



Los Angeles County and Long Beach



Long Beach and Virginia Village / Market Street

Virginia Village / Market Street

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 Virgina Village / Market Street 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 Long Beach. 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. Large City-owned parcels 2. Community parks and gardens 3. Unique neighborhood identity and character 4. Long Beach Boulevard streetscape improvements 5. Jane Addams Elementary School

Neighborhood Background

The Virginia Village/Market Street neighborhood is located in North Long Beach, California. Originally founded as Virginia City, the area was annexed by the City of Long Beach in 1924. For the purposes of this assessment, Global Green established a study area that is bounded by the Los Angeles River the west, Atlantic Blvd. to the east, 55th Street to the north, and 53rd Street to the south.

North Long Beach is a mixed-income community with modest, well-maintained single-family neighborhoods. The neighborhood is historically diverse and this continues today. In 2010 the predominant ethnicity was being Latino, followed by Black, Asian/Pacific Islander, and White. The neighborhood is home to low- and moderate-income residents, with over three quarters of the students at neighborhood schools being eligible for free or reduced lunch.

Streetscape conditions in North Long Beach generally range from fair to poor, with residential streets exhibiting a higher streetscape quality than commercial corridors. Many infrastructure improvements were constructed in the 1920s and have deteriorated. Market Street is generally lacking street trees, has a relatively narrow 5-foot sidewalk, and limited crossing opportunities between Atlantic Avenue and Long Beach Boulevard. Currently, access to the Los Angeles River at the western terminus of the Los Angeles River is possible but is not yet improved with public stairs, disabled and bicycle access, or lighting.

Several streetscape and façade improvements were recently completed at the historic intersection of Long Beach Boulevard and Market Street. Additional investments in infrastructure and urban design are being considered to further revitalize and vastly improve the function, identity, and sustainability of the neighborhood.

An upcoming, potentially catalytic project for the neighborhood is the Market Street Pedestrian and Streetscape Enhancement Project. The City received a grant to implement complete street enhancements on Market Street to create a truly integrated multi-modal street environment for pedestrian, bicyclists, transit and cars. Planned improvements include sidewalk widening, bicycle facilities, transit stop enhancements, street trees, and storm water planters with drought tolerant planting. The project's purpose is to create an inviting environment, provide pedestrian linkages to adjacent neighborhoods, educational institutions and transit facilities, and assist residents and commuters in shifting to alternative modes of travel along Market Street. A second project that has the potential to benefit the neighborhood is construction of a restored wetland adjacent to the Los Angeles River between the existing DeForest Park to the north and the Dominguez Gap wetlands to the south. This will establish open space feature directly to the west of the neighborhood and improve bicycle access along the River to South Long Beach and the Pacific Ocean.

A number of civic, business, and non-profit organizations are active in the neighborhood, including the 8th City Council District Office, the Virginia Village Business Association, and the Addams and Dairy neighborhood associations are active in community. The City of Long Beach Department of Health and Human Services (DHHS) also has a long history of working with the North Long Beach community. The Coalition for a Healthy North Long Beach is a network of community partners, including representatives from DHHS, the Long Beach Unified School District, community-based organizations, residents, health services providers and city council representatives. In addition, the DHHS Healthy Active Long Beach program works with the Long Beach Unified School District and Long Beach Parks, Recreation and Marine in the area to promote healthy eating and physical activity. Other community partners include Bike 90800, Center for Families and Youth, St. Athanasius Church, and His Nesting Place.

Neighborhood Challenges

1. Scattered retail and few options for food or groceries on Market Street 2. Limited street trees throughout study area 3. Underutilized privately held parcels 4. Challenging pedestrian conditions 5. Lack of formal access to DeForest Wetlands from Market Street

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) Improve Transportation and Mobility, 2) Increase Community Health and Safety, 3) Strengthen Neighborhood Identify and Livability, and 4) Increase Building and Infrastructure Energy Efficiency.

