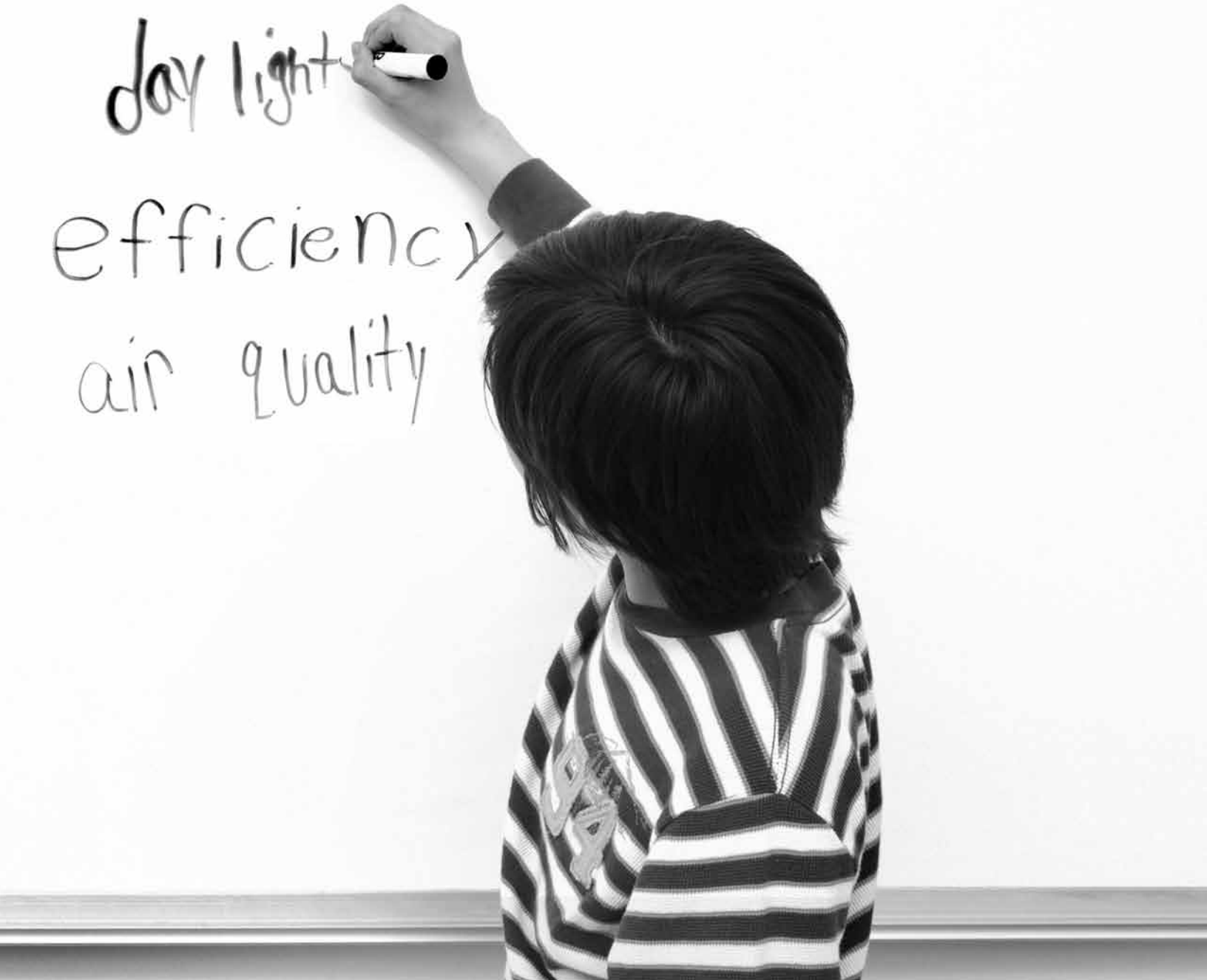
GREEN EXISTING SCHOOLS

PROJECT MANAGEMENT GUIDE



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green school /grEn skül / n. a school building or facility that creates a healthy environment that is conducive to learning while saving energy, resources and money

INTRODUCTION

Green schools create healthy environments conducive to learning while saving energy, resources, and money. The U.S. Green Building Council (USGBC) developed *The Green Existing Schools Project Management Guide* to help schools and school districts green their existing facilities and achieve LEED® (Leadership in Energy and Environmental Design) certification. The guide outlines the process for navigating LEED certification for existing schools and provides details on how to conduct organizational assessments, educate and train staff, initiate the certification process, and manage a campus- or district-wide plan. It is designed to be used in concert with additional resources contained in the Green Existing Schools Toolkit (www.usgbc.org/k12toolkit), including:

- *Green Existing Schools Implementation Workbook for Schools*
  Project teams should refer to the workbook to assist with the evaluation and improvement of current O&M practices and policies. The contents of the workbook include sample policies, programs, and plans; data collection forms, worksheets, and tables; and sample surveys.
- *LEED 2009 for Existing Buildings: Operations & Maintenance Project Checklist*
  Project teams can use the LEED Project Checklist as a scorecard to track the credits they are pursuing toward certification.
- "LEED 2009 for Existing Buildings: Operations & Maintenance Rating System"
  The rating system summarizes the intent, requirements, and technologies/strategies for each credit
- "LEED 2009 Green Building Operations & Maintenance Reference Guide"
  The reference guide contains detailed information on the implementation of prerequisites and credit requirements. It can be purchased at www.usgbc.org/store.

Implementing an initiative to green existing schools across a campus or district requires a comprehensive plan that integrates two processes: one focused on how each school facility will meet the LEED building performance requirements and the other on adopting sustainable operations and maintenance policies and best practices. Coordinating these two processes, along with the LEED documentation requirements, calls for dedicated, informed champions who are capable of leading an integrated project team and improving operational effectiveness.

The course the process takes will depend on factors such as the condition and age of the building(s), the size of the district or campus, budgets and financing options, the expertise of in-house staff, and the level of LEED certification sought. It will take time to align existing capital improvement plans with the LEED certification process, implement new policies and practices, and train maintenance and procurement staff. Every school and school district is different. The path to achieving LEED certification will vary for each facility and efforts will require a level of customization for every project. Despite the differences, the goal of these efforts is the same — healthy and productive learning environments for students, teachers, and staff.

Who is USGBC?

The U.S. Green Building Council is a Washington, D.C.-based 501(c)(3) nonprofit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings. USGBC works toward its mission of market transformation through its LEED green building certification program, robust educational offerings, a nationwide network of chapters and affiliates, the annual Greenbuild International Conference & Expo, and advocacy in support of public policy that encourages and enables green buildings and communities.

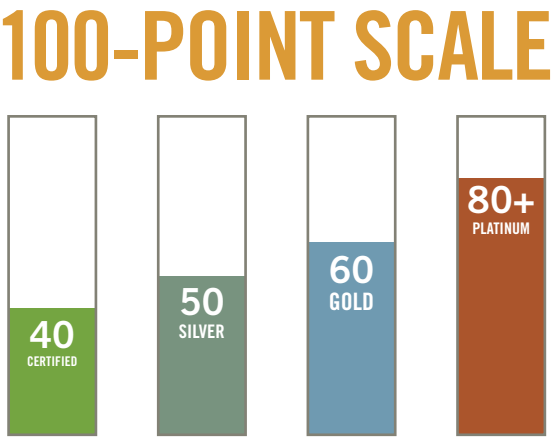
In 2007 USGBC launched the National Green Schools Campaign with a goal that every child attend a green school within a generation. To this end, USGBC works closely with schools and school districts across the country to help them achieve their green school goals. USGBC has created a variety of green school resources including implementation and financing guides, online and instructor-led educational courses, webinars, the Educator Resource Center (www.usgbc.org/educators), and a dedicated Web site, www.GreenSchoolBuildings.org. Green Schools Committees in every USGBC chapter lead the National Green Schools Campaign at the state and local level.

What is LEED?

In 2000, USGBC established the LEED rating system as a way to define and measure "green buildings." LEED is an internationally recognized green building certification system, providing third-party verification that measures how well a building or community performs across all the metrics that matter most: energy savings, water efficiency, CO_2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. The suite of LEED rating systems are designed to address the complete lifecycle of buildings.

Each rating system provides a concise framework for identifying and implementing practical and measurable green building solutions. LEED points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. A project must satisfy specific prerequisites and earn a minimum number of points to be certified. Certification levels,

based on the number of points, include: Certified, Silver, Gold, and Platinum.



Green Existing School Facilities

School districts of all sizes, private schools, and charter schools can green their existing building stock through the LEED for Existing Buildings: Operations & Maintenance rating system, which is a set of performance standards for the sustainable, ongoing operation of existing buildings that are not undergoing major renovations. The certification system identifies and rewards current best practices and provides an outline for buildings to use less energy, water, and natural resources; improve the indoor environment; and uncover operating inefficiencies. Prerequisites and credits within the rating system address high-performance building systems, O&M best practices, and sustainable policies.

A key component of all the LEED rating systems is energy efficiency. The LEED for Existing Buildings: O&M rating system uses the U.S. Environmental Protection Agency (EPA) Portfolio Manager as the benchmarking platform to validate a building's energy performance. Portfolio Manager is a free, interactive online tool that assesses energy and water consumption, performance, and cost information for individual buildings and building portfolios. Portfolio Manager rates the current level of building energy performance based on 12 months of utility data entered into the online tool. Buildings receive an energy performance rating on a scale of 1 to 100, known as an ENERGY STAR rating. For LEED for Existing Buildings: O&M certification, a building must have a rating of 69 or above.

Existing schools and facilities with ENERGY STAR ratings of 69 or higher may require little or no capital expenditures for repairs and renovations (providing IAQ requirements can also be met). For these buildings, the certification process will focus on adopting and implementing O&M best practices, establishing sustainable policies, and managing the LEED documentation process. For schools with ENERGY STAR ratings below 69, LEED certification will also require occupant education programs and building system upgrades and/or retrofits in order to meet the energy performance requirements.

