Chapter 5

Sustainability

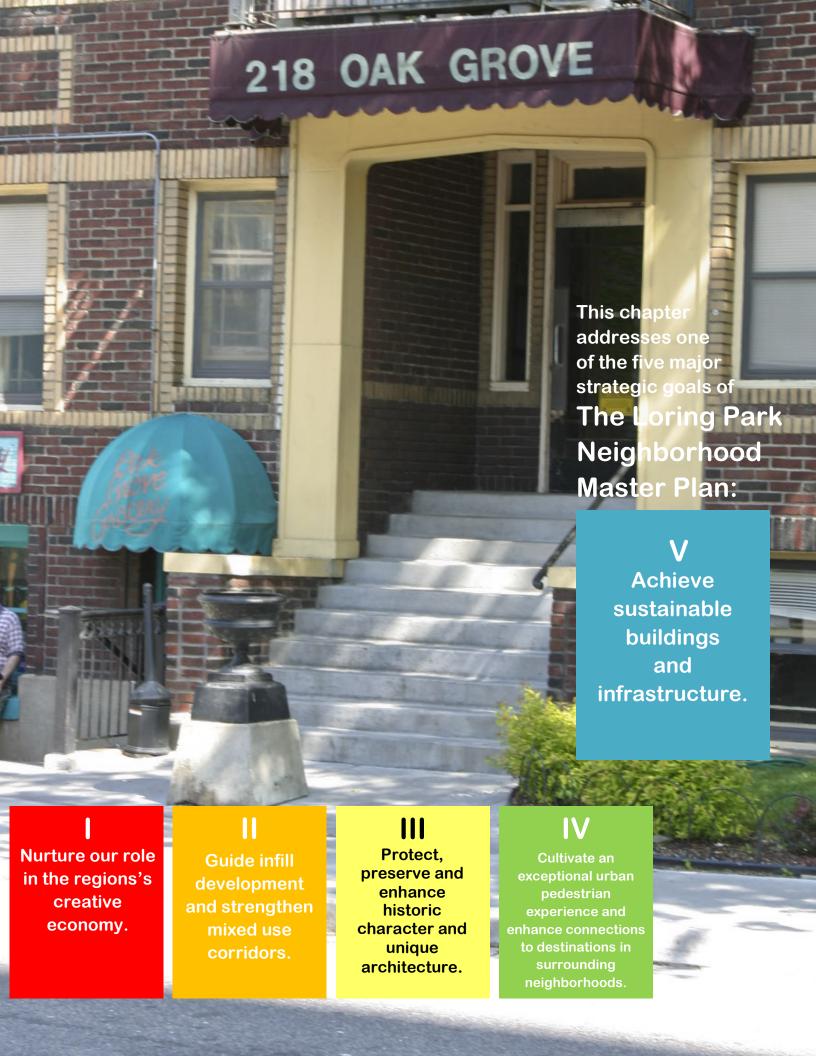
This chapter of the Loring Park Neighborhood Small Area Plan addresses long range sustainability of urban systems and the natural environment. The first section briefly addresses the Neighborhood within the context of the City of Minneapolis sustainability policy (Greenprint), the second presents the results of ongoing LEED for Neighborhood Development based sustainability analysis. The third section lays out a set of eight simple metrics to measure progress towards neighborhood specific goals:

Toward a Sustainable City

Measuring Progress in the Neighborhood

- > LEED for Neighborhood Development (LEED-ND)
- > The Loring Indicators

The lead for organization and implementation for many of the policy actions in this chapter will be driven by Citizens for a Loring Park Community and community stakeholders with assistance from the City of Minneapolis and other implementation partners, so their participation is implied although not stated in each action.





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Chapter 5 Sustainability

PDF files of this chapter and the entire master plan can be found at the City of Minneapolis Community Planning & Economic Development (CPED) webpage dedicated to approved city plans and at Citizens for a Loring Park Community (CLPC) webpage:

www.loringpark.org



Frontispiece: The stoops and balconies of Oak Grove Street on Loring Hill ...down into the Apartment District to LaSalle...stretching through Loring Village to Loring Greenway and to downtown... constitute a continuous sector of intact urban fabric that is truly unique in our region. Having a convenient walk to regional transit, churches, workplaces, Loring Park, major entertainment venues, etc. makes the neighborhood a truly exceptional urban place to live – and is a major reason the neighborhood scores so highly according to LEED-ND metrics which gives high marks for walkability.

