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**AGENDA**  
**SPECIAL MEETING**  
**CITY COUNCIL**  
**AND**  
**PLANNING AND ZONING COMMISSION**  
**TOWN OF ADDISON, TEXAS**  
**JULY 26, 2007, 7:30 P.M.**  
**ADDISON TOWN HALL**  
**5300 BELT LINE ROAD**

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**JOINT WORK SESSION**  
**OF THE CITY COUNCIL**  
**AND**  
**THE PLANNING AND ZONING COMMISSION**

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Item #WS1 - Presentation and discussion of the Goals and Policies (including, among other things, sustainable development and LEED (Leadership in Energy and Environmental Design) standards) for the Brookhaven Village neighborhood, approximately 100 acres bounded by Spring Valley Road on the north, the City of Farmers Branch on the east, Brookhaven Community College on the south, and Marsh Lane on the west, as an amendment to the Town of Addison's Comprehensive Plan.

Attachments:

1. Memo from Carmen Moran
2. Comprehensive Plan Revisions proposed by Councilmember Meier

- 
3. Comprehensive Plan, as approved by the Planning & Zoning Commission on February 22, 2007
  4. Leed-ND Standards
- 

Adjournment of Special Meeting of Planning and Zoning Commission.

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**CONTINUATION OF  
SPECIAL MEETING OF THE CITY COUNCIL**

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Item #S1 Presentation and discussion regarding the Town's participation in and partial ownership and use (together with Opus West Corporation) of a parking garage located in the Addison Circle area and generally at the northwest corner of the Dallas North Tollway and Addison Circle Drive.

Attachments:

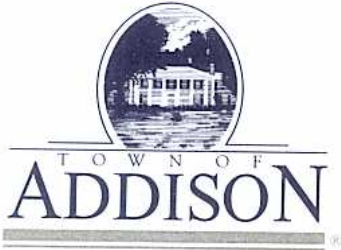
1. Memo from Carmen Moran
  2. Evaluation of OPUS Parking Agreement by Walter P. Moore
- 

Adjourn Meeting

---

Posted at 5:00 p.m. on July 23, 2007  
Mario Canizares, City Secretary

**THE TOWN OF ADDISON IS ACCESSIBLE TO PERSONS WITH  
DISABILITIES. PLEASE CALL (972) 450-2819 AT LEAST 48 HOURS  
IN ADVANCE IF YOU NEED ASSISTANCE.**



**#WS1-Attach.#1**

**DEVELOPMENT SERVICES**  
(972) 450-2880 Fax: (972) 450-2837

16801 Westgrove  
Post Office Box 9010 Addison, Texas 75001-9010

## MEMORANDUM

July 20, 2007

**TO:** Ron Whitehead  
**FROM:** Carmen Moran, Director of Development Services  
**SUBJECT:** Proposed changes to Comprehensive Plan Goals and Policies for Brookhaven neighborhood

Please find attached two items:

1. Revisions to the Comprehensive Plan Goals and Policies for the Brookhaven neighborhood, which have been suggested by Councilmember Meier.
2. The Comprehensive Plan Goals and Policies for the Brookhaven neighborhood, as they were approved by the Planning and Zoning Commission on February 22, 2007.

#WS1-Attachment #2  
**Addison Comprehensive Plan**

- 1) **AddisonBrookhaven Village.** The AddisonBrookhaven Village Area, defined by Spring Valley Road on the North, Marsh on the West, Brookhaven Community College on the South, and the Town limit on the East, provides an opportunity to create an exciting new sustainable pedestrian-oriented community within the Town of Addison.
- 2) **Sustainable Community.** A neighborhood achieves true (different word)sustainability when it offers a mix of uses including retail and restaurants, pedestrian-orientation, and a range of housing types to accommodate a person's full life-cycle. This is the type of neighborhood that can develop a palpable "sense of community" because people do not have to move out when their housing needs change. Residents get to know their neighbors and stay engaged because they are committed to the community. These are also the types of neighborhoods that will attract reinvestment over time.
- 3) **Residential Unit Type.** It is important to diversify the unit type in the Village so that a range of household types are attracted, and residents are provided with opportunities to move up or down to units of different sizes and with different amenities; leased and owned.
- 4) **Neighborhood Retail.** Greenhaven Village Shopping Center has the opportunity to both retain its auto-oriented business from Marsh and Spring Valley and to create a new destination in the area by adding "third place" neighborhood oriented retail. This pedestrian environment has proven successful throughout the region in conjunction with higher density residential projects like Addison Circle, Legacy Town Center, West Village, and others.
- 5) **Connections.** A key ingredient to creating desirable and sustainable communities is providing connections – connections between home, work, recreation, retail, dining, and education.



**Third Places**

Sociologist Ray Oldenburg coined the phrase "Third Places" to describe locations other than home (the first place) or work (the second place) that provide an informal gathering spot in which boundaries such as professional disciplines, social standing, or corporate rank are not recognized, and informal networking and chance conversations among patrons can lead to exchanges of ideas. They are also often used as ad hoc work and meeting places by clientele not tied to a traditional workplace, setting the stage for still more chance interactions. Coffee shops, pubs, alfresco cafes, and even bookstores can qualify as third places.

AddisonBrookhaven Village residents would be able to

to walk or bicycle to Greenhaven Village Shopping Center at the Southeast corner of Spring Valley and Marsh, Brookhaven Community College, ~~Greenhill~~Green Hill School, ~~Brookhaven Country Club~~, and Addison's trail system and Athletic Center.

- 6) **Creek Corridor.** The corridor along the creek, which is re-named "Carmen's Creek~~Farmers Branch~~", provides an opportunity to preserve flood plain and create an open space amenity with trails that will connect to Brookhaven Community College and the Town's trail system and Athletic Center. This corridor will provide an important link in a Town-wide system connecting Town Hall to Addison Circle, retail and restaurant districts to the Community College. This will be a major amenity for residents.
- 7) **Access.** [New Name]~~Brookhaven Club Drive~~ should be enhanced to provide a signature tree lined street with parking, entry features, and a round-about. As illustrated in the Addison~~Brookhaven~~ Village Concept Diagram, it could also include a trail that would connect the Town's trail system to Farmers Branch and Brookhaven Country Club.

A new diagonal roadway from Marsh to the Community College, called [New Name]~~Brookhaven Commons Drive~~ on the diagram, would create a central focus for the community at the round-about and provide a new entry to both the Village neighborhood and the Community College. This would also serve as an important pedestrian corridor to connect with the retail area.

- 8) **Environmental Responsiveness.** New development should sensitively respond to the unique conditions of this neighborhood and the environment of north central Texas.

Following principles established for LEED certification of buildings (Leadership in Energy and Environmental Design) and neighborhoods (LEED-ND) by the U.S. Green Building council (USBC), site and building layout and design should address such issues as:

- Neighborhood layout, diversity of uses and linkages to surrounding areas to facilitate pedestrian and bicycle movement and outdoor use.
- Design of pedestrian paths, streets, and public areas including providing shade green areas and places for social gathering and interaction.
- The orientation, design, and construction of new and renovated buildings to minimize net energy and water use and improve air quality.

## Policies

1. **Create an enhanced tree-lined Brookhaven Club Drive with on-street parking to slow traffic, a round-about to discourage through traffic, and pedestrian and bicycle trail.**
2. **Create a new street [New Name](~~Village Commons Drive~~) that crosses Brookhaven Country Club Dr. at 90 degrees and provides a new entrance to the community from Marsh Ln through Greenhaven Village Shopping Center, and a ceremonial entrance to Brookhaven Community College from the north.**

An enhanced Brookhaven Club Drive and the new Village Commons Drive[New Name]-\_\_\_\_\_will help establish a village identity and provide a high quality armature around which the new neighborhood can be built.

[New Name]~~Village Commons Drive~~ also offers the opportunity to provide a prime location for performing art, cultural and civic facilities. It should not however, handle any service traffic for the College.

3. **Encourage a blend of residential unit types including town home and condominium/apartment; as well as high rise and low rise.**

As often as possible, provide that all residential units at grade have windows and front door entries which face the sidewalk similar to the standards for Les Lacs Village.

4. **Work with retail property owners to create neighborhood-oriented "third place" environment that is well connected to the Village.**
5. **Work with developers to include connections within and through their developments that will provide residents with greater non-vehicle-oriented connections.**

This could include a trail along the enhanced Brookhaven Club Drive and along the [creek name] open space corridor.

*Addison!*

6. **Investigate and pursue options for an environmentally sustainable community, including following LEED standards for building and neighborhood design.**

~~This would not include a requirement for LEED certification, but rather ensure a serious response to the importance of creating a sustainable neighborhood. This may include compliance with Addison's Sustainability Policy.~~

## Brookhaven Village

### Background

The Brookhaven Village Area, defined by Spring Valley Road on the North, Marsh on the West, Brookhaven Community College on the south and the Town limit on the east, provides an opportunity to create an exciting new sustainable pedestrian-oriented community within the Town of Addison.

**Sustainable Community.** A neighborhood achieves true sustainability when it offers a mix of uses including retail and restaurants, pedestrian-orientation, and a range of housing types to accommodate a person's full life-cycle. This is the type of neighborhood that can develop a palpable "sense of community" because people do not have to move out when their housing needs change. Residents get to know their neighbors and stay engaged because they are committed to the community. These are also the types of neighborhoods that will attract reinvestment over time.

**Residential Unit Type.** It is important to diversify the unit type in the Village so that a range of household types are attracted, and residents are provided with opportunities to move up or down to units of different sizes and with different amenities.

**Neighborhood Retail.** Greenhaven Village Shopping Center has the opportunity to both retain its auto-oriented business from Marsh and Spring Valley, and to create a new destination in the area by adding "third place" neighborhood-oriented retail. This pedestrian environment has proven successful throughout the region in conjunction with higher density residential projects like Addison Circle, Legacy Town Center, West Village and others.

**Connections.** A key ingredient to creating desirable and sustainable communities is providing connections -- connections between home, work, recreation, retail, dining and education.

Brookhaven Village residents would be able to walk or bicycle to Greenhaven Village Shopping Center at the southeast corner of Spring Valley and Marsh,



#### Third Places

Sociologist Ray Oldenburg coined the phrase "Third Places" to describe locations other than home (the first place) or work (the second place) that provide an informal gathering spot in which boundaries such as professional disciplines, social standing, or corporate rank are not recognized, and informal networking and chance conversations among patrons can lead to exchanges of ideas. They are also often used as ad hoc work and meeting places by clientele not tied to a traditional workplace, setting the stage for still more chance interactions. Coffee shops, pubs, alfresco cafes and even bookstores can qualify as third places.



Brookhaven Community College, Green Hill School, Brookhaven Country Club and Addison's trail system and Athletic center.

**Creek Corridor.** The corridor along the creek, which is named "Farmers Branch." provides an opportunity to preserve flood plain and create an open space amenity with trails that will connect to Brookhaven Community College and to the Town's trail system and Athletic Center. This corridor will provide an important link in a Town-wide system connecting Town Hall to Addison Circle, retail and restaurant districts to the Community College. This will be a major amenity for residents.

**Access.** Brookhaven Club Drive should be enhanced to provide a signature tree lined street with parking, entry features and a round-about. As illustrated in the Brookhaven Village Concept Diagram, it could also include a trail that would connect the Town's trail system to Farmers Branch and Brookhaven County Club.

A new diagonal roadway from Marsh to the Community College, called Brookhaven Commons Drive on the diagram, would create a central focus for the community at the round-about and provide a new entry to both the Village neighborhood and the Community College. This would also serve as an important pedestrian corridor to connect with the retail area.

**Environmental Responsiveness.** New development should sensitively respond to the unique conditions of this neighborhood and the environment of north central Texas. Following principles established for LEED certification of buildings (Leadership in Energy and Environmental Design) and neighborhoods (LEED-ND) by the U.S. Green Building Council (USBC), site and building layout and design should address such issues as:

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- Design of pedestrian paths, streets and public areas including providing shade, green areas and places for social gathering and interaction.
- The orientation, design and construction of new buildings to minimize net energy and water use and improve air quality.

## **Policies**

1. **Create an enhanced tree-lined Brookhaven Club Drive with on-street parking to slow traffic, a round-about to discourage through traffic and a pedestrian trail.**
2. **Create a new street (Village Commons Drive) that crosses Brookhaven Country Club Dr. at 90 degrees and provides a new entrance to the community from Marsh Lane through Greenhaven Village Shopping Center, and a ceremonial entrance to Brookhaven Community College from the north.**

An enhanced Brookhaven Club Drive and the new Village Commons Drive will help establish a village identity and provide a high quality armature around which the new neighborhood can be built.

Village Commons Drive also offers the opportunity to provide a prime location for performing arts, cultural and civic facilities. It should not however, handle any service traffic for the college.

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This could include a trail along the enhanced Brookhaven Club Drive and along the [creek name] open space corridor.

**6. Investigate and pursue options for an environmentally sustainable community, including following LEED standards for building and neighborhood design.**

This would not include a requirement for LEED certification, but rather ensure a serious response to the importance of creating a sustainable neighborhood.



**Addison Circle**



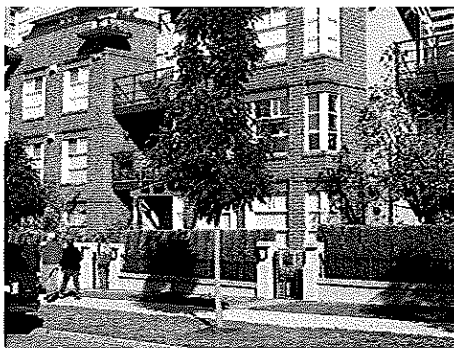
**Addison TXU Right-of-Way**



**Chicago**



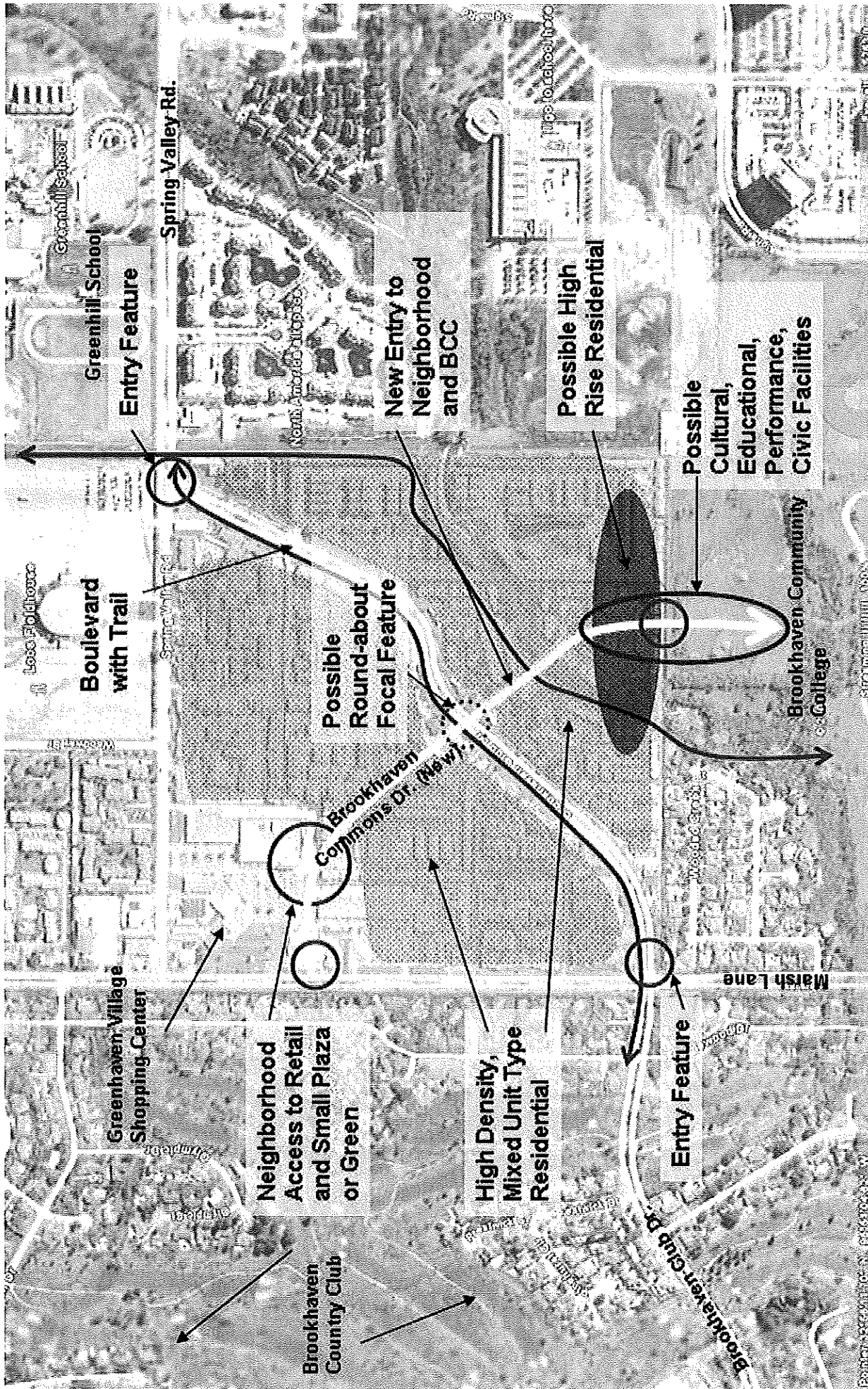
**Vancouver**



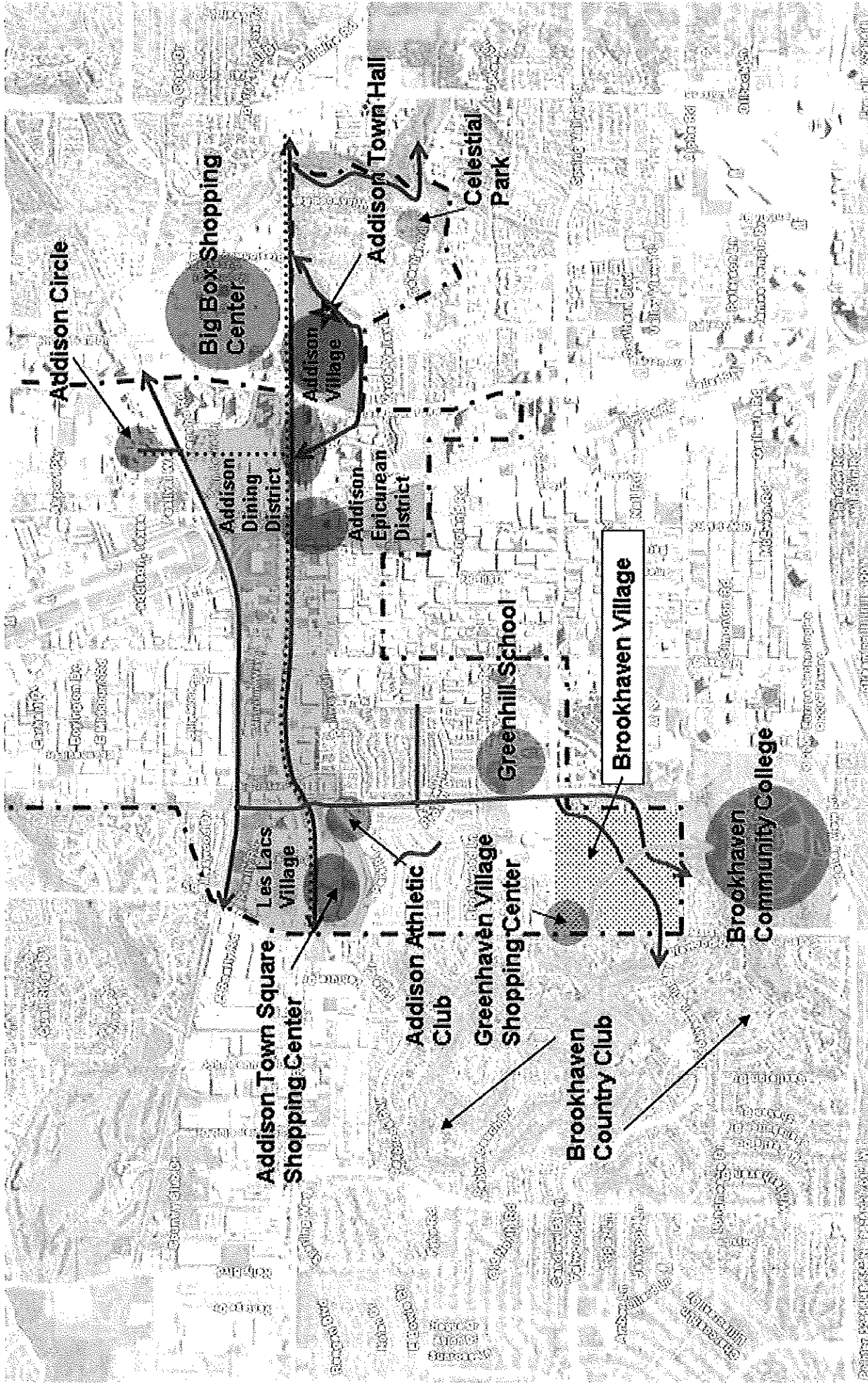
**Vancouver**



**Calgary**



*Addison!* Brookhaven Village  
**CONCEPT**



Legend	
Trails	Schools
Possible Transit	Retail
New Road	

*Addison!* Brookhaven Village

# CONNECTIONS DIAGRAM

# PILOT VERSION



# LEED for Neighborhood Development Rating System

Developed through a partnership of the Congress for New Urbanism,  
Natural Resources Defense Council and the U.S. Green Building Council



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### **Trademark**

LEED® is a registered trademark of the U.S. Green Building Council.