The **Improve Transportation and Mobility** recommendation identifies opportunities to create a safer environment for pedestrians and cyclists and to enable a more efficient connection to the bus and light rail. Residents of the Market Street neighborhood have a number of transportation options including cycling, bus, and light rail. By improving the ability to access and move between these options the neighborhood can be better connected to greater Long Beach and to the shopping, employment, education, and recreation amenities in nearby neighborhoods. **Community Health and Safety** highlights the potential to increase after school programs in schools, increase access to health foods, and identify strategies to address persistent concerns related to safety in specific portions of the neighborhood. **Neighborhood Identity and Character** recognizes the potential to further express the historic character and increase public amenities through strategic use of publicly owner parcels. **Building and Infrastructure Resource Efficiency** focuses on improving the environmental performance of individual structures, and specifying efficient products and equipment when upgrades are made to public infrastructure.

The community workshop was well attended and provided critical feedback which informed the recommendations in this document

Recommendations

1 Improve Transportation + Mobility	2 Community Health + Safety
3 Neighborhood Identity + Character	4 Building + Infrastructure Resource Efficiency

Recommendation 1

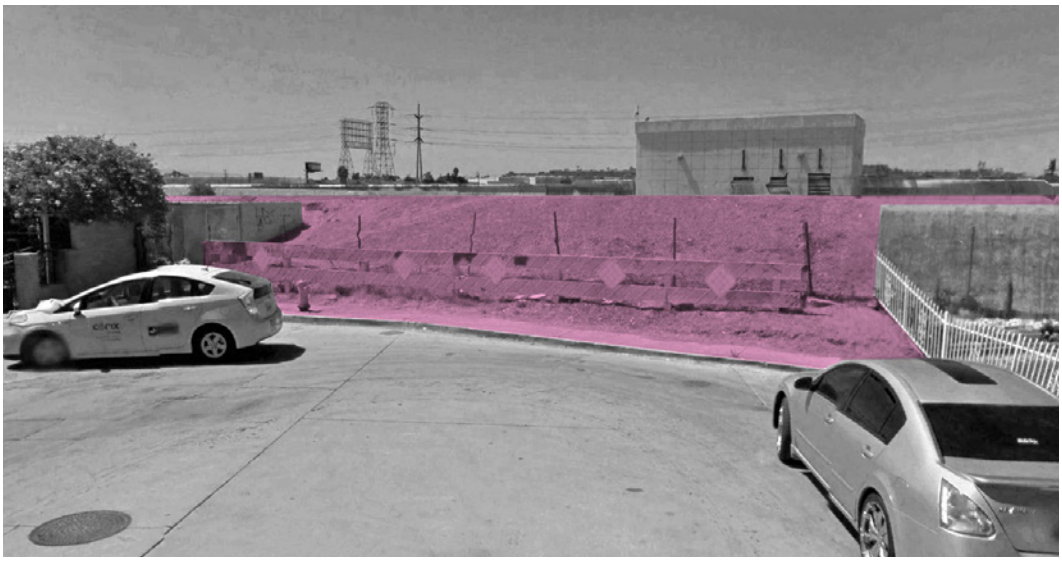
Improve Transportation + Mobility

One of the guiding principles of LEED-ND is to foster communities that cater to pedestrians and cyclists, thus enabling people to commute, recreate and complete errands without reliance on private automobiles. Neighborhood Pattern and Design (NPD) prerequisites 1, 2 and 3 work in concert to support this vision by requiring Walkable Streets, Compact Development and Connected and Open Communities.

The Market Street neighborhood benefits from a cohesive grid of medium sized blocks. The one exception is the area to the north that is currently occupied by a mobile home park. This street grid and the relatively narrow streets create a context that is supportive of walking, cycling, and slower speed vehicle travel. The City has already made significant strides in improving mobility through the introduction of one-way couplets to the north and south of Market Street.

Using LEED-ND as a guide reveals opportunities to further improve pedestrian, cyclist, and transit rider accommodations, along Market Street, parallel streets to the north and south, and at the key intersections and transit access locations at Long Beach Boulevard and Atlantic Boulevard. This includes the requirement in Smart Location and Linkage (SLL) credit 4, Bicycle Network and Storage that any improvements or introductions of new cycling facilities must be complimented by an adequate number of bicycle storage spaces - both secured, enclosed spaces for residential buildings as well as plentiful options for retail establishments.

In conjunction with physical improvements to the streets and sidewalks, there is also a need to continually maintain a strong local business community and to increase the quality and diversity of retail and service offerings in the neighborhood to further encourage that daily needs are met locally.