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5.4	Guide Projects and Public Realm Investments Toward Achievement of Goals
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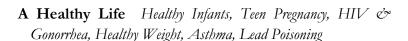
The Loring Indicators

- #1 Energy Performance of Buildings
- #2 Mixed Income Diverse Community
- #3 Walkability & Connectivity
- #4 Green Surfaces
- #5 Transit Supportive Development
- #6 Surface Parking Lots
- #7 Recycling, Composting & Waste
- #8 Water Efficiency



Toward a Sustainable City

The foundation for the neighborhood based work is enabled and will be assisted by the City of Minneapolis. The City's *Sustainability Indicators* provide a set of city wide goals for sustainability. It is also an educational tool, providing a holistic but also very tangible framework for achieving improvements in the following areas:



Greenprint Climate Change, Renewable Energy, Air Quality, Tree Canopy, Biking (Bikeways), Downtown Transportation Alternatives, Airport Noise, Stormwater, Healthy Lakes, Green Jobs, Local Food, Waste Reduction and Recycling

A Vital Community Brownfield Sites, Part I Violent Crimes, Community Engagement, Homelessness, Affordable Housing, Employment and Poverty, Graduation Rate, Arts and the Economy

See the end of this chapter for specific policy: 5.1 Support Community Engagement: City of Minneapolis' Sustainability Indicators & Greenprint





Measuring Progress in the Neighborhood

Meanwhile, on the ground in the Loring Park Neighborhood, volunteers working for Citizens for Loring Park Community, in partnership with representative(s) of the Minnesota Chapter of the United States Green Building Council, have engaged in a set of initiatives utilizing a new national rating system offered by the United States Green Building Council (USGBC):

USGBC's LEED for Neighborhood Development (LEED-ND)

USGBC's LEED-ND rating system provides performance metrics for the location, design and performance of new developments within a district or neighborhood context. This is meant as a complimentary rating system to the wide range of building scale certifications also offered.



Learn about the LEED for Neighborhood Development Rating System

USGBC.ORG/LEED/ND

The LEED-ND rating system had three core chapters, with minimum Prerequisites and 110 points available for achievement in a range of topics called Credits:

Smart Location & Linkages (27 points)

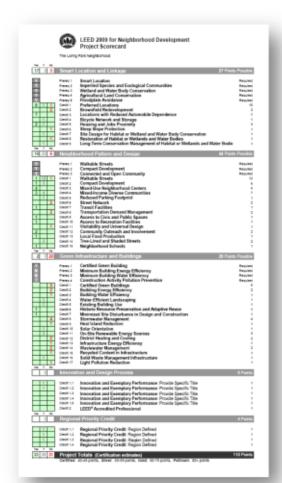
Smart Location, Imperiled Species and Ecological Communities, Wetlands and Water body Conservation, Agricultural Land Conservation, Floodplain Avoidance, Preferred Locations, Brownfield Redevelopment, Locations with Reduced Automobile Dependence, Bicycle Network and Storage, Housing and Johs proximity, Steep Slope Protection, Habitat/Wetlands Protection, Restoration & Long term Conservation Management

Neighborhood Pattern & Design (44 points)

Walkable Streets, Compact Development, Connected and Open Community, Mixed Use Neighborhood Centers, Mixed Income Diverse Communities, Reduced Parking Footprint, Street Network (Connectivity), Transit Facilities, Transportation Demand Management, Access to Civic & Public Spaces, Access to Recreation Facilities, Visitability and Universal Design, Community Outreach and Involvement, Local Food Production, Tree-Lined and Shaded Streets, Neighborhood Schools

Green Infrastructure & Buildings (29 points)