**Minor changes, including only corrected typos and minor clarifications, have been made to this version that were not included in the February 2007 version of the LEED for Neighborhood Development rating system. In addition, an alternative version of GCT Credit 9 (Stomwater Management) is provided with this version. Prerequisite and credit requirements were not changed in any way that would affect a project's ability to achieve them.**

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# Introduction

## Overview

The U.S. Green Building Council (USGBC), the Congress for the New Urbanism (CNU), and the Natural Resources Defense Council (NRDC)—three organizations that represent some of the nation’s leaders among progressive design professionals, builders, developers, and the environmental community—have come together to develop a national set of standards for neighborhood location and design based on the combined principles of smart growth, new urbanism, and green building. The goal of this partnership is to establish these standards for assessing and rewarding environmentally superior development practices within the rating framework of the LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™.

Unlike other LEED products that focus primarily on green building practices, with relatively few credits regarding site selection and design, LEED for Neighborhood Development places emphasis on the design and construction elements that bring buildings together into a neighborhood, and relate the neighborhood to its larger region and landscape. The work of the committee is guided by sources such as the Smart Growth Network’s ten principles of smart growth, the Charter of the New Urbanism, and other LEED rating systems. LEED for Neighborhood Development creates a label, as well as guidelines for design and decision-making, to serve as an incentive for better location, design, and construction of new residential, commercial, and mixed use developments.

The existing LEED for New Construction Rating System has a proven track record of encouraging builders to utilize green building practices, such as increasing energy and water efficiency and improving indoor air quality in buildings. It is the hope of the partnership that LEED for Neighborhood Development will have a similarly positive effect in encouraging developers to revitalize existing urban areas, reduce land consumption, reduce automobile dependence, promote pedestrian activity, improve air quality, decrease polluted stormwater runoff, and build more livable, sustainable, communities for people of all income levels.

## How LEED Rating Systems Work

LEED provides rating systems that are voluntary, consensus-based, market-driven, grounded in accepted energy and environmental principles, and that strike a balance between established practices and emerging concepts. LEED rating systems are developed by committees, in adherence with USGBC policies and procedures guiding the development and maintenance of rating systems. LEED for Neighborhood Development is one of a growing portfolio of rating systems serving specific market sectors.

LEED rating systems typically consist of a few prerequisites and many credits. In order to be certified, a project must meet each prerequisite. Each credit is optional, but achievement of each credit contributes to the project’s point total. A minimum point total is required for certification, and higher point scores are required for silver, gold, or platinum LEED certification.

## What is a “Neighborhood Development”?

The rating system is designed to certify exemplary development projects that perform well in terms of smart growth, new urbanism, and green building. Projects may constitute whole neighborhoods, fractions of neighborhoods, or multiple neighborhoods. Smaller, infill projects that are single use but complement

existing neighboring uses should be able to earn certification as well as larger and mixed use developments.

## **The LEED for Neighborhood Development Pilot Program**

Up to 120 projects in total will be selected to be a part of the pilot program. The objective of the pilot program is to ensure that the rating system is practical for application and is an effective tool for recognizing projects that incorporate smart growth, new urbanist, and green building practices. The LEED for Neighborhood Development Core Committee will assess the experience gained from the pilot program in order to revise the rating system for public comment and ballot.

LEED for Neighborhood Development's principal aim is to improve land-use patterns, neighborhood design, and technology in the United States. However, on a very limited basis, the pilot program may test the applicability of the rating system in non-United States settings as well.

In terms of eligibility for the pilot program, there is no minimum or maximum for project size and no strict definition for what would comprise a neighborhood. The only requirement is that projects must be able to meet all prerequisites and anticipate that the minimum number of points through credits to achieve certification can be earned.

## **Certification Process**

LEED for Neighborhood Development will certify projects that may have significantly longer construction periods than single buildings, and as a result the standard LEED certification process needed to be modified. The core committee wanted to be able to provide developers of certifiable projects with some form of approval even at the early, pre-entitlement stage. They also wanted to ensure that great plans became great real-life projects. With these goals in mind, the core committee created the following three-stage certification process:

### **Optional Pre-review (Stage 1)**

This stage is available but not required for projects at any point before the entitlement process begins. If pre-review approval of the plan is achieved, USGBC will issue a letter stating that if the project is built as proposed, it will be able to achieve LEED for Neighborhood Development certification. The purpose of this letter is to assist the developer in building a case for entitlement among land use planning authorities, as well as a case for financing and occupant commitments.

### **Certification of an Approved Plan (Stage 2)**

This stage is available after the project has been granted any necessary approvals and entitlements to be built to plan. Any changes to the pre-reviewed plan that could potentially affect prerequisite or credit achievement would be communicated to USGBC as part of this submission. If certification of the approved plan is achieved, USGBC will issue a certificate stating that the approved plan is a LEED for Neighborhood Development Certified Plan and will list it as such on the USGBC website.

### **Certification of a Completed Neighborhood Development (Stage 3)**

This step takes place when construction is complete or nearly complete. Any changes to the certified approved plan that could potentially affect prerequisite or credit achievement would be communicated to USGBC as part of this submission. If certification of the completed neighborhood development is achieved, USGBC will issue plaques or similar awards for public display at the project site and will list it as such on the USGBC website.

Similar to other LEED certification processes, projects will be provided with a more thorough explanation of credit topics and calculations in a reference guide. Project teams will be required to submit documentation for each credit as described in the “submittal” sections of the rating system. Pilot participants will be given submittal templates to fill out as part of documentation after they register their project. The templates will assist projects in providing the requested calculations. The submittal section included with each credit in the rating system is subject to modification during the course of the pilot program. During the pilot program, project teams are encouraged to suggest replacement documentation that clearly verifies that the requirements have been met but may be easier to access or produce than the items listed below. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

## **Acknowledgements**

The partnership would like to thank the following funders for their support of the creation of LEED for Neighborhood Development (listed alphabetically):

The Blue Moon Fund  
Centers for Disease Control  
EDAW  
U.S. EPA Office of Brownfields Cleanup and Redevelopment  
U.S. EPA Development, Community, and Environment Division  
The Johnson Foundation  
National Endowment for the Arts

The pilot version of the LEED for Neighborhood Development Rating System has been made possible because of the efforts of many dedicated volunteers, staff members, consultants, and others in the USGBC, CNU, and NRDC communities. The partnership extends its deepest gratitude to all of these individuals, and especially to the LEED for Neighborhood Development Core Committee members selected by the partners, for their tireless volunteer efforts in developing this rating system. They are:

Doug Farr (Chair), Farr Associates  
Kaid Benfield (Vice-Chair), Natural Resources Defense Council  
Bill Browning, Browning + Bannon LLC  
Victor Dover, Dover, Kohl & Partners Town Planning  
Sharon Feigon, Center for Neighborhood Technology  
Rebecca Flora, Green Building Alliance  
Bert Gregory, Mithun Architects + Designers + Planners  
Daniel Hernandez, Topology, LLC  
Melissa Knott, Forest City Stapleton, Inc.  
Jessica Cogan Millman, Coalition for Smarter Growth  
Susan Mudd, Congress for the New Urbanism Board of Directors  
John Norquist, Congress for the New Urbanism  
Michael Pawlukiewicz, Urban Land Institute  
Shelley Poticha, Reconnecting America  
Tom Richman, Tom Richman  
Elizabeth Schilling, Urban Associates  
Laura Watchman, Defenders of Wildlife  
Sandy Wiggins, Consilience, LLC

## Project Checklist

### Smart Location & Linkage

30 Possible Points

Prereq 1	<b>Smart Location</b>	Required
Prereq 2	<b>Proximity to Water and Wastewater Infrastructure</b>	Required
Prereq 3	<b>Imperiled Species and Ecological Communities</b>	Required
Prereq 4	<b>Wetland and Water Body Conservation</b>	Required
Prereq 5	<b>Agricultural Land Conservation</b>	Required
Prereq 6	<b>Floodplain Avoidance</b>	Required
Credit 1	<b>Brownfield Redevelopment</b>	2
Credit 2	<b>High Priority Brownfields Redevelopment</b>	1
Credit 3	<b>Preferred Locations</b>	2-10
Credit 4	<b>Reduced Automobile Dependence</b>	1-8
Credit 5	<b>Bicycle Network</b>	1
Credit 6	<b>Housing and Jobs Proximity</b>	3
Credit 7	<b>School Proximity</b>	1
Credit 8	<b>Steep Slope Protection</b>	1
Credit 9	<b>Site Design for Habitat or Wetlands Conservation</b>	1
Credit 10	<b>Restoration of Habitat or Wetlands</b>	1
Credit 11	<b>Conservation Management of Habitat or Wetlands</b>	1

### Neighborhood Pattern & Design

39 Possible Points

Prereq 1	<b>Open Community</b>	Required
Prereq 2	<b>Compact Development</b>	Required
Credit 1	<b>Compact Development</b>	1-7
Credit 2	<b>Diversity of Uses</b>	1-4
Credit 3	<b>Diversity of Housing Types</b>	1-3
Credit 4	<b>Affordable Rental Housing</b>	1-2
Credit 5	<b>Affordable For-Sale Housing</b>	1-2
Credit 6	<b>Reduced Parking Footprint</b>	2
Credit 7	<b>Walkable Streets</b>	4-8
Credit 8	<b>Street Network</b>	1-2
Credit 9	<b>Transit Facilities</b>	1
Credit 10	<b>Transportation Demand Management</b>	2
Credit 11	<b>Access to Surrounding Vicinity</b>	1
Credit 12	<b>Access to Public Spaces</b>	1
Credit 13	<b>Access to Active Public Spaces</b>	1
Credit 14	<b>Universal Accessibility</b>	1
Credit 15	<b>Community Outreach and Involvement</b>	1
Credit 16	<b>Local Food Production</b>	1

### Green Construction & Technology

31 Possible Points

Prereq 1	<b>Construction Activity Pollution Prevention</b>	Required
Credit 1	<b>Certified Green Buildings</b>	1-3
Credit 2	<b>Energy Efficiency in Buildings</b>	1-3
Credit 3	<b>Reduced Water Use</b>	1-3
Credit 4	<b>Building Reuse and Adaptive Reuse</b>	1-2
Credit 5	<b>Reuse of Historic Buildings</b>	1

Credit 6	<b>Minimize Site Disturbance through Site Design</b>	1
Credit 7	<b>Minimize Site Disturbance during Construction</b>	1
Credit 8	<b>Contaminant Reduction in Brownfields Remediation</b>	1
Credit 9	<b>Stormwater Management</b>	1-5
Credit 10	<b>Heat Island Reduction</b>	1
Credit 11	<b>Solar Orientation</b>	1
Credit 12	<b>On-Site Energy Generation</b>	1
Credit 13	<b>On-Site Renewable Energy Sources</b>	1
Credit 14	<b>District Heating and Cooling</b>	1
Credit 15	<b>Infrastructure Energy Efficiency</b>	1
Credit 16	<b>Wastewater Management</b>	1
Credit 17	<b>Recycled Content in Infrastructure</b>	1
Credit 18	<b>Construction Waste Management</b>	1
Credit 19	<b>Comprehensive Waste Management</b>	1
Credit 20	<b>Light Pollution Reduction</b>	1

## Innovation & Design Process

6 Possible Points

Credit 1	<b>Innovation in Design</b>	1-5
Credit 2	<b>LEED Accredited Professional</b>	1

## Project Totals

106 Possible Points

### Certification Levels:

Certified 40-49 points

Silver 50-59 points

Gold 60-79 points

Platinum 80-106 points



# Smart Location & Linkage

## SLL Prerequisite 1: Smart Location

### Required

#### Intent

Encourage development within and near existing communities or public transportation infrastructure. Reduce vehicle trips and miles traveled and support walking as a transportation choice.

#### Requirements

##### OPTION 1

Locate the **project** on an **infill site**;

OR

##### OPTION 2

Locate the project near existing or planned **adequate transit service** so that at least 50% of dwelling units and business entrances within the project are within  $\frac{1}{4}$  mile **walk distance** of bus or streetcar stops or within  $\frac{1}{2}$  mile walk distance of bus rapid transit stops, light or heavy passenger rail stations and ferry terminals. In the case of planned service, show that the relevant transit agency has committed in a legally binding warrant that **adequate transit service** will be provided at or before the beginning of the transit agency's first service year after 50% of the dwelling units and/or businesses within the project are occupied and has identified all funding necessary to do so;

OR

##### OPTION 3

Locate the project near existing neighborhood shops, services, and facilities so that the **project boundary** is within  $\frac{1}{4}$  mile walk distance of at least four, or within  $\frac{1}{2}$  mile walk distance of at least 6, of the **diverse uses** defined in Appendix A. Uses may not be counted in two categories, e.g an office building may be counted only once even if it is also a major employment center. A mixed use building containing several uses as distinct enterprises would count each as a separate use, but no more than half of the minimum number of diverse uses can be situated in a single building. A single retail store of any type (such as a big box retail store that sells both clothing and household goods) may only be counted once even if it sells products associated with multiple use types;

OR

##### OPTION 4

Locate the project within a region served by a Metropolitan Planning Organization (MPO) and within a transportation analysis zone for which MPO research demonstrates that the average annual home-based and/or non-home-based rate of **Vehicle Miles Traveled (VMT)** per capita is lower than the average annual rate of the metropolitan region as a whole. The research must be derived from transportation

surveys conducted within ten years of the date of submission for LEED for Neighborhood Development certification;

OR

#### OPTION 5

Locate the project within a region served by a Metropolitan Planning Organization (MPO) and demonstrate through peer-reviewed analysis that the average annual home-based and/or non-home-based rate of Vehicle Miles Traveled (VMT) per capita of the project will be lower than the average annual rate shown by MPO research for the metropolitan region as a whole. The MPO research must be derived from transportation surveys conducted within ten years of the date of submission for LEED for Neighborhood Development certification. The analysis prepared for the project must be conducted by a qualified transportation professional and reviewed and supported by a second qualified transportation professional who is not affiliated with either the sponsor of the project or the first analyst.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1:

- ❑ A map of the vicinity demonstrating that the project is located on an infill site.

##### Option 2:

- ❑ A site and/or vicinity map showing all dwelling units and relevant building entrances, transit stops, and walking routes to those stops.
- ❑ A table of walk distances between each dwelling unit or business entrance and the closest transit stop, and a calculation of the percentage of dwelling units and business entrances that lie within the specified distances.
- ❑ Schedules or a brief narrative indicating the frequency and type of transit available.
- ❑ For planned transit routes, provide documents from the relevant transit authority indicating when service will be instituted and the source of funding.

##### Option 3:

- ❑ A site and/or vicinity map showing the project's boundary and walking routes to any uses listed in Appendix A.

- ❑ A table of walk distances between the project boundary and each relevant use listed in Appendix A.

Option 4:

- ❑ Excerpts of relevant MPO research.

Option 5:

- ❑ Confirmation of which MPO the project is located within.
- ❑ VMT analysis, with relevant conclusions highlighted, and the sources of peer-review listed.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Prerequisite 2: Proximity to Water and Wastewater Infrastructure Required

### Intent

Encourage new development within and near existing communities in order to reduce multiple environmental impacts caused by sprawl. Conserve natural and financial resources required for construction and maintenance of infrastructure.

### Requirements

#### OPTION 1

Locate the **project** on a site served by existing water and wastewater infrastructure. Replacement or other on-location improvements to existing infrastructure are considered *existing* for the purpose of achieving this option;

OR

#### OPTION 2

Locate the project within a legally adopted planned water and wastewater service area and provide new water and wastewater infrastructure for the project.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1

- ❑ A site and/or vicinity map indicating the location of existing water and wastewater infrastructure.

##### Option 2

- ❑ A map showing the planned water and wastewater service areas, and/or a letter from the relevant public authority stating that the project site lies within planned water and wastewater service areas.
- ❑ A brief narrative explaining the new infrastructure that the project team or sponsor commits to providing or funding if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Prerequisite 3: Imperiled Species and Ecological Communities Required

### Intent

Protect imperiled species and ecological communities.

### Requirements

Check with the state Natural Heritage Program, and any local wildlife agencies to determine if species listed under the federal Endangered Species Act, the state's endangered species act, or species or ecological communities classified by NatureServe as G1 (critically imperiled) or G2 (imperiled), have been found on the site or have a high likelihood of occurring on the site due to the presence of suitable habitat and nearby occurrences. If no such species have been found or have a high likelihood of being present, the prerequisite is achieved. If any such species have been found or have a high likelihood of being present, meet the requirements of Option 1 or Option 2 set forth below.

#### OPTION 1

Comply with an approved Habitat Conservation Plan (HCP) under the Endangered Species Act for each identified species or ecological community;

OR

#### OPTION 2

If no approved HCP exists for an identified species or ecological community, then coordinate with the state's Natural Heritage Program or fish and wildlife agency to perform adequate surveys of imperiled species and ecological communities. If a survey finds that an imperiled species or ecological community is present, the project applicant shall do the following:

- a. Work with a qualified biologist, a non-governmental conservation organization or the appropriate state, regional or local agency to identify and map the geographic extent of the habitat and identify an appropriate buffer of no less than 100 feet around the habitat that ensures the protection of the imperiled species or ecological community.
- b. Protect the habitat and buffer or setback area from development in perpetuity by donating or selling the land or a conservation easement on the land to an accredited land trust or relevant public agency.
- c. Work with ecologists to analyze the threats from development of the proposed project and develop a management plan that eliminates or significantly mitigates the identified threats.

## Additional Notes

G1 species are critically imperiled; at very high risk of extinction globally due to extreme rarity (often five or fewer populations), very steep declines, or other factors.

G2 species are imperiled; at high risk of extinction globally due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

NatureServe ([www.natureserve.org](http://www.natureserve.org)) is a non-profit conservation organization that provides the scientific information and tools needed to help guide effective conservation action. It represents an international network of biological inventories—known as natural heritage programs or conservation data centers—operating in all 50 U.S. states, Canada, Latin America and the Caribbean. “G1” and “G2” are part of a classification system developed in the early 1970s by the Nature Conservancy's network of natural heritage programs in every state. NatureServe currently maintains the network of natural heritage program, the classification system, and the data on biodiversity. NatureServe uses a number of criteria in assessing the status of species, including the number of populations, the size of populations, the viability of the species occurrences, the trends in population numbers, and the threats to species.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### All Options

- ❑ Results of inquiries to the state Natural Heritage Program and any local wildlife agencies as to whether listed endangered species or G1 or G2 ecological communities occur or have a high likelihood of occurring on the project site.

#### Option 1

- ❑ A map showing the geographic extent of the HCP and the project's location within it.
- ❑ A brief narrative describing how the project will meet the requirements of the HCP.

#### Option 2

- ❑ Information about the site received from the relevant natural heritage program or agency.
- ❑ The results of site surveys.
- ❑ If imperiled species or ecological communities are found, submit a) a site plan which delineates imperiled species habitat in relation to the project; b) a letter from the

accredited land trust or relevant public agency stating that a transfer of land rights for the habitat and buffer has taken place or will take place if the project is built, such that these areas will be protected in perpetuity; and c) a brief narrative explaining how imperiled species and ecological communities will be protected.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.



# Smart Location & Linkage

## SLL Prerequisite 4: Wetland and Water Body Conservation Required

### Intent

Conserve water quality, natural hydrology and habitat and preserve biodiversity through conservation of water bodies or wetlands.

### Requirements

#### OPTION 1 – FOR SITES WITH NO WETLANDS OR WATER BODIES

Locate the **project** on a site that includes no **wetlands**, **water bodies**, or land within 100 feet of these areas;

OR

#### OPTION 2 – FOR PREVIOUSLY DEVELOPED SITES WITH WETLANDS/WATER BODIES

Locate the project on a **previously developed site** where the area within a 1 mile radius from the perimeter of the site has either a) an average **street grid density** of at least 30 centerline miles per square mile, or b) an average built **density** of at least 30 dwelling units per acre for any residential components and 1.5 **FAR** for any non-residential components. If local, state, and federal regulations permit impacts to any on-site wetlands, water bodies, or buffer land that is within 100 feet of these areas, such impacts must be compensated by on-site or off-site wetland restoration of equal or greater amounts;

OR

#### OPTION 3 – FOR ALL OTHER SITES

If the project is located on a site that includes wetlands, water bodies, or land within 100 feet of these areas, and if local, state, and federal regulations permit impacts to any on-site wetlands, water bodies, or buffer land that is within 100 feet of these areas, limit any impacts to less than the percentage of these areas reflected in either one of the two following tables, and compensate by on-site or off-site wetland restoration of equal or greater amounts. The portion of the site that is impacted must incorporate stormwater best management practices within the impacted area to infiltrate, re-use, or evapotranspire at least 90% of the average annual rainfall or 1” of rainfall from 75% of the **development footprint** within the impacted area.

Street grid density within a 1 mile radius from the perimeter of the site boundary	Percentage of on-site impacts allowed
>20	15
10-20	10
<10	5

Residential <b>density</b> (DU/acre)	Non-residential density <b>(FAR)</b>	Percentage of on-site impacts allowed
>20	>1.0	15
10-20	.75 - 1.0	10
< 10	< .75	5

For all Options, minor development within the buffer may be undertaken in order to enhance appreciation for wetlands and water bodies. Such development may only include minor path-ways, limited pruning and tree removal for safety, habitat management activities, educational structures not exceeding 200 square feet, and small clearings for picnic tables, benches, and non-motorized recreational water crafts.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A site and/or vicinity map demonstrating that there are no wetlands, water bodies, or land within 100 feet of these areas.