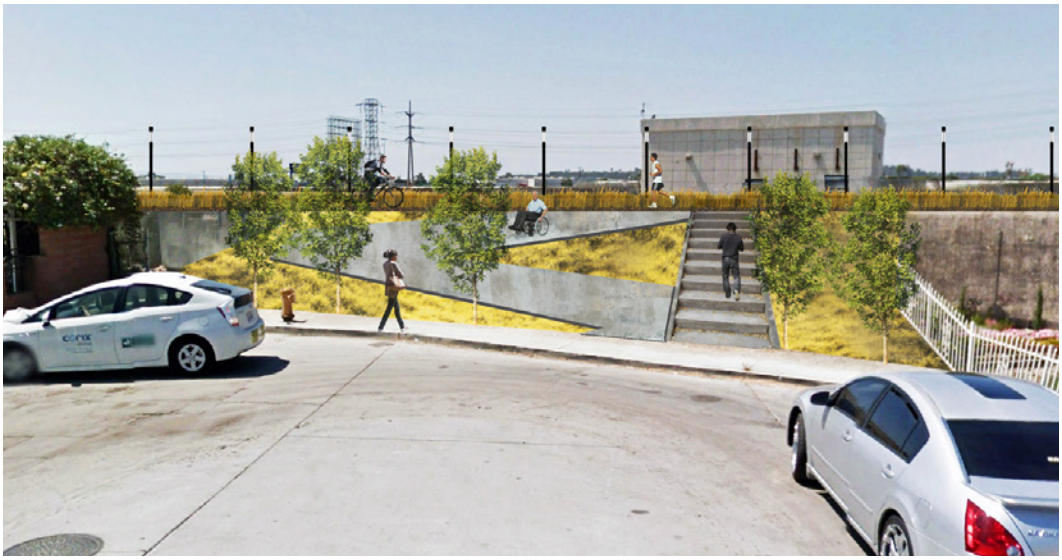


Action Items

1. **Provide direct access to the Los Angeles River and the DeForest Wetlands:** through public access stairway and ramp at the western terminus of Market Street. Formalizing and improving the quality of this existing access point will have a beneficial impact on safety while also connecting the community more strongly to the LA River Bike path and walking and running opportunities along the River. (Diagram below)

2. **Implement pedestrian, cyclist, and transit improvements on Market Street from the LA River to Atlantic:** This area has a narrow right-of-way that makes it difficult to provide the space needed for a safe bike lane. Sharrows are also not recommended in this area due to the speed of vehicular traffic. There are a number of other enhancements that can be made to Market Street in a fairly cost effective way through restriping, corner bulb outs, addition of planters, improving parking efficiency, and creating increased crosswalk clarity at the signalized and unsignalized intersections. These interventions could be completed without needing to change the current dimensions of the travel way or the location of curbs, gutters, or storm drain inlets. (Diagram p.12)

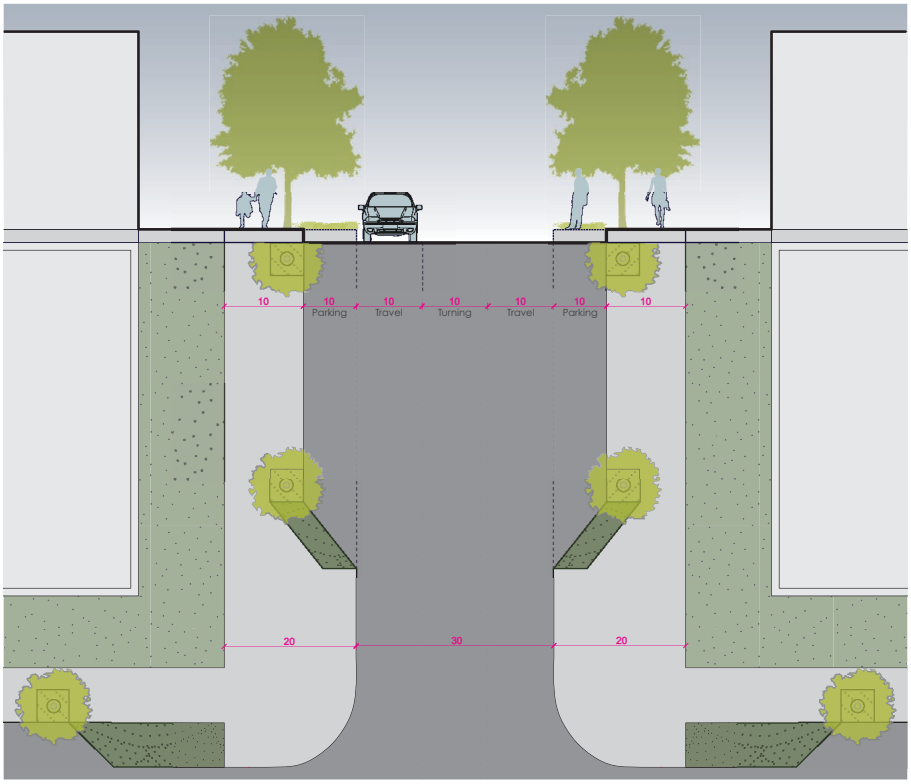
3. **Improve Cycling Facilities either on Market Street through restriping or through improvements to other east-west streets that are adjacent to Market Street:** East of Atlantic the right-of-way increases so that it is possible to have two travel lanes in each direction and a striped bike lane on each side.



