



2013

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## Building Exterior & Hardscape Management Plan

901 Fifth Avenue

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# I. Introduction

Green Building Operations Procedures are meant to be used by property management and engineering teams to institutionalize best practices within existing building operations. The plan provided herein covers building exterior and hardscape management and establishes environmentally sensitive procedures that provide a clean, well-maintained, and safe building exterior.

Through the Building Exterior and Hardscape Management Plan, the building's management ensures that exterior maintenance efforts support the following concerns:

- Energy Efficiency – Minimizing the environmental impact by choosing energy-efficient equipment, products, services and practices.
- Water Conservation – Reducing the use of potable water and contributing to the preservation of natural water supplies.
- Outdoor Air Quality – Eliminating or managing volatile organic compounds and toxic off-gassing to maintain a healthy work environment.
- Improved Live/Work Environment – Providing a safe, comfortable and accessible live/work environment for employees and building occupants.
- Bottom Line Improvements – Environmentally responsible practices will cut operational costs by minimizing energy and water usage.

This plan is based on the requirements of the LEED-EB OM rating systems as excerpted from the 2009 Edition – LEED-EB OM Requirements: SSc2, Building Exterior & Hardscape Management Plan (1 credit).

## II. Goals

The goal of the Environmental Building Plan for Exterior & Hardscape Management Plan is to encourage environmentally-sensitive building exterior and hardscape management practices that provide a clean, well-maintained and safe building exterior.

Performance measurement goals require that each aspect of the plan utilize quantifiable performance metrics (cost, volume, or number of applications) that are appropriate for that specific exterior hardscape task. Methods for measurement are outlined below under “Performance Measurement.” Property management staff will strive to implement the environmental requirements established herein 100% of the time. When this is not possible, the products or strategies used on the building exterior must meet the requirements at least 20% of the time.

### III. Scope

The scope of this plan includes the cleaning and maintenance of the exterior elements of the building. This includes, but is not limited to:

- Cleaning and maintenance of the Building's facade, including windows, exterior walls, finishes and trim
- Cleaning and maintenance of the Building's hardscapes, including sidewalks, pavement and any other hardscape.
- Snow and ice removal
- Paints and sealants used on the Building's exterior
- Maintenance equipment

## IV. RESPONSIBILITIES

The building's Property Manager and Building Engineer are responsible for informing all building personnel, service partners, other vendors and Tenants of this Exterior & Hardscape Maintenance Plan. Moreover, the Property Manager and Building Engineer will be responsible for implementing the practices set forth in this document in order to ensure that the standards specified within are upheld. The Property Manager and Engineer may delegate certain duties relating to building exterior and hardscape management to appropriate personnel, service partners and other vendors, but will bear the ultimate responsibility for the effective implementation of this plan. If exterior cleaning and/or maintenance are contracted with a service provider, that provider is responsible for carrying out their services in accordance with this plan, without exception.

Additionally, The building's property management and engineering team will be responsible for maintaining onsite logs relating to work performed with cleaning building exterior and hardscapes (including window washing), snow and ice removal, any paints or sealants used on the building exterior and hardscapes and maintenance equipment used in any of the above categories.

## V. TIME PERIOD

This plan is to take effect immediately and will be reviewed and updated annually.

## VI. GUIDANCE FOR RESOURCES AND IMPLEMENTATION

### A. Cleaning and Maintenance of the Building's Façade (Windows, Exterior Walls and Finishes)

Manual cleaning will be the standard for exterior building and hardscape cleaning and maintenance. Pressure washing will be performed as infrequently as possible. Wherever possible, cleaning agents, as well as any solvents utilized for the maintenance of the exterior hardscape, will be Green Seal certified and/or approved by EPA's Environmentally Preferred Purchasing (EPP) program.

Should stone or brick repair and maintenance be required on or around the building exterior, the party responsible for such service will strive to use reclaimed stone and brick wherever possible. Moreover, the environmental impact of the mortar and joint compounds used to repaint exteriors will be considered when undertaking repairs.

If leaking occurs in exterior sections of the building and/or hardscape, maintenance personnel will select waterproofing methodologies and products that reduce the occurrence of harmful chemical emissions. Waterborne, low-toxicity, low-VOC, liquid rubber and asphalt emulsion waterproofing applications will be employed whenever possible.

Maintenance personnel responsible for window cleaning will use water and when necessary, low-toxicity and low-VOC biodegradable window-washing agents may be used for stubborn stains and dirt. These agents will be used sparingly.

In these limited cases, products with the following green cleaning specifications must be used first prior to using more stringent cleaning agents:

- Green Seal GS-37
- Environmental Choice CCD-110
- Environmental Choice CCD-146

Because ground floor windows are not located next to any irrigation or sprinkler heads, lime and calcium deposits do not build up on the windows. Therefore, ground floor windows are treated in the same manner as all other exterior windows.

