

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 21st).

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.

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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 CO₂ emissions shall be less than or equal to national average of CO₂ 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.

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 CO₂ 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 CO₂ 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.

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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.

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.

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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.

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.

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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.

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.

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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.

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.

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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.

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.

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.

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.