Creating formalized access to the DeForest Wetlands at the end of Market Street would increase open space in a park-poor neighborhood

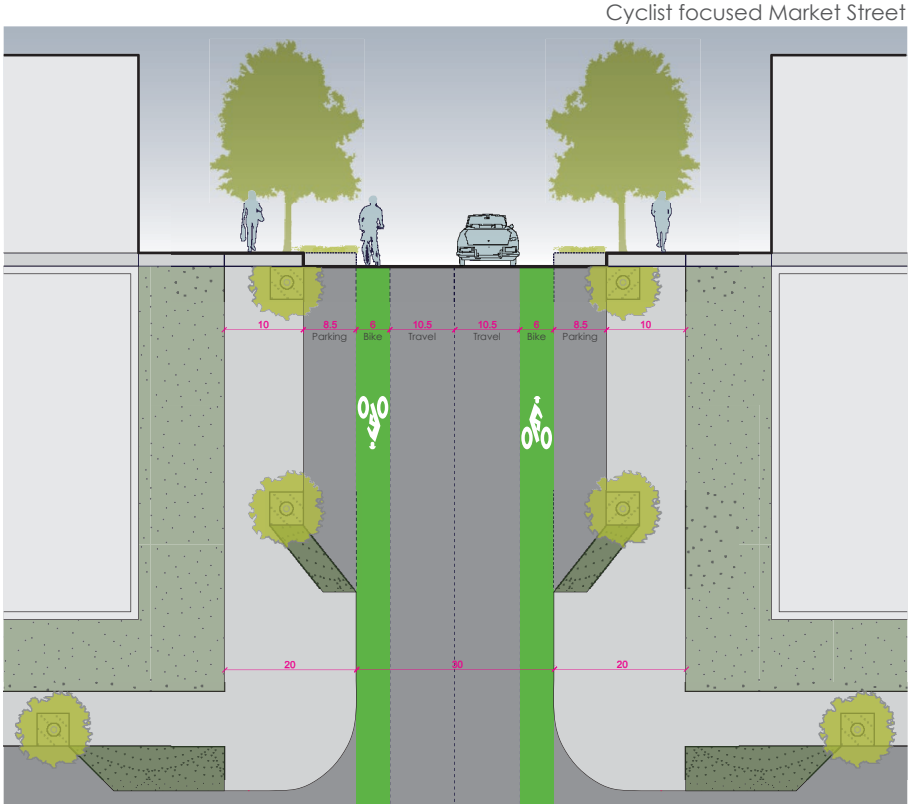
Recommendation 1

Improve Transportation + Mobility



Pedestrian / transit focused Market Street

Cyclist focused Market Street



Market Street

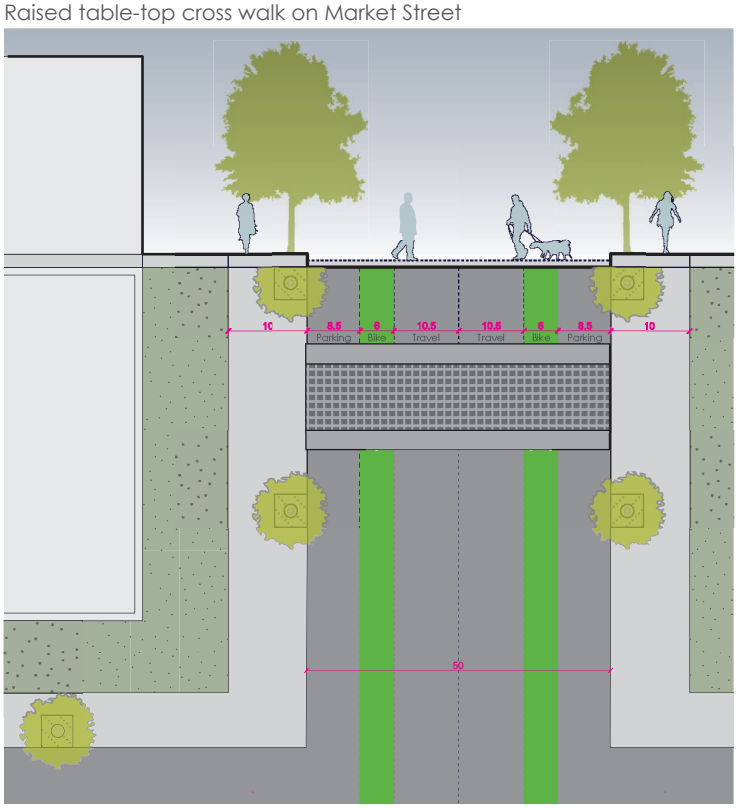
1

The 50 foot right of way on Market Street, is characterized by busy vehicular, bus and cyclist travel, and poorly designated pedestrian crossings. Several relatively minor improvements can improve conditions and contribute to a safer, more welcoming street condition in line with visions for the neighborhood's future. Based on feedback, the constraints of the street and professional experience, two options are presented:

1. Pedestrian focused - This approach introduces corner bulb-outs that shorten crossing distances for pedestrians, lend themselves to bus stops and offer storm management opportunities through the use of bioswales. This option yields good throughput as it maintains the flexibility of the existing turn lane.
2. Cyclist focused - This option maintains the bulb-outs discussed above, but removes the vehicular turning lane to accommodate Class 2 bicycle lanes in each direction. This shift will reduce speeds and increase safety, but may add to congestion.w

Additionally, we recommend the installation of raised table-top crossings at Pine and Locust Streets to further improve safety, especially for children walking to Jane Addams Elementary School. If dedicated cycling lanes are not provided on Market Street, consider accommodating cyclists on Louise and Plymouth streets.

Raised table-top cross walk on Market Street



Recommendation 2

Community Health + Safety