Certified Green Building, Minimum Building Energy Efficiency, Minimum Building Water Efficiency, Construction Activity Pollution Prevention, Water Efficient Landscaping, Existing Building Use, Historic Resource Preservation and Adaptive Reuse, Minimized Site Disturbance in Design and Construction, Stormwater Management, Heat Island Reduction, Solar Orientation, On-Site Renewable Energy Sources, District Heating and Cooling, Infrastructure Energy Efficiency, Wastewater Management, Recycled Content in Infrastructure, Solid Waste Management Infrastructure, Light Pollution Reduction





The Loring Park
Neighborhood's LEEDND scorecard, shown
above, can be found at
www.loringpark.org
and in the appendix of
this document.









Measuring Neighborhood-wide Performance

The work done to date in the neighborhood in support of these goals include the execution of three studies:

Summer 2010

CLPC, the University of Minnesota's Center for Urban and Regional Affairs (CURA) and USGBC MN Chapter collaborated in a study to explore the potential for LEED-ND certification. A small task force was formed with a goal to assess the neighborhood's physical environment and compare this with the metrics identified in the LEED-ND 2009 Rating System. The results provided a framework that identified the neighborhood's strengths and areas for opportunity for growth and redevelopment.

Winter 2010

A community design workshop was held during the master plan process to derive community based solutions to sustainability, connectivity and walkability issues. Three teams prioritized the sustainability issues important to them and brainstormed solutions. An event record summarizing the workshop results can be found in the appendix.

Spring 2011

As part of the master planning process, a study of neighborhood sustainability was performed utilizing all LEED-ND criteria. The resulting report, Analysis of Neighborhood Wide Sustainability Utilizing USGBC's 2009 LEED for Neighborhood Development Rating System (see appendix), generated a list of strengths and weaknesses that led to the development of the sustainability policies in this chapter. This analysis was performed by a workgroup of four professionals involved in the Loring Park Master Plan process: Peter Musty, Master Plan consultant Team Leader; Neil Reardon, Master Plan Steering Committee Member; Lauren Huynh, Minneapolis Planning Commissioner; and John Van Heel, Loring Park Neighborhood Master Plan Steering Committee Chair.

Summer-Fall 2011

Loring Park emerged as a local demonstration project for existing neighborhoods. Although the LEED-ND Rating System was written for new neighborhood developments, Loring Park is a great example of a living protoype. CLPC and the USGBC MN Chapter continued their collaboration with a team of 18 volunteers with the goal to evaluate each applicable and complete the documentation and submittals for LEED-ND certification.

Results: How the Loring Park Neighborhood 'Scores' in 2012

The following is a summary of performance in the three categories of LEED-ND, based on the two years of analyses explained above:

SLL Smart Location & Linkages

Loring is well located – and enjoys great connectivity to its surrounding urban context. Loring also is relatively well served by transit and a diverse mix of services within walking distance. Further, there is a density of compact residential and commericial development suporting an improving multi-modal network. Housing is close to many jobs.

All prerequisites met; 52% of credits achieved.

NPD Neighborhood Pattern & Design

Loring boasts a wonderful Victorian/Indutrial era block pattern with high Connectivity* with smaller blocks in its core (* = high number of intersections per square mile). Also making the existing neighborhood very walkable is a spectrum of predominantly continuous building frontages that are visually interesting and establish a strong sense of public to private and 'eyes on the street'. Hurting walkability scores in some areas is the prevalence of surface parking lots, stretches of blank walls and harsher streetscapes. Public safety perceptions impact walkability later at night. Commercial spaces are somewhat under-utilized along commercial corridors, and several streets are difficult to cross – particularly at the perimeter of Loring Park. There is a wide diversity of housing types, including a percentage of affordable units.

All prerequisites met; 27% of credits achieved.

GIB Green Infrastructure & Buildings

The Loring Park Neighborhood must make considerable investments in order to bring the neighborhood's older building stock to a point where they are considered certifiably green or sustainable by any standard of performance. There is much that can be done in terms of district wide energy, groundwater and stormwater technologies to lower the neighborhood 'footprint' in terms of its overall demand for energy, and the amount of GHG (greehouse gas) emissions from building operating energy. The LEED rating system presents several other criteria – such as urban heat island and night sky radiation - that the neighborhood could use bulk buying power and economies of scale to address.