Launch a Pilot Project

Successful initiatives can start small. Many schools and school districts become acquainted with the LEED certification process through the establishment of a pilot program in which one or more facilities are registered to pursue certification. The lessons learned from the pilot will help to streamline the LEED process for the other school facilities.

Several factors will determine the best candidates for a pilot program. In some cases, selecting a facility with an ENERGY STAR rating of 69 or above may be preferable, since little or no capital improvements will be required. In other cases, facilities with low ENERGY STAR ratings that are scheduled in the capital improvement plan for renovations or retrofits may prove to be ideal candidates for a pilot. It is important to align the LEED certification process with the capital improvements schedule. In doing so, the costs to implement building system improvements will not be new or added costs, but rather will come from existing funds in the capital improvement budget.

Even though LEED for Existing Buildings: O&M certification is awarded to individual facilities, many of the LEED credits focus on policies, programs, and plans that are best implemented at the district or campus level. For example, a green cleaning policy, which requires the use of sustainable products and practices, is typically managed at the campus or district level in order to consolidate purchasing, distribution, and training. In many cases, navigating the LEED certification process for the pilot school(s) will lead to campus- or district-wide improvements to O&M practices and policies. In some cases, multiple buildings on a campus can be certified as one project, provided all the buildings in the group satisfy the Minimum Program Requirements. (See page 41 for more details.)

The *Green Existing Schools Project Management Guide* is designed to help schools and school districts launch and implement an initiative to green their existing facilities. It outlines the entire process, from ways to make the case for going green to how to promote success. Used in conjunction with the other components of the Green Existing Schools Toolkit, school administrators, facilities staff, and program managers will have the necessary resources to operate and maintain schools that are healthy for students, comfortable for teachers, and cost-effective.

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Phase One: Getting Started

The initiative to green existing schools may originate with a discussion among facility planners and maintenance technicians, a conversation between principals and the superintendent, one parent's idea at a PTA meeting, a school board's working session, or even a group of motivated students and faculty. No matter how the idea is sparked, successful efforts to green operations and maintenance practices and pursue LEED certification require campus- or district-wide support. Therefore, identifying leaders to champion the process is an important early step.

Leaders who understand their school or school district's current needs, goals, and facilities management structure make excellent advocates. Those promoting LEED for Existing Buildings: O&M will need to educate school administrators, board members, and staff on the certification process and may also need to make a convincing case to hesitant stakeholders. As the benefits of high-performance operations and LEED certification become evident, enthusiasm will build throughout the school or school district to not only green one building, but to lay the groundwork to institutionalize a campus- or district-wide approach to healthy, high-performance schools.

Details on LEED certification and how to make a compelling case for greening existing schools are outlined below. These ideas are also detailed in a handout entitled *Why LEED Certification for Existing Schools*? located in **Appendix A**.

Understand LEED Certification

In 2000, USGBC established the LEED rating system as a way to define and measure "green buildings." In school terms, LEED is like a report card for buildings, demonstrating to the community that a facility is built and/or operated in a way that supports the health and well-being of occupants and saves energy, resources, and money. LEED certification is available for both new and existing schools. The LEED rating system is an internationally recognized certification system that measures how well a building performs according to several metrics:

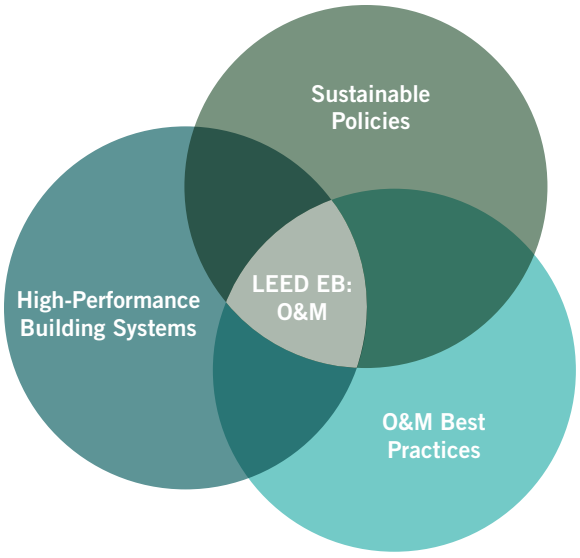
- energy savings
- water efficiency
- CO_2 emissions reduction
- improved indoor environmental quality
- stewardship of resources

LEED provides a concise framework for identifying and implementing practical and measurable green building solutions. Points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. A project must satisfy specific prerequisites and earn a minimum number of points to be certified. Certification levels, based on the number of points, include: Certified, Silver, Gold, and Platinum.

Once the LEED credits are implemented and the energy-efficiency and performance requirements met, the final step for LEED certification is submitting the project certification documentation. When all templates are submitted and all required supporting documents uploaded to the Web-based LEED Online system, the application is ready to submit for review. The Green Building Certification Institute (GBCI) reviews applications and provides feedback. If the application is complete and all requirements are met, GBCI awards a LEED certification for the building.

LEED for Existing Buildings: Operations & Maintenance

The LEED for Existing Buildings: O&M rating system contains performance standards for the sustainable, ongoing operation of existing buildings that are not undergoing major renovations. It includes high-performance building systems, O&M best practices, and sustainable policies. LEED for Existing Buildings: O&M can be applied both to existing buildings seeking LEED certification for the first time and to projects previously certified under LEED for New Construction, Schools, or Core & Shell. It is the only LEED rating system under which buildings are eligible for recertification.



Types of Credit Requirements

There are three types of improvements addressed through the LEED for Existing Buildings: O&M rating system:

High-Performance Building Systems:

Implement building improvements and technologies in order to use less energy, less water, and fewer natural resources. System upgrades and retrofits also improve indoor air quality and address operational inefficiencies.

Examples: Efficient lighting systems and indoor plumbing fixtures. These improvements relate directly to the school facility being certified.

O&M Best Practices:
Adopt operations and maintenance best practices to ensure project measures are effectively implemented and maintained.

Examples: Systems monitoring, green cleaning, and preventative maintenance procedures. Schools or school districts can treat the project pursuing certification as a pilot for the adoption of new best practices to be implemented campus- or district-wide.

Sustainable Policies:
Establish green policies to demonstrate an organization-wide commitment to sustainability.

Examples: Policies to guide recycling programs and the use of eco-friendly products. These types of requirements lend themselves to campus- or district-wide adoption and implementation.

The LEED for Existing Buildings: O&M rating system is flexible, not a one size fits all tool. There are nine prerequisites that every project must satisfy. Project teams can choose credits to pursue according to the needs of the school or school district and earn points toward certification.

For many schools and school districts, O&M best practices and sustainable policies that contribute toward a facility's LEED certification will be established through campus- or district-wide policies, programs, and plans. In this way, the certification of an individual school facility can result in operational improvements that extend throughout the entire campus or school district. However, campus- or district-wide implementation of these practices is not a requirement of the rating system; only facilities registered to pursue certification need comply.

The "LEED 2009 for Existing Buildings: Operations & Maintenance Rating System", which can be downloaded free of charge from the USGBC Web site, provides the intent and requirements for each prerequisite and credit. A list of LEED for Existing Buildings: O&M rating system credits that require policies, plans, and programs is located in **Appendix B**.

LEED for Existing Buildings: O&M Rating System Credit Categories

The LEED for Existing Buildings: O&M rating system is organized into six credit categories: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation in Operations. Regional Priority is an additional category that acknowledges the importance of local conditions in determining best practices for ongoing operations and maintenance.

Figure 1.1 – LEED for Existing Buildings: O&M Rating System Credit Categories

Sustainable Sites (SS) credits promote responsible, innovative, and practical site maintenance strategies that are sensitive to plants, wildlife, and water and air quality. These credits also mitigate some of the negative effects buildings have on the local and regional environment. Environmentally sensitive site maintenance practices reduce site operations and maintenance costs while creating and maintaining outdoor spaces that are attractive and healthy for both building occupants and local flora and fauna.

Water Efficiency (WE) prerequisites and credits encourage the use of strategies and technologies that reduce the amount of potable water consumed in facilities. Many water conservation strategies are no-cost; others provide rapid payback. Some, such as biological wastewater treatment systems and graywater plumbing systems, require more substantial investments and are cost-effective only under certain building and site conditions.

Energy and Atmosphere (EA) prerequisites and credits address the reduction of energy consumption through a performance-based approach that allows owners and managers to tailor energy reduction measures to their buildings. Improving the energy performance of facilities lowers operating costs, reduces pollution, and enhances occupant comfort. Many energy efficiency measures have a rapid payback because of the rising cost of energy.

Materials and Resources (MR) prerequisites and credits set the foundation for developing, implementing, and documenting policies and practices that support effective waste management and responsible procurement. The MR credit category focuses on two main issues: the environmental impact of materials brought into the facility and the minimization of landfill and incinerator disposal for materials taken out of the facility.

Indoor Environmental Quality (IEQ) prerequisites and credits address concerns relating to indoor air quality; occupant's health, safety, and comfort; air change effectiveness; and air contaminant management. The IEQ credit category encourages improvements to ventilation, indoor CO_2 levels, daylighting and lighting quality, and thermal comfort – all of which have the potential to impact occupant health and performance.

Innovation in Operations (IO) credits recognize projects for innovative and exemplary technologies, methods, project planning, and project execution.

Regional Priority (RP) credits address environmental concerns that are local priorities for each region of the country, as identified by USGBC's regional councils, chapters, and affiliates. A project that earns a regional priority credit will earn one bonus point in addition to any points already awarded for that credit. Up to four extra points can be earned in this way.