Recent research has demonstrated that there are strong connections between the design or the built environment and the health outcomes of residents. Feeling safe and secure at home and in a neighborhood are also linked to personal happiness and wellbeing. LEED-ND includes credits related to increasing the health and safety of communities through a combination of urban design strategies and providing access to health services and fresh food. These credits are included in the Neighborhood Pattern and Design section of the rating system in Prerequisite and Credit 1: Walkable Streets and Credit 3: Mixed Use Neighborhood Centers.

The objectives of a number of LEED credits are to create an active street life with "eyes on the street" so that people of all ages are able to move through the neighborhood without concerns about being exposed to safety concerns or risks. The application of these credits can be augmented by the use of Crime Prevention Through Environmental Design (CEPTED) guidelines. These physical design strategies often need to be combined with youth engagement and community education about how to minimize the risk of being exposed to a crime-related incident. The Market Street neighborhood benefits from a local public school and the school at St Athanasius Church. The schools enable children to attend school close to home and for the schools to serve a source of community unity. Older children are able to attend nearby middle schools. The schools offer after school programs, which are well-used by elementary schools students. Offerings for middle school and high school students are very limited however, as the neighborhood does not have a City of Long Beach recreation or youth facility. This can result in older children loitering or assembling in the hours after the school dismissal and the time their parents return from work. Given the shortage of local park space and the lack of a gym or other recreation facility, the ability to provide engaging after school activities for older children is challenging.

