



# LEED 2009 for Existing Buildings: Operations and Maintenance

## SS CREDIT 7.1: HEAT ISLAND REDUCTION - NONROOF

All fields and uploads are required unless otherwise noted.

### ALL OPTIONS

This static sample form has been modified for offline access. All sections of the form are visible. Sample forms are for reference only.

Select one of the following:

- ☐ LEED Design & Construction Streamlined Path: The project earned at least one point related to non-roof heat island reduction under LEED for New Construction, LEED for Core and Shell, or LEED for Schools.
- ☐ Operations & Maintenance Submittal Path. The project team will document compliance with the heat island reduction requirements of LEED-EB: O&M SS Credit 7.1.



### DESIGN & CONSTRUCTION STREAMLINED PATH

**Upload L-7.** Provide the USGBC-generated LEED Certification Scorecard(s) of the previously-certified project.

- ☐ The project earned an exemplary performance point for heat island reduction through non-roof strategies under LEED for New Construction, LEED for Core and Shell, or LEED for Schools (achieved a compliance threshold of 100% for either option).

Select one of the following:

- ☐ **No Change:** The design and construction elements that contributed to the previously-earned credit have not been altered, replaced, or removed since D&C certification of the project.
- ☐ **Change:** The design and construction elements that contributed to the previously-earned credit have been altered, replaced, or removed since D&C certification of the project. These changes do not put into question the potential achievement of EB SS7.1.

## ELEMENTS CHANGED

Describe the circumstances of these changes.

Select one of the following:

- ☐ For all high SRI surfaces that contributed to the previously earned credit, a maintenance program is in place to ensure that these surfaces maintain good reflectance over time, including cleaning at least every two years.
- ☐ As part of the LEED Design & Construction application, SRI surfaces were not used to meet credit requirements.

## MAINTENANCE PROCEDURE AND SCHEDULE

Describe the cleaning procedures and schedules for the SRI surfaces used to meet the D&C rating system credit requirements.

## OPERATIONS & MAINTENANCE SUBMITTAL PATH

Performance period start:

Performance period end:

A Licensed Professional Exemption for a Civil Engineer or Registered Landscape Architect is available in lieu of a site or landscape plan identifying all parking and nonroof hardscapes.

Select one of the following:

- ☒ Licensed Professional Exemption - Civil Engineer or Registered Landscape Architect.
- ☐ Full Documentation Path.

*NOTE: For each Licensed Professional Exemption claimed, the relevant licensed professional must complete the corresponding Exemption Signature on the Licensed Professional Exemptions tab in order to be considered a valid submittal.*

Licensed Professional Exemption claimed by:

A scaled site or landscape plan identifying all hardscape and parking areas at the project site is required to document compliance with SS Credit 7.1. The site plan below is a linked submittal. (If no document is present, or if the document does not include the required information, upload a site plan which meets the above requirements.)

#### Upload L-2. Provide the site plan for the LEED building.

Select one of the following

- ☐ The linked site plan above meets the following criteria:
  - 1) It was accurate as of the close of the performance period.
  - 2) All non-roof hardscape areas within the LEED project boundary are highlighted.
  - 3) Each portion of hardscape complying with any strategy in this submittal option is clearly marked and labeled.
- ☐ A different document is better suited to satisfy these requirements.

#### Upload SSc7.1-1. Provide a site or landscape plan identifying all hardscape and/or parking areas.

Select one of the following

- ☐ **Option 1. Site Hardscape.** A combination of shading, high reflectance, and/or open-grid paving is provided for at least 50% of the site hardscape.
- ☐ **Option 2. Parking Under Cover.** At least 50% of parking is placed under cover.

## OPTION 1. SITE HARDSCAPE

Select one of the following:

- ☐ **Reflective Materials.** The nonroof heat absorption reduction strategies at the project include materials with an SRI of at least 29.
- ☐ **No Reflective Materials.** The nonroof heat absorption reduction strategies at the project do NOT include materials with an SRI of at least 29.