LEED for Existing Buildings: O&M Prerequisites and Credits

The LEED for Existing Buildings: O&M rating system consists of 9 prerequisites and 49 credits. All prerequisites must be accomplished before any points can be earned toward certification. **Figure 1.2** below shows the titles of all prerequisites and credits and notes the potential for campus- or district-wide application of prerequisites or credits pursued toward an individual facility's LEED certification effort. For example, in order for one facility to achieve the Building Exterior and Hardscape Management Plan credit (SSc2), it may make sense to write a plan to use environmentally friendly alternatives to toxic chemical treatments at the campus or district level so that it can be made applicable to all facilities, even those not pursuing certification. The Minimum Indoor Plumbing Efficiency prerequisite (WEp1) requires that the facility being certified meet the minimum water efficiency performance level and have a policy in place for analyzing the economic benefits of conversion to high-performance plumbing fixtures whenever a future indoor plumbing renovation is planned. This policy will most likely be established at the campus or district level. However, campus- or district-wide adoption of policies, programs, and plans is not required for certification; only facilities registered to pursue certification need comply. The certification project(s) can be an opportunity to pilot sustainable best practices and policies for campus- or district-wide implementation.

Figure 1.2 – LEED Prerequisites and Credits with Potential for Campus- or District-wide Application

		campus-/district-wide opportunity
	Sustainable Sites (SS)	
SSc1	LEED Certified Design and Construction	
SSc2	Building Exterior and Hardscape Management Plan	✓
SSc3	Integrated Pest Management, Erosion Control, Landscape Management Plan	✓
SSc4	Alternative Commuting Transportation	✓
SSc5	Site Development—Protect or Restore Open Habitat	
SSc6	Stormwater Quantity Control	
SSc7.1	Heat Island Reduction—Nonroof	
SSc7.2	Heat Island Reduction—Roof	
SSc8	Light Pollution Reduction	
	Water Efficiency (WE)	
WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	✓
WEc1	Water Performance Measurement	
WEc2	Additional Indoor Plumbing Fixture and Fitting Efficiency	
WEc3	Water Efficient Landscaping	
WEc4	Cooling Tower Water Management	
	Energy and Atmosphere (EA)	
EAp1	Energy Efficiency Best Management Practices (BMP)	✓
EAp2	Minimum Energy Efficiency Performance	
EAp3	Fundamental Refrigerant Management	
EAc1	Optimize Energy Efficiency Performance	
EAc2.1	Existing Building Commissioning—Investigation and Analysis	
EAc2.2	Existing Building Commissioning—Implementation	
EAc2.3	Existing Building Commissioning—Ongoing Commissioning	✓

continued, next page

Figure 1.2 – LEED Prerequisites and Credits with Potential for Campus- or District-wide Application (continued)

		campus-/district-wide opportunity
EAc3.1	Performance Measurement—Building Automation System	✓
EAc3.2	Performance Measurement—System-Level Metering	
EAc4	On-site and Off-site Renewable Energy	
EAc5	Enhanced Refrigerant Management	
EAc6	Emissions Reduction Reporting	
	Materials and Resources	
MRp1	Sustainable Purchasing Policy	✓
MRp2	Solid Waste Management Policy	✓
MRc1	Sustainable Purchasing—Ongoing Consumables	✓
MRc2	Sustainable Purchasing—Durable Goods	✓
MRc3	Sustainable Purchasing—Facility Alterations and Additions	✓
MRc4	Sustainable Purchasing—Reduced Mercury in Lamps	✓
MRc5	Sustainable Purchasing—Food	✓
MRc6	Solid Waste Management—Waste Stream Audit	
MRc7	Solid Waste Management—Ongoing Consumables	
MRc8	Solid Waste Management—Durable Goods	
MRc9	Solid Waste Management—Facility Alterations and Additions	✓
	Indoor Environmental Quality (IEQ)	
IEQp1	Minimum Indoor Air Quality (IAQ) Performance	
IEQp2	Environmental Tobacco Smoke (ETS) Control	✓
IEQp3	Green Cleaning Policy	✓
IEQc1.1	IAQ BMP—IAQ Management Program	✓
IEQc1.2	IAQ BMP—Outside Air Delivery Monitoring	
IEQc1.3	IAQ BMP—Increased Ventilation	
IEQc1.4	IAQ BMP—Reduce Particulates in Air Distribution	
IEQc1.5	IAQ BMP—IAQ Management for Facility Alterations and Additions	✓
IEQc2.1	Occupant Comfort—Occupant Survey	
IEQc2.2	Controllability of Systems—Lighting	
IEQc2.3	Occupant Comfort—Thermal Comfort Monitoring	
IEQc2.4	Daylight and Views	
IEQc3.1	Green Cleaning—High-Performance Cleaning Program	✓
IEQc3.2	Green Cleaning—Custodial Effectiveness Assessment	
IEQc3.3	Green Cleaning—Purchase of Sustainable Cleaning Products and Materials	✓
IEQc3.4	Green Cleaning—Sustainable Cleaning Equipment	✓
IEQc3.5	Green Cleaning—Indoor Chemical and Pollutant Source Control	
IEQc3.6	Green Cleaning—Indoor Integrated Pest Management	✓
	Innovation in Operations (IO)	
IOc1	Innovation in Operations	
IOc2	LEED Accredited Professional	
IOc3	Documenting Sustainable Building Cost Impacts	
	Regional Priority (RP)	
RPc1	Regional Priority	

Make the Case for Green Existing Schools

Advocates seeking to achieve LEED certification may encounter hesitant stakeholders. The reluctance to green existing schools may be born from a belief that the process is too expensive and time consuming or the new practices and policies too burdensome. There are many reasons to green an existing school, including the health and achievement of students, teachers, and staff; improving a school's energy efficiency, which in turn generates cost savings; and reducing the school's environmental footprint.

Demonstrate a Commitment to the Health and Achievement of Students, Teachers, and Staff

A LEED-certified school demonstrates a commitment to the health and well-being of students, teachers, and staff. By improving indoor air quality, removing toxic materials, optimizing lighting conditions, and addressing cleanliness and comfort issues, a green school becomes a learning environment capable of improving the academic performance of students.

Improve Energy Efficiency and Generate Cost Savings

Improving an existing facility's energy performance is a major component of LEED for Existing Buildings: O&M certification and can provide immediate and measurable reductions in operational costs, resulting in lower utility bills.

Third-Party Verification

While some schools or districts may claim to be energy efficient or green, LEED certification is an internationally recognized certification system that offers third-party verification that the school has achieved real energy and environmental performance goals and created a healthier and more productive learning environment.

The School as a Teaching Tool

Teachers at green schools can use the building as the basis for innovative curricula. The school can serve as a tool for hands-on lessons, such as math students tracking and charting utility cost savings, science students analyzing the environmental impact of traditional cleaning products compared to eco-friendly ones, and students designing their dream sustainable homes using the types of systems and innovations used to green their school. Exercises like these help students connect to their environment and understand the effect that buildings have on land, natural resources, and their communities.

How much does LEED Cost?

The cost to register and certify a school facility is based on the project's square footage. This process provides a comprehensive third-party review of the energy and environmental performance of the school and ensures that goals are met. For a 100,000-square-foot school, LEED for Existing Buildings: O&M registration and certification fees are less than $4,000.

**Prices are determined by GBCI and are subject to change. For complete pricing information, visit www.gbci.org.*

Educate Stakeholders and Foster Collaboration

As more concrete action is taken to green existing schools, cooperation between departments and administrative offices is required. Tools to assist in educating stakeholders and fostering the necessary collaboration among the various departments, administrative offices, and decision makers are outlined below.

Establish a Core Working Group

Convening a working group comprised of representatives from the departments that will be directly involved in implementing the LEED project(s), including facilities management, custodial and procurement staffs, administration, and finance, will promote the sharing of ideas and build consensus amongst stakeholders. This integrated working group can help lay the groundwork for a broader campus or district initiative. The working group may be tasked with identifying LEED credits that are aligned with campus/district priorities and goals. The group should present its recommendations to school/school district leadership.

Leadership may also want to establish a Green Schools Task Force that engages participation across an even broader range of departments including dining services, curriculum, and transportation. The Task Force should also provide opportunities for student, staff, and parent involvement.

Train and Educate

Training and education programs will help school administrators and staff better understand the benefits of LEED certification and how to achieve it. All those involved in the advocacy and early information-exchange process can benefit from USGBC's general orientation courses. As the project team members are selected and decisions are made on what LEED credits to pursue, more advanced training may be required.

Contact a Local Green Schools Committee

USGBC has more than 70 chapters nationwide, each with a Green Schools Committee. Local chapters are listed on the USGBC Web site. The committees are composed of community and professional volunteers knowledgeable about green schools and the LEED rating system. Depending on the chapter's size and resources, it can offer varying levels of support, such as facilitating focus group sessions, delivering inspirational and educational presentations, or advising school administrators and staff on available resources and next steps.

Visit USGBC's Green School Buildings Web Site

USGBC maintains a dedicated Web site to help schools go green. www.GreenSchoolBuildings.org provides a variety of resources including research links, videos, PowerPoint presentations, and project profiles. Through the site, you can locate LEED-certified schools in your region or contact your local green schools committee.

Evaluate Staffing Needs

In-House Capacity

The staff time and commitment required for a project to achieve LEED for Existing Buildings: O&M certification will depend on several factors, including current operational practices, the level of certification sought, the desired timeline for completion, and what, if any, capital improvements are needed to meet energy performance requirements outlined in the LEED prerequisites.

A school/school district's facilities department will have the greatest involvement in the LEED for Existing Buildings: O&M certification process, followed by custodial services and the purchasing department. Staff from other school/school district offices and departments will also need to be engaged. Most critical to success will be the willingness of leadership to adopt new O&M policies and practices and to provide the resources needed for training relevant staff, implementing the project measures, monitoring progress, and submitting the required LEED documentation.

Appoint a LEED Coordinator

A key personnel decision will be the appointment of a LEED Coordinator to facilitate the LEED certification process. Having a single point-person responsible for coordinating, monitoring, and managing the process is critical to the project's success.