Not All Prerequisites met; 10% of credits achieved.









The Highest Priority:

Analyses of Loring Park
Neighborhood physical systems
indicate that the largest increases
in sustainability performance will
come from proactively
supporting a range of
investments that increase the
energy efficiency of the
neighborhood's aging
infrastructure and buildings.

Framework for Community Based Policy, Action & Investment

Three neighborhood based studies of LEED for Neighborhood Design criteria revealed the following:

- Due to existing physical connectivity and proximity to neighborhood amentities and well formed urban pattern of streets and blocks, Loring Park Neighborhood performs relatively well on the Smart Location & Linkage and Neighborhood Pattern & Design categories especially relative to LEED's standards set for the neighborhood wide energy efficiency of infrastructure and buildings. As one of the oldest neighborhoods in Minneapolis, almost all of the buildings, if studied, would likely not be in compliance with the energy, water, and infrastructure credit requirements.
- ➤ Overall, according to USGBC LEED-ND 2009 standards, the Loring Park Neighborhood performs below a 'Certified' level. There is potential over time to achieve LEED-ND Silver certification, perhaps Gold, if measures such as the Loring Indicators (see 4.4 The Loring Indicators) are implemented in future growth and redevelopment over time.
- The results identify areas for improvement in all three LEED-ND categories. In addition to upgrading building energy performance and public infrastructure, for the credits analyses repeatedly revealed room for improvement on issues such as wetland conservation and restoration within Loring Park, walkability enhancements, focused growth near transit and reduction of surface parking. However, clearly the low score on Green Infrastructure & Buildings credits revealed where the Neighborhood has the most room for improvement.

Recommendations

- 5.1 Support Community Engagement: City of Minneapolis' Sustainability Indicators & Greenprint Organize a formal neighborhood wide effort to educate the community regarding the city's Sustainability Indicators, including Greenprint, and explore organized ways to contribute to accomplishment of specific city-wide goals.
- **5.2** Certify the Master Plan in USGBC's LEED for Neighborhood Development Explore certification of the entire neighborhood in USGBC's LEED–ND 2009 as a 'Small Area Plan', per the recent CLPC Board resolution:

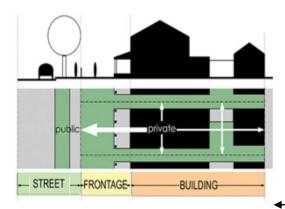
"CLPC (Citizens for the Loring Park Community) supports the development of a LEED-ND pilot project in collaboration with the USGBC Minnesota Chapter and national USGBC, including the following actions: 1) registering the project with USGBC/GBCI and 2) assistance in seeking funding opportunities working towards pilot project certification."

- 5.3 Work to Increase Overall LEED-ND score Set goals for neighborhood wide improvement in the areas defined in LEED-ND 2009. Immediately following USGBC Minnesota's study of credits, determine an estimated baseline score (certified, silver, gold or platinum) from data derived by the three field research initiatives through Fall 2011. Set mid range and long range goals for increasing the score and/or certification level of the neighborhood. Set up a timeline for measuring improvement(s) to the score (either through formal USGBC certification or by informal analysis). Develop GIS data set in secure location that will allow efficient evaluation of performance within each credit over time.
- 5.4 Guide Projects & Public Realm Investments Toward Achievement of Goals guide individual projects toward contribution to sustainability goals:
 - LEED-ND based (friendly) Grants & Incentives leverage and utilize information developed by LEED-ND based research to help secure government, private and nonprofit grants or other support from agencies that are familiar

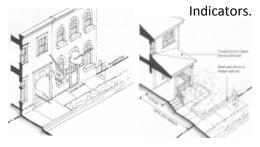








In context based built form guidelines that address building frontage, consider use of LEED-ND criteria and/or terminology in order to dovetail with neighborhood wide goals for walkability as set by the Loring Sustainability