Maintenance personnel will also reduce the use of toxic and high-VOC exterior sealants, paints and stains to the greatest extent possible. These products must meet the following green specifications:

Adhesives and sealants have a VOC content less than the current VOC content limits of the South Coast Air Quality Management District (SCAQMD), Rule #1168, or sealants used as fillers must meet or exceed the requirements of the Bay Area Quality Management District, Regulation 8, Rule 51.

Paints and coatings must have VOC emissions not exceeding the VOC and chemical component limits of Green Seal's Standard GS-11 requirements.

Latex, water-based exterior paints will be selected in lieu of oil-based exterior paints. Exterior painters will be trained in procedures that reduce chemical emissions and water consumption (needed for post painting clean-up). All paints and sealants will be Green Seal certified or meet the equivalent thresholds. Any time sealants, paints or stains are required for the exterior of the building, products which meet these criteria will be specified whenever possible. Not only will this reduce harmful chemical emissions into the environment, but it will also help to protect the health of the maintenance personnel.

### **B. Cleaning and Maintenance of the Building's Hardscapes (Sidewalks, Brick Pavers in the Courtyard Area and Any Other Hardscapes)**

Manual cleaning is the standard for hardscape cleaning and maintenance. Pressure washing will be used only after manual methods have failed to deliver positive results. Wherever possible, cleaning agents, as well as any solvents used for the maintenances of the exterior hardscape, will be Green Seal certified and/or approved by the EPA's Environmentally Preferred Purchasing Program. (EPP)

If leaking occurs in exterior sections of the Building and/or hardscape, maintenance personnel will select waterproofing methodologies and products that reduce the occurrence of harmful chemical emissions.

Waterborne, low-toxicity, low-VOC, liquid rubber and asphalt emulsion waterproofing applications will be employed whenever possible.

### **C. Snow and Ice Removal; De-icing Plan and Equipment**

Maintenance will assess all walkways, sidewalks and entryways in order to identify critical, high-traffic routes. Whenever possible, maintenance personnel will not remove snow from non-essential and seldom-used walkways and entryways. Such a plan is intended to reduce the amount of maintenance required for the upkeep of those non-critical areas. For heavily traveled areas or for those areas which are required to be maintained during winter months by state or city statutes and ordinances, maintenance staff will use manual methods to remove snow. Fossil-fuel driven equipment will only be used when necessary to remove snow from critical areas of the parking lot.

When snow falls overnight and in the early morning hours, if possible, maintenance staff will shovel before the normal opening and operating hours of the Building. When snow falls during regular operating hours, snow removal will take place frequently in order to lessen the chance that pedestrians, cars and other types of traffic will compact the snow, thus making removal more difficult and increasing the chance that ice will form.

To the greatest extent possible, maintenance staff will tailor their de-icing practices according to the type of precipitation. With drier, powder-type snowfall, which can be completely removed, maintenance will not apply a de-icing agent. However, if a wet and heavy snow or slushy mix falls, maintenance will apply a de-icing agent to all paths around the entry to lesson pedestrian hazard. Applying the de-icing agent before a heavy, wet snowfall, maintenance personnel can ensure that snow and ice can be more easily removed. For larger areas in need of snow removal and necessary de-icing such as courtyards, the maintenance staff will follow the procedure described above.

De-icing agents can introduce harmful chemical pollutants into the environment. Maintenance staff will use only magnesium and potassium chloride ice-melting products instead of the more commonly used sodium and calcium chloride products. Magnesium and potassium chloride de-icing agents are not only less harmful to vegetation but are also less damaging to exterior walkways and interior flooring.

Maintenance staff will use a spreader to uniformly disperse the chemical de-icing compounds and to ensure that the correct amount of agent is used. Liquid de-icing agents will only be used where it is especially important to prevent ice from forming, or where the use of an ice-melting chemical is not possible.

#### **D. Paints and Sealants Used on the Building's Exterior**

Maintenance personnel will also reduce the use of toxic and high-VOC exterior sealants, paints and stains to the greatest extent possible. These products must meet the following green specifications:

Adhesives and sealants have a VOC content less than the current VOC content limits of the South Coast Air Quality Management District (SCAQMD), Rule #1168, or sealants used as fillers must meet or exceed the requirements of the Bay Area Quality Management District, Regulation 8, Rule 51.

Paints and coatings must have VOC emissions not exceeding the VOC and chemical component limits of Green Seal's Standard GS-11 requirements.