LEED Professional Credentials

LEED Professional Credentials indicate professional excellence and a strong depth of knowledge and practical understanding of the LEED rating systems. The credentials include LEED Green Associate and LEED Accredited Professional (LEED AP). Requiring the LEED Coordinator and/or select project team members to be credentialed increases the likelihood for the project's success, helps drive down costs by building in-house expertise, and greatly improves efficiency by ensuring key project team members clearly understand the certification process and documentation requirements.

Consultants

If funds are available, using LEED accredited green building consultants to facilitate the LEED certification process can lessen the demand on staff resources.

Assessment – If leadership wants a detailed assessment of the project and improvements required to achieve LEED certification, the LEED Coordinator or green building consultants can work with staff and available performance data to generate projections for resources and staffing needs.

Specialized Technical Tasks – Some technical tasks required for a specific LEED credit may not be within the school/school district's range of expertise. In such cases, hiring contractors or service providers may be the best option for accomplishing the necessary tasks.

Document Preparation – Completing the documentation required for LEED projects involves a significant investment of time, especially for the first project. Some schools/school districts rely on consultants to manage the process. Consultants work with other project team members to ensure submittals for each prerequisite and credit are accurate, complete, and meet the requirements for documentation. Engaging a consultant to manage LEED submittals can be costly. Provided staff capacity and opportunities for training exist, schools/school districts can keep costs down by managing this process in-house.

Tap the Expertise of the Community

Because the health and well-being of our children is a shared priority of all communities, schools/school districts have a unique opportunity to access support from local volunteers. Project teams can access support from nearby colleges and universities, state environmental and energy offices, the local USGBC chapter, and local utility providers. Parents too may be green building experts in disguise. Members of the local USGBC chapter, especially members of the Green Schools Committee, may be willing to assist in the evaluation and implementation of LEED prerequisites and credits.

Conduct an Organizational Assessment

The LEED Coordinator should conduct an organizational assessment of the school/school district's organizational structure and the corresponding responsibilities for each relevant position to determine how to implement the processes needed to meet LEED certification requirements. **Figure 1.3** presents a sample organizational role matrix for a school district.

Figure 1.3 – Organizational Role Matrix

Roles	Administrators	Staff	Cross-Departmental Committees/ Councils	Community Partners	Consultant/Service Provider
Advocacy	Serve as advocates or champions, influencing policy and business planning decisions.	Serve on committees or contribute to activities that help spread the message.	Promote the benefits of green schools and spread awareness across the school/ school district.	Local municipalities, as well as professional and service associations with programs that promote sustainability, can serve as a resource for advocacy.	N/A
Education	Devote resources to training on the implementation of sustainable best management practices.	Become knowledgeable on high-performance O&M and the LEED certification process.	Research and recommend programs for educating school/ school district administrators and key staff on their implementation responsibilities.	Provide support in areas of specialization as requested by the school/school district.	Develop an education plan. Deliver training as requested by the school/school district.
Initiation	Initiate or approve project, identify LEED Coordinator and additional staff to participate on project team, and approve new policies.	Report challenges and opportunities involved with implementation.	Solicit feedback from managers and peers. Make recommendations to administrators.	Provide support in areas of specialization as requested by the school/school district.	Conduct preliminary assessment or host project charrette, as requested by the school/school district.
Project Management	Emphasize importance of participation on the LEED project team. Approve significant expenditures of time and resources.	Make up project team, including LEED Coordinator. Maintain open communication. Complete project tasks and documentation as assigned.	Keep abreast of team progress, issues, and accomplishments.	Provide support in areas of specialization, as requested by the school/school district.	Oversee documentation and LEED submittal process, as requested by the district.
Technical Implementation	Allocate resources for contracts, purchases, or labor hours.	Coordinate with team members and provide feedback to LEED Coordinator as necessary.	Acknowledge accomplishments when tasks are completed.	Provide support in areas of specialization, as requested by the school/school district.	Provide specialized services, as requested by the school/school district.

Create Credit Task Assignment Matrix

To gain a better understanding of the tasks and their organizational impact, create a Credit Task Assignment Matrix. The LEED prerequisites and credits, and the departments most likely to be involved in meeting the requirements, are outlined in a sample matrix in **Figure 1.4**. The LEED Coordinator should construct a matrix to reflect the unique organizational structure and special characteristics of the school/school district.

Figure 1.4 – Credit Task Assignment Matrix

Credit		Lead Role	Support Role
SS c2	Build Exterior and Hardscape Management Plan	Facilities – Grounds Section	Operations & Maintenance
SS c3	Integrated Pest Management, Erosion Control, and Landscape Management Plan	Facilities – Grounds Section	Safety & Environmental Section
SS c5	Site Development—Protect or Restore Open Habitat	Facilities – Grounds Section	
SS c7.1	Heat Island Reduction—Nonroof	Facilities – Planning Dept	Grounds Section
SS c6	Stormwater Quantity Control	Facilities – Planning Dept	Grounds Section
SS c8	Light Pollution Reduction	Facilities – Planning Dept	
SS c7.2	Heat Island Reduction—Roof	Facilities – Planning Dept	Operations & Maintenance
IEQ c2.4	Daylight and Views	Facilities – Planning Dept	School
WE p1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Facilities – Plumbing Shop	
WE c1	Water Performance Measurement	Facilities – Plumbing Shop	
WE c2	Additional Indoor Plumbing Fixture and Fitting Efficiency	Facilities – Plumbing Shop	
WE c3	Water Efficient Landscaping	Facilities – Plumbing Shop	Grounds Section
WE c4	Cooling Tower Water Management	Facilities – Plumbing Shop	
EAp1	Energy Efficiency Best Management Practices (BMP)—Planning, Documentation, and Opportunity Assessment	Facilities – HVAC Shop	Electric Shop, Energy Management Section
EAp3	Fundamental Refrigerant Management	Facilities – HVAC Shop	
EAc2.1	Existing Building Commissioning—Investigation and Analysis	Facilities – HVAC Shop	
EAc2.2	Existing Building Commissioning—Implementation	Facilities – HVAC Shop	Operations & Maintenance
EAc2.3	Existing Building Commissioning—Ongoing Commissioning	Facilities – HVAC Shop	Operations & Maintenance
EAc3.1	Performance Measurement—Building Automation System	Facilities – HVAC Shop	
EAc3.2	Performance Measurement—System-Level Metering	Facilities – HVAC Shop	
EAc5	Enhanced Refrigerant Management	Facilities – HVAC Shop	
IEQ p1	Minimum Indoor Air Quality (IAQ) Performance	Facilities – HVAC Shop	
IEQ c1.2	IAQ BMP—Outdoor Air Delivery Monitoring	Facilities – HVAC Shop	
IEQ c1.3	IAQ BMP—Increased Ventilation	Facilities – HVAC Shop	Planning Dept
IEQ c1.4	IAQ BMP—Reduced Particulates in Air Distribution	Facilities – HVAC Shop	
IEQc2.3	Occupant Comfort—Thermal Comfort Monitoring	Facilities – HVAC Shop	
EAp2	Minimum Energy Efficiency Performance	Facilities – Energy Management Section	

continued, next page

Figure 1.4 – Credit Task Assignment Matrix (continued)

Credit		Lead Role	Support Role
EAc1	Optimize Energy Efficiency Performance	Facilities – Operations & Maintenance	Energy Management Section
EAc4	On-site and Off-site Renewable Energy	Facilities – Operations & Maintenance	Energy Management Section
EAc6	Emissions Reduction Reporting	Facilities – Operations & Maintenance	Energy Management Section
MRc3	Sustainable Purchasing—Facility Alterations and Additions	Facilities – Operations & Maintenance	School, Shops, Planning Dept, Purchasing Dept
MRc9	Solid Waste Management—Facility Alterations and Additions	Facilities – Operations & Maintenance	Shops, Planning Dept
IEQc1.5	IAQ BMP—IAQ Management for Facility Alterations and Additions	Facilities – Operations & Maintenance	Shops, Planning Dept
IEQc2.2	Controllability of Systems—Lighting	Facilities – Electric Shop	Planning Dept
IEQc1.1	IAQ BMP—IAQ Management Program	Safety & Environmental Section	Facilities—HVAC Shop
IEQc3.6	Green Cleaning—Indoor Integrated Pest Management	Safety & Environmental Section	Custodial Services, Grounds Section
IEQp3	Green Cleaning Policy	Custodial Services	School
MRp2	Solid Waste Management Policy	Custodial Services	School, Facilities—Operations & Maintenance
MRc6	Solid Waste Management—Waste Stream Audit	Custodial Services	School (Middle or High can be done by students)
MRc7	Solid Waste Management—Ongoing Consumables	Custodial Services	School
IEQc3.1	Green Cleaning—High-Performance Cleaning Program	Custodial Services	School
IEQc3.2	Green Cleaning—Custodial Effectiveness Assessment	Custodial Services	School
IEQc3.3	Green Cleaning—Purchase of Sustainable Cleaning Products and Materials	Custodial Services	School, Purchasing Dept
IEQc3.4	Green Cleaning—Sustainable Cleaning Equipment	Custodial Services	School
IEQc3.5	Green Cleaning—Indoor Chemical and Pollutant Source Control	Custodial Services	School
SSc4	Alternative Commuting Transportation	School – Principal	
IEQp2	Environmental Tobacco Smoke (ETS) Control	School – Principal	
IEQc2.1	Occupant Comfort—Occupant Survey	School – Principal	
MRc8	Solid Waste Management—Durable Goods	School – Principal	Warehouse
MRp1	Sustainable Purchasing Policy	Purchasing Dept	School, Facilities—Operations & Maintenance, Food Service
MRc1	Sustainable Purchasing—Ongoing Consumables	Purchasing Dept	School
MRc2	Sustainable Purchasing—Durable Goods	Purchasing Dept	School
MRc4	Sustainable Purchasing—Reduced Mercury in Lamps	Purchasing Dept	School, Facilities—Operations & Maintenance
MRc5	Sustainable Purchasing—Food	Food Service	Purchasing Dept

Secure an Organization-Wide Commitment

Form Focus Groups

Focus groups provide the opportunity for administrators and the LEED Coordinator to initiate discussion among staff and others who will be implementing the LEED credits. Involving key staff in early phases of development will instill a sense of ownership and provide valuable insights on the opportunities and challenges in implementing the LEED certification process. Focus groups should be small groups of no more than five to eight staff and may include a facilitator. Focus questions can be developed from a review of the "LEED 2009 for Existing Buildings: Operations & Maintenance Rating System", which shows the intent and requirement of each prerequisite and credit. The questions can be distributed to focus group members prior to the session or at the beginning of it. The facilitator elicits responses while notes are taken and prepares an executive summary for administrators.