- with LEED-ND rating system or that directly utilize LEED-ND standards as performance criteria
- Public Realm Guidelines utilize public realm design guidelines in this master plan as a guide to gauge the merits of specific capital investments
- Additional Built Form Guidelines Addressing Walkability to ensure the walkability of streets, study further (within each of the four land use/built form districts of Loring Hill, Loring Village, Hennepin Harmon, Loring Greenway) the need for new or expanded context based frontage guidelines that include performance parameters for key functional elements in new construction, such as:
 - o proper dimension and function of successful frontage elements such as dooryards, balconies, porches and awnings, glazing, proper orientation and relationships of doors and windows to sidewalk/street, gates/fences, elevated yards/first floors
 - o inclusion of green surfaces or adequate landscaping to soften appearance and screen less desirable features such as surface parking, trash handling or loading areas.
- 5.5 Establish Specific High Priority Neighborhood-wide Benchmarks for Success: The Loring Indicators See pages 12-18 in this chapter for more information on The Loring Indicators. Define a simple, memorable and easily measurable set of benchmarks by which the community can monitor progress towards the most important sustainability goals. The tool will have three primary purposes:
 - to maximize effectiveness of neighborhood based time, effort and resources
 - to provide a simple framework of benchmarks for measuring progress towards key sustainability goals over time
 - to serve as formal criteria (additional to those set in place by municipal site plan review policy) for neighborhood support of private development proposals (i.e. to assist in setting conditions for the earning exceptions such as additional height and density bonuses)

The Loring Indicators

The following pages outline a simple set of benchmarks, titled **The Loring Park Neighborhood Sustainability Indicators** (aka The Loring Indicators) that community members can use to monitor progress toward high priority neighborhood wide sustainability goals and to give structure to organized community based initiatives.

They are also intended to serve as criteria (additional to those set in place by municipal site plan review policy) for earning exceptions such as additional height and density bonuses. For each of the following eight indicators, there are *Measurable Goal(s)*, 2012 Baseline(s), and Strategies outlined.

- **#1** Energy Performance of Buildings
- **#2 Mixed Income Diverse Community**
 - **#3 Walkability & Connectivity**
 - #4 Green Surfaces
 - **#5 Transit Supportive Development**
 - **#6 Surface Parking**
 - #7 Recycling, Composting & Waste
 - **#8 Water Efficiency**



Setting measurable goals for sustainability were a special focus at three separate workshops during the 2010-2011 Loring Park Neighborhood Master Plan process. http://www.loringpark.org

Energy Performance of Buildings

Measurable Goal

Increase by ten the number of buildings that demonstrate an average improvement (10% improvement for new buildings, 5% improvement for existing buildings) over ASHRAE Standard 90.1 – 2007, <u>and</u> meet the standards within one of the following or *their equivalent*:

LEED for New Construction (LEED NC)
LEED for Existing Buildings (LEED EB)
LEED for Neighborhood Development (LEED-ND)
State of Minnesota B3 Guidelines
EPA's ENERGY STAR

2012 Baseline

In 2012, there are zero buildings in the neighborhood that demonstrate compliance.

- a. Inform and educate on the goals and recommendations of the City of Minneapolis Plan for Sustainable Growth (Comprehensive Plan).
- b. Comply with the city-adopted USGBC's LEED standards and SB 2030 Standard. All projects must demonstrate compliance with the minimum energy performance as noted above.
- c. Encourage efforts in new construction and existing buildings to install energy efficient mechanical and electrical systems, controls and sensors to reduce overall energy usage.
- d. Explore opportunities for on-site renewable energy.
- e. Incorporate building life-cycle assessments and commissioning.
- f. Participate in utility-sponsored energy conservation programs.

Mixed-Income Diverse Community

Measurable Goal

Using the following standard, drawn from LEED for Neighborhood Development (LEED-ND), Neighborhood Pattern & Design, Credit 4: Mixed Income Diverse Communities; achieve and retain a combined minimum X points (to be determined) of 7 points possible, while also achieving individual minimums:



<u>Diversity of Unit Size</u>: Achieve minimum 2 points of 3 possible points (Goal: exceed 0.70 Simpson Diversity Index).