Another objective of LEED-ND is to offer a range of shopping and service options in the neighborhood so that the majority of day-to-day needs can be met locally by walking, cycling, or transit. In addition to convenience and reduction in transit-related resource use, there are health benefits related to regular physical activity that accrue to the residents. One of the services that is encouraged within the neighborhood centers is a health clinics. This is particularly important if there is not nearby access to more significant medical offices or to a nearby hospital.

Options for improving the health of the community is to increase access to fresh food by offering fresh fruit and vegetables at local markets or convenience stores. LEED-ND also encourages access to fresh food through Credit C13: Local Food Production, which requires either a local community garden of sufficient size to serve the neighborhood, a weekly farmers market, or access to a local CSA pick location.

Action Items

1. **Explore the possibility for the Elementary school to serve a location to pick up weekly CSA deliveries:** Having a central location for deliveries reduces the need for the CSA representatives to drive through the meeting for individual drop-offs and creates an opportunity for residents to interact with each other.

2. **Determine the feasibility of increasing the number of permitted mobile markets that serve the neighborhood:** Trucks and vans selling produce currently serve the neighborhood, but the quality of the food and possibly the options could be improved by engaging with these vendors to issue permits that ensure that food safety measures are being followed and by recommending other food choices that could be provided to increase the nutritional value of what is offered.

3. **Explore the possibility of establishing a weekly Farmer's Market in the neighborhood, possibly on the parking lot that is next to El Cortez:** The Farmer's Market could be scheduled for a time that the parking lot is not heavily used. Having a local farmer's market can also be a benefit to local businesses by attracting additional people to the neighborhood and is also a way for the urban farms in Long Beach to reach additional customers.

4. **Explore opportunities to better use the facilities at in the local parks, the open space at Deforest Wetlands project, or the possibility to use the open space at the Elementary School in the evenings and weekends:** Long Beach Unified could also explore options for expanding the types of programs that are offered after school in order to better match the needs and interests of older students.

The parking lot next to El Cortez on 53rd Street and Long Beach Boulevard holds potential as a centralized farmers market location for the neighborhood

Recommendation 3

Neighborhood Identity + Character

Recognizing, preserving, and enhancing the unique character of a neighborhood is a part of identify what types of sustainability strategies may be most relevant. LEED-ND recognizes the inherent value of historic buildings both from the perspective of the resource value of the embodied energy and from the cultural value to the community. This is reflected in Green Building and Infrastructure Credit 6: Historic Resource Preservation and Adaptive Reuse, which encourages the protection and continued use of older structures.

LEED-ND also encourages the investment in public rights of way and other publicly lots to provide amenities for the community. These can include streetscape improvements, pocket parks, parklettes, or community supportive uses such as childcare, clinics, job training facilities, community gardens, or affordable housing. There are several parcels in the neighborhood that are owned by the City or Long Beach Unified School District. The future use of these parcels warrants careful consideration to ensure that there is community benefit.

Historic structures in the neighborhood should be preserved and celebrated

3

Action Items

1. **Explore the potential to earn a local or national designation for the neighborhood as a historic district.**

2. **Include a requirement to provide public amenities as a condition of the sale of RDA lots, such as the lot adjacent to El Cortez. These could include the ability of the community to use the properties for events, streetscape upgrades, street tree planting, or green infrastructure to improve water quality.**

Recent streetscape improvements on Long Beach Boulevard can serve as a model for improvements required under sale of RDA lots

Recommendation 4

Building + Infrastructure Resource Efficiency

Buildings and infrastructure in urbanized areas account for over 40% of energy consumption and represent significant investments in materials and their associated embodied energy. Urban development also changes hydrological patterns and causes higher ambient temperatures through the urban heat island effect. LEED-ND addresses these issues primarily in the Green Infrastructure and Building category, through credits related to green building certification, energy and water efficiency, landscape water use reduction, stormwater management, heat island reduction, infrastructure energy and materials efficiency, and solid waste and recycling.

Any new construction in the Market Street neighborhood will be subject to the 2013 Title 24, Part 6 California Energy Code. This code is more stringent than the International Energy Conservation Code referred to in LEED ND, so all new buildings will meet and exceed the LEED ND standards regarding building energy use. The State CALGreen code addresses water efficiency of at least 20% improvement from federal standards, which is consistent with the LEED ND prerequisite. Long Beach also has a LEED policy for civic projects so new public facilities will be required to earn at least LEED Silver certification. The City of Long Beach also has a policy that large-scale new development meets the intent of the LEED rating system. Ideally all private property owners should be encouraged to consider green building rating systems such as LEED for new developments and to use state incentive programs such as Energy Upgrade California to improve the efficiency of existing buildings.