Latex, water-based exterior paints will be selected in lieu of oil-based exterior paints, where necessary. Contracts for exterior painting will include training in procedures that reduce chemical emissions and water consumption (needed for post-painting clean-up). All paints, sealants and stains will be Green Seal certified or meet equivalent thresholds. Any time sealants, paints or stains are required for the exterior of the building, products which meet these criteria will be specified whenever possible. Not only will this reduce harmful chemical emissions into the environment, but it will also help to protect the health of the maintenance personnel.

#### **E. Maintenance Equipment**

Manual equipment will be used whenever practical. If it is necessary to utilize powered equipment, maintenance personnel will make every attempt to utilize equipment that generates lower emissions and produces less noise. Corded electric and mobile battery-operated exterior maintenance equipment are examples of such equipment. In those instances where the use of equipment that runs on fossil fuels is necessary, lower-emitting products will be selected whenever possible.

## VII. Performance Measurement

All documentation relating to the tasks required by this Exterior Building and Hardscape Management Plan will be kept on file for the purpose of LEED EB-OM (re)certification. A detailed log of actions taken in compliance with this plan will be maintained. This log will include the record of each activity, the date it occurred and specific information on what the procedure entailed. All of the building's management and maintenance personnel involved in exterior building and hardscape decisions will have access to this log. Additionally, a list of cleaning products, de-icers, maintenance sealers, adhesives, paints and equipment used onsite, will be maintained and updated as necessary.

### **Exterior Cleaning – Building Façade**

As discussed in Section 6A above, only on rare occasions, low-toxicity and low-VOC biodegradable agents that conform to the green cleaning specifications mentioned above may be used. These agents will be used sparingly. At the time of the application, maintenance staff will record the type and cost of agents used. Non-preferable agents will count against the total cost for all products used. As an example, if preferable cleaning products used total \$90, and \$10 is expended for non-preferable products, then 90% of the total agents used will be considered environmentally preferable, by cost.

### **Exterior Cleaning – Building Hardscape**

Environmentally preferable maintenance practices and products will be measured by the number of hours that maintenance staff uses those practices and/or products in a calendar year. As an example, if exterior sidewalks and hardscapes are cleaned 5 hours per week and environmentally preferable practices are used 4 of those 5 hours, then the preferable maintenance practices will have a performance value of 80 %.

### **Snow and Ice Removal**

As noted in Section 6C above, hand shoveling is the preferred method as long as liability issues are not compromised. Magnesium and Potassium Chloride de-icing agents may be used if necessary. If deicing agents are used, maintenance staff will record the type of deicing agent and bag weight of de-icing agents used. If hand shoveling is used, maintenance staff should estimate the volume of de-icing agent that was avoided (by weight). Non-preferable de-icing agents will count against the performance. As an example, if preferable practices or products are used amounting to 90 pounds and 10 pounds of non-preferable agents are used, then 90% of the total agents used will be considered environmentally preferable.

**Paints, Sealants, and Stains**

As discussed in Section 6D above, all exterior paints, sealants and stains will meet certain green product specifications. The costs of non-preferable products will count against the total for all products used. At the time of the application, maintenance staff will record the type and cost of exterior paints, sealants and stains. Non-preferable products will count against the total cost for all products used. As an example, if preferable products total \$90, and \$10 is expensed for non-preferable products, then 90% of the total agents used will be considered environmentally preferable, by cost.

**Maintenance Equipment**

The utilization of environmentally preferable equipment will be measured by the number of hours that maintenance staff uses that equipment in a calendar year. As noted in Section 6B above, manual equipment will be the preferred practice. On those days where it is not prudent to use manual equipment, and fossil fuel-based equipment is necessary, maintenance staff will record the date and equipment type, and count equipment usage hours against the total number of maintenance equipment hours. As an example, if maintenance equipment is used 5 hours per week and environmentally preferable practices are used 4 of those 5 hours, then the preferable maintenance practices will have a performance value of 80 %.

## VIII. QUALITY ASSURANCE PROCESS

On a monthly basis, the Property Manager and Building Engineer will review the upcoming repairs and maintenance activities to ensure that any work provided by service partners, vendors or staff have the necessary information to perform the task in accordance with this plan. They will also review the log monthly and address any exceptions to the plan to ensure that the service providers and staff are meeting the criteria outlined above.

In addition, the Property Manager will provide an annual Environmental Sustainability Report detailing the prior year's environmental achievements. All documentation on work performed will be maintained with contractor specifications, reports and photographs, is available, and/or applicable.

## IX. REFERENCES

- **Green Seal:** [www.greenseal.org](http://www.greenseal.org) – Green Seal is a nonprofit organization that identifies and promotes sustainable products and services. The website lists certified products, including paints, coatings and cleaning products.
- **EPA’s Environmentally Preferable Purchasing Program:** [www.epa.gov/epp](http://www.epa.gov/epp) - EPP is used by the federal government and other industries to streamline the purchase of environmentally friendly products and equipment.