OR

- ❑ Declaration that there are no wetlands or water bodies.

#### Options 2 and 3

- ❑ A site and/or vicinity map showing a) any previously developed areas of the site; b) the street grid density or built density of the area within a 1 mile radius of the perimeter of the project site; and c) the construction impact zone; and d) the location of any wetlands, water bodies, or land within 100 feet of these areas.
- ❑ A calculation of either street grid density or built density within a 1 mile radius of the perimeter of the project site.
- ❑ If on-site impacts occur, a brief narrative describing the planned compensating wetland restoration activities, including the size of the impacted wetlands and of the restored wetlands. For Option 3, also include a narrative describing the stormwater best management practices employed and the amount of rainfall that will be captured.

#### Option 3

- ❑ A site plan indicating the portion of the site that is impacted, and the location of any BMPs.

- ❑ A written commitment to incorporate BMPs within the impacted area to meet the requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

##### Options 2 and 3

- ❑ If wetland restoration activities took place, either a photograph, diagram, or a brief description of the resulting areas.

##### Option 3

- ❑ For portions of the site where BMPs were required, a calculation of either 90% of the average annual rainfall or 1” of rainfall that occurs on the project’s development footprint and other effectively impervious areas.
- ❑ A calculation of the percentage of the development footprint for which runoff is infiltrated, re-used, or evapotranspired.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Smart Location & Linkage

## SLL Prerequisite 5: Agricultural Land Conservation Required

### Intent

Preserve irreplaceable agricultural resources by protecting prime and unique farmland and forest lands from development.

### Requirements

#### OPTION 1

Locate the **project** such that the site contains no more than 25% **prime soils**, **unique soils**, or soils of state significance as identified in a state Natural Resources Conservation Service soil survey;

OR

#### OPTION 2

Locate the project such that it meets the requirements specified in Options 1, 2, or 3, of SLL Prerequisite 1;

OR

#### OPTION 3

Locate the project such that it is within a designated receiving area for development rights under a publicly administered farmland protection program that provides for the transfer of development rights from lands designated for conservation to lands designated for development;

OR

#### OPTION 4 – FOR REGIONS WITH AN ABUNDANCE OF PRIME AGRICULTURAL LAND

If the project is located within a metropolitan or micropolitan statistical area for which 75% or more of the total vacant land, including **infill sites**, is covered by prime soils, unique soils, or soils of state significance, and is on an **adjacent site**, then the prerequisite is not applicable. If the project does not lie in an established metropolitan or micropolitan statistical area, then the county boundary may serve for the purposes of the calculation.

## Additional Notes

The Natural Resources Conservation Service (NRCS) is responsible for identifying prime and unique soils, and they make detailed soil surveys and maps available for every county in the United States. NRCS data are available for download to GIS mapping programs.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A site and/or vicinity map indicating the location of any prime or unique soils on the site.

OR

- ❑ Declaration that there are no prime or unique soils on the site.
- ❑ If any prime, unique, or state significant soils occur on the site, a calculation of the percentage of the site area that they cover.

#### Option 2

- ❑ No additional documentation necessary.

#### Option 3

- ❑ A brief description and/or map indicating the receiving area for development rights.

#### Option 4

- ❑ Data and/or a map showing that 75% of the total vacant land in the metropolitan or micropolitan statistical area (or county) is covered by prime soils, unique soils, or soils of state significance.
- ❑ A site and/or vicinity map showing that the project site is an adjacent site.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Smart Location & Linkage

## SLL Prerequisite 6: Floodplain Avoidance Required

### Intent

Protect life and property, promote open space and habitat conservation, and enhance water quality and natural hydrological systems.

### Requirement

#### OPTION 1- FOR SITES WITH NO 100-YR FLOODPLAINS

Locate on a site that does not contain any land within the 100-year floodplain as defined and mapped by the Federal Emergency Management Agency or state or local floodplain management entity, whichever has been done most recently;

OR

#### OPTION 2- FOR INFILL AND PREVIOUSLY DEVELOPED SITES

Locate the **project** on an **infill site** or a **previously developed site** and follow the National Flood Insurance Program (NFIP) requirements for developing any portions of the site that lie within the 100-year floodplain as defined and mapped by the Federal Emergency Management Agency or state or local floodplain management entity, whichever has been done most recently;

OR

#### OPTION 3- FOR ALL OTHER SITES

For projects where part(s) of the site is located within the 100-year floodplain as defined and mapped by the Federal Emergency Management Agency or state or local floodplain management entity, whichever has been done most recently, develop only on portions of the site that are not in the 100-year floodplain or on portions that have been previously developed. Previously developed portions in the floodplain must be developed according to the NFIP requirements.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1

- ❑ A site and/or vicinity map indicating that the site contains no land within the 100-year floodplain.

OR

- ❑ Declaration that the site contains no land within the 100-year floodplain.

##### Option 2

- ❑ A site and/or vicinity map indicating that the project is an infill site or areas that are previously developed.
- ❑ If any portion of the site lies within the 100-year floodplain, submit a brief narrative describing how the NFIP requirements will be met for that portion.

##### Option 3

- ❑ A site and/or vicinity map indicating where new development will take place, areas that are previously developed, and the boundaries of the 100-year floodplain.
- ❑ If any portion of the site that is being redeveloped lies within the 100-year floodplain, submit a brief narrative describing how the NFIP requirements will be met for that portion.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2



If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 1: Brownfields Redevelopment

### 2 Points

#### Intent

Encourage the reuse of land by developing sites where development is complicated by environmental contamination, reducing pressure on undeveloped land.

#### Requirements

Locate **project** on a site, part or all of which is documented as contaminated (by means of an ASTM E1903-97 Phase II Environmental Site Assessment or a local Voluntary Cleanup Program) OR on a site defined as a **brownfield** by a local, state or federal government agency;

AND

Remediate site contamination such that the controlling public authority approves the protective measures and/or clean-up as effective, safe, and appropriate for the future use of the site.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ Confirmation of whether any part of the project site was determined contaminated by means of an ASTM E1903-97 Phase II Environmental Site Assessment or defined as a brownfield by a local, state, or federal agency.
- ❑ Narrative describing the site contamination and remediation efforts undertaken or to be undertaken by the project.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- Confirmation from the controlling public authority that it has approved the remediation as effective, safe, and appropriate for the future use of the site.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Smart Location & Linkage

## SLL Credit 2: High Priority Brownfields Redevelopment

### 1 Point

#### Intent

Encourage the cleanup of contaminated **brownfields** sites in areas targeted for redevelopment.

#### Requirements

Earn SLL Credit 1: Brownfields Redevelopment, using a site that is in one of the following areas:

- Federal Empowerment Zone
- Federal Enterprise Community
- Federal Renewal Community
- Communities with Official Recognition (OR) from the Department of Justice for their Weed and Seed Strategy
- Qualified Low-Income Communities (LICs) as defined by the New Markets Tax Credit (NMTC) Program of the U.S. Department of the Treasury - Community Development Financial Institutions Fund (CDIF).

Brownfield sites in areas identified by state level equivalent programs to those listed above will also qualify.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- Documentation demonstrating that the site lies within one of the listed zones or communities.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 3: Preferred Locations

### 2 to 10 Points

#### Intent

Encourage development within existing communities and developed places to reduce multiple environmental harms associated with sprawl. Reduce development pressure beyond the limits of existing development. Conserve natural and financial resources required for construction and maintenance of infrastructure.

#### Requirements

Locate the **project** in one of the following locations that also earn at least one point for **street grid density** according to the calculation below:

- An **infill site** that is also a **previously developed site** (6 points)
- An infill site that is not a previously developed site (4 points)
- An **adjacent site** that is also a previously developed site (3 points)
- A previously developed site that is not an adjacent or infill site (2 points)
- An adjacent site that is not a previously developed site (1 point)

AND

Calculate the street grid density (in street centerline miles per square mile) within a 1 mile radius from the perimeter of the site boundary. Points are added to the above points according to the following street grid density:

- 40 centerline miles per square mile or greater (4 points)
- 30-39 centerline miles per square mile (3 points)
- 20-29 centerline miles per square mile (2 points)
- 10-19 centerline miles per square mile (1 point)

No points are available under this credit for sites that are not either 1) an adjacent site, 2) an infill site, or 3) a previously developed site.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A map of the vicinity demonstrating that the project is located on one or more of the following: 1) an infill site; 2) an adjacent site; or 3) a previously developed site.
- ❑ A map of the vicinity showing the street grid density of the area within a 1 mile radius of the perimeter of the project site.
- ❑ A calculation of the street grid density within a 1 mile radius of the perimeter of the project site.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 4: Reduced Automobile Dependence

### 1 to 8 Points

#### Intent

Encourage development in locations that exhibit superior performance in providing transportation choices or otherwise reducing motor vehicle use.

#### Requirements

##### OPTION 1

Locate **project** on a site with transit service of 20 or more easily accessible transit rides per week day. The number of points available for increasing transit service is indicated in the table below. The total number of rides available during weekdays is defined as the number of buses or streetcars stopping within a ¼ mile **walk distance** of at least 50% of the project's dwellings and business entrances, and the number of bus rapid transit buses, light rail trains, heavy passenger rail, and ferries stopping within a ½ mile walk distance of at least 50% of the project's dwellings and business entrances;

Total rides available per weekday	Points earned
20 – 59	2
60 – 99	3
100 – 224	4
225 – 349	5
350 – 499	6
500 or more	7

OR

##### OPTION 2

Locate project within a region served by a Metropolitan Planning Organization AND within a transportation analysis zone where annual **Vehicle Miles Traveled (VMT)** per capita or single occupancy vehicle (SOV) driving mode share has been demonstrated by MPO research derived from a household transportation survey to be no more than 80% of the average of the metropolitan region as a whole. The research must be derived from transportation surveys conducted within ten years of the date of submission for LEED for Neighborhood Development certification. Additional credit may be awarded for increasing levels of performance, as indicated;



Percent of average regional per capita VMT or SOV mode share	Points earned
71% to 80%	2
61% to 70%	3
51% to 60%	4
41% to 50%	5
31% to 40%	6
30% or less	7

OR

### OPTION 3

Locate the project such that 50% of the dwelling units and business entrances are within a ¼ mile walk distance of at least one vehicle that is available through a vehicle-sharing program, and publicize the availability and benefits of the vehicle-sharing program to project occupants. If the project will add more than 100 dwelling units and/or employees to the neighborhood, at least one additional vehicle for every 100 dwelling units and/or employees must be available and the parking space must be dedicated as part of the project. Where new vehicle locations are created, a vehicle share program must commit to providing a vehicle to the location for at least three years. (1 point)

Points earned under Options 1 and 2 may not be combined. A point from Option 3 may be earned independently, or be added to those earned under Options 1 and 2 for a maximum of 8 points.

### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A site and/or vicinity map showing all relevant dwelling units and building entrances, transit stops, and walking routes to those stops.
- ❑ Schedules or a brief narrative indicating the frequency and type of transit available.
- ❑ A list of transit stops that lie within the specified walk distance of 50% of the project's dwelling units and business entrances.

- ❑ A calculation showing the total rides available per weekday.

Option 2

- ❑ Excerpts of relevant MPO research.

Option 3

- ❑ A site and/or vicinity map showing all relevant building entrances, shared vehicles, and walking routes to those vehicles.
- ❑ A table of walk distances between each dwelling unit and/or business entrance and the closest shared vehicle, and a calculation of the percentage of dwelling units and business entrances that lie within the specified distances.
- ❑ A brief narrative describing how the availability of the vehicle-sharing program will be publicized to project occupants.
- ❑ If the project adds more than 100 dwelling units or employees to the neighborhood, submit calculations showing how many additional vehicles are required and indicate on the site plan where any required parking spaces are dedicated within the project.
- ❑ If a new vehicle location is created to meet the requirements, submit a letter from the vehicle-sharing program stating its commitment to provide a vehicle at that location for at least 3 years.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 5: Bicycle Network

### 1 Point

#### Intent

To promote bicycling and transportation efficiency.

#### Requirements

Design or locate the **project** such that 50% of the dwelling units and business entrances are within 3 miles of at least four or more of the diverse uses listed in Appendix A using an existing **biking network** and/or a biking network that will be completed as part of the project (3 mile distance is measured along the biking network, not as a straight radius);

AND

For any non-residential buildings and multifamily residential buildings that are part of the project, provide bicycle parking spaces or storage for a capacity of no less than 15% of the off-street parking space capacity provided for cars for those buildings.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site and/or vicinity map indicating the relevant building entrances, diverse uses listed in Appendix A, and biking network.
- ❑ A table of biking distances between each dwelling unit or business entrance and each relevant use listed in Appendix A, and a calculation of the percentage of dwelling units and business entrances that lie within the specified distance.
- ❑ If non-residential buildings or multifamily residential buildings are included in the project, submit a calculation of the required bicycle parking spaces and indicate their location on the site plan.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 6: Housing and Jobs Proximity

### 3 Points

#### Intent

Encourage balanced communities with a diversity of uses and employment opportunities. Reduce energy consumption and pollution from motor vehicles by providing opportunities for shorter vehicle trips and/or use of alternative modes of transportation.

#### Requirements

##### OPTION 1

Include a residential component equaling at least 25% of the **project's** total building square footage, and locate and/or design the project such that the center is within a 1/2 mile **walk distance** of a number of **pre-project** jobs equal to or greater than 50% of the number of dwelling units in the project;

OR

##### OPTION 2

Include a non-residential component equaling at least 25% of the project's total building square footage, and locate on an **infill** site whose center is within a 1/2 mile walk distance of an existing and operational rail transit stop, and within a 1/2 mile walk distance of a number of existing dwelling units equal to or greater than 50% of the number of new jobs created as part of the project.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1

- ❑ A calculation demonstrating that at least 25% of the project's built square footage is residential.

- ❑ A site and/or vicinity map showing the location of relevant dwelling units within the project, nearby pre-project jobs, and walking routes to those jobs.
- ❑ A calculation showing that the number of pre-project jobs is equal to or greater than 50% of the number of dwelling units.

Option 2

- ❑ A calculation demonstrating that at least 25% of the project's built square footage is non-residential.
- ❑ A site and/or vicinity map demonstrating that the project site is an infill site, and indicating the location of the relevant rail transit stop, existing dwelling units, new jobs created as part of the project, and walking routes to the transit stop and dwelling units.
- ❑ A calculation showing that the number of pre-project jobs is equal to or greater than 50% of the number of dwelling units.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate "No change since Stage 1" on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate "No change since Stage 2" on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 7: School Proximity

### 1 Point

#### Intent

Promote public health through physical activity by facilitating walking to school. Promote community interaction and engagement.

#### Requirements

Include a residential component in the **project** that constitutes at least 25% of the project's total building square footage; and locate or design the project so that at least 50% of the project's dwelling units are within ½ mile **walk distance** of an existing or planned school.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A calculation demonstrating that at least 25% of the project's square footage is residential.
- ❑ A site and/or vicinity map showing the relevant school, dwelling units, and walking routes.
- ❑ A table of walk distances between each dwelling unit the relevant school, and a calculation of the percentage of dwelling units that lies within the specified distance.
- ❑ If the school is planned rather than existing, submit a letter signed by the school district or academic institution confirming that a school will be constructed at the identified location.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.



# Smart Location & Linkage

## SLL Credit 8: Steep Slope Protection

### 1 Point

#### Intent

Minimize erosion to protect habitat and reduce stress on natural water systems by preserving steep slopes in a natural, vegetated state.

#### Requirements

##### OPTION 1

Avoid disturbing portions of **project** sites that have **pre-project** slopes greater than 15%;

OR

##### OPTION 2- FOR **PREVIOUSLY DEVELOPED SITES** ONLY

On portions of project sites with pre-project slopes greater than 15%:

- a. treat any fractions of the site that have not been previously developed by complying with the requirements for sites that are not previously developed set forth in Option 3;

OR

- b. restore **native plants** or **adapted plants** to 100% of any **previously developed** slopes over 40%; 60% of any previously developed slopes between 25%-40%; and 40% of any previously developed slopes between 15%-25%;

OR

##### OPTION 3

On portions of project sites with pre-project slopes greater than 15% that are not previously developed sites:

- do not disturb slopes greater than 40% and do not disturb portions of the project site within 50 feet of the top of the slope, and 75 feet from the **toe of the slope**;
- limit development to no more than 40% of slopes between 25%-40%, and to no more than 60% of slopes between 15%-25%.
- locate development such that the percentage of the **development footprint** that is on pre-project slopes less than 15% is greater than the percentage of **buildable land** that has pre-project slopes less than 15%.

For all three options, those portions of project sites with slopes up to 20 feet in elevation (toe to top) that are more than 30 feet in any direction from another slope greater than 15% are exempt from the requirements, although more restrictive local regulations may apply.

For Options 2 and 3, develop **CC&Rs**, development agreements, or other binding documents that will protect the specified steep slope areas in perpetuity.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### All Options

- ❑ Topographic drawings of the project site indicating slopes, any areas that are previously developed, and the areas planned for development or redevelopment.

#### Option 1

- ❑ Declaration that there are no pre-project slopes greater than 15%.

#### Option 2a

- ❑ Calculations showing that portions of the site that have not been previously developed are complying with the percentage requirements set forth in Option 3.

#### Option 2b

- ❑ A site plan indicating areas planned for restoration (or indicate these areas on the topographic drawings).
- ❑ A list of plants to be used.

#### Option 3

- ❑ Calculations showing that the site is complying with the percentage requirements.

#### Options 2a and 3

- ❑ A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will restrict development around slopes according to the relevant credit requirements. If jurisdictional regulations provide for these restrictions, a copy of the relevant passages can be substituted.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For Options 2a and 3, if written commitments to create copies of the required agreements were submitted previously, submit a copy of the actual agreement(s).
- For Option 2b, either a photograph, diagram, or a brief description of the restored areas.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Smart Location & Linkage

## SLL Credit 9: Site Design for Habitat or Wetland Conservation

### 1 Point

#### Intent

Conserve native wildlife habitat, wetlands and water bodies.

#### Requirements

##### OPTION 1

Work with the state's Natural Heritage Program, a local fish or wildlife agency, or the state fish and wildlife agency to determine if significant habitat occurs on the site. If significant habitat is found, do not disturb that significant habitat or portions of the site within an appropriate buffer around the habitat. The geographic extent of the habitat and the appropriate buffer shall be identified by a qualified biologist, a non-governmental conservation organization or the appropriate state, regional or local agency. Protect significant habitat and its identified buffers from development in perpetuity by donating or selling the land or a conservation easement on the land to an accredited land trust or relevant public agency. Significant habitat for this credit includes:

- Habitat for species that are listed or are candidates for listing under state or federal endangered species acts, or for those classified as G1, G2, G3 and/or S1 and S2 species by NatureServe (see note below about G and S classification); and
- Locally or regionally significant habitat, or patches of natural vegetation at least 150 acres in size (irrespective of whether some of the 150 acres lies outside the **project boundary**); and
- Habitat flagged for conservation under a regional or state conservation or green infrastructure plan;

OR

##### OPTION 2

If the project is located on a **previously developed site**, use **native plants** for 90% of vegetation, and use no **invasive plants** on any part of the site;

OR

##### OPTION 3 – FOR SITES WITH WETLANDS AND/OR WATER BODIES

Design the project to conserve 100% of all **water bodies** and **wetlands** on the site; and conduct an assessment, or compile existing assessments, showing the extent to which water bodies and/or wetlands on the site perform the following functions: 1) water quality maintenance, 2) wildlife habitat protection, and 3) hydrologic function maintenance, including flood protection. Assign appropriate buffers (not less than 100 feet) around the development footprint throughout the site based upon the functions provided, contiguous soils and slopes, and contiguous land uses; and protect wetlands, water bodies, and their

buffers from development in perpetuity by donating or selling the land or a conservation easement on the land to an accredited land trust or relevant public agency.

## Additional Notes

G1 species are critically imperiled; at very high risk of extinction globally due to extreme rarity (often five or fewer populations), very steep declines, or other factors.

G2 species are imperiled; at high risk of extinction globally due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3 species are vulnerable; at moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

S1 species are critically imperiled in the state because of extreme rarity (often five or fewer occurrences) or because of some factor such as very steep declines making it especially vulnerable to extirpation from the state

S2 species are imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.

See notes under SLL Prerequisite 3: Imperiled Species and Ecological Communities” for more information about NatureServe and this classification system.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A brief description of the efforts to determine if significant habitat occurs on the project site, including information about the site received from the relevant natural heritage program or agency.
- ❑ A brief narrative summarizing the results of the efforts to determine whether significant habitat occurs on the project site.
- ❑ If significant habitat is found, submit a) a site plan which delineates significant habitat and buffers in relation to the project; and b) a letter from the accredited land trust or

relevant public agency stating that a transfer of land rights for the habitat and buffer has taken place or will take place if the project is built, such that these areas will be protected in perpetuity.

Option 2

- A site plan indicating areas that were previously developed.
- A list of plants to be used.

Option 3

- A site plan which delineates any water bodies, wetlands, and/or buffers in relation to the development footprint.
- A summary of the assessment of water body and wetland functions.
- A letter from the accredited land trust or relevant public agency stating that a transfer of land rights for the habitat and buffer has taken place or will take place if the project is built, such that these areas will be protected in perpetuity.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Smart Location & Linkage

## SLL Credit 10: Restoration of Habitat or Wetlands

### 1 Point

#### Intent

Restore wildlife habitat and wetlands that have been harmed by previous human activities.