The City should also establish energy efficiency and resource efficient standards for the repair and replacement of public infrastructure such as sidewalks, streets, streetlights, and traffic signals. Green infrastructure recommendations include coordination with the Public Works Department regarding street repaving and/or sidewalk repair projects, to determine whether using permeable surfaces in the public right-of-way is feasible given the underlying soil profile. Furthermore, new public and private investment in sidewalks, streets, and parks spurred by new residential and non-residential building construction should implement rain gardens, bioswales, and other effective tools for implementing sustainable water management practices.

Action Items

1. **Provide technical assistance and incentives for new buildings to pursue LEED or Energy Star certification:** Assist owners of existing buildings in pursuing energy benchmarking and monitoring and in identifying rebate programs for energy audits and retrofits.

2. **Require new projects and major renovations to include low-impact development features** such as rain barrels, drywells, rain gardens, swales, and permeable paving when soil conditions allow. Explore opportunities to redesign existing parking lots to include retention areas or bioswales.

3. **Establish a citywide standard for efficient street lighting,** though LED bulbs or other efficient technologies that applies when new street infrastructure is installed.

4. **Public Infrastructure Standards:** Establish standards for recycled content for street paving, sidewalks, and streetscape features.

Low Impact Development features such as this bioswale located at Orange and 2nd Street should be required of new projects and major renovations

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 Long Beach. 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 35, and those listed as "Possible with Effort", are aggressively pursued and achieved, affording an additional 43 points, the analysis shows that the Market Street Neighborhood would likely earn a rating of gold from the USGBC.

	Total	Achievable with Current Conditions	Possible with Effort
Smart Location And Linkage	27	14	8
Neighborhood Pattern and Design	44	13	22
Green Building and Infrastructure	29	8	13
	100	**35**	**43**

LEED-ND Certification Thresholds:

Certified: 40-49 Silver: 50-59 Gold: 60-79 Platinum: 80+

Sustainability Assessment

Market St. Neighborhood, Long Beach, CA

Legend	
✔	Achieved
?	Unkown
✕	Not Achieved
–	Does not exist/ NA
	Explicit support/ no technical issues
	Lack of explicit support/ minor technical issues
	Opposition/ signficant technical issues
	Not Applicable

Baseline Conditions	Local/Regional Planning Priority	Regulatory Support	Technical feasibility	Market Support	Neighborhood Need/ Stakeholder Input		Smart Location & Linkage	Total Points
✔						P 1	**Smart Location**	Required
✔						P 2	**Imperiled Species and Ecological Communities Conservation**	Required
✔						P 3	**Wetland and Water Body Conservation**	Required
–						P 4	**Agricultural Land Conservation**	Required
–						P 5	**Floodplain Avoidance**	Required
✔						C 1	**Preferred Locations**	
✔						C 2	**Brownfield Remediation**	
✔						C 3	**Access to Quality Transit**	
✔						C 4	**Bicycle Network**	
✕						C 4	**Bicycle Storage**	
✕						C 5	**Housing and Jobs Proximity**	
–						C 6	**Steep Slope Protection**	
–						C 7	**Site Design for Habitat or Wetland and Water Body Conservatior**	
✔						C 8	**Restoration of Habitat or Wetlands and Water Bodies**	
?						C 9	**Long-Term Conservation Management of Habitat or Wetlands an**	

50% 30% 4% 16%

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 Market Street neighborhood is previously developed and the City has existing programs in place to restore the DeForest Wetlands, many of the goals of this credit category will be met with limited impact of habitats or water bodies. One challenge highlighted, however, is the difficultly of integrating bicycle facilities along Market Street.