<u>Diversity of Income</u>: Achieve minimum of X (to be determined) of 4 possible points (Goal: exceed XX% AMI).

2012 Baseline(s)

Loring's 2012 Simpson Diversity Index is 0.59.

Loring's baseline Housing AMI is XX% (baseline percentage yet to be determined)

- a. Leverage public dollars with private investment to rehabilitate existing housing.
- b. Maintain and support through policy and public funding the existing affordable housing stock throughout the neighborhood.
- c. Promote new development which includes diverse housing options including but not limited to:
 - a mix of owned and rental units;
 - affordable housing units (as defined by households earning below the area median income);
 - units with home office or studio spaces;
 - accessory dwelling units;
 - units accessed directly from street level;
 - diversity of large, medium, and small sized units by square ft. (<750sf; >750 sf to 1,250 sf; >1,250 sf)
 - expansion of life-cycle housing and housing for families with children

Walkability & Connectivity



Measurable Goal

Achieve and retain 8 of 12 possible points for walkability and connectivity within the neighborhood, using the following as the standard:

LEED for Neighborhood Development (LEED-ND) 2009, Neighborhood Pattern & Design, Credit 1: Walkable Streets

2012 Baseline

In 2012, the neighborhood meets requirements for 2 out of 12 possible points.

- a. Review annually and work to implement recommendations of the City of Minneapolis Pedestrian Master Plan.
- b. Identify, maintain and promote cross-block connections in large blocks where the street grid has been interrupted, where connections do not currently exist, or are not direct due to land features, lack of public right of way, or infrastructure impediment.
- c. Discourage blank facades and deep setbacks. Encourage:
 - functional entries as often as possible
 - street facing building facades
 - entries located within 18 feet of the property line
 - ground floor clear glazing and windows
 - on street parking as often as possible
 - elevated ground level living units 24 inches above sidewalk
 - reduction of target speeds on city streets
- d. Create and maintain safer crossings through better streetscape design. Reduce design speeds on all neighborhood streets and at intersections.
- e. Continue to promote multimodal transportation options.

Green Surfaces

Measurable Goal

Increase green surfaces through-out the neighborhood by an equivalent of the building footprint of the Minneapolis Convention Center (17 acres or 750,000 squ.ft.). Green surfaces may include grass or native landscaping, permanent community gardens, seasonal container gardens, pocket parks, green roofs and green walls.



2012 Baseline

0.00 acres as of January 1, 2012

- a. Within public projects, maximize opportunities to include green surfaces.
- b. Expand community gardening program in Loring Park with MPRB and other potential partners such as Friends of Loring Park, MCTC and HomeGrown Minneapolis etc.
- c. Facilitate community gardening efforts across the neighborhood. Identify potential community garden locations such as an urban orchard in Loring Park or vegetable gardens at sites across the neighborhood.
- d. Pursue vertical greening at blank walls across neighborhood. Identify potential locations.
- e. Encourage green roofs and green walls in all new private development or redevelopment projects, and to maximize opportunities for gardening in the design of units.

Transit Supportive Development

Measurable Goal

As a neighborhood-wide goal, double* the total built square footage of properties of the Loring Park Neighborhood reachable within one-quarter mile pedestrian shed (five minute walking distance) from the Primary Transit Network at Nicollet Avenue**. To understand the desired limits on development intensity, see Built Form Plan in the Land Use & Built Form Chapter of this plan.

2012 Baseline

There is approximately 11 (eleven) million square feet*** of finished square footage contained in the properties of the Loring Park Neighborhood within one-quarter mile pedestrian shed (five minute walking distance) of Nicollet Avenue.

Strategies

- a. Maximize development capacity of infill sites within parameters set by the Land Use and Built Form Chapter of this plan.
- b. Support mixed-use development.
- c. In development projects, incorporate building and site design that provides safe, accessible, convenient and lighted pedestrian access and way-finding to transit stops and stations.
- d. Incorporate pedestrian scale design features at the street level such as adequate sidewalk space, street trees, greenery and landscaping, street furniture, and sidewalk cafes.
- e. Provide for alternative modes of transportation by installing secured bike storage with showers and changing facilities and car sharing facilities.