#### Requirements

Using only **native plants**, restore native habitat or **pre-development water bodies** or **wetlands** on the **project** site in an area equal to or greater than 10% of the **development footprint** and remove any invasive species on the site. Protect such areas from development in perpetuity by donating or selling the land or a conservation easement on the land to an accredited land trust or relevant public agency.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan showing areas of restoration.
- ❑ A list of plants to be used.
- ❑ A calculation comparing the size of the restored areas to the size of the development footprint.
- ❑ A letter from the accredited land trust or relevant public agency stating that a transfer of land rights for the habitat or wetlands and water bodies has taken place or will take place if the project is built, such that these areas will be protected in perpetuity.
- ❑ Declaration that any invasive species on the project were removed.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- Either a photograph, diagram, or a brief description of the restored areas.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Smart Location & Linkage

## SLL Credit 11: Conservation Management of Habitat or Wetlands 1 Point

### Intent

Conserve native wildlife habitat, wetlands and water bodies.

### Requirements

#### OPTION 1 – FOR SITES WITH HABITAT

Create a long-term (at least 10-year) management plan for on-site native habitats and their buffers and create a guaranteed funding source for management. Involve at least one person from a natural resources agency, a natural resources consulting firm, or an academic ecologist in writing the management plan and conducting or evaluating the ongoing management. The plan should include biological objectives consistent with habitat conservation, and it should identify a) procedures, including personnel to carry them out, for maintaining the conservation areas; b) estimated implementation costs and funding sources; and c) threats that the **project** poses for habitat within conservation areas (e.g., introduction of exotic species, intrusion of residents in habitat areas) and measures to substantially reduce those threats;

OR

#### OPTION 2 – FOR SITES WITH WETLANDS AND WATER BODIES

Create a long-term (at least 10-year) management plan for any on-site **wetlands, water bodies** and their buffers and a guaranteed funding source for management. Involve at least one person from a natural resources agency, a natural resources consulting firm, or an academic ecologist in writing the management plan and conducting or evaluating the ongoing management. The plan should include biological objectives consistent with wetland and water body conservation, and it should identify a) procedures, including personnel to carry them out, for maintaining the conservation areas; and b) estimated implementation costs and funding sources.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- A copy or summary of the management plan, including identification of preparers, or a written commitment to create a management plan if the project is built.

#### **For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

#### **For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- If a written commitment to create a management plan was submitted at previous stages, submit a copy or summary of the completed management plan.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Neighborhood Pattern & Design

## NPD Prerequisite 1: Open Community

### Required

#### Intent

Promote communities that are physically connected to each other. Foster community and connectedness beyond the development.

#### Requirements

Designate all streets and sidewalks that are built as part of the **project** or serving the project directly as available for general public use and not gated. Gated areas and enclaves are NOT considered available for public use, with the exception of education and health care campuses where gates are used for security purposes.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site and/or vicinity map indicating that all streets and sidewalks are available for general public use.
- OR
- ❑ Declaration that all streets and sidewalks are available for general public use.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Prerequisite 2: Compact Development Required

### Intent

Conserve land. Promote livability, transportation efficiency, and walkability.

### Requirements

Build any residential components of the **project** at an average **density** of seven or more dwelling units per acre of **buildable land** available for residential uses;

AND

Build any non-residential components of the project at an average density of 0.50 **FAR** or greater per acre of buildable land available for non-residential uses.

If the project location is serviced by a transit agency which has specified minimum service densities that are greater than the densities required by this prerequisite, then the project must meet the transit agency's minimum service densities instead.

The specified average density must be achieved by the point in the project's construction at which 50% of dwelling units are built, or within five years of the date that the first building is occupied, whichever is longer.

### Additional Notes

The density of a mixed-use building is calculated by: 1) determining the total square footage of all residential and non-residential uses; 2) calculating the percentages of the total square footage that the residential and non-residential components each represent; 3) applying those percentages to the building parcel to determine the proportionate share of land area for each component; and 4) calculating residential density as the number of dwelling units per acre using the residential share of the building parcel, and calculating non-residential density as FAR using the non-residential share of the land area divided by total non-residential square footage. For example, a mixed-use building of ten dwellings at 1,500 sq.ft. each, and 25,000 sq.ft. of retail, on one acre of land would have a residential density of 26 DU/acre and a non-residential density of 0.92 FAR. Densities of individual mixed use buildings that are not being averaged with other single-use buildings must meet either the residential density minimum or the non-residential density minimum, but need not meet both.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The*

certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating densities.  
OR
- ❑ A table of calculations of the densities of any residential components, non-residential components, and mixed use buildings.
- ❑ A statement indicating whether any transit agency has specified minimum service densities higher than densities required by this prerequisite for the area where the project is located.
- ❑ A statement indicating the expected timeline for project construction and (for projects that have a residential component) which components of the project will be completed when 50% of the dwelling units are built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

- ❑ If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 1: Compact Development

### 1 to 7 Points

#### Intent

Conserve land. Promote community livability, transportation efficiency, and walkability.

#### Requirements

Design and build the **project** to achieve the densities shown in the table below.

Residential Density (DU/acre)	Non-residential Density (FAR)	Points Available
10 to 20	0.75 to 1.0	1
> 20 and ≤ 30	> 1.0 and ≤ 1.5	2
> 30 and ≤ 40	> 1.5 and ≤ 2.0	3
> 40 and ≤ 50	> 2.0 and ≤ 2.5	4
> 50 and ≤ 60	> 2.5 and ≤ 3.0	5
> 60 and ≤ 70	> 3.0 and ≤ 3.5	6
> 70	> 3.5	7

The specified density must be achieved by the point in the project's construction at which 50% of dwelling units are built, or within five years of the date that the first building is occupied, whichever is longer.

#### Additional Notes

The scoring of the density of a mixed-use project is calculated by a weighted average: 1) determining the total square footage of all residential and non-residential uses; 2) calculating the percentages of the total square footage that the residential and non-residential components each represent; 3) determining the density of each component as measured in dwelling units per acre and FAR respectively; 4) determining how many points the residential and non-residential component each earns separately according to the table above; 5) if the points are different, multiply the point value of the residential component by the percentage of the total square footage it represents (as determined in step 2) and multiply the point value of the non-residential component by the percentage of the total square footage it represents (as determined in step 2); 6) add the two scores together. For example; a project that is 75% residential at an average density of 65 DU/acre and 25% non-residential at an FAR of 0.8 would earn 4 points:  
 $(.75 \times 6) + (.25 \times 1) = 4.25$ , which is rounded to 4.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The*

certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating densities.  
OR
- ❑ A table of calculations of the densities of any residential components, non-residential components, and mixed use buildings.
- ❑ For mixed-use projects, submit a calculation showing the points earned by the weighted average of residential and non-residential.
- ❑ A statement indicating the expected timeline for project construction and (for projects which have a residential component) which components of the project will be completed when 50% of the dwelling units are built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.



# Neighborhood Pattern & Design

## NPD Credit 2: Diversity of Uses

### 1 to 4 Points

#### Intent

Promote community livability, transportation efficiency, and walkability.

#### Requirements

Include a residential component in the **project** that constitutes at least 25% of the project's total building square footage; and design or locate the project such that at least 50% of the dwelling units are within ½ mile **walk distance** of at least two (1 point), four (2 points), seven (3 points) or ten (4 points) of the **diverse uses** defined in Appendix A. Uses may either be in nearby areas or be built within the development.

Verify that a pedestrian can reach the uses via routes that do not necessitate crossing any streets that have speed limits of greater than 25 miles per hour, unless those crossings have vehicle traffic controls such as signals and stop signs with crosswalks.

The specified number of uses must be in place by the time certain percentages of occupancy are in place, as indicated in the following table:

Number of uses	Percentage of project occupancy at which uses need to be in place
Two uses (1 point)	20%
Four uses (2 points)	30%
Seven uses (3 points)	40%
Ten uses (4 points)	50%

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A calculation demonstrating that at least 25% of the project's built square footage is residential.
- ❑ A site and/or vicinity map of the vicinity showing the project's dwelling units and walking routes to any of the relevant uses defined in Appendix A.
- ❑ A table of walk distances between each dwelling unit and relevant uses defined in Appendix A, and calculation of the percentage of dwelling units that lie within the specified distance.
- ❑ For any streets with speed limits greater than 25 miles per hour that intersect with walking routes to the relevant uses defined in Appendix A, verify that vehicle traffic controls exist or will be installed at all walking route intersections.
- ❑ A statement indicating the expected timeline for project construction and which uses will be in place at the time the relevant percentages of occupancy are in place.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate "No change since Stage 1" on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate "No change since Stage 2" on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 3: Diversity of Housing Types

### 1 to 3 Points

#### Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

#### Requirements

Include a sufficient variety of housing sizes and types in the **project** such that the total variety of housing within the project, or within a ¼ mile of the center of the project, achieves at least 0.5 according to the following calculation, which is based on the Simpson Diversity Index using the housing categories below.

The Simpson Diversity Index score is calculated with the following equation:

$$\text{Score} = 1 - \sum (n/N)^2,$$

where  $n$  = the total number of dwellings in a single category, and  
 $N$  = the total number of dwellings in all categories.

Score on the Simpson Diversity Index	Points Earned
$\geq 0.5$ and $< 0.6$	1
$\geq 0.6$ and $< 0.7$	2
$\geq 0.7$	3

Housing categories are defined for the purposes of this calculation in LEED for Neighborhood Development as:

- (1) Detached residential large - (greater than 1200 sq. ft.)
- (2) Detached residential small - (less than 1200 sq. ft.)
- (3) Duplex or townhouse - large (greater than 1200 sq. ft.)
- (4) Duplex or townhouse - small (less than 1200 sq. ft.)
- (5) Multifamily dwelling in a building with no elevator - large (greater than 750 sq. ft.)
- (6) Multifamily dwelling in a building with no elevator - small (less than 750 sq. ft.)
- (7) Multifamily dwelling in a building with elevator four stories or fewer - large (greater than 750 sq. ft.)
- (8) Multifamily dwelling in a building with elevator four stories or fewer - small (less than 750 sq. ft.)
- (9) Multifamily dwelling in a building with elevator more than four stories and fewer than nine stories - large (greater than 750 sq. ft.)
- (10) Multifamily dwelling in a building with more than four stories and fewer than nine stories - small (less than 750 sq. ft.)
- (11) Multifamily dwelling in a building with elevator nine stories or more - large (greater than 750 sq. ft.)
- (12) Multifamily dwelling in a building with nine stories or more - small (less than 750 sq. ft.)

- (13) Live/work large (greater than 1200 sq. ft.)
- (14) Live/work small (less than 1200 sq. ft.)
- (15) Accessory Unit – large (greater than 1200 sq. ft.)
- (16) Accessory Unit – small (less than 1200 sq. ft.)

Townhouse and live/work units may be ground related and/or within a multifamily or mixed-use building. Double counting is prohibited. Each dwelling may be classified in only one category.

### Additional Notes

This credit was adapted from Laurance Aurbach's TND Design Rating Standards Version 2.1, June 2005.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site and/or vicinity map showing the location of different types of housing, either 1) within the project; or 2) within ¼ mile of the center of the project.
- ❑ The number of dwelling units in each category, the total number of dwelling units, and the results of the Simpson Diversity Index calculation.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 4: Affordable Rental Housing

### 1 to 2 Points

#### Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

#### Requirements

Include a proportion of rental units priced for households earning below **area median income** such that:

##### OPTION 1

At least 15% of total rental units are priced for households up to 50% of area median income and units are maintained at affordable levels for a minimum of fifteen years (1 point);

OR

##### OPTION 2

At least 30% of total rental units are priced for households up to 80% of area median income and units are maintained at affordable levels for a minimum of fifteen years (1 point);

OR

##### OPTION 3

At least 15% of total rental units are priced for households up to 50% of area median income and an additional 15% of total rental units are priced for households at up to 80% of area median income and units are maintained at affordable levels for a minimum of fifteen years (2 points).

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ Confirmation of current HUD data regarding the area median income and the resulting maximum monthly rents.
- ❑ A table showing the number of affordable and market rate housing units, the rental prices of any affordable units, and a calculation of the percentage of rental units that are priced within the specified range.
- ❑ A copy of, or a written commitment to create a regulatory and operating agreement, deed restrictions, or other recorded document evidencing that the units will be maintained at the specified affordable levels for a minimum of fifteen years.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 5: Affordable For-Sale Housing 1 to 2 Points

### Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

### Requirements

Include a proportion of for-sale housing affordable to households at or slightly above the **area median income** such that:

#### OPTION 1

At least 10% of for-sale housing is priced for households up to 80% of the area median income (1 point);

OR

#### OPTION 2

At least 20% of for-sale housing is priced for households up to 120% of the area median income (1 point);

OR

#### OPTION 3

At least 10% of for-sale housing is priced for households up to 80% of the area median income and an additional 10% of for-sale housing is priced for households at up to 120% of the area median income (2 points).

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*



- ❑ Confirmation of current HUD data regarding the area median income and the resulting maximum housing sale price(s).
- ❑ A table showing the number of affordable and market rate housing units, the sale prices of any affordable units, and a calculation of the percentage of for-sale units that are priced within the specified range.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 6: Reduced Parking Footprint

### 2 Points

#### Intent

Design parking to increase the pedestrian orientation of projects and to minimize the adverse environmental effects of parking facilities.

#### Requirements

For any non-residential buildings and multifamily residential buildings that are part of the project, locate all off-street surface parking lots at the side or rear of buildings, leaving building frontages and streetscapes free of surface parking lots;

AND

Use no more than 20% of the total **development footprint** area for surface parking facilities, with no individual surface parking lot larger than 2 acres. For the purposes of this credit, surface parking facilities include ground-level garages unless they are under or over space intended for human occupancy. Underground or multi-story parking facilities can be used to provide additional capacity, and on-street parking spaces are exempt from this limitation;

AND

For any non-residential buildings and multifamily residential buildings that are part of the **project**, provide bicycle and/or carpool parking spaces equivalent to 10% of the total automobile parking for each non-residential and multifamily building on the site. Signage indicating carpool parking spots should be provided, and bicycle parking should be within 200 yards of the entrance to the building that it services. The 10% carpool/bicycle space requirement can be met with any combination of bicycle and carpool parking.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating the location of all surface, underground, or multi-story parking facilities, including relevant carpool and bicycle spaces and carpool signage. For bicycle spaces provided for non-residential buildings, indicate the distance between the spaces and the entrance of the building they serve.
- ❑ The percentage of total development footprint that is used for surface parking facilities.
- ❑ The size of each individual parking lot that is part of the project.
- ❑ For any non-residential or multifamily residential buildings, submit the number of conventional automobile parking spaces, carpool spaces, and bicycle parking spaces that will be provided.
- ❑ Confirm that signage will be provided for any carpool spaces.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 7: Walkable Streets

### 4 to 8 Points

#### Intent

Provide appealing and comfortable pedestrian street environments in order to promote pedestrian activity. Promote public health through increased physical activity.

#### Requirements

Design and build the **project** such that all of the following are achieved (4 points):

- a. A principal **functional entry** of each building has a front façade that faces a public space such as a street, square, park, paseo, or plaza.
- b. A minimum of 30% of all street frontages located *within* the project, if any, are planned for development that complies with the minimum building-height-to-street-width proportions of 1:3; and where building sites are planned along streets *bordering* the project, a minimum of 15% of the total street frontage of such sites contains (or is dedicated to) development that will produce a building-height-to-street-width proportion of 1:3. Street frontages are to be measured in linear feet.
- c. Continuous sidewalks or equivalent provisions for walking are provided along both sides of all streets within the **project**. New sidewalks must be at least 4 feet wide. Equivalent provisions for walking include *woonerfs* and footpaths.
- d. All streets along exclusively residential blocks within the **project**, whether new or existing, are designed for a maximum speed of 20 mph.
- e. All streets along non-residential or mixed use blocks within the project, whether new or existing, are designed for a maximum speed of 25 mph.

If the above measures are achieved, the project may earn additional points as follows: 1 point for designing and building the project such that any three measures on the list below are accomplished (up to 4 additional points):

- f. The front façades of at least 80% of all buildings are no more than 25 feet from front property line.
- g. The front facades of at least 50% of all buildings are no more than 18 feet from the front property line.
- h. The front facades of at least 50% of mixed-use and non-residential buildings are contiguous to the sidewalk.
- i. Functional building entries occur every 75 feet, on average, along non-residential or mixed use blocks.
- j. All ground-level non-residential interior spaces that face a public space have transparent glass on at least 33% of the ground-level façade.
- k. No blank (without doors or windows) walls longer than 50 feet occur along sidewalks. Walls with public art installations such as murals may be exempted.
- l. Any ground-level storefront windows must be kept open and visible (unshuttered) at night, and this must be stipulated to future owners in **CC&Rs** or other binding documents.

- m. On-street parking is provided on 70% of both sides of all new streets. The percentage of on-street parking shall be measured by comparing the length of street designated for parking to the total length of the curb around the perimeter of each block, including curb cuts, driveways, and intersection radii.
- n. Street trees occur between the vehicle travel way and sidewalk at intervals of no greater than 40 feet;
- o. At least 50% of ground-floor dwelling units have an elevated finished floor no less than 24 inches above the sidewalk grade.
- p. In non-residential or mixed use projects, 50% or more of the total number of office buildings include ground floor retail; and all businesses and/or other community services on the ground floor are accessible directly from sidewalks along a public space such as a street, square, or plaza.
- q. Trees or other structures provide shade within five years of project occupancy over at least half the length of sidewalks included within or contiguous to the project. The estimated crown diameter (the width of the shade if the sun is directly above the tree) is used to calculate the shaded area.

## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ To achieve the base 4 points, submit a site plan or plans indicating the following:
  - (a) the principal functional entries of all buildings and any streets or other public spaces.
  - (b) any street frontages planned for development with a minimum building height- to-street-width proportion of 1:3.
  - (c) the location and width of sidewalks or equivalent provisions for walking.
  - (d/e) the location of residential and non-residential uses, and the speed for which each street within the project will be designed.
- ❑ To achieve the base 4 points, submit the following additional documentation:
  - (b) a calculation showing the percentage of street frontage within the project that will meet the minimum building height-to-street-width proportion of 1:3; and the same percentage for street frontage on the borders of the project.
- ❑ To achieve additional points, submit a site plan or plans indicating the following (as appropriate to the measures attempted):

- (f/g) the distance between the front façades of buildings and the front property lines.
  - (h) the location of any mixed-use or non-residential buildings and the distance between their front façades and the sidewalk.
  - (i) the location of functional entries along non-residential or mixed use blocks.
  - (j) the location of all ground-level non-residential uses along public spaces, the length of the use that will border the public space (in linear feet), and which of them will have transparent glass on the ground-level façade.
  - (k) the location and length of any blank walls along sidewalks.
  - (l) the location of any ground-level storefront windows that will be kept open and visible (unshuttered) at night.
  - (m) the location and length of any on-street parking.
  - (n) the location of any street trees and the distance between them.
  - (o) the location of any ground-floor dwelling units, and which of them will have an elevated finished floor.
  - (p) the location of any office buildings, which of them will have ground floor retail, and the location of entries to any ground-level business or community service from sidewalks or other public spaces.
  - (q) the location and length of sidewalks, and the location and length of shade that will be generated by trees or other structures.
- To achieve additional points, submit the following additional documentation (as appropriate to the measures attempted):
- (f) a calculation showing the percentage of building front façades that will be no more than 25 feet from the front property line.
  - (g) a calculation showing the percentage of building front façades that will be no more than 18 feet from the front property line.
  - (h) a calculation showing the percentage of mixed-use and non-residential building front façades that will be contiguous to the sidewalk.
  - (i) a calculation showing the average of the distances between functional building entries along non-residential or mixed-use blocks.
  - (j) a calculation showing the percentage of ground-level non-residential interior spaces that will face a public space that will have transparent glass on the ground-level façade.
  - (l) a copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will ensure that ground-level storefront windows are kept open and visible (unshuttered) at night.
  - (m) a calculation showing the percentage of street length that will have on-street parking.

- (o) a calculation showing the percentage of ground-floor dwelling units that will have an elevated finished floor.
- (p) a calculation showing the percentage of office buildings that will have ground floor retail.
- (q) a calculation showing the percentage of sidewalks that will be shaded.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For projects attempting the measure described in (l), if a written commitment to create the required agreements was submitted previously, submit a copy of the actual agreement(s).

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Neighborhood Pattern & Design

## NPD Credit 8: Street Network

### 1 to 2 Points

#### Intent

Encourage the design of projects that incorporate high levels of internal connectivity and the location of projects in existing communities in order to conserve land, promote multimodal transportation and promote public health through increased physical activity.

#### Requirements

If new cul-de-sacs are created as part of the **project**, include a pedestrian or bicycle through-connection in at least 50% of any new cul-de-sacs. If topographical conditions prohibit such connections, these are not included in the calculation.

AND meet the requirements under one of the following Options:

#### OPTION 1 – FOR PROJECTS SMALLER THAN 7 ACRES

Locate the project such that the **street grid density** within a ¼ mile radius from the center of the project falls within one of the ranges listed in the table below, OR design the project such that the project's street grid density falls within one of the ranges listed in the table below.

OR

#### OPTION 2 – FOR PROJECTS 7 ACRES OR LARGER

Design the project such that the project's average street grid density falls within one of the ranges listed in the table below.

Street grid density (centerline miles/sq.mi.)	Points Earned
20 – 29	1
>30	2

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*



- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### All Options

- ❑ A site plan indicating the location of any cul-de-sacs and pedestrian or bicycle through-connections.