Adopt a Green Schools Resolution

Adopt a campus- or district-wide green schools resolution to set priorities, solidify the school/school district commitment to sustainability, and empower leadership and staff. A sample resolution is located in **Appendix C**.

Phase Two: Project Preparation

Once a school/school district decides to pursue LEED certification for a particular project, the next phase - the project preparation phase - includes selecting and educating LEED project team members, becoming a member of USGBC, coordinating project management tasks, conducting the preliminary technical assessment, drafting a preliminary project scorecard, hosting a kickoff charrette, and developing the Project Certification Plan.

Select Project Team Members

The first phase of project development involves selecting the staff to conduct the preliminary technical assessment, also known as the LEED Certification Assessment. The certification assessment process involves gathering information on the facility's energy and overall building performance to determine what is needed for the project to meet the nine LEED prerequisites. **Figure 2.3** lists the departmental staff mostly likely to be involved in the preliminary technical assessment phase and the related tasks and responsibilities.

The second phase of team selection focuses on project implementation. New members may be added to the LEED project team based on the policy and building system upgrades needed to meet the requirements of the credits the team has chosen to pursue for certification. Most often, team members will include representatives from the grounds, procurement, food service, and safety and environment departments. Assigning individuals to the project team from the departments directly affected by the building upgrades and the new policies, programs, and plans will help with the overall coordination of the project implementation, ensure continuity, and facilitate effective communication.

Team Dynamics

As with any team-based process, understanding team dynamics is critical to the success of a LEED project. The most challenging tasks will likely be the adoption and implementation of new policies, plans, and programs. Facilitating improvements to O&M practices requires strong leadership skills from the LEED Coordinator. School/school district administrators also play a vital role, as do members of the project team.

Successful Teams Share the Following Characteristics:

Common Purpose – Team members work well together when they share a common purpose. The project charrette helps to solidify a shared understanding among team members, many of whom are from different departments.

Open Communication – Providing up-to-date information to team members on a consistent basis will help to ensure the project's success. Team meetings, conference calls, e-mail updates, and circulating revised scorecards facilitate clear communication. The LEED Coordinator should also be readily available to answer questions and address team members' concerns.

Leadership – Strong leadership is instrumental in moving a project forward. Senior administrators and LEED Coordinators need to encourage collaboration and build consensus. They can also motivate project teams by clearing obstacles and providing resources.

Shared Expectations – The Project Certification Plan describes the school/school district's vision for the LEED project and outlines tasks and deadlines, ensuring administrators, the LEED Coordinator, and team members have shared expectations. Additionally, the Project Certification Plan details the roles and responsibilities for each team member.

Support – The project team will need the support of school/school district leadership to prioritize workflow, since team membership does not preclude staff from their other professional responsibilities. To satisfy some prerequisites and credits, leadership may need to assign additional staff and instruct one-time contributors to prioritize their efforts related to the LEED project. Leadership may also be required to approve the services of outside contractors or consultants, shifts in policies and practices, and education or training opportunities.

Recognition – As critical milestones are reached during the LEED process, members of the project team should be recognized for their efforts. Acknowledgement can be as simple as citing team member efforts during periodic project updates to senior leadership or mentioning them in a newsletter or Web site.

Join USGBC

Schools and school districts join USGBC as national members. USGBC member organizations are involved in key decision-making processes that guide the future of USGBC and advance the green building movement. In addition, all full-time employees of member organizations are eligible to receive discounts on LEED project registration and certification fees, reference guides, courses, and more.

The annual dues for USGBC membership are $300 for an individual school and $500 for a school district. The member savings to register and certify a 100,000-square-foot school with LEED for Existing Buildings: O&M is $1,300; any school/school district pursuing LEED certification should join USGBC prior to registering a LEED project, purchasing a reference guide, or attending educational courses. A membership application is included at the back of this guide.

For more information on becoming a member or to apply online visit www.USGBC.org/membership.

Train and Educate Project Team and Staff

The certification process is an important learning experience for all project team members. Instructional courses in the implementation of LEED and the operation and maintenance of sustainable buildings can facilitate project activities. The benefits of training for project team members will continue to accrue long after the LEED certification process is complete; project teams will be armed with the skills and knowledge they need to make continuous improvements to O&M practices throughout the campus or school district. USGBC offers a variety of training opportunities, ranging from workshops to online courses. **Figure 2.1** details the types of education offerings and the target audiences.

Figure 2.1 – USGBC Training Opportunities

Target Audience	Course Titles	Course Level
Individuals with limited or no prior knowledge of green building principles	• Green Building Basics and LEED (Faculty-led or Online) Course	100 Level – Awareness
Individuals familiar with the LEED rating system and green building principles	• LEED Core Concepts & Strategies (Faculty-led or Online) Course	200 Level – Understanding
Individuals who are implementing and applying the LEED rating system	• Understanding LEED Project Costs and Returns • Integrative Approach to Successful LEED Projects • Green Building Operations & Maintenance: The LEED Implementation Process	300 Level – Application & Implementation

Coordinate Project Management Tasks

To guide the LEED certification process, the LEED Coordinator will manage the tasks outlined in **Figure 2.2**, which can be tracked by using USGBC's Project Tracking Tool located in **Appendix D**. The figure also highlights the support needed from school/school district administrators.

Figure 2.2 – Project Management Tasks

Project Preparation

LEED Project Management Tasks	Administrator Support
Learn About Available Resources	Become familiar with the Existing Schools Toolkit and other USGBC resources available for helping schools pursue LEED certification.
Appoint the LEED Project Team	Establish a LEED Project Team to manage the LEED certification process.
Become a Member of USGBC	Join USGBC as a national member organization to receive discounts on LEED project registration and certification fees, reference guides, courses, and more.
Initiate Education Program	Allocate time and funds for educating and training the LEED Coordinator and other members of the project team. Follow up with additional training as the project unfolds.
Assemble the Preliminary Technical Assessment Team	Assign responsibility to the facilities department as the task lead for the LEED project. Approve activities required for the preliminary assessment.
Conduct Project Orientation	Provide logistical support and require participation of key staff.
Perform the Preliminary Technical Assessment	Establish completion milestones for the preliminary assessment.
Register Project	Allocate funds for registering the facility in the LEED Online system and upload general project details into LEED Online. Reserve additional funds for certification fees based on the total square footage of the project (For a 100,000-square-foot facility, the total LEED registration and certification fees are less than $3,000.)
Draft Preliminary LEED Project Scorecard	Identify key credits to pursue based on school/district priorities.
Host Project Kickoff Charrette	Encourage attendance of senior administrators, relevant stakeholders, project team members, and other associated support staff.
Develop Project Certification Plan	Review requirements for LEED prerequisite and credit implementation tasks. Approve credits to be pursued and allocate resources accordingly. Establish a schedule for completion.

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Figure 2.2 – Project Management Tasks (continued)

Project Implementation

LEED Project Management Tasks	Administrator Support
Complete Building Improvements; Adopt and Implement Policies, Plans, and Programs	Ensure coordination of any building retrofit or upgrades with the LEED certification process. Establish policies related to LEED certification requirements. Monitor implementation of best practices.
Prepare Application and Necessary Documentation	Support project team, as necessary.
Upload Materials to LEED Online	Support project team, as necessary.
Submit Completed Application to Green Building Certification Institute (GBCI) for Preliminary Review	Support project team, as necessary.
Submit Responses or Clarifications for Final Review	Support project team, as necessary.

Promote Success and Prepare for Recertification

LEED Project Management Tasks	Administrator Support
Promote Success	Recognize achievements through special ceremonies and activities, issue press releases, and showcase the project on the school/school district's Web site.
Prepare for Recertification	Establish recertification activities.

Conduct Preliminary Technical Assessment

The facilities department is usually assigned to lead the team conducting the preliminary technical assessment, also referred to as the LEED Certification Assessment. (Assessment forms are located in **Appendix E**.) The technical assessment focuses on the school's ability to meet the nine prerequisites.

The LEED for Existing Buildings: O&M rating system uses the U.S. Environmental Protection Agency's (EPA) Portfolio Manager as the benchmarking platform to validate a building's energy performance. Portfolio Manager is a free, interactive, online tool that assesses energy and water consumption, performance, and cost information for individual buildings and building portfolios. Rating the building's energy performance is a critical step in conducting the LEED Certification Assessment and assuring compliance with the Minimum Energy Efficiency Performance Prerequisite (EAp2). Portfolio Manager rates the current level of building energy efficiency, based on 12 months of utility data entered into the online tool. The building then receives an energy performance rating on a scale of 1 to 100, known as the ENERGY STAR rating. For LEED certification, a building must have a rating of 69 or above.

Existing facilities with ENERGY STAR ratings of 69 or higher may require little or no capital costs for repairs and renovations (providing that IAQ requirements are also met). For these buildings, the LEED certification process will focus on adopting and implementing plans, policies, and programs and managing the LEED documentation process. For schools with ENERGY STAR ratings below 69, LEED certification may require building system upgrades or retrofit installations, in addition to the adoption and implementation of plans, policies, and programs, in order to meet the energy performance requirements outlined in the prerequisite. Depending on the facility size, site configuration, and school type (public school district, independent school, charter school, etc.), different procedures will apply. **Figure 2.3** summarizes performance and submittal requirements for each of the nine prerequisites and indicates the responsible departments.