Sustainability Assessment

Market St. Neighborhood, Long Beach, CA

Legend	
✔	Achieved
?	Unkown
✕	Not Achieved
–	Does not exist/ NA
	Explicit support/ no technical issues
	Lack of explicit support/ minor technical issues
	Opposition/ signficant technical issues
	Not Applicable

Baseline Conditions	Local/Regional Planning Priority	Regulatory Support	Technical feasibility	Market Support	Neighborhood Need/ Stakeholder Input			
Neighborhood Pattern & Design								
✔						P 1	**Walkable Streets- Functional Entries**	Required
✔						P 1	**Walkable Streets- Building Height to Street Centerline Ratio**	Required
✔						P 1	**Walkable Streets-Continuous Sidewalks**	Required
✔						P 1	**Walkable Streets-Garage and Service Bays**	Required
✔						P 2	**Compact Development**	Required
✔						P 3	**Connected and Open Community**	Required
✔						C 1a	**Walkable Streets : Facades and Entries**	
✕						C 1b	**Walkable Streets: Ground-Level Use and Parking**	
✕						C 1c	**Walkable Streets: Design Speeds for Safe Ped and Bicycle Trave**	
✕						C 1d	**Walkable Streets: Sidewalk Intrusions**	
✔						C 2	**Compact Development**	
✔						C 3	**Mixed-Use Neighborhoods**	
✕						C 4	**Diversity of Housing Types**	
✔						C 4	**Affordable Housing**	
✔						C 5	**Reduced Parking Footprint**	
✕						C 6	**Connected and Open Community**	
✕						C 7	**Transit Facilities**	
–						C 8	**Transportation Demand Management**	
✔						C 9	**Access to Civic and Public Space**	
✔						C 10	**Access to Recreation Facilities**	
✔						C 11	**Visitability and Universal Design**	
✔						C 12	**Community Outreach and Involvement**	
✕						C 13	**Local Food Production**	
✕						C 14	**Tree-Lined and Shaded Streetscapes**	
✔						C 15	**Neighborhood Schools**	
32%			52%			9%	7%	

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 Virginia Village / Market Street neighborhood reveals an underlying neighborhood structure which lends itself to walkability, but with many opportunities for improvement. Market Street requires the most careful attention- many of the core tenets of walkable urbanism are within reach if careful effort is made to prioritize building and streetscape improvements that prioritize pedestrian and cyclist safety.

Sustainability Assessment

Market St. Neighborhood, Long Beach, CA

Legend	
✔	Achieved
?	Unkown
✕	Not Achieved
–	Does not exist/ NA
	Explicit support/ no technical issues
	Lack of explicit support/ minor technical issues
	Opposition/ signficant technical issues
	Not Applicable

	Baseline Conditions	Local/Regional Planning Priority	Regulatory Support	Technical feasibility	Market Support	Neighborhood Need/ Stakeholder Input			
Green Infrastructure & Buildings									
✔							P 1	**Certified Green Building**	Required
✔							P 2	**Minimum Building Energy Performance**	Required
✔							P 3	**Indoor Water Use Reduction**	Required
✔							P 4	**Construction Activity Pollution Prevention**	Required
✕							C 1	**Certified Green Buildings**	
✕							C 2	**Optimize Building Energy Performance**	
✕							C 3	**Indoor Water Use Reduction**	
✕							C 4	**Outdoor Water Use Reduction**	
✔							C 5	**Building Reuse**	
✕							C 6	**Historic Resource Preservation and Adaptive Use**	
✔							C 7	**Minimized Site Disturbance**	
✔							C 8	**Rainwater Management**	
✕							C 9	**Heat Island Reduction**	
–							C 10	**Solar Orientation**	
✕							C 11	**Renewable Energy Production**	
–							C 12	**District Heating and Cooling**	
✔							C 13	**Infrastructure Energy Efficiency**	
✕							C 14	**Wastewater Management**	
✕							C 15	**Recycled and Reused Infrastructure**	
✔							C 16	**Solid Waste Management**	
✕							C 17	**Light Pollution Reduction**	
	28%			49%			1%	21%	

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. Virginia Village / Market Street neighborhood's location in California combined with Long Beach's Sustainable City Action Plan means that many of the efficiency standards in this category's prerequisites are satisfied by Title 24 and CalGreen standards. As the city plans and implements its improvements for North Long Beach, particular attention should be given to optimizing water and energy efficiency strategies for all new buildings and streetscape improvements on Market Street.

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

Global Green USA
Green Urbanism Program
2218 Main Street 2nd Floor
Santa Monica, CA 90405
www.globalgreen.org