##### Option 1

- ❑ A site plan and map of the vicinity showing the street grid density of the area within a ¼ mile radius of the center of the project site.
- ❑ A calculation of the street grid density within a ¼ mile radius of the center of the project site.

##### Option 2

- ❑ A site plan showing the street grid density of the project site.
- ❑ A calculation of the street grid density of the project site.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 9: Transit Facilities

### 1 Point

#### Intent

Encourage transit use and reduce driving by creating safe and comfortable transit facilities.

#### Requirements

Provide covered and at least partially enclosed shelters, adequate to buffer wind and rain, with at least one bench at each transit stop within the **project boundaries**. Shelters shall be illuminated to five average maintained footcandles (light levels may be reduced after hours). Existing external lighting can contribute to this level, but any new lighting shall meet light pollution requirements in GCT Credit 20, and designed to not directly illuminate any windows of residential properties.

AND

Provide kiosks, bulletin boards, and/or signs devoted to providing local transit information as part of the project, including basic schedule and route information at each transit stop that borders or falls within the **project**.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan showing the location of any transit stops within the project boundaries and any kiosks, bulletin boards, or signs with local transit information that will be provided as part of the project.
- ❑ A brief narrative listing the facilities for each transit stop that will be provided, including shelters, benches, and the mechanism for achieving the minimum light levels.
- ❑ A brief narrative describing the transit information that will be posted at kiosks, bulletin boards, or signs.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 10: Transportation Demand Management

### 2 Points

#### Intent

Reduce energy consumption and pollution from motor vehicles by encouraging use of public transit.

#### Requirements

##### OPTION 1

Create and implement a comprehensive transportation demand management (TDM) program for the **project** aimed at reducing **weekday peak period** trips by at least 20% compared to the forecasted trip generation for the project without the TDM strategies; and fund for a minimum of two years following **buildout** of the project (1 point);

OR

##### OPTION 2

Provide transit passes valid for at least one year, subsidized to be half of regular price or cheaper, to each resident and employee locating within the project during the first three years of project occupancy (or longer). Publicize the fact that subsidized transit passes are available to the eligible residents and employees (1 point);

OR

##### OPTION 3

Provide transit service (with vans, shuttles, buses) to rail, ferry, or other major transit facilities and/or another major destination such as a retail or employment center, with service no less frequent than five rides per weekday peak period. The service must begin when the project is 20% occupied or sooner, and must be guaranteed for at least two years beyond project buildout (1 point).

No more than 2 points can be earned under this credit.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1

- ❑ A narrative describing the TDM program, including the strategies used, the estimated resulting trip reduction percentage, and the estimated cost of the program for two years following buildout of the project.
- ❑ A written commitment to fund the TDM program for two years following buildout of the project if the project is built.

##### Option 2

- ❑ A narrative describing the type of transit available, the mechanism for publicizing and distributing subsidized transit passes, the regular and subsidized prices of passes, and the estimated number of new residents and employees that will receive subsidized transit passes.
- ❑ A written commitment to provide a legally binding guarantee that passes will be provided to meet the requirements, if the project is built.

##### Option 3

- ❑ A map of the vicinity indicating the routes of new transit service that will be provided as part of the project.
- ❑ A description of the type of transit, and a schedule of service to be provided by as part of the project.
- ❑ A timeline of estimated project occupancy as compared with the estimated start date of transit service provided as part of the project.
- ❑ A written commitment to provide a legally binding guarantee that such service will be provided for at least two years beyond project buildout, if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For Options 2 or 3, if a copy of the legally binding guarantee has not yet been submitted, submit a copy of this guarantee.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Neighborhood Pattern & Design

## NPD Credit 11: Access to Surrounding Vicinity

### 1 Point

#### Intent

Provide direct and safe connections, for pedestrians and bicyclists as well as drivers, to local destinations and neighborhood centers. Promote public health by facilitating walking and bicycling.

#### Requirements

Design and build **projects** such that there is at least one through-street at the **project boundary** every 800 feet, or at existing abutting street intervals, whichever distance is smaller. This does not apply to connections that cannot physically be made; e.g. **wetlands**, rivers, railroads, extreme topography, natural gas lines, pipeline easements, highways, expressways and other limited-access roads.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site and/or vicinity map showing the project boundary, existing abutting street intervals, the through-streets at the project boundary, and the distances between through-streets.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.



# Neighborhood Pattern & Design

## NPD Credit 12: Access to Public Spaces

### 1 Point

#### Intent

To provide a variety of open spaces close to work and home to encourage walking, physical activity and time spent outdoors.

#### Requirements

Locate and/or design **project** so that a park, green plaza or square at least 1/6 acre in area, and at least 150' in width, lies within 1/6 mile **walk distance** of the 90% of the dwelling units and business entrances in the project. Parks less than 1 acre must also have a proportion no narrower than 1 unit of width to 4 units of length;

AND

For projects larger than 7 acres only, locate and/or design the project so that taken together all of the parks in the project shall average at least 1/2 acre in size.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location, size, and proportions of all relevant parks; and 3) the walking routes between the project's buildings and relevant parks.
- ❑ A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant public space, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.
- ❑ For projects larger than 7 acres, submit a calculation of the average size of parks (in acres) in the project.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 13: Access to Active Spaces

### 1 Point

#### Intent

To provide a variety of open spaces close to work and home to encourage walking, physical activity and time spent outdoors.

#### Requirements

##### OPTION 1

Locate and/or design the **project** so that an active open space facility (e.g., general playfields, soccer, baseball, basketball and other sports fields) of at least 1 acre lies within ½ mile **walk distance** of 90% of the dwelling units and business entrances in the project;

OR

##### OPTION 2

Locate and/or design the project so that at least 50% of dwelling units and business entrances are located within ¼ mile walk distance of a multi-use trail or Class I bikeway of at least 3 miles in length;

OR

##### OPTION 3

Locate and/or design the project so that at least 90% of all dwelling units and business entrances in the project are located within ¼ mile walk distance of a public recreation center or gym with outdoor facilities or a park with active recreational facilities.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location and size of all relevant active open space facilities; and 3) the walking routes between the project's buildings and relevant facilities.
- ❑ A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant active open space facility, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.

#### Option 2

- ❑ A site and/or vicinity map showing 1) the location of all buildings; 2) the location and length of the relevant trail; and 3) the walking routes between the project's buildings and relevant trail.
- ❑ A table of walk distances between each building and the closest relevant trail, and a calculation of the percentage of building that lie within the specified distance.

#### Option 3

- ❑ A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location of all relevant recreation centers and gyms with outdoor facilities, and parks with active recreational facilities; and 3) the walking routes between the project's buildings and relevant recreation centers, gyms, and parks.
- ❑ A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant recreation center, gym, or park, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate "No change since Stage 1" on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Neighborhood Pattern & Design

## NPD Credit 14: Universal Accessibility

### 1 Point

#### Intent

Enable the widest spectrum of people, regardless of age or ability, to more easily participate in their community life by increasing the proportion of areas that are usable by people of diverse abilities.

#### Requirements

For **projects** with residential components:

For each residential unit type developed, design 20% (and not less than one) of each type to comply with the accessible design provisions of the Fair Housing Amendments Act (FHAA) and Section 504 of the Rehabilitation Act (Rehabilitation Act), as applicable. Separate residential unit types include: single-family, duplex, triplex, multi-unit row or townhouses, and mixed-use buildings that include residential units. (Compliance for multi-family buildings of four or more units is already a regulatory requirement.). All paths of travel between residential units and other buildings within the project shall comply with the accessible design provisions of the FHAA and Rehabilitation Act, as applicable;

AND

For projects with common-use or recreational facilities constructed as part of the project:

- For any residential areas, apply the accessible design provisions of the FHAA and the Rehabilitation Act to facilities and rights-of-way; and
- For any non-residential areas, apply the accessible design provisions of the American Disabilities Act (ADA) to facilities and rights-of-way.

Projects that include only non-residential components and public right-of-ways will not be able to achieve this credit, since they are already required by law to comply with applicable accessibility regulations. However, if non-residential projects include any common-use or recreational facilities not covered by accessibility regulations, they will be able to achieve the credit.

Regarding residential accessibility design provisions, an accessible entrance can be located at the front, side or back of the residential unit, which may sometimes be determined by the topography of the site.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A brief narrative identifying the universal design or universal accessibility features of the project, and identifying any applicable provisions of the FHAA, Rehabilitation Act, and the ADA.
- ❑ For projects with residential components, submit a site plan indicating the location of any units and paths of travel that comply with the applicable provisions of the FHAA and the Rehabilitation Act, and a calculation showing the percentage of each type of residential unit that complies with the applicable provisions.
- ❑ For projects with common-use or recreational facilities constructed as part of the project, submit a site plan indicating the location of these facilities, including rights-of-way in residential areas.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ For projects with residential components, submit a list of street addresses for any residential units that comply with the applicable provisions of the FHAA and the Rehabilitation Act

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Neighborhood Pattern & Design

## NPD Credit 15: Community Outreach and Involvement

### 1 Point

#### Intent

To encourage community participation in the project design and planning and involve the people who live in a community in deciding how it should be improved or how it should change over time.

#### Requirements

Meet with immediate neighbors and local public officials to solicit input on the proposed **project** during the pre-conceptual design phase,

AND

Host an open community meeting during conceptual design phase to solicit input on the proposed project,

AND

Modify the project design as a direct result of community input, or if modifications are not made, explain why community input did not generate design improvements,

AND

Work directly with community associations and/or other social networks of the community to advertise public meetings and generate comments on project design,

AND

Establish ongoing means for communication between the developer and the community throughout the design, construction, and in cases where the developer maintains control of part or the entire project, post-construction.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ For projects that have not yet undertaken community outreach and involvement but intend to, submit a written commitment to meet the requirements of the credit and a brief description as to how and when the activities are expected to take place.
- ❑ For projects that have already undertaken community outreach and involvement, submit the following:
  - 1) some documentation that at least one public meeting was held (examples could include meeting fliers, agenda, minutes, invitation letters, photographs of the meeting, copies of meeting sign-in sheets);
  - 2) a brief narrative and/or illustration demonstrating how community input influenced changes to the design or an explanation of why changes were not made;
  - 3) at least one letter of support from a community association and/or social network stating that the project team worked directly to engage with the association or network to advertise and generate comments on the project;
  - 4) a brief narrative describing the ongoing means of communication between developers and community during design, construction, and in cases where the developer maintains control of part or the entire project, after construction.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ If community outreach and involvement efforts had not taken place at the time of previous stages of certification, submit documentation of these efforts.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Neighborhood Pattern & Design

## NPD Credit 16: Local Food Production

### 1 Point

#### Intent

Promote community-based and local food production to minimize the environmental impacts from transporting food long distances and increase direct access to fresh foods.

#### Requirements

Establish **CC&Rs** or other forms of deed restrictions that do not prohibit areas for growing produce, including greenhouses, on any portion or area of residential front yards, rear yards, side yards, balconies, patios or rooftops. Greenhouses, but not gardens, may be prohibited in front yard areas that face the street.

AND

Meet the requirements under one of the following Options:

#### OPTION 1 – NEIGHBORHOOD FARMS AND GARDENS

Dedicate permanent and viable growing space and/or related facilities (such as greenhouses) within the **project** at the square footage areas specified below. Provide fencing, watering systems, soil and/or garden bed enhancements (such as raised beds), secure storage space for garden tools, solar access, and pedestrian access for these spaces. Ensure that the spaces are owned and managed by an entity that can include occupants of the project in its decision-making, such as a community group, a homeowners association, or a public body.

Project <b>density</b> (dwelling unit/acre)	Required growing space (sq ft per dwelling unit)
7 to 14	200
> 14 and ≤ 22	100
> 22 and ≤ 28	80
> 28 and ≤ 35	70
> 35	60

OR

#### OPTION 2 – COMMUNITY SUPPORTED AGRICULTURE

Purchase shares in a **Community Supported Agriculture (CSA)** program located within 150 miles of the project site for at least 80% of the households within the project for two years. Shares must be delivered to within ¼ mile of the project on a regular schedule, which shall not be less than twice per month at least four months of the year.

OR

### OPTION 3 – PROXIMITY TO FARMERS' MARKET

Locate and/or design project such that the center is within ¼ mile of an established farmer's market (that has been operating for at least two years), with at least three producer vendors, and that operates at least once a week for at least 5 months of the year.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### All Options

- ❑ A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, deed restrictions, or other binding documents that will establish that areas for growing produce are not prohibited as specified.

#### Option 1

- ❑ A site plan showing the location and size of dedicated space for growing and/or related facilities.
- ❑ A calculation showing the required growing space based on density.
- ❑ A written commitment to provide the items specified if the project is built.
- ❑ A brief narrative explaining what entity will serve to own and manage the growing spaces and facilities.

#### Option 2

- ❑ Identification of available CSA programs that can deliver to within ¼ mile of the project site according to the specified schedule, and an estimated cost for purchasing shares for 80% of the project's households for two years.
- ❑ A written commitment to purchase shares for 80% of the project's households for two years, if the project is built.

#### Option 3

- ❑ A map showing the location of the relevant farmers' market in relation to the project.

- ❑ A brief narrative describing the number of producer vendors and the market's schedule of operation.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate "No change since Stage 1" on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate "No change since Stage 2" on project checklist, and submit the following additional post-construction documentation:

- ❑ If a written commitment to create the required agreements regarding the allowance of growing spaces and facilities was submitted previously, submit a copy of the actual agreement(s).
- ❑ For Option 1, if a written commitment to provide the items specified was submitted previously, submit confirmation that the items were provided.
- ❑ For Option 2, if a written commitment to purchase shares for 80% of the project's households for two years, submit confirmation that the shares were purchased.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Prerequisite 1: Construction Activity Pollution Prevention Required

### Intent

Reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.

### Requirements

Create and implement an Erosion and Sedimentation Control (ESC) Plan for all construction activities associated with the **project**. The ESC Plan shall list the Best Management Practices (BMPs) employed and describe how the BMPs accomplish the following objectives:

- Prevent loss of soil during construction by stormwater runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.
- Prevent sedimentation of any impacted stormwater conveyance systems or receiving streams.
- Prevent polluting the air with dust and particulate matter.

The BMPs shall be selected from the 2003 EPA Construction General Permit (CGP) OR local erosion and sedimentation control standards and codes, whichever is more stringent.

Note: Many projects are already mandated to comply with the CGP. These requirements are intended to integrate consideration of these measures into site planning and to ensure that all projects seeking LEED certification implement these measures, regardless of size.

### Additional Notes

Information on the CGP is available at: <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating where erosion and sedimentation control will be necessary during construction.
- ❑ A written commitment that an ESC plan will be created and implemented if the project is built, or confirmation that local code requires the same provisions.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ A summary of the ESC Plan, including a list of BMPs that will be used and confirmation of whether they were selected from the EPA CGP or local standards and codes.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ Copies of photographs or drawings to document the erosion and sedimentation control measures implemented on the site, or a representative sample thereof.
- ❑ A brief narrative describing the erosion and sedimentation control measures implemented on the project.

#### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Green Construction & Technology

## GCT Credit 1: LEED Certified Green Buildings

### 1 to 3 Points

#### Intent

Encourage the design and construction of buildings to utilize green building practices.

#### Requirements

##### OPTION 1 – FOR **PROJECTS WITH 5 OR FEWER HABITABLE BUILDINGS**

Design, construct, or retrofit one building as part of the project to be certified under one of the following LEED building rating systems: LEED for New Construction, LEED for Existing Buildings, LEED for Homes, LEED for Core & Shell, LEED for Schools, or any Application Guides of these rating systems (1 point). Additional points (no more than 3 total) may be earned for each additional certified building that is part of the project;

OR

##### OPTION 2 – FOR **PROJECTS WITH 6 OR MORE HABITABLE BUILDINGS**

Design, construct, or retrofit a percentage of the square footage of buildings that are part of the project to be certified under one of the LEED building rating programs listed above. Points are available as follows:

Percent of square footage of project's buildings LEED certified	Points
20% to 30%	1
> 30% to 40%	2
> 40%	3

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to certify the relevant buildings under a LEED building rating system if the project is built.

Option 2

- ❑ A calculation showing the percentage of square footage that will be LEED certified.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ Confirmation that the relevant buildings have been registered under a LEED building rating system. (If buildings are submitting for Design Review, the results of this review may be submitted, but are not required.)

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ Confirmation that the relevant buildings have been certified under a LEED building rating system.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 2: Energy Efficiency in Buildings

### 1 to 3 Points

#### Intent

Encourage the design and construction of energy efficient buildings to reduce air, water, and land pollution and environmental impacts from energy production and consumption.

#### Requirements

1 POINT CAN BE EARNED AS FOLLOWS:

Design and construct at least 90% of all buildings in the **project** such that they meet one of the following requirements according to the appropriate category:

Category 1: For non-residential buildings and residential buildings over 3 stories:

#### WHOLE BUILDING ENERGY SIMULATION

Demonstrate a minimum 10% improvement in the proposed building performance rating compared to the baseline building performance rating per ASHRAE/ IESNA Standard 90.1-2004 (without addenda) by a whole building project simulation using the Building performance Rating Method in Appendix G of the Standard. Appendix G requires that this energy analysis include ALL of the energy costs within and associated with the building project. To achieve this point, the proposed design:

- must comply with the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) in Standard 90.1-2004 (without addenda);
- must include all the energy costs within and associated with the building project; and
- must be compared against a baseline building that complies with Appendix G to Standard 90.1-2004 (without addenda). The default process energy cost is 25% of the total energy cost for the baseline building. For buildings where the process energy cost is less than 25% of the baseline building energy cost, the LEED submittal must include supporting documentation substantiating that process energy inputs are appropriate.

For the purposes of this analysis, process energy is considered to include, but is not limited to, office and general miscellaneous equipment, computers, elevators and escalators, kitchen cooking and refrigeration, laundry washing and drying, lighting exempt from the lighting power allowance (e.g. lighting integral to medical equipment) and other (e.g. waterfall pumps). Regulated (non-process) energy includes lighting (such as for the interior, parking garage, surface parking, façade, or building grounds, except as noted above), HVAC (such as for space heating, space cooling, fans, pumps, toilet exhaust, parking garage ventilation, kitchen hood exhaust, etc.), and service water heating for domestic or space heating purposes.

For this credit, process loads shall be identical for both the baseline building performance rating and for the proposed building performance rating. However, project teams may follow the Exceptional Calculation Method (ASHRAE 90.1-2004 G2.5) to document measures that reduce process loads. Documentation of process load energy savings shall include a list of the assumptions made for both the base and proposed design, and theoretical or empirical information supporting these assumptions.

OR

#### PRESCRIPTIVE COMPLIANCE PATH A

Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide for Small Office Buildings or the ASHRAE Advanced Energy Design Guide for Small Retail Buildings, as appropriate to building type. The following restrictions apply:

- Buildings must be under 20,000 square feet.
- Buildings must be office or retail occupancy.
- Project teams must fully comply with all applicable criteria as established in the Advanced Energy Design Guide for the climate zone in which the building is located.

OR

#### PRESCRIPTIVE COMPLIANCE PATH B

Comply with the Basic Criteria and Prescriptive Measures of the Advanced Buildings Benchmark™ Version 1.1 with the exception of the following sections: 1.7 Monitoring and Trend-logging, 1.11 Indoor Air Quality, and 1.14 networked Computer Monitor Control. The following restrictions apply:

- Project teams must fully comply with all applicable criteria as established in Advanced Buildings Benchmark for the climate zone in which the building is located.

Category 2: For residential buildings 3 stories or fewer:

Qualify as an ENERGY STAR Home by either a performance path (through a **HERS Index** rating) or a prescriptive path (Builder Option Package or BOP).

2 POINTS CAN BE EARNED AS FOLLOWS:

Design and construct at least 90% of all buildings in the project such that they meet one of the following requirements according to the appropriate category:

Category 1: For non-residential buildings and residential buildings over 3 stories:

#### WHOLE BUILDING ENERGY SIMULATION

Demonstrate a minimum 15% improvement in the proposed building performance rating compared to the baseline described above in WHOLE BUILDING ENERGY SIMULATION of Category 1.

OR

#### PRESCRIPTIVE COMPLIANCE PATH A

Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide for Small Office Buildings or the ASHRAE Advanced Energy Design Guide for Small Retail Buildings, as described above in PRESCRIPTIVE COMPLIANCE PATH A of Category 1.

Category 2: For residential buildings 3 stories or fewer:

Qualify as an ENERGY STAR Home by either a performance path (through a HERS Index rating) or a prescriptive path (Builder Option Package or BOP).

3 POINTS CAN BE EARNED AS FOLLOWS:

Design and construct at least 90% of all buildings in the project such that they meet one of the following requirements according to the appropriate category:

Category 1: For non-residential buildings and residential buildings over 3 stories:

#### WHOLE BUILDING ENERGY SIMULATION

Demonstrate a minimum 20% improvement in the proposed building performance rating compared to the baseline described above in WHOLE BUILDING ENERGY SIMULATION of Category 1.

OR

#### PRESCRIPTIVE COMPLIANCE PATH A

Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide for Small Office Buildings or the ASHRAE Advanced Energy Design Guide for Small Retail Buildings, as described above in PRESCRIPTIVE COMPLIANCE PATH A of Category 1.

Category 2: For residential buildings 3 stories or fewer:

Exceed the ENERGY STAR for Homes requirements by achieving a minimum **HERS Index** of at least 80 for **IECC** Climate Zones 1-5 (generally the southern United States), or at least 75 for IECC Climate Zones 6-8 (generally the northern United States).