Figure 2.3 – Preliminary Technical Assessment Tasks

Responsible Department	LEED Prerequisite		Tasks/Responsibilities
Facility Operations			
Energy Management	**EAp1**	Energy Efficiency Best Management Practices—Planning, Documentation, and Opportunity Assessment	Conduct the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Level I walk-through energy audit.
	EAp2	Minimum Energy Efficiency Performance	Establish ENERGY STAR Portfolio Manager Account and determine facility's energy performance rating (must be at least 69 at time of application).
HVAC Shop	**EAp1**	Energy Efficiency Best Management Practices—Planning, Documentation, and Opportunity Assessment	Report availability of system documentation (system narrative, sequence of operations, and PM program).
	EAp3	Fundamental Refrigerant Management	Report refrigerants in use in base building systems, potential for conversion to non CFC-based refrigerants, and potential for system retrofit (if containing CFC-based refrigerants).
	IEQp1	Minimum Indoor Air Quality Performance	Measure outside air ventilation rates (must be capable of at least 10 CFM/person at time of application).
Electric Shop	**MRp1**	Sustainable Purchasing Policy	Assess and provide input to environmentally preferable purchasing (EPP) policy regarding mercury in lamps.
	EAp1	Energy Efficiency Best Management Practices—Planning, Documentation, Opportunity Assessment	Assist with measurement of energy use breakdown and conduct of ASHRAE Level I audit.
Plumbing Shop	**WEp1**	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Determine age of fixtures. If prior to 1993, inventory existing fixture types and provide report.
Carpenter Shop	**MRp1**	Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding facility alterations and additions.
	MRp2	Solid Waste Management Policy	Provide assessment of capability for recycling waste from facility alterations at the school site.
Planning Section	**MRp1**	Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding facility alterations and additions.
	MRp2	Solid Waste Management Policy	Provide assessment of capability for recycling waste from facility alterations at the school site.
Custodial Services	**MRp2**	Solid Waste Management Policy	Provide assessment of capability for recycling ongoing consumables at the school site.
	IEQp3	Green Cleaning Policy	Provide assessment of capability to develop a green cleaning policy.
School			
	MRp1	Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding furniture and equipment (durable goods).
	MRp2	Solid Waste Management Policy	Provide assessment of capability for recycling ongoing consumables.
	IEQp2	Environmental Tobacco Smoke (ETS) Control	Provide copy of ETS Control Policy.
Purchasing Department			
	MRp1	Sustainable Purchasing Policy	Assess and provide input to EPP policy regarding ongoing consumables, furniture and equipment (durable goods), facility alteration materials, and mercury containing lamps.

Draft Preliminary Project Scorecard

A preliminary project scorecard will list all the credits that a project is pursuing in the LEED for Existing Buildings: O&M rating system and give the first indication of the level of certification that is possible to achieve. The scorecard can be created using the LEED Project Checklist, an Excel-based spreadsheet listing all rating system prerequisites and credits (www.usgbc.org/K12toolkit). In the left-most column are boxes to indicate "Yes" for credits that will be pursued, "No" for credits that will not be pursued, and "Maybe" for credits that need to be investigated further before a decision can be made. The checklist will automatically tabulate a point tally based on the information entered into the spreadsheet. Project teams can use the LEED Project Checklist to draft a preliminary list of the credits to pursue for certification. The scorecard should be updated regularly throughout the course of the project.

Host Project Kickoff Charrette

The project kickoff workshop, often referred to as a charrette, is a collaborative session in which team members and stakeholders draft a plan to meet LEED certification. The charrette is often considered the "official" start of the project. The event helps to cultivate broad interest in the project and builds momentum and enthusiasm for achieving LEED certification.

Project Charrette:

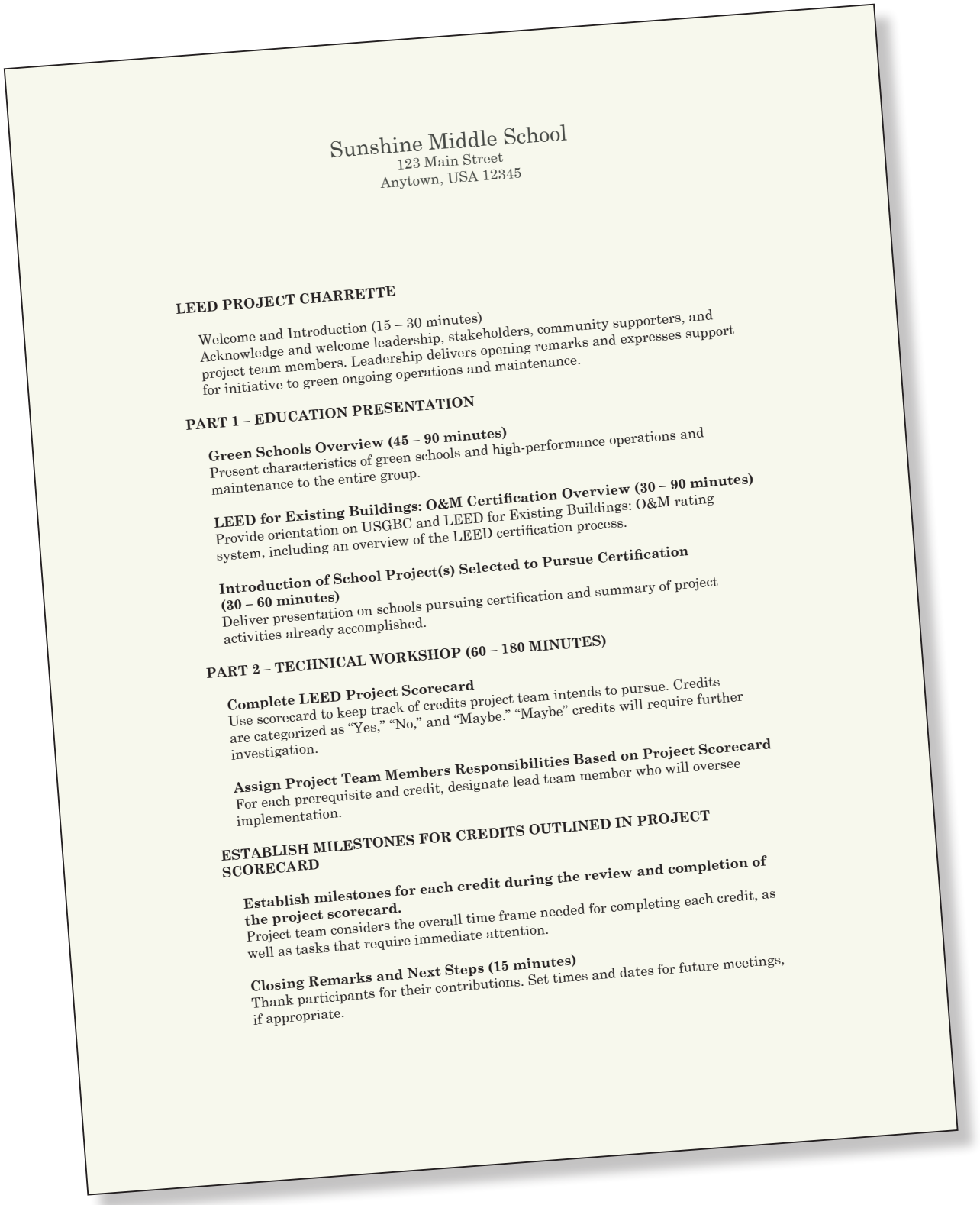
- Identifies improvements needed to complete the project successfully.
- Establishes LEED certification as the shared goal of all participants.
- Provides an opportunity to educate all stakeholders on the characteristics of green schools in a language shared by all in attendance.
- Increases the visibility of the project with senior administrators and the community.
- Creates a roadmap for the Project Certification Plan.

Charrette Agenda

The charrette agenda is often divided into two parts: the education presentation and the technical workshop. The agenda begins with an education presentation to senior administrators and staff in attendance, with the goal of receiving their support and commitment to the project's success. The second part is the technical workshop, which focuses on the development of the Project Certification Plan.

The length of the charrette will vary. If prior education and training activities have taken place and the project team has already prepared a preliminary project scorecard, the charrette's objectives can likely be accomplished in a half day session. If administrators and staff are learning about LEED certification for the first time and the project team has only recently been identified, the charrette may take a full day to complete.

Figure 2.4 – Sample Agenda for the Project Kickoff Charrette



Sunshine Middle School
123 Main Street
Anytown, USA 12345

LEED PROJECT CHARRETTE

Welcome and Introduction (15 – 30 minutes)
Acknowledge and welcome leadership, stakeholders, community supporters, and project team members. Leadership delivers opening remarks and expresses support for initiative to green ongoing operations and maintenance.

PART 1 – EDUCATION PRESENTATION

Green Schools Overview (45 – 90 minutes)
Present characteristics of green schools and high-performance operations and maintenance to the entire group.

LEED for Existing Buildings: O&M Certification Overview (30 – 90 minutes)
Provide orientation on USGBC and LEED for Existing Buildings: O&M rating system, including an overview of the LEED certification process.

Introduction of School Project(s) Selected to Pursue Certification (30 – 60 minutes)
Deliver presentation on schools pursuing certification and summary of project activities already accomplished.

PART 2 – TECHNICAL WORKSHOP (60 – 180 MINUTES)

Complete LEED Project Scorecard
Use scorecard to keep track of credits project team intends to pursue. Credits are categorized as "Yes," "No," and "Maybe." "Maybe" credits will require further investigation.

Assign Project Team Members Responsibilities Based on Project Scorecard
For each prerequisite and credit, designate lead team member who will oversee implementation.

ESTABLISH MILESTONES FOR CREDITS OUTLINED IN PROJECT SCORECARD

Establish milestones for each credit during the review and completion of the project scorecard.
Project team considers the overall time frame needed for completing each credit, as well as tasks that require immediate attention.

Closing Remarks and Next Steps (15 minutes)
Thank participants for their contributions. Set times and dates for future meetings, if appropriate.