#### Table SSc7.1-1. Reflective Materials

Complete the table below for all hardscape surfaces or architectural shading devices where materials with high reflectance are used to reduce heat absorption. SRI values can be entered manually (if known), or calculated based on material reflectance and emissivity. For projects using existing weathered gray concrete hardscapes, provide documentation in narrative box below to demonstrate that the weathered surfaces have been sufficiently cleaned and lightened to qualify for the default SRI values.

Material Description	Area of Coverage (sf)	Reflectance (0-1)	Emittance (0-1)	SRI value (actual or calculated)
Total qualifying area (sf)				

**Table SSc7.1-2.** Heat Absorption Reduction Strategies

Complete the table below for all nonroof heat absorption reduction strategies employed at the project site.

Area shaded by current and future tree canopy, within 5 years of installation (sf)	
Area shaded by structures covered with energy-producing solar panels (sf)	
Area covered by qualifying reflective materials (sf)	
Area covered by open-grid pavement system (at least 50% pervious) (sf)	
Total area of qualifying nonroof hardscape surfaces (sf)	
Total area of all nonroof hardscape surfaces on project site (sf)	
Qualifying non-roof surfaces as a percentage of total non-roof surfaces (must be at least 50%)	

Describe the maintenance program in place to ensure that SRI surfaces maintain good reflectance over time. Include information regarding the cleaning procedures and schedule.

## OPTION 2. PARKING UNDER COVER

Select one of the following:

- ☐ **Reflective Materials.** The project includes parking that is shaded or covered by materials with an SRI of at least 29.
- ☐ **No Reflective Materials.** The project does NOT include parking that is shaded or covered by materials with an SRI of at least 29.

**Table SSc7.1-3.** Reflective Materials : Parking

Complete the table below for all reflective surfaces covering or providing shade for parking at the project site. SRI values can be entered manually (if known), or calculated based on material reflectance and emissivity.

Material Description	Parking spaces	Reflectance (0-1)	Emittance (0-1)	SRI value (actual or calculated)
Qualifying parking spaces				

**Table SSc7.1-4. Parking Spaces Under Cover**

Complete the table below for all parking at the project site.

Number of spaces covered by roofing materials with an SRI of at least 29	
Number of spaces covered by vegetated roof	
Number of spaces covered by roof covered by solar panels	
Number of spaces underground or under a building	
Number of all other spaces under cover, including spaces under a deck	
Total number of qualifying parking spaces	
Total number of parking spaces provided for building users (may include reserved off-site parking)	
Percentage of compliant parking spaces (must be at least 50%)	

*One exemplary performance point is available to project teams that have 100% of the parking spaces located under cover.*

Describe the maintenance program in place to ensure that SRI surfaces maintain good reflectance over time. Include information regarding the cleaning procedures and schedule.

## ADDITIONAL DETAILS

- ☐ Special circumstances preclude documentation of credit compliance with the submittal requirements outlined in this form.

## SPECIAL CIRCUMSTANCES

Describe the circumstances limiting the project team's ability to provide the submittals required in this form. Be sure to reference what additional documentation has been provided, if any. Non-standard documentation will be considered upon its merits.

**Upload SSc7.1-SC.** Provide any additional documentation that supports the claim to special circumstances. (Optional)

- ☐ The project team is using an alternative compliance approach in lieu of standard submittal paths.

## ALTERNATIVE COMPLIANCE PATH

Describe the alternative compliance path used by the project team. Include justification that this path meets the credit intent and requirements. Be sure to reference what additional documentation has been provided, if any. Non-standard documentation will be considered upon its merits.

**Upload SSc7.1-ACP.** Provide any additional documents that support the alternative compliance path approach. (Optional)

- ☐ The project team is using the above alternative compliance path to document exemplary performance of SS Credit 7.1.

## SUMMARY

SS Credit 7.1: Heat Island Reduction - Nonroof Points Documented:

One exemplary performance point is available to project teams that achieve either of the following:

- 1) At least 95% of the site hardscape constructed with high-albedo materials and/or open-grid paving and /or shading within 5 years.
- 2) At least 95% of the parking spaces provided for building users located under cover.

SS Credit 7.1: Heat Island Reduction - Nonroof Exemplary  
Performance Documented:

- ☐ The project team reserves one point in the Innovation in Operations credit category for exemplary performance in SS Credit 7.1.