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to meet the requirements of the credit as appropriate to the number of points attempted if the project is built, including a table listing each building and what compliance path is planned for the building, and a calculation showing the percentage of buildings that will be meeting the relevant requirements.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ For Category 1 buildings, submit a statement of the project team’s capacity and/or qualifications to design and construct the relevant buildings according to the compliance path chosen, and/or a description of the services that will be contracted to do so.
- ❑ For Category 2 buildings, submit the name of the HERS provider to be used or a brief narrative explaining how the project team will ensure that homebuilders will have the necessary capacity and/or qualifications to meet the requirements.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ For Category 1 buildings using WHOLE BUILDING ENERGY SIMULATION, submit confirmation that, for a representative sample of buildings, whole building energy simulation was completed and the specified percentage of improvement in

energy performance was achieved. (The LEED submittal template may provide additional calculations that are too lengthy to repeat here.)

- For Category 1 buildings using PRESCRIPTIVE COMPLIANCE PATH A, submit confirmation that, for a representative sample of buildings, the prescriptive measures of the appropriate ASHRAE Advanced Energy Design Guide were met. (The LEED submittal template may provide additional calculations that are too lengthy to repeat here.)
- For Category 1 buildings using PRESCRIPTIVE COMPLIANCE PATH B, submit confirmation that, for a representative sample of buildings, the prescriptive measures of the Advanced Buildings Benchmark™ were met. (The LEED submittal template may provide additional calculations that are too lengthy to repeat here.)
- For Category 2 buildings attempting 1 or 2 points, submit the ENERGY STAR for Homes certificate.
- For Category 2 buildings attempting 3 points, submit the HERS performance test results.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 3: Reduced Water Use

### 1 to 3 Points

#### Intent

Minimize water use in buildings and for landscape irrigation to reduce the impact to natural water resources and reduce the burden on municipal water supply and wastewater systems.

#### Requirements

##### OPTION 1 – INDOOR (1 to 2 points)

Design and construct at least 90% of all buildings in the **project** such that they meet one of the following requirements according to the appropriate category (1 point):

Category 1: For non-residential buildings and residential buildings over 3 stories:

Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers, and kitchen faucets.

Category 2: For residential buildings 3 stories or fewer:

Comply with 2 out of 3 of the following requirements:

- The average flow rate for all lavatory faucets must be  $\leq 2.0$  GPM.
- The average flow rate for all shower heads must be  $\leq 2.0$  GPM.
- The average flow rate for all toilets, including dual-flush toilets, must be  $\leq 1.3$  GPF.

##### 2 POINTS CAN BE EARNED AS FOLLOWS:

Design and construct at least 90% of all buildings in the project such that they meet one of the following requirements according to the appropriate category:

Category 1: For non-residential buildings and residential buildings over 3 stories:

Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers, and kitchen faucets.

Category 2: For residential buildings 3 stories or fewer:



Comply with all of the following requirements:

- The average flow rate for all lavatory faucets must be  $\leq 2.0$  GPM.
- The average flow rate for all shower heads must be  $\leq 2.0$  GPM.
- The average flow rate for all toilets, including dual-flush toilets, must be  $\leq 1.3$  GPF.

OR

#### OPTION 2 – OUTDOOR (1 point)

For irrigation, use only captured rainwater, recycled wastewater, recycled **graywater**, or water treated and conveyed by a public agency specifically for non-potable uses.

OR

Install landscaping that does not require permanent irrigation systems. Temporary irrigation systems used for plant establishment are allowed only if removed within one year of installation.

A point from Option 2 may be earned independently, or be added to those earned under Options 1, for a maximum of 3 points.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### Option 1

- ❑ An estimate of baseline indoor water use based on the type and number of buildings in the project.
- ❑ A written commitment to employ indoor water use reduction strategies to meet the requirements of the credit as appropriate to the number of points attempted if the project is built.

##### Option 2

- ❑ A site plan indicating areas of outdoor water use.
- ❑ A written commitment to employ outdoor water use reduction strategies to meet the requirements of the credit, including a list of strategies planned.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

#### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

##### Option 1

- For Category 1 buildings, submit: 1) a narrative describing the strategies that were used in the buildings to reduce water use; 2) a table showing each building’s water use compared to the baseline fixture performance requirements of the Energy Policy Act of 1992; and 3) a calculation of the aggregate percentage of reduced water use for each building.
- For Category 2 buildings, submit a table showing the fixtures that were incorporated into each building that meet the flow rate specifications.

##### Option 2

- The total non-potable water supply in gallons available for irrigation purposes.
- A brief narrative describing the landscaping and irrigation design strategies employed by the project.

#### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 4: Building Reuse and Adaptive Reuse

### 1 to 2 Points

#### Intent

Extend the life cycle of existing building stock, conserve resources, reduce waste, and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.

#### Requirements

Incorporate into the **project** the reuse of one building that maintains at least 50% (based on surface area) of the existing building structure (including structural floor and roof decking) and envelope (including exterior skin and framing, and excluding window assemblies and non-structural roofing material). Hazardous materials that are remediated as a part of the project scope shall be excluded from the calculation of the percentage maintained (1 point).

For projects reusing portions of two or more existing buildings, 1 additional point can be earned by incorporating into the project the reuse that achieves the greater of the following:

- 50% of 1 existing building plus an equivalent amount reused among one or more buildings (based on surface area, as defined above); or
- 20% of the existing building stock (based on surface area, as defined above)

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to maintain the percentage of building structure(s) to meet the requirements of the credit as appropriate to the number of points attempted if the project is built.
- ❑ For projects attempting to earn 2 points, confirmation of which compliance path the project will use and calculations demonstrating that it is the greater of the two.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A table of the existing and reused areas in square feet of each structural/envelope element, and a calculation of the percentage of existing buildings reused.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 5: Reuse of Historic Buildings

### 1 Point

#### Intent

Encourage use of historic buildings in a manner that preserves their historic materials and character.

#### Requirements

Incorporate into the **project** one or more buildings that have been:

- designated, listed, or identified by a local government as a historic or contributing structure in a locally designated historic district pursuant to a local preservation ordinance;  
OR
- designated, listed, or identified as a historic or contributing structure in a historic district under a state historic register or on the National Register of Historic Places;

AND

Rehabilitate the building(s) in accordance with local or federal standards for rehabilitation, and:

- obtain confirmation from the municipality, and/or the local historic preservation commission that the plan(s) for rehabilitation meet the local standards for an historic rehabilitation,  
OR
- obtain confirmation from a State Historic Preservation Office or the National Park Service that the rehabilitation satisfies the Secretary of the Interior’s “Standards for Rehabilitation.”

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- A document from the local government, the State Historic Preservation Officer, or the National Park Service stating the name and address of the property, its historic designation or status, and the date of designation. Other acceptable documents include a

copy of the notice in the *Federal Register* or a verifiable copy of the web page of a state or national register that demonstrates the designation.

- ❑ A written commitment to incorporate and rehabilitate at least one historic building to meet the requirements of the credit if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ A document from the municipality, and/or the local historic preservation commission stating that the building(s) has complied with local requirements for a historic rehabilitation, including the name and address of the property or properties, and the date compliance was determined, or a document from the State Historic Preservation officer or the National Park Service, stating that the building(s) has complied with the Secretary of the Interior’s “Standards for Rehabilitation,” including the name and address of the certified property or properties and the date compliance was determined.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 6: Minimize Site Disturbance Through Site Design

### 1 Point

#### Intent

Preserve existing tree canopy, native vegetation and pervious surfaces while encouraging high **density**, smart growth communities.

#### Requirements

##### OPTION 1

Locate the **development footprint** on areas that are 100% **previously developed** and for which the zone of construction impact is 100% previously developed;

OR

##### OPTION 2

Depending on the density of the **project**, do not develop or disturb a proportion of the land that has not been previously developed on the site, exclusive of any land excluded from development by law or required to be preserved as a prerequisite of LEED for Neighborhood Development, and stipulate in **CC&Rs** or other binding development documents that the undisturbed area will be protected from development in perpetuity. Densities and minimum percentages are as follows (mixed use projects should use the lowest applicable density or calculate a weighted average per the methodology in NPD Credit 1: Compact Development):

Residential Density (DU/acre)	Non-Residential Density (FAR)	Minimum percentage of previously undeveloped site area to leave undisturbed
< 15	< .50	20%
15-21	.50 – 1.00	15%
> 21	> 1.0	10%

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

##### All Options

- A site plan indicating the location of any areas that are previously developed, the development footprint of the project, and the zone of construction impact.

##### Option 2

- A calculation showing the residential and/or non-residential density of the project.
- A calculation of the percentage of the previously undeveloped areas that will be left undisturbed.
- A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will protect the undisturbed area according to the relevant credit requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For Option 2, if a written commitment to create the required agreements was submitted previously, submit a copy of the actual agreement(s).

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Green Construction & Technology

## GCT Credit 7: Minimize Site Disturbance During Construction

### 1 Point

#### Intent

Conserve existing natural areas and protect trees to provide habitat and promote biodiversity.

#### Requirements

##### OPTION 1

Locate the **development footprint** on areas that are 100% **previously developed** and for which the zone of construction impact is 100% previously developed;

OR

##### OPTION 2

For portions of the site that are not previously developed: identify limits of disturbance through the creation of construction impact zones; and limit all site disturbance to 40 feet beyond the building perimeter; 10 feet beyond surface walkways, patios, surface parking and utilities less than 12 inches in diameter; 15 feet beyond primary roadway curbs and main utility branch trenches; and 25 feet beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities and playing fields) that require additional staging areas in order to limit compaction in the constructed area.

OR

##### OPTION 3 – AVAILABLE FOR SITES WITH TREES ONLY

Survey the site to identify:

- trees in good or excellent condition as determined by a certified arborist,
- any Heritage or Champion trees of special importance to the community as defined by a jurisdictional City, County or State Forester because of their age, size, type, historical association or horticultural value,
- the caliper of all trees at 4'6" above ground (diameter at breast height or D.B.H.), and
- any invasive species of tree present on the site, and whether those species threaten the health of other trees to be preserved on the site, as determined by a certified arborist.

Preserve the following on the site that are also identified as in good or excellent condition:

- all Heritage or Champion Trees identified,
- a minimum of 75% of all non-invasive trees (including the above) over 18" in caliper (D.B.H.), and
- a minimum of 25% of all non-invasive trees (including the above) that are over 12" in caliper (D.B.H.) if deciduous, and 6" in caliper (D.B.H.) if conifer.

Develop a plan, in consultation with and approved by a certified arborist, for the health of the trees, including fertilization and pruning, and construction tree protection plans and specifications which are to include protection fencing located at the drip line of each tree, and specifying that if trenching or other disturbance is necessary within the drip line, this work must be done by hand. If a certified arborist has determined that the health of the trees to be preserved is threatened by invasive vegetation, develop a plan for invasive vegetation removal and restoration.

Stipulate in **CC&Rs** or other binding development documents that the preserved trees will be protected from development in perpetuity.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Options 1 and 2

- ❑ A site plan indicating the location of any areas that are previously developed, the development footprint of the project, and the zone of construction impact.

#### Option 3

- ❑ A site plan showing the locations of existing trees, and indicating which will be preserved.
- ❑ A summary of the survey conducted, highlighting the type and quantity of trees found, any Heritage or Champion trees, any trees with a caliper greater than 18", and any invasive tree species present on the site.
- ❑ A list or summary of the trees to be preserved.
- ❑ A calculation of the percentage of non-invasive trees with a caliper greater than 12" or 6" (as appropriate to type) that will be preserved.
- ❑ A copy or summary of the maintenance plan developed in consultation with a certified arborist.
- ❑ A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will protect the preserved trees according to the relevant credit requirements if the project is built.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For Option 3, if a written commitment to create the required agreements was submitted previously, submit a copy of the actual agreement(s).

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 8: Contaminant Reduction in Brownfields Remediation 1 Point

### Intent

Encourage **brownfields** cleanup methods that reduce contaminant volume or toxicity and thereby minimize long-term remediation or monitoring burdens.

### Requirements

Earn SLL Credit 1: Contaminated Brownfields Redevelopment;

AND

Use cleanup method(s) for 100% of the remediation that treat, reduce or eliminate the volume or toxicity of contaminated material found on the site.

Cleanup methods which include only capping or translocation of contaminated material to an off-site location will not achieve this credit.

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### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating the areas of contamination.
- ❑ A written commitment to meet the requirements of the credit if the project is built, and a brief narrative describing the types of contamination and the cleanup methods to be used.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A brief narrative and/or technical drawings demonstrating the cleanup methods used.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 9: Stormwater Management

### 1 to 5 Points

<b>JUNE 2007 VERSION</b>
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**Note: Projects can use this version or the February 2007 version found in Appendix B.**

#### Intent

Reduce adverse impacts on water resources by mimicking the natural hydrology of the region on the project site, including groundwater recharge. Reduce pollutant loadings from stormwater discharges, reduce peak flow rates to minimize stream channel erosion, and maintain or restore chemical, physical, and biological integrity of downstream waterways.

#### Requirements

##### OPTION 1 – FOR PREVIOUSLY DEVELOPED SITES

Implement a comprehensive stormwater management plan for the **project** that infiltrates, re-uses, or evapotranspirates the below-specified amount of rainfall from the project's **development footprint** and other areas that have been graded so as to be effectively impervious.

Points achievable	Arid Watersheds (less than 20" of rain/year)	Semi-arid Watersheds (between 20"-40" rain/year)	Humid Watersheds (at least 40" rain/year)
1 point	0.15"	0.225"	0.3"
2 points	0.3"	0.45"	0.6"
3 points	0.45"	0.675"	0.9"
4 points	0.6"	0.9"	1.2"
5 points	0.75"	1.125"	1.5"

##### OPTION 2 – FOR ALL OTHER SITES

Implement a comprehensive stormwater management plan for the project that infiltrates, re-uses, or evapotranspirates the below-specified amount of rainfall from the project's **development footprint** and other areas that have been graded so as to be effectively impervious.

Points achievable	Arid Watersheds (less than 20" of rain/year)	Semi-arid Watersheds (between 20"-40" rain/year)	Humid Watersheds (at least 40" rain/year)
1 point	0.3"	0.45"	0.6"
2 points	0.6"	0.9"	1.2"
3 points	0.9"	1.35"	1.8"

4 points	1.2”	1.8”	2.4”
5 points	1.5”	2.25”	3.0”

- Notes: a) The stormwater management plan should identify practices to be employed, such as permeable pavements, rainwater harvesting systems or green roofs.  
b) For the purposes of the calculations in this credit, the development footprint will include typically impervious surfaces included in the definition of “development footprint,” such as roofs and pavements, even though the surfaces may be made pervious as part of the stormwater management plan.

## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### All Options

- ❑ A site plan indicating the project’s development footprint, and the location of any planned stormwater management technologies or BMPs.
- ❑ A written commitment to develop and implement a comprehensive stormwater management plan to meet the requirements if the project is built.
- ❑ Confirmation of type of watershed.

#### Option 1

- ❑ A site plan indicating previously developed areas (this can be done as part of the site plan listed above).

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

#### All Options

- ❑ A summary of the stormwater management plan, highlighting the technologies or BMPs used on the site.

- ❑ A statement of the project team's capacity and/or qualifications to implement the plan, and/or a description of the services that will be contracted to do so.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate "No change since Stage 2" on project checklist, and submit the following additional post-construction documentation:

- ❑ A calculation of either 90% of the average annual rainfall or 1" of rainfall that occurs on the project's development footprint and other effectively impervious areas.
- ❑ A calculation of the percentage of the development footprint for which runoff will be infiltrated, re-used, or evapotranspired.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Green Construction & Technology

## GCT Credit 10: Heat Island Reduction

### 1 Point

#### Intent

Reduce heat islands to minimize impact on microclimate and human and wildlife habitat.

#### Requirements

##### OPTION 1 – NON-ROOF

Provide any combination of the following strategies for 50% of the non-roof impervious site landscape (including roads, sidewalks, courtyards, parking lots, and driveways):

- Shade (within five years of occupancy)
- Paving materials with a Solar Reflectance Index (SRI) of at least 29
- Open grid pavement system

OR

Place a minimum of 50% of off-street parking spaces under cover (defined as underground, under deck, under roof, or under a building). Any roof used to shade or cover parking must have an SRI of at least 29;

OR

##### OPTION 2 – ROOF

Use roofing materials that have a Solar Reflectance Index (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface of all buildings within the **project**; or install a “green” (vegetated) roof for at least 50% of the roof area of all buildings within the project.

Combinations of SRI compliant and vegetated roof can be used provided that they collectively cover 75% of the roof area of all buildings.

Roof Type	Slope	SRI
Low-Sloped Roof	$\leq 2:12$	78
Steep-Sloped Roof	$\geq 2:12$	29

#### Additional Notes

Shaded areas for the purposes of this credit will include areas shaded by trees, other landscape features, but not awnings, buildings, or other structural features.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### Option 1

- ❑ A site plan indicating the location of any non-roof areas that will be employing the heat island reduction technologies or strategies listed in the requirements.
- ❑ A written commitment to employ sufficient non-roof heat island reduction strategies to meet the requirements, if the project is built.

#### Option 2

- ❑ A site plan indicating the location of any green roofs or roof areas that will have an SRI greater than or equal to those specified in the requirements.
- ❑ A written commitment to include a sufficient percentage of green roofs, or roofs with the specified SRI value to meet the requirements, if the project is built.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

##### Option 1

- ❑ A table of strategies to be used and area covered by each, and a calculation of the percentage of non-roof impervious site landscape that will employ heat island reduction strategies.

##### Option 2

- ❑ A table of roof types to be used and roof area covered for each, and a calculation of the percentage of roof area that will be green roofs or roofs with the specified SRI value.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

# Green Construction & Technology

## GCT Credit 11: Solar Orientation

### 1 Point

#### Intent

Achieve enhanced energy efficiency by creating the optimum conditions for the use of passive and active solar strategies.

#### Requirements

OPTION 1 – BLOCK DESIGN (AVAILABLE FOR **PROJECTS** EARNING AT LEAST 2 POINTS UNDER NPD CREDIT 1: COMPACT DEVELOPMENT)

Locate project on existing blocks, or design and orient project, such that for 75% or more of the project's blocks, one axis of each block is within 15 degrees of geographical east/west, and the east/west length of each block is at least as long, or longer, as the north/south length of the block.

OR

OPTION 2 – BUILDING DESIGN (AVAILABLE FOR ALL PROJECTS)

Design and orient 75% or more of the **project's** buildings such that one axis of each building is at least 1.5 times longer than the other, and such that the longer axis is within 15 degrees of the geographical east/west axis. The length to width ratio shall be applied only to the length of walls enclosing conditioned spaces; walls enclosing unconditioned spaces such as garages, arcades, or porches cannot contribute to credit achievement. South-facing vertical surfaces of buildings counting towards credit achievement must not be more than 25% shaded at time of initial occupancy (measured at noon on December 21<sup>st</sup>).

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

Option 1

- ❑ A site plan indicating the axis of all relevant blocks, and their degree relation to the geographical east/west axis.
- ❑ A calculation of the percentage of blocks that have a long (or equal-length) axis within 15 degrees of geographical east/west axis.

Option 2

- ❑ A site plan indicating: 1) the axis of all relevant buildings and their degree relation to the geographical east/west axis; and 2) the length to width proportion of each relevant building.
- ❑ A cross section drawing showing any shading that would impact solar access for relevant buildings.
- ❑ A calculation of the percentage of buildings that the required proportions and their long axis within 15 degrees of geographical east/west axis.

**For STAGE 2 Submissions (Certification of Approved Plan)**

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

Option 2

- ❑ Drawings, diagrams, or photographs demonstrating the solar access for each relevant building, or a representative sample thereof.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 12: On-Site Energy Generation

### 1 Point

#### Intent

Reduce air, water, and land pollution from energy consumption and production by increasing the efficiency of the power delivery system. Increase the reliability of power.

#### Requirements

##### OPTION 1 – (PRESCRIPTIVE) ELECTRICAL BASELINE

Develop on-site energy generation system(s) with peak electrical generating capacity of at least 5% of the **project's** specified electrical service load.

##### OPTION 2 – (PERFORMANCE) TOTAL ENERGY BASELINE

Develop on-site energy generation system(s) with capacity of at least 5% of the project's annual electrical and thermal energy consumption, as established through an accepted building energy performance simulation tool.

For both options, total CO<sub>2</sub> emissions shall be less than or equal to national average of CO<sub>2</sub> emissions for grid supplied electricity, which shall be calculated as the sum of 1545 lb per MWh produced by the on-site power generation system and 145 lb per MMBtu of thermal energy produced by the on-site power generation system.

For both options, calculations for total on-site energy can include future site or building-integrated systems stipulated through **CC&Rs** or other binding documents.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to develop on-site energy generation system(s) to meet the requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ A brief narrative describing the planned on-site energy generation system(s), including an estimate of the total project specified electrical service load or energy use, confirmation of which compliance path will be used, the type(s) of on-site energy system(s) to be used, and estimates of CO<sub>2</sub> emissions compared to the national average of grid supplied electricity.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

All Options

- ❑ A list of on-site energy generating system(s) used and the generation capacity of each.
- ❑ A calculation of total CO<sub>2</sub> emissions of the system compared to the national average for grid supplied electricity, as described in the requirements.

Option 1

- ❑ The total electrical service load of the project and a calculation showing the percentage that is generated by on-site system(s).

Option 2

- ❑ The total annual electrical and thermal energy consumption of the project, a calculation showing the percentage that is generated by on-site system(s), and confirmation of the building energy performance simulation tool used.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



# Green Construction & Technology

## GCT Credit 13: On-Site Renewable Energy Sources

### 1 Point

#### Intent

Encourage on-site renewable energy self-supply in order to reduce environmental and economic impacts associated with fossil fuel energy use.