Develop Project Certification Plan

The Project Certification Plan is a critical project management tool used to guide the LEED certification process. The plan is based on the project scorecard, but adds two elements: assigning responsibilities and scheduling milestones. In many cases, the plan development begins prior to the charrette and is updated after the charrette. The LEED Coordinator will monitor progress and update the plan throughout the project's implementation phase. A template for the Project Certification Plan is located in **Appendix F**.

Assign Responsibilities and Schedule Milestones

The Project Certification Plan will outline project team members' responsibilities, including who will assess credit requirements, identify resources, initiate action, monitor progress, and report updates. The plan also details the timeline through schedule milestones, which help the LEED Coordinator track the project's progress. A milestone is the date by which a credit requirement is to be met. There may be intermediate tasks to complete before the credit is realized, such as gaining funding approval and accomplishing preparatory tasks. These too are noted in the plan.

Establish Project Schedule

The LEED for Existing Buildings: O&M certification application includes performance data for the project over the performance period - the continuous, unbroken time during which sustainable operations performance is measured. The performance period may not have any gaps, defined as any period of time longer than 1 full week.

Some prerequisites and credits in LEED for Existing Buildings: O&M require that operating data and other documentation be submitted for the performance period. The performance period is the most recent period of operations preceding certification application; it must be a minimum of 3 months for all prerequisites and credits except the Minimum Energy Efficiency Performance prerequisite (EAp2) and the Optimize Energy Efficiency Performance credit (EAc1), which have longer minimum durations of 1 year. At the project team's option, the performance period for any prerequisite or credit may be extended to a maximum of 24 months preceding certification application.

Consistent start times and durations of the performance periods for each prerequisite and credit are preferred but not strictly necessary. However, all performance periods must overlap and terminate within 1 week of each other. To ensure that certification is awarded based on current building performance data, LEED for Existing Buildings: O&M certification applications must be submitted to GBCI within 60 calendar days at the end of the performance periods.

Once the project team determines the anticipated submission date, it can set the performance periods and establish the LEED project schedule. Identifying the submission date early in project development helps to focus project team members and allows school/school district leaders to prioritize efforts.

The first LEED project will have the steepest learning curve, since understanding the LEED process, implementing new practices and policies, and training staff takes time. Subsequent LEED certification efforts for the campus/district will benefit from lessons learned on the inaugural project. As a result, the timeline for other projects will likely be shorter.

A sample excerpt from a project schedule for a school district pursuing LEED for Existing Buildings: O&M certification of a middle school facility is illustrated in **Figure 2.5**. **Figure 2.6** provides a broad overview of the LEED project schedule. The project team established the schedule using the maximum allowable two years to achieve certification.

Figure 2.5 – Sunshine Middle School Project Schedule: Excerpt

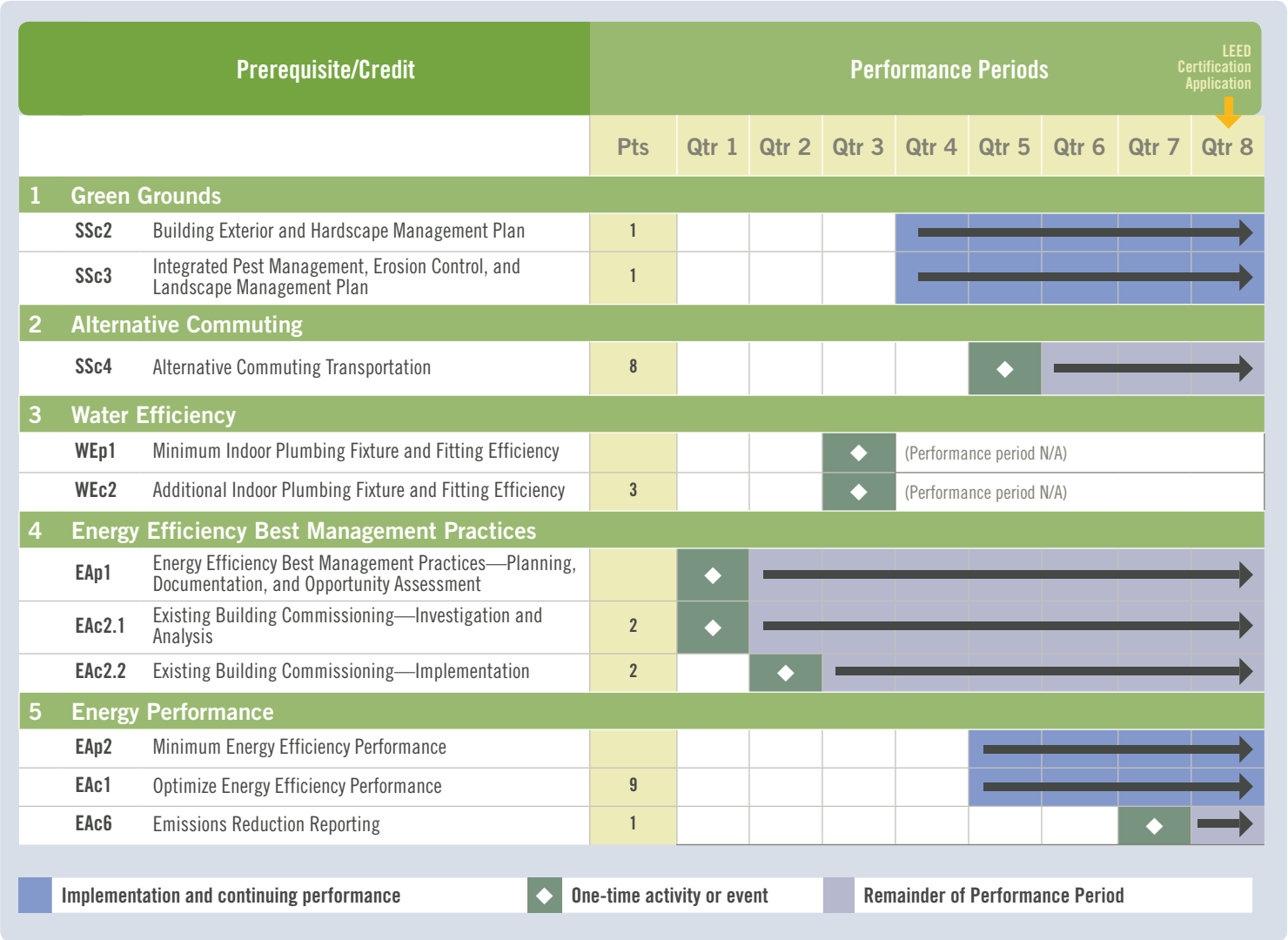


Figure 2.6 – Sunshine Middle School Project Schedule: Summary

Phase Three: Project Implementation

After completing the project preparation phase, implementation of LEED prerequisites and credit requirements begins according to the Project Certification Plan and the established schedule. Steps include: implementing building system improvements; establishing O&M best practices; adopting policies, plans, and programs; and managing LEED documentation.

Utilize LEED Resources

The "LEED 2009 Reference Guide for Green Building Operations & Maintenance" (www.usgbc.org/K12toolkit) outlines how to implement the prerequisite and credit requirements. The reference guide is an invaluable tool for navigating the certification process and executing the Project Certification Plan. The guide includes the details and benefits of each credit, along with sections on:

- Related Credits
- Summary of Referenced Standards
- Implementation
- Timeline and Team
- Calculations
- Documentation Guidance
- Examples
- Regional Variations
- Resources
- Definitions

In the project preparation phase, the LEED Coordinator and team members may become familiar with the "LEED 2009 Reference Guide for Green Building Operations & Maintenance". In the implementation phase, however, the LEED Coordinator and team members need to thoroughly review the guide and have it readily available to help answer questions.

Install Building Systems Upgrades and Improvements

If needed, install building system upgrades and retrofits to meet the energy-efficiency and water-efficiency performance requirements. If major efficiency improvements are necessary or desired, project teams may rely on contractors to upgrade or install new systems.

Systems upgrades and improvements should be accomplished as early in the project schedule as possible and prior to the start of the relevant performance periods. This is especially the case for improvements needed to satisfy the Minimum Energy Efficiency Performance prerequisite (EAp2) and the Optimize Energy Efficiency Performance credit (EAc2) because the project's energy efficiency levels are based on a full year of energy consumption data.

Detailed guidance on implementation strategies and timelines for building systems upgrades and improvements can be found in the "LEED 2009 Green Building Operations & Maintenance Reference Guide".

Adopt Policies, Plans, and Programs

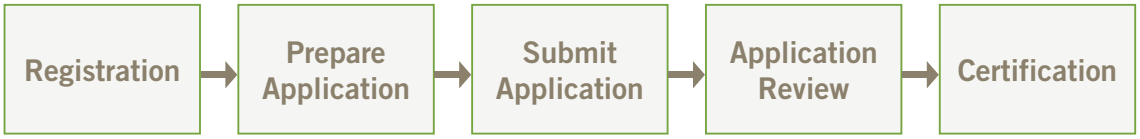
The *Green Existing Schools Toolkit Implementation Workbook* (www.usgbc.org/K12Toolkit) includes templates, forms, worksheets, and tracking systems aligned with the rating system requirements and grouped by the credit categories. Project teams can use the forms to gather data needed for credit requirements and the spreadsheet-based tracking systems to manage the documentation required for prerequisite and credit compliance. Project teams can work with related departments and school/school district leadership to customize and adopt the sample policies, programs, and plans.

Manage Documentation with LEED Online

LEED Online is the primary resource for managing the LEED documentation process. Through LEED Online, project teams can manage project details, complete documentation requirements for LEED prerequisites and credits, upload supporting files, submit applications for review, receive reviewer feedback, and ultimately earn LEED certification. LEED Online provides a common space where members of a project team can work together to document compliance with the LEED rating system. All projects must be certified using LEED Online. The Green Building Certification Institute (GBCI) reviews applications for LEED certification. If the application is complete and all requirements have been met, GBCI will award a LEED certification for the school according to the number of points awarded. **Figure 3.1** summarizes the LEED Online certification application process.