* This goal is based on an analysis of current vs. projected transit supportive development intensity levels for transit oriented development, as set by LFFD-ND.

** Nicollet Avenue in Loring Village is part of the regions Primary Transit Network.

*** Estimate of square footage is provided by City of Minneapolis Sustainability Office

Surface Parking Lots

Measurable Goal

Move below ground, transfer into structures, or eliminate, one-half (1,000) of the parking spots located in surface parking lots throughout Loring Park Neighborhood.

2012 Baseline

In 2012, there exist over 2,000** private off-street surface parking spots in the Loring Park Neighborhood.

- a. Establish program in collaboration with property owners to permanently turn unused parking stalls back to green space, community garden plot, bicycle parking, street vendor stall or other use.
- b. Convert unused surface lots to building sites.
- c. Establish district parking strategy to reduce demand for surface parking by encouraging shared parking agreements, promoting car sharing, stacking parking in structures underground or midblock out of sight of the street. (See District Parking policies in Land Use & Built Form Chapter and Public Realm Chapters of this plan).
- d. Support transit and multi-modal investments at a local and regional level as a strategy to allow community members of Loring to drive less, resulting in lower demand for parking over time.
- * The level of desired reduction in exposed off-street surface parking is based on LEED-ND standards and aspirations expressed by community members in visioning session(s).
- ** The baseline quantities are based on a count by volunteers of 21.5 acres of area devoted to private off-street surface parking on 92 surface lots. The quantity does not include on-street parking or parking inside or atop structures.

Recycling, Composting & Waste

* The desired ratio is based on meeting the Hennepin County long range (per household) goal.

Measurable Goal

Work to achieve 4:1 ratio of recycling-to-waste by 80% of neighborhood buildings.

2012 Baseline

Determining baseline ratios will be done in collaboration with municipal and county agencies.

- a. Partner with Hennepin County Environmental Services to assist owners of multi-family buildings to establish recycling service.
- b. Partner with Hennepin County Environmental Services to assist commercial establishments in recycling.
- c. Work with MPRB toward zero waste at all park events.
- d. Pursue improved residential/commercial recycling services. Add recycling/trash bins across neighborhood. For residential and commercial pick-ups, examine the need for reduction in the size of waste bins and an increase in recycling bin size.
- e. Measure current levels of home recycling. Promote increased levels in cooperation with property owners, Hennepin County and the City of Minneapolis.
- f. Encourage reuse and recycling of large household items through existing private and non-profit services.
- g. Support city efforts to increase organics composting collection by establishing a neighborhood-wide residential composting program. Organic waste containers should be made available at each multi-unit building.
- Support coordination of hazardous waste drop-offs and pick-ups between residents and Hennepin County's dropoff locations.



Hennepin County's Choose to Reuse Directory <u>www.choosetoreuse.org</u>

Water Efficiency

Measurable Goal

Increase by ten the number of buildings (new or existing) that demonstrate compliance with reducing an average of 20% less potable water for indoor water usage based on the Energy Policy Act of 1992/2005 and 2006 UPC/IPC, and meet the standards within one of the following or their equivalent:

LEED for New Construction (LEED NC)
LEED for Existing Buildings (LEED EB)
LEED for Neighborhood Development (LEED-ND)
State of Minnesota B3 Guidelines

2012 Baseline

In 2012, there are zero buildings in the neighborhood that demonstrate compliance.

- a. Inform and educate on the goals and recommendations of the City of Minneapolis Plan for Sustainable Growth (Comprehensive Plan).
- b. Comply with the city-adopted USGBC's LEED standards and SB 2030 Standard. All projects must demonstrate compliance with the minimum water performance as noted above.
- c. Encourage efforts in new construction and existing buildings to install water efficient fixtures to reduce overall water use.
- d. Incorporate building life-cycle assessments and commissioning.
- e. Participate in utility-sponsored water conservation programs.