#### Requirements

##### OPTION 1 – (PRESCRIPTIVE) ELECTRICAL BASELINE

Design and incorporate the use of shared on-site nonpolluting renewable energy generation technologies such as solar, wind, geothermal, small scale/micro hydroelectric, and biomass with peak electrical generating capacity of at least 5% of the **project's** specified electrical service load.

##### OPTION 2 – (PERFORMANCE) TOTAL ENERGY BASELINE

Design and incorporate the use of shared on-site nonpolluting renewable energy generation technologies such as solar, wind, geothermal, small scale/micro hydroelectric, and biomass with peak electrical generating capacity of at least 5% of the project's annual electrical and thermal energy consumption, as established through an accepted building energy performance simulation tool.

For both options, calculations for total on-site energy can include future site or building-integrated systems stipulated through **CC&Rs** or other binding documents.

#### Additional Notes

##### Eligible Renewable Energy Systems

- **Electrical Systems:** Photovoltaic (PV), wind, hydro, wave, tidal, and bio-fuel based electrical production systems deployed at the project site.
- **Geothermal Energy Systems:** Geothermal energy systems using deep-earth water or steam sources (and not using vapor compression systems for heat transfer) deployed at the project site. These systems may either produce electric power or provide thermal energy for primary use at the building.
- **Solar Thermal Systems:** Active solar thermal energy systems that employ collection panels; heat transfer mechanical components, such as pumps or fans, and a defined heat storage system, such as a hot water tank or thermo-siphon solar and storage tank “batch heaters” deployed at the site.

Ineligible on-site renewable energy systems include geo-exchange systems (ground source heat pumps) and renewable or green-power from off-site sources. Eligible bio-fuels include untreated wood waste including mill residues, agricultural crops or waste, animal waste and other organic waste and landfill gas. Electrical production based on the following bio-fuels are excluded from eligibility for this credit:

combustion of municipal solid waste, forestry biomass waste, other than mill residue, wood that has been coated with paints, plastics, or formica and wood that has been treated for preservation with materials containing halogens, chlorine compounds, halide compounds, chromated copper arsenate (CCA), or arsenic. If more than 1% of the wood fuel has been treated with these compounds, the energy system shall be considered ineligible for this credit.

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## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to develop on-site renewable energy generation system(s) to meet the requirements if the project is built.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ A brief narrative describing the planned on-site renewable energy generation system(s), including an estimate of the specified electrical service load or total project energy use, confirmation of which compliance path will be used, and the type(s) of on-site energy system(s) to be used.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

All Options

- A list of on-site renewable energy generating system(s) used and the generation capacity of each.

Option 1

- The total electrical service load of the project and a calculation showing the percentage that is generated by on-site renewable energy system(s).

Option 2

- The total annual electrical and thermal energy consumption of the project, a calculation showing the percentage that is generated by on-site renewable energy system(s), and confirmation of the building energy performance simulation tool used.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 14: District Heating & Cooling

### 1 Point

#### Intent

Reduce air, water, and land pollution resulting from energy consumption in buildings by employing energy efficient district technologies.

#### Requirements

Design and incorporate into the **project** a district heating and/or cooling system for space conditioning of all buildings in the project (at least 2 buildings total) such that at least 80% of the project total square footage is connected, and at least 80% of the project total peak heating or cooling load is connected.

The efficiency of each component of the system which is regulated by ASHRAE / IESNA 90.1-2004 must have an overall efficiency performance at least 10% better than specified by the ASHRAE 90.1 - 2004 Prescriptive Requirements. Additionally, pumping power must not exceed 2.5% of the thermal energy output (with one kWh of electricity equal to 3,413 Btu). Combined Heat and Power (CHP) district systems can achieve this credit by demonstrating equivalency relative to the above criteria.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to develop a district heating and/or cooling system to meet the requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- A brief narrative describing the planned district heating or cooling system, including an estimate of the total project heating or cooling load, and which buildings will be connected.
- A list of components of the system that are regulated by ASHRAE / IESNA 90.1-2004, and the estimated efficiency of each compared to the relevant standard.
- Submit an estimate of pumping power as a percentage of thermal energy output.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- The heating or cooling generation capacity of the system.
- The total heating or cooling load of the project, and a calculation showing the percentage that is generated by the district heating or cooling system.
- A calculation showing the percentage of the project total square footage that is connected.
- The efficiency of each component which is regulated by ASHRAE / IESNA 90.1-2004 compared to the relative standard.
- Submit the calculation of pumping power as a percentage of thermal energy output.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 15: Infrastructure Energy Efficiency

### 1 Point

#### Intent

Reduce air, water, and land pollution from energy consumption.

#### Requirements

Design or purchase any traffic lights, street lights, water and wastewater pumps and treatment systems that are included as part of the **project** to achieve a 15% annual energy reduction beyond an estimated baseline energy use for this infrastructure. If any traffic lights are installed as part of the project, use light emitting diode (LED) technology.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to meet the requirements for any of the specified infrastructure items used in the project if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ A list of the relevant infrastructure items to be used in the project.
- ❑ An estimate of the baseline energy use for these items.
- ❑ A brief narrative explaining how the 15% reduction in annual energy use will be achieved and demonstrated.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A brief narrative and/or other documentation specified by the project beforehand (see Case 2A) demonstrating that the 15% reduction in energy use was achieved.
- Confirmation that LED technology was used for any traffic lights.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 16: Wastewater Management

### 1 Point

#### Intent

Reduce pollution from wastewater and encourage water reuse.

#### Requirements

Design and construct the **project** to divert at least 50% of the wastewater generated by the project, and reuse wastewater to replace the use of potable water. Provide for on-site wastewater treatment to a quality defined by state and local regulations for the proposed reuse.

50% of the wastewater is calculated by determining the total wastewater flow using conventional design practices in gallons per day and demonstrating that 50% of that volume enters an alternative, on-site process.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A written commitment to divert, treat as necessary, and reuse wastewater on site to meet the requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ An estimate of the amount of wastewater to be generated by the project.



- ❑ A brief narrative describing the technologies to be used for diversion and treatment, the estimated percentage of wastewater to be diverted, and the on-site reuses for the diverted wastewater.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ Applicable drawings from the construction documents that show the technologies used to divert, treat, and reuse wastewater.
- ❑ A calculation of the amount of wastewater generated by the project.
- ❑ A calculation of the amount of wastewater diverted, treated, and reused on site.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 17: Recycled Content in Infrastructure

### 1 Point

#### Intent

Use recycled materials to reduce the environmental impact of extraction and processing of virgin materials.

#### Requirements

Use the indicated recycled materials in all the following applications, if present in the **project**.

For roadways, parking lots, sidewalks, and curbs (above-ground structured parking and underground parking are exempt from this requirement):

- Any aggregate base and aggregate subbase shall be at least 90% by volume recycled aggregate materials such as crushed Portland cement concrete and asphalt concrete.
- Any asphalt base shall be a minimum 15% by volume recycled asphalt pavement.
- Any asphalt concrete pavement shall:
  - be a minimum 15% by volume recycled asphalt pavement, OR
  - be a minimum 75% by volume rubberized asphalt concrete from crumb rubber from scrap tires (crumb rubber modifier), OR
  - include a minimum of 5% (of total weight) of **pre-consumer** or **post-consumer** asphalt roofing shingles.
- Any Portland cement concrete pavement shall contain:
  - recycled mineral admixtures (such as coal fly ash, ground granulated blast furnace slag, rice hull ash, silica fume, or other pozzolanic industrial byproduct) to reduce by at least 25% the concrete mix's typical Portland cement content, AND
  - a minimum of 10% by volume reclaimed concrete material aggregate.

Piping made of Portland cement concrete shall contain recycled mineral admixtures (such as coal fly ash, ground granulated blast furnace slag, rice hull ash, silica fume, or other pozzolanic industrial byproduct) to reduce by at least 25% the concrete mix's typical Portland cement content.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- A written commitment to meet the requirements for recycled content in the specified applications, if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A table of each material used on the project that is being tracked for recycled content, including the type of material and recycled content.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 18: Construction Waste Management

### 1 Point

#### Intent

Divert construction and demolition debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

#### Requirements

Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be stored on-site or commingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- A written commitment to recycle and/or salvage demolition debris to meet the requirements if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- A summary of the construction waste management plan.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A table of the demolition debris, including a general description of each category of waste generated, the quantity in tons or cubic yards, and the location of receiving agent (recycler/landfill) for waste.
- A calculation showing the total percentage of material diverted from landfill disposal.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 19: Comprehensive Waste Management

### 1 Point

#### Intent

Reduce the waste hauled to and disposed of in landfills. Promote proper disposal of office and household hazardous waste streams.

#### Requirements

Meet at least two of the following three requirements and publicize the availability and benefits of the drop-off point(s), station(s), or services:

- 1) Include at least one drop-off point as part of the **project** available to all project occupants for office or household potentially hazardous wastes such as paints, solvents, oil, batteries; OR locate project in a local government jurisdiction that provides services for collecting these materials. If a plan for post-collection disposal or use does not exist, establish one.
- 2) Include at least one recycling or reuse station as part of the project available to all project occupants dedicated to the separation, collection, and storage of materials for recycling including, at a minimum, paper, corrugated cardboard, glass, plastics and metals; OR locate project in a local government jurisdiction that provides recycling services for these materials. If a plan for post-collection use does not exist, establish one.
- 3) Include at least one compost station as part of the project available to all project occupants dedicated to the collection and composting of food wastes; OR locate project in a local government jurisdiction that provides services for composting materials. If a plan for post-collection use does not exist, establish one.

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#### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating the location of the drop-off points or stations and a written commitment to provide them if the project is built, or confirmation that the project site is located in a jurisdiction that provides services for collecting these materials, and a schedule or summary of those services.
- ❑ A written commitment to publicize the availability and benefits of the drop-off points or stations to project occupants if the project is built.
- ❑ Confirmation that a plan for post-collection disposal or reuse of materials exists, or a written commitment to create one if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ If the collection services will be provided as part of the project (rather than by the local jurisdiction), submit a brief narrative describing how the stations will be operated and any necessary plans for post-collection disposal or reuse of materials.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- ❑ Confirmation that the collection services are available to project occupants, and that any necessary plan for post-collection disposal or reuse of materials have been implemented.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Green Construction & Technology

## GCT Credit 20: Light Pollution Reduction

### 1 Point

#### Intent

Minimize light trespass from site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact on nocturnal environments.

#### Requirements

For exterior lighting in **shared portions of the project**, only light areas as required for safety and comfort. Do not exceed 80% of the lighting power densities for exterior areas and 50% for building facades and landscape features as defined in ASHRAE/IESNA Standard 90.1-2004, Exterior Lighting Section, without addenda;

AND

Stipulate **CC&Rs** or other binding documents that require continued adherence to these standards.

All **projects** shall be classified under the following zones, as defined in IESNA RP-33, and shall follow all of the requirements for that specific zone:

#### **LZ1 — Dark (Park and Rural Settings)**

Design exterior lighting so that all site and building mounted luminaires produce a maximum initial illuminance value no greater than 0.01 horizontal and vertical footcandles at the site boundary and beyond. Document that 0% of the total initial designed fixture lumens are emitted at an angle of 90 degrees or higher from nadir (straight down).

#### **LZ2 — Low (Residential areas)**

Design exterior lighting so that all site and building mounted luminaires produce a maximum initial illuminance value no greater than 0.10 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 10 feet beyond the site boundary. Document that no more than 2% of the total initial designed fixture lumens are emitted at an angle of 90 degrees or higher from nadir (straight down). For site boundaries that abut public rights-of-way, light trespass requirements may be met relative to the curb line instead of the site boundary.

#### **LZ3 — Medium (Commercial/Industrial, High-Density Residential)**

Design exterior lighting so that all site and building mounted luminaires produce a maximum initial illuminance value no greater than 0.20 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 15 feet beyond the site. Document that no more than 5% of the total initial designed fixture lumens are emitted at an angle of 90 degrees or higher from nadir (straight down). For site boundaries that abut public rights-of-way, light trespass requirements may be met relative to the curb line instead of the site boundary.

#### **LZ4 — High (Major City Centers, Entertainment Districts)**



Design exterior lighting so that all site and building mounted luminaires produce a maximum initial illuminance value no greater than 0.60 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 15 feet beyond the site. Document that no more than 10% of the total initial designed site lumens are emitted at an angle of 90 degrees or higher from nadir (straight down). For site boundaries that abut public rights-of-way, light trespass requirements may be met relative to the curb line instead of the site boundary.

---

## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ A site plan indicating shared portions of the project, and relevant sources of lighting.
- ❑ Confirmation of which LZ (lighting zone) the project is located in.
- ❑ A written commitment to reduce light pollution from shared portions of the project to meet the requirements if the project is built.
- ❑ A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will require continued adherence to these standards.

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

- ❑ A brief summary of the lighting design strategies that will be used to reduce light pollution from shared portions of the project.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

#### Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- Applicable lighting drawings from the construction documents that show the design strategies and/or technologies used to reduce light pollution from shared portions of the project.
- If a written commitment to create copies of the required agreements was submitted previously, submit a copy of the actual agreement(s).

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Innovation & Design Process

## ID Credit 1: Innovation and Exemplary Performance 1 to 5 Points

### Intent

To provide projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED for Neighborhood Development Rating System and/or innovative performance in green building, smart growth, or new urbanist categories not specifically addressed by the LEED for Neighborhood Development Rating System.

### Requirements

In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach and strategies that might be used to meet the requirements. (1 point each, up to 5 possible)

---

### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

#### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- ❑ The specific title for the ID credit, a statement of the credit intent, and a statement of credit requirements.
- ❑ A narrative (and site plan if necessary) describing the project's approach to achievement of the credit, including a description of the quantifiable benefits of the credit proposal.
- ❑ A written commitment to meet the requirements (stated by the project team as part of the submission requirement above) if the project is built.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- Copies of any specific construction drawings or exhibits that will serve to illustrate the project’s approach to this credit. (Note: this may not be applicable to all ID credit proposals.)

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

# Innovation & Design Process

## ID Credit 2: LEED Accredited Professional 1 Point

### Intent

To support and encourage the planning and design integration required by a LEED for Neighborhood Development green neighborhood project and to streamline the application and certification process.

### Requirements

At least one principal member of the **project** design team shall be a LEED Accredited Professional.

OR

At least one principal member of the project design team shall be a professional who is credentialed with regard to smart growth as determined by the Natural Resources Defense Council in consultation with Smart Growth America.

OR

At least one principal member of the project design team shall be a professional who is credentialed with regard to new urbanism as determined by the Congress for the New Urbanism.

OR

This point may be used instead as an additional point available under ID Credit 1: Innovation and Exemplary Performance, for performance not related to professional team member experience.

---

### Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- The name, place of employment, and a brief description of the project role for the individual.

- ❑ Confirmation of whether the individual is a LEED Accredited Professional, credentialed with regard to smart growth, or credentialed with regard to new urbanism.

#### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

##### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1.

##### Case 2C: Did not submit at Stage 1

- ❑ Submit the documentation required at Stage 1.

#### For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

##### Case 3A: No change since Stage 2

If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

##### Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- ❑ Submit updated versions of the relevant documentation submitted at Stage 2.

# Definitions

**Adapted (or introduced) Plants** – Plants that reliably grow well in a given habitat with minimal attention from humans in the form of winter protection, pest protection, water irrigation, or fertilization once root systems are established in the soil. Adapted plants are low maintenance but not invasive.

**Adaptive reuse** – Conversion of an existing building that is functionally obsolete for its designed purpose to an updated purpose.

**Adequate transit service** – During **weekday peak periods**, at least four buses (including bus rapid transit), streetcars or light rail trains per hour OR at least 5 heavy passenger rail or ferries per weekday peak period.

**Adjacent site** – A site having at least 25% of its perimeter bordering land that has been **previously developed**. For the purposes of this definition, a street or roadway does not constitute previously developed land. Any fraction of the perimeter that borders waterfront will be excluded from the calculation.

**Area median income** – The median, or middle, income of a county as defined and available from the U.S. Department of Housing and Urban Development.

**Biking network** – A continuous network consisting of one or more of the following: bicycle lanes or trails at least 5 feet wide or roads designed for a speed of 10 miles per hour or slower.

**Block** – Land bounded by the project boundary, dedicated transportation or utility rights-of-way, waterfront, and/or comparable land division features.

**Brownfield** – Real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminate. (U.S. EPA)

**Buildable land** – The portion of the site where construction can occur. When used in **density** calculations, the calculation for buildable land excludes: public streets and other public rights of way, and land excluded from development by law or other prerequisites of LEED for Neighborhood Development.

**Buildout** – The time at which all **habitable buildings** on the project are complete and ready for occupancy.

**Class I Bikeway** - Class I bikeways are defined as bicycle or multi-use facilities that are completely separate from the vehicular right-of-way. The standard Class I bikeway has pavement that is 8 feet wide however the exact design requirements for Class I bikeways differ from jurisdiction to jurisdiction.

**Community Supported Agriculture (CSA)** – A farm operation for which a community of individuals who pledge support so that the farmland becomes, either legally or informally, the community's farm. The growers and consumers provide mutual support, sharing the risks and benefits of food production. Consumers receive portions of the farm's harvest throughout the growing season.

**Covenants, Conditions and Restrictions (CC&Rs)** – Limitations that may be placed on a property and its use, and which are made a condition of holding title or lease.

**Density** – Density is the amount of building structures constructed on the project site, measured for residential buildings as dwelling units per acre of **buildable land** available for residential uses, and for non-residential buildings as the floor area ratio per acre of buildable land area available for non-residential uses.

**Development footprint** – The total land area of a **project** site covered by buildings, streets, parking areas, and other typically impermeable surfaces constructed as part of the project.

**Floor Area Ratio (FAR)** – The measure of the **density** of non-residential land use. It is the total non-residential building **floor area** divided by the total **buildable land area available for non-residential uses**. For example, on a site with 10,000 square feet of buildable land area, an FAR of 1.0 would be 10,000 square feet of built building floor area. On the same site, an FAR of 1.5 would be 15,000 square feet of built floor area; an FAR of 2.0 would be 20,000 built square feet and an FAR of 0.5 would be 5,000 built square feet.

**Functional entry** – An entryway that is designed to be used by pedestrians and is open during regular business hours. This does not include any door that is exclusively designated as an emergency exit, or a garage door that is not designed as an entrance for pedestrians.

**Graywater** – Untreated household waste water which has not come into contact with toilet waste. Gray water includes used water from bathtubs, showers, bathroom wash basins, and water from clothes-washer and laundry tubs. It shall not include waste water from kitchen sinks or dishwashers. Some states and local authorities allow kitchen sink wastewater to be included in graywater. Project teams should comply with graywater definitions as established by the authority having jurisdiction in their areas. (Uniform Plumbing Code)

**Habitable building** – A structure that is intended for living, working, or other types of occupancy. Habitable structures do not include buildings such as garages and pump stations.

**HERS Index** – A scoring system established by the Residential Energy Services Network (RESNET) in which a home built to the specifications of the HERS Reference Home (based on the 2006 International Energy Conservation Code) scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. The lower a home's HERS Index, the more energy efficient it is in comparison to the HERS Reference Home.

**Infill site** – A site having at least 75% of its perimeter bordering sites that have been **previously developed**. For the purposes of this definition, a street or roadway does not constitute previously developed land. Any fraction of the perimeter that borders waterfront will be excluded from the calculation.

**IECC** – International Energy Conservation Code

**Invasive Plants** – Plants that may be either indigenous or non-indigenous species or strains that are characteristically adaptable, aggressive, have a high reproductive capacity and tend to overrun the ecosystems in which they inhabit.

**Native (or indigenous) Plants** – Plants that have adapted to a given area during a defined time period and are not invasive. In America, the term often refers to plants growing in a region prior to the time of settlement by people of European descent.



**Neighborhood** – An area of dwellings and/or work places and their immediate environment that residents and/or employees identify with in terms of social and economic attitudes, lifestyles, and institutions.

**Post-consumer** – Generated by households or by commercial, industrial and institutional facilities in their role as end-users of a product, which can no longer be used for its intended purpose.

**Pre-consumer** – Diverted from the waste stream during the manufacturing process. It does not include the reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

**Pre-development** – Before any development occurred on the site. Pre-development conditions describe the natural conditions of the site prior to any human alteration, i.e. development of roads, buildings, etc.

**Previously developed** – Having pre-existing paving, construction, or altered landscapes. This does not apply to altered landscapes resulting from current agricultural use, forestry use, or use as preserved natural area.

**Previously developed site** – A site consisting of at least 75% **previously developed land**.

**Pre-project** – Before the **project** was initiated, but not necessarily before any development or disturbance took place on the site. Pre-project conditions describe site conditions as the current developer or project applicant found them.

**Prime soils** – Soils with chemical, hydrographic and topological properties that make them especially suited to the production of crops. The Natural Resources Conservation Agency is responsible for identifying prime soils, and they make detailed soil surveys and maps available for every county in the United States. All of the NRCS data are available for download to GIS mapping programs.

**Project** – The land and construction that constitutes the basis for LEED for Neighborhood Development application.

**Project boundary** – The outermost property line of the **project**. Projects located on publicly-owned campuses that do not have internal property lines shall delineate a sphere of influence line to be used in place of “property line.” The phrase ‘project site’ is equivalent to the land inside the project boundary.

**School** – An institution for the academic instruction of children or adults, technical trade school, arts school, college, or university.