Information on LEED Online, including a demo of the online platform, is available at www.leedonline.com.

Figure 3.1 – LEED Online Certification Application Process Overview



Features of LEED Online:

Team Administration – The LEED Online "Project Administrator" typically the LEED Coordinator, is the person who registers the project in LEED Online and has full control of the project account. As project team members are assigned responsibilities to shepherd specific prerequisites and credits through the implementation process, the administrator "invites" them to participate and "assigns" roles. Project team members will be granted varying degrees of account access. Because LEED Coordinators have overall responsibility for the project, some may prefer to handle all documentation and not grant direct access to other team members. Other LEED Coordinators may want to delegate some control to other team members.

Project Organization – Any user who is a team member on more than one registered LEED project will be able to sort, view, and group projects according to a number of project traits, including location, design, and management firm.

Status Indicators and Timeline – The LEED Online system explains all the steps in the review and certification process and highlights steps completed. The system also displays specific dates associated with each phase and step.

Support for Certification Review and Submittals – The LEED Online system shepherds each project team through the entire certification process, from initial project registration through all review phases. In the pre-application phase, project teams can contact reviewers with questions regarding credit compliance and project implementation. During a LEED review, if any minor clarifications are needed, the online system allows the reviewer to contact the project team through the system.

Data Linkages – Some data, such as a building's gross floor area or full-time equivalent (FTE) occupancy, are required in the documentation for several LEED credits. LEED Online automatically populates fields in all appropriate forms after the data is initially entered, saving time and helping to ensure project-wide consistency. If needed, an override option is available.

Automatic Data Checks – The LEED Online system will alert users when required data is missing, providing a chance to correct the error before submitting the certification application.

Project Information Submittal Forms

For each LEED project, the school/school district is required to submit project information forms that contain general information about the facility being certified. The information is used to ensure consistency across prerequisites and credits on data such as total square footage of building area, site area, occupancy, etc. There are five project information submittal forms:

1. **Minimum Program Requirements –** Minimum Program Requirements (MPRs) are the minimum characteristics that a project must possess in order to be eligible for LEED Certification. The MPRs can be found in the "LEED 2009 for Existing Buildings: Operations & Maintenance Rating System". In this submittal form, the project team acknowledges compliance with several minimum program requirements:

   – Project applying for certification is required to comply with all environmental laws.

- Project must be a complete, permanent building or space, and it must use a reasonable site boundary.
- Project must comply with minimum floor area requirements, at least 1,000 square foot gross floor area, and with minimum occupancy rates of at least one FTE occupancy.
- Project team is required to commit to sharing whole-building energy and water usage data with USGBC and GBCI.
- Project building area must be no less than two percent of the gross land area within the LEED project boundary.

2. **Project Summary Details –** This submittal form requires information on building area and gross square footage; energy, fuel and water sources; and budget and cost information. There is also a section to acknowledge the project's location in a historic district, if applicable.

3. **Occupant and Usage Data –** Information required in this form includes the principal building activity, gross square footage, a list of space types, daily occupancy, occupied hours per week, and any exempted space.

4. **Schedule and Overview Documents –** Information required for this form includes expected certification application date; start date of continuous occupancy; earliest and latest performance period; overview documents such as interior and exterior photos and floor plans; a building description; and a narrative on the LEED project process and highlights.

5. **Previous LEED Certification Details –** If the building received a previous LEED certification, additional information is needed for this submittal form.

Prerequisite and Credit Submittal forms

The prerequisite and credit submittal forms are the primary means for GBCI to ensure the project team has complied with all the requirements of the prerequisites and credits it is pursuing. The submittal forms function in several ways: they document the performance period, identify required document uploads, and acknowledge different aspects of compliance. In some cases, templates contain tables that must be completed or fields for a narrative response that describes or explains specific aspects of credit implementation.

The submittal forms themselves contain detailed information to guide project team members through the process of documenting compliance. Many submittal forms have built in calculators that, based on the data entered by the project team, will automatically generate calculations necessary for documenting compliance.

Certification Application Process

Prior to certification, all project teams are required to submit completed documentation requirements for all prerequisites and at least the minimum number of credits required to achieve certification, as well as completed general project information forms. Once a complete application has been submitted by the LEED Project Administrator to LEED Online, a formal Preliminary Review will be initiated.

The Preliminary Review confirms all documentation submitted with the initial application is complete and in compliance with the LEED 2009 for Existing Buildings: O&M rating system. Each prerequisite and credit is designated as "awarded," "pending," or "denied," and is accompanied by technical advice as deemed appropriate by the review team. All general project information forms are designated "approved" or "not approved."

If all prerequisites have been awarded, the minimum number of credits required for certification have been awarded, and all general project information forms have been approved, project teams may accept the results of the Preliminary Review as final. However, project teams also have the option of submitting a response to the Preliminary Review and initiating a Final Review. Revised documentation for any prerequisite or attempted credit marked as "pending" or "denied" during the Preliminary Review must be submitted for a Final Review. (Alternatively, attempted credits may be withdrawn from the application at this time.) Any project information forms designated as "not approved" should also be revised and resubmitted. The review team will issue a final ruling on each prerequisite and credit as "awarded" or "denied." Once the final application review is complete, the project team can either accept or appeal the final decision.

Phase Four: Showcase Success and Prepare for Recertification

Achieving a LEED for Existing Buildings: O&M certification is a significant and impressive accomplishment. It reflects a commitment by school/school district leadership and staff to economic efficiency, environmental stewardship, and the health and well-being of students, teachers, and staff.

School districts with a LEED-certified school will receive the following recognition from USGBC:

- A formal certificate of recognition.
- Information on how to order a plaque and certificates, photo submissions, and marketing.
- May be included (at the owner's discretion) in an online directory of certified projects.
- May be included (along with photos and other documentation) in the US Department of Energy High Performance Buildings Database.
- May be featured (at the owner's discretion) in a future USGBC presentation, project profile, or case study.

Develop a Communications Plan

A LEED-certified facility is an achievement the school/school district will want to showcase. Schools/school districts should develop a comprehensive communications plan to ensure that parents, the community, senior leadership and decision makers, and local officials know about the green facility and all it has to offer students, teachers, and staff. To assist with press efforts, a sample release is included in **Appendix G**. Another way to showcase the green facility is to plan a ceremony to unveil the LEED plaque and invite local government officials, community leaders, senior leadership, press, parents, teachers, and students. The ceremony is also an opportunity to publicly thank the project team.

The school/school district may want to establish a Web page dedicated to its green school(s), which can highlight green strategies and components, detail the collaborative effort undertaken to achieve LEED certification, showcase any curriculum or education programs focused on the school's green features, and include testimonials from teachers, students, and staff about the value of their green school.

Establish Recertification Activities

Schools certified under LEED for Existing Buildings: O&M can apply for recertification as frequently as every year but must file for certification at least once every five years to maintain LEED for Existing Buildings: O&M status. If projects do not recertify at the five-year mark, the next application will be considered an initial certification application. The project must recertify all prerequisites, but may drop previously earned credits or add new credits as desired.

The recertification process is streamlined and requires minimal documentation if facility and site improvements and sustainable practices have been maintained. It is important for schools/school districts to plan ahead for recertification by monitoring practices and policies that have been implemented and ensuring their continuous use. **Appendix H** highlights the prerequisites and credits that require recordkeeping or tracking.

Appendix A: Why LEED Certification for Existing Schools?

The LEED for Existing Buildings: Operations & Maintenance rating system provides existing schools with the opportunity to demonstrate a commitment to economic efficiency, environmental stewardship, and the health and well-being of students, teachers, and staff.

Understand LEED Certification

In 2000, USGBC established the LEED rating system as a way to define and measure "green buildings." In school terms, LEED is like a report card for buildings, demonstrating to the community that a facility is built and/or operated in a way that supports the health and well-being of occupants and saves energy, resources, and money. LEED certification is available for both new and existing schools. The LEED rating system is an internationally recognized certification system that measures how well a building performs according to several metrics:

- energy savings
- water efficiency
- CO_2 emissions reduction
- improved indoor environmental quality
- stewardship of resources

LEED provides a concise framework for identifying and implementing practical and measurable green building solutions. Points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. A project must satisfy specific prerequisites and earn a minimum number of points to be certified. Certification levels, based on the number of points, include: Certified, Silver, Gold, and Platinum.

LEED for Existing Buildings: Operations & Maintenance

The LEED for Existing Buildings: O&M rating system is a set of performance standards for the sustainable, ongoing operation of existing buildings that are not undergoing major renovations. It includes high-performance building systems, O&M best practices, and sustainable policies.

LEED for Existing Buildings: O&M can be applied both to existing buildings seeking LEED certification for the first time and to projects previously certified under LEED for New Construction, Schools, or Core & Shell. It is the only LEED rating system under which buildings are eligible for recertification.

Types of Credit Requirements

There are three types of improvements addressed through the LEED for Existing Buildings: O&M rating system:

- **High-Performance Building Systems:** Implement building improvements and technologies in order to use less energy, less water, and fewer natural resources. System upgrades and retrofits also improve indoor environmental quality and address operational inefficiencies. Examples: Efficient lighting systems and indoor plumbing fixtures. These requirements relate directly to the specific school facility being certified.
- **O&M Best Practices:** Adopt operations and maintenance best practices to ensure project measures are effectively implemented and maintained. Examples: Systems monitoring, green cleaning, and preventative maintenance procedures. Schools or school districts can treat the project pursuing certification as a pilot project for the adoption of new best practices to be implemented campus- or district-wide.
- **Sustainable Policies:** Establish green policies to demonstrate an organization-wide commitment to sustainability. Examples: Recycling programs and the use of eco-friendly products. These types of requirements lend themselves to campus- or district-wide adoption and implementation.

The LEED for Existing Buildings: O&M rating system is flexible, not a one-size-fits-all tool. Project teams can choose credits to pursue according to