**Shared portions of the project** – Areas of the **project** that are publicly-owned, such as streets and parks, and land and facilities that are held under common ownership by entities such as a condominium association, land trust, or privately owned corporations.

**Street grid density** – The density of the street network as measured in centerline miles per square mile. Areas that shall be excluded from the calculation are water bodies, parks, recreational facilities, public campus facilities (such as universities), areas preserved from development because of local, state, or federal law, land preserved from development from the prerequisites of LEED for Neighborhood Development, land that cannot be developed due to a unique topographic or geologic condition (such as steep slopes).

**Toe of the slope** – Where there is a distinct break between a 40% slope and lesser slopes.

**Unique soils** – Soils with chemical, hydrographic and topological properties that make them especially suited to specific crops. The Natural Resources Conservation Agency is responsible for identifying unique soils, and they make detailed soil surveys and maps available for every county in the United States. All of the NRCS data are available for download to GIS mapping programs.

**Walk distance** – The distance that a pedestrian must travel between destinations without obstruction, in a safe and comfortable environment such as on sidewalks, footpaths or other pedestrian facilities.

**Water bodies** – The surface water of a stream, creek, river, lake, estuary, bay, or ocean.

**Weekday peak periods** – Weekdays between 5:30 a.m. to 10:30 a.m. and 3:30 p.m. to 8:30 p.m. The period of time during the weekday commute when traffic congestion is the greatest.

**Wetlands** – Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." <http://www.wetlands.com/regs/tlpge02e.htm> (1987 Army Corps of Engineers Manual)

**Vehicle Miles Traveled (VMT)** – The number of miles traveled by motor vehicles in a specified period of time, such as a day or a year, by a number of motorists in absolute or per capita terms.

**Woonerf** – A Dutch word that means “street for living.” In practice, it is common space shared by pedestrians, bicyclists, and low-speed motor vehicles. They are usually streets raised to the same grade as curbs and sidewalks. Vehicles are slowed by placing trees, planters, parking areas, and other obstacles in the street, so that motorists travel at walking speed.

# Appendix A: List of Diverse Uses

Bank  
Child care facility (licensed)  
Community/civic center  
Convenience store  
Hair care  
Hardware store  
Health club or outdoor recreation facility  
Laundry/dry cleaner  
Library  
Medical/dental office  
Pharmacy (stand-alone)  
Place of worship  
Police/fire station  
Post office  
Restaurant  
School  
Senior care facility  
Supermarket  
Theater

# Appendix B:

## GCT Credit 9: Stormwater Management

### 1 to 5 Points

**FEBRUARY 2007 VERSION**

**Note: Projects can use this version or the June 2007 version found in the GCT Section.**

#### Intent

Reduce pollution and hydrologic instability from stormwater, prevent flooding, and promote aquifer recharge.

#### Requirements

##### OPTION 1 – FOR **PREVIOUSLY DEVELOPED SITES** OF ANY SIZE AND **INFILL SITES** OF LESS THAN 7 ACRES

Implement a comprehensive stormwater management plan for the **project** that infiltrates, re-uses, or evapotranspirates runoff from 90% of the average annual rainfall or 1” of rainfall from a percentage of the project’s **development footprint** and other areas that have been graded so as to be effectively impervious, as listed below.

Minimum 15% of the development footprint	(1 point)
Minimum 30% of the development footprint	(2 points)
Minimum 45% of the development footprint	(3 points)
Minimum 60% of the development footprint	(4 points)
Minimum 75% of the development footprint	(5 points)

##### OPTION 2 – FOR ALL OTHER SITES

Implement a comprehensive stormwater management plan for the project that infiltrates, re-uses, or evapotranspirates runoff from 90% of the average annual rainfall or 1” of rainfall from a percentage of the project’s **development footprint** as listed below.

Minimum 20% of the development footprint	(1 point)
Minimum 40% of the development footprint	(2 points)
Minimum 60% of the development footprint	(3 points)
Minimum 80% of the development footprint	(4 points)
Minimum 100% of the development footprint	(5 points)

- Notes:
- a) The stormwater management plan should identify practices to be employed, such as permeable pavements, rainwater harvesting systems or green roofs.
  - b) For the purposes of this calculations in this credit, the development footprint will include typically impervious surfaces included in the definition of “development

footprint,” such as roofs and pavements, even though the surfaces may be made pervious as part of the stormwater management plan.

---

## Submittals

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- ❑ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

### For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

#### All Options

- ❑ A site plan indicating the project’s development footprint, and the location of any planned stormwater management technologies or BMPs.
- ❑ A written commitment to develop and implement a comprehensive stormwater management plan to meet the requirements if the project is built.

#### Option 1

- ❑ A site plan indicating the size of the project and any previously developed areas (this can be done as part of the site plan listed above).

### For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

#### Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 1” on project checklist, and submit the following additional documentation:

#### All Options

- ❑ A summary of the stormwater management plan, highlighting the technologies or BMPs used on the site.
- ❑ A statement of the project team’s capacity and/or qualifications to implement the plan, and/or a description of the services that will be contracted to do so.

#### Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- ❑ Submit updated versions of the relevant documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1 and the additional item(s) listed above in Case 2A.

**For STAGE 3 Submissions (Certification of Completed Neighborhood Development)**

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

Case 3A: No change since Stage 2

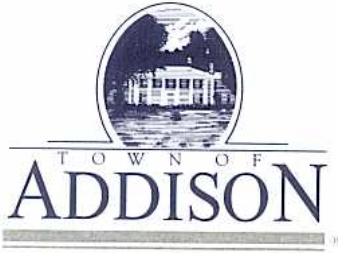
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- A calculation of either 90% of the average annual rainfall or 1” of rainfall that occurs on the project’s development footprint and other effectively impervious areas.
- A calculation of the percentage of the development footprint for which runoff will be infiltrated, re-used, or evapotranspired.

Case 3B: Change since Stage 2

If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.



DEVELOPMENT SERVICES

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## MEMORANDUM

July 20, 2007

TO: Ron Whitehead  
FROM: Carmen Moran, Director of Development Services  
SUBJECT: Parking garage funding analysis by Walter P. Moore

The staff has been approached by OPUS West about the possibility of the Town's investment in the construction of a parking garage in Addison Circle. The garage would serve two purposes. It would be used by the tenants in the office building during the day, and on nights and weekends, it would be used by visitors to Addison Circle. In addition, it would be available as parking for our big three special events: Taste Addison, Kaboom Town, and Oktoberfest.

OPUS West does not yet have a final design for the office building or the parking structure. However, at this point, it expects the garage to have 745 parking spaces. In preliminary discussions, the Town talked with OPUS about an agreement whereby the Town would have use of 200 parking spaces every night and on weekends, then on a select number of weekends, the Town would have the ability to use all spaces in the garage.

The Town asked Walter P. Moore, a nationally-recognized consultant on parking and parking garages, to conduct an analysis to determine what the appropriate amount of the Town's investment in a garage should be, and how the investment should be structured. Walter P. Moore's report is attached. Walter P. Moore also included recommendations on construction and maintenance standards that should be included in any garage in which the Town made an investment.

Staff would like to put this on the next available Council agenda for discussion. The staff hopes this item can be discussed by the Council at one meeting, and then brought back on a future agenda with a funding recommendation from the staff.

Staff would note that in preliminary discussions, OPUS West was talking about a 500 space garage, which is the parameter the staff gave to Walter P. Moore. Since that time, OPUS has decided to expand the garage to 745 spaces.

Evaluation of Opus Parking Agreement  
Town of Addison, Texas

Prepared for  
Mr. Ron Whitehead  
City Town of Addison  
City of Addison, TX  
5300 Belt Line Road  
Addison, TX 75001

Prepared by  
Walter P. Moore and Associates, Inc.  
300 South Orange Avenue  
Suite 875,  
Orlando, Florida 32801-3332

53-07001-00

June 25, 2007



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## EXECUTIVE SUMMARY

Walter P. Moore and Associates, Inc., has been commissioned to perform evaluations and recommendations in support of the Town of Addison's efforts to secure the long term rights or ownership in 200 parking spaces in the planned parking structure of the speculative office building planned for Addison Circle.

The Opus Group intends to construct an office building and supporting parking structure with construction to start on both no later than January 1, 2009. The Town of Addison is in need of "after office hours" parking for the many events planned for Addison Circle. These two entities are in discussions to enter into business terms to satisfy the Town of Addison's parking needs with securing a fifty (50) year agreement for the non-exclusive right to access 200 spaces in the parking structure.

Walter P Moore is to provide an evaluation and recommendation for the best financial and long-term use arrangement for the Town of Addison. Those business terms have been analyzed under the following scenarios:

1. Town of Addison undertaking venture as Owner/Constructor of parking structure with lease agreement by Opus;
2. Town of Addison purchase of rights for use of 200 parking spaces by making one-time lease payment.
3. Town of Addison lease of rights for use of 200 parking spaces based on "fair market value".

Walter P Moore, using industry standards and our own empirical data, has determined that the Town of Addison would be best served by entering into the agreement, wherein they pay a one time lease payment of \$2,000,000 for the use of the 200 parking spaces. The final contractual business terms defining use, standards of design, operational criteria and maintenance standards shall be further developed. Recommendations for these requirements are further outlined in this report.

This study represents the opinions and professional judgment of Walter P Moore. Every reasonable effort has been made to ensure that the data contained in this study reflect the most accurate and timely information possible and they are believed to be reliable. This study is based on estimates, assumptions, and other information reviewed and evaluated by Walter P Moore from its meetings with the Town, the Town's representatives, and our general knowledge of the parking industry. No responsibility is assumed for inaccuracies in reporting by the Town, the Town's representatives or any other data source used in preparing this study. Unforeseen changes in economic or other factors could have an impact on the conclusions presented.

**ECONOMIC EVALUATION**  
**Town of Addison as Owner/Developer**

Walter P Moore, using industry standards and our own empirical data, has determined that the development cost of a 500-space parking structure is \$8,314,196 or \$16,628 per space. Assuming a 30 year mortgage and 20% initial equity payment, the value of parking is determined to be \$16,797,629 or \$33,595 per space for the proposed fifty year agreement. Table 1 summarizes these financial projections.

Table 1

**Opus Parking Structure**  
**Development Analysis**

Capacity (Spaces)	500	
Max GSF	175,000	
Estimated GSF/Space	350	
Start Date of Parking Operation		
Cost Per Space		\$12,351
<b>Hard Cost Estimate/Sq. Ft.</b>		<b>\$35</b>
		\$6,125,000
<b>Estimated Project Cost</b>		<b>\$6,125,000</b>
	Hard Construction Cost	6,125,000
	Sales Tax (8.25% of hard cost)	50,531
	<b>Total Hard Cost</b>	<b>6,175,531</b>
Land Cost		0
Misc. Construction Cost		500,000
A&E Consulting Fees		432,287
Carrying Cost During Construction (Assume 5% of development cost)		355,580
Control Equipment Cost		75,000
Legal Fees/Loan Commitment Fees		100,000
Geotechnical Study/Phase I&II Environmental Soil Testing/Archeological Surveys		100,000
Demolition Cost		20,000
Site Preparation		0
Construction Management		0
Owners Contingencies		247,021
		308,777
<b>Total Development Cost</b>		<b>\$8,314,196</b>
Total Development Cost Per Space		\$16,628
Equity Payment		\$1,662,839
Principal + Interest		\$15,134,790
<b>Total Parking Value</b>		<b>\$16,797,629</b>
Total Parking Value Per Space		\$33,595

Based on the projected development costs, the following is a summary of the financial results of the Town acting as Owner/Developer of the proposed parking structure:

Typical Year

Revenue <sup>1</sup>	\$300,000
Expenses <sup>2</sup>	\$200,000
NOI	\$100,000
Debt Service	\$504,000
NOI after Debt Service	-\$404,000

The financial projection over fifty year period:

Revenue	\$15,000,000
Expenses	\$10,000,000
NOI	\$5,000,000
Principal + Interest	\$16,797,629
NOI after Debt Service	-\$11,797,629

The projected financial return or cost of parking for the Town of Addison for their acting as Owner/Developer is -  
\$11,797,629

<sup>1</sup> Revenue based on market rate of \$50 per parking space per month  
<sup>2</sup> Expenses based on average of \$400 per space per year

### Town of Addison to Purchase Parking "Rights"

Walter P Moore, using industry standards and our own empirical data, has determined that the development cost of a 500-space parking structure is \$8,314,196 or \$16,628 per space. Assuming a 30 year mortgage and 20% initial equity payment, the value of parking is determined to be \$16,797,629 or \$33,595 per space for the proposed fifty year agreement. Table 1 summarizes these financial projections.

Based on the projected development costs, the following is a summary of the financial results of the Town purchasing the right to the use of 200 spaces in the parking structure:

The financial projection over fifty year period:

Development Cost	\$16,797,629
Development Cost Per Space	\$33,595
City Payment	\$2,000,000
City Payment By Space	\$10,000
Difference Per Space	-\$23,595

The projected financial return or cost of parking for the Town of Addison purchasing the parking as non-exclusive use of 200 parking spaces is

-\$2,000,000

### Town of Addison to Lease Parking "Rights"

Walter P Moore, using industry standards and our own empirical data, has determined that the development cost of a 500-space parking structure is \$8,314,196 or \$16,628 per space. Assuming a 30 year mortgage and 20% initial equity payment, the value of parking is determined to be \$16,797,629 or \$33,595 per space for the proposed fifty year agreement. Table 1 summarizes these financial projections.

Based on the projected development costs, the following is a summary of the financial results of the Town leasing the non-exclusive rights to the use of 200 spaces in the parking structure:

The financial projection over fifty year period:

Development Cost	\$16,797,629
Development Cost Per Space	\$33,595
City Payment <sup>3</sup>	\$5,500,0000
City Payment By Space	\$27,883
Difference Per Space	-\$5,712

The projected financial return or cost of parking for the Town of Addison leasing the parking as non-exclusive use of 200 parking spaces is

-\$5,500,000

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<sup>3</sup> City payment of \$20 per space per month w/ adjustment for 3% inflation

## DESIGN/OPERATIONS Functional Design

### Design Criteria

The following are a listing of design parameters that are described as minimum standards to be incorporated by the Opus design team:

1. Maximum five (5) level structure (one at grade and four (4) supported levels)
2. Structural system:
  - a. Cast-in-place, reinforced concrete structure
  - b. Pre-cast reinforced concrete structure
3. Exterior spandrel panels to be reflective of architecture of planned office building – overall appearance to be in keeping with look of adjacent land uses
4. Two cab elevator, traction preferred
5. Lighting and security to good design practices
6. Materials meeting all applicable quality standards
7. ADA compliance in all aspects of design
8. Multiple points of entry/exit for both vehicles and pedestrians
9. Required setbacks and landscape buffers from Town streets, as required per Town standards
10. Maximum walking distance to vertical transportation – 250 feet
11. Minimum ceiling height:
  - a. 8'-0" Clear to bottom of beams for pre-cast, 7'0" to bottom of beams for cast-in-place
  - b. 8'-2" clear into and out of van accessible spaces
12. Flat floor spaces – 60% of floor parked floor area
13. Park-on-ramp maximum slope – 5.5%
14. Express ramp maximum slope – 12.0%
15. Express ramp minimum transition length – 12'-0" @ 6% Slope



16. Maximum number of 360 degree turns to top of garage – five
17. Spaces passed on primary search path:
  - a. Angled parking – 800
  - b. 90 degree parking – 500
18. Non-parking roadway lane width:
  - a. One Lane – 12'-0"
  - b. Multiple Lanes – 11'-0"
19. Drive aisle width for turning movements:
  - a. One lane – 18'-0"
  - b. Two lanes with two-way traffic – 30'-0"
20. Minimum Drive Aisle for Two-Way Traffic – 24'-0"
21. Parking Bay & Space Geometry:
  - a. 54'-6" bay width and 9 foot wide spaces @ 60°
  - b. 51'-6" bay width and 9 foot wide spaces @ 70°
  - c. 61'-4" bay width and 9 foot wide spaces @ 90°
22. Garage Lighting:
  - a. Entry/Exit Locations – 50 foot candles (from property line to 80' inside the facility)
  - b. Traffic Lanes – 10 foot candles
  - c. Parking Areas – 10 foot candles
  - d. Stairs and Pedestrian Walkways – 30 foot candles
  - e. Elevator Lobbies – 50 foot candles
  - f. Restrooms and Storage Areas – 50 foot candles
  - g. Roof – 5 foot candles

## Operational Criteria

The following are operational criteria and procedures that are described as minimum standards to be incorporated by the Opus project management team:

### Hours of Operation and Guaranteed Use

The hours of use by the Town of Addison should be guaranteed as the following:

Monday – Thursday 6 PM – 2 AM

Friday – Sunday 6 AM – 2 AM

Opus shall guarantee to the Town of Addison access to the 200 spaces in a contiguous area (within the parking structure) by having capability to cordon off and reserve the area containing the 200 spaces. 500 spaces shall be available for designated events.

Opus project management shall have card access system (for controlled access to the parking structure) that is capable of "time zone" activation, such that the users assigned to the 200 space are must vacate by 6 PM.

## Maintenance

**Routine Maintenance** – routine maintenance of a parking structure must be performed at regular intervals (some required daily, weekly, semi-annually to others that only require yearly attention) if the full benefit of the effort is to be realized. Irregular or incomplete routine maintenance procedures will provide only a marginal return on investment and in some cases result in the need for Capital Repair & Replacement work to be performed.

**Housekeeping** - Cleaning of the parking facility to include, but not limited to, the following:

1. Removal of trash and debris from all areas of the garage
2. Removal of accumulated snow, ice and/or water in all areas of the garage
3. Sweeping of the garage
4. Power washing of the garage
5. Cleaning and minor maintenance of all vertical surfaces
6. Keep the parking facility free and clean of all graffiti
7. Cleaning of all public restrooms, if any, and other common use areas and facilities in the garage

8. Maintain trash and rubbish containers throughout the facility
9. Cleaning of floor drain grates at all levels
10. Cleaning of all windows and glass
11. Re-stripping of the garage including parking spaces, traffic arrows and other markings, curbs, parking equipment islands, "No Parking" areas within the garage, etc.
12. Maintenance and re-stripping of painted surfaces in the garage including touch-up painting of steel connections, stairs, railings and of concrete surfaces with minor repairs.

The Town of Addison shall be responsible for removal of trash and debris only after times of their use and shall contribute a percentage (to be mutually agreed upon) for all other Routine Maintenance services.

#### **Structural and Waterproofing**

1. Remove ponding water from all horizontal floor surfaces
2. Routing and sealing of random floor cracks on topping slab
3. Re-sealing of control joints between structural double tee beams, between vertical elements and horizontal floor surfaces
4. Concrete patching to prevent trip hazards and other safety concerns
5. Re-sealing of expansion joints
6. Replace/reset of bearing pads
7. Patching and/or re-applying of weatherproof membrane systems as required
8. Periodic application of concrete penetrating sealers on the concrete floor surfaces
9. Tuck-pointing of cracks in masonry joints

#### **Equipment**

1. Parking Equipment preventative and normal maintenance requirements
2. Repair and maintenance of internal graphics and wayfinding systems

3. Inspect and replace light fixture bulbs/lamps as needed
4. Maintain in good working condition all air-handling and ventilation systems in the garage

Capital Repair & Replacement – frequency of the following maintenance items will vary dependent on geographical location of the facility and routine maintenance procedures being performed.

1. Structural engineer to inspect the structure every three years and prepare a report of items in need of repair or replacement
2. Replacement of failed expansion joints
3. Major structural repairs to beams, columns, pre-cast double tees, façade, etc.
4. Major repair of elevators and other mechanical systems in the garage
5. Major repair or replacement of waterproofing membrane system
6. Major repair or replacement of the Parking Access and Revenue Control System
7. Major repair to the electrical systems in the garage
8. Major repair or replacement of light fixtures in the garage
9. Re-surfacing of the floor slabs (for topping in place pre-cast double tees)
10. Major repair and maintenance of the fire protection systems in the garage.

Opus should be required to budget and place in escrow an annual payment for use in performing capital improvements as shown below:

Cast-in-place	\$35,000.00
Pre-cast	\$70,000.00

### Insurance Requirements

Opus is to be required to carry public liability insurance in such amounts as shown below, to pay all the premiums thereon when due, and to cause such insurance to include the Town of Addison as additional insured there under (with respect to Town of Addison's operations only). Opus and Town of Addison to agree on amount of participation for Town of Addison's percentage of use.

Commercial General Liability \$1,000,000 combined single limit each occurrence for bodily injury and property damage.

Umbrella Excess Coverage \$10,000,000

Garagekeeper's Legal Liability \$10,000,000 combined single limit each occurrence

Crime: Policy Limits: \$50,000 commercial blanket

Workers' Compensation:

Policy Limits:

Coverage A – Statutory

Coverage B - \$100,000

Opus shall obtain and maintain liability insurance on elevators in the Parking Facility naming Opus and Town of Addison as insured.

Opus shall obtain fire and extended coverage insurance covering the Parking Facility and the equipment contained therein.

## SUMMARY

Walter P Moore, using industry standards and our own empirical data, has determined that the Town of Addison would be best served by entering into the agreement, wherein they pay a one time lease payment of \$2,000,000 for the non-exclusive use of the 200 parking spaces. The final contractual business terms defining use, standards of design, operational criteria and maintenance standards shall be further developed. Recommendations for these requirements are further outlined in this report.

As part of the agreement with Opus, the Town of Addison should have input to design standards, requirements of operation, hours of use, maintenance and capital repair programs and guarantee of rights to parking spaces for the fifty (50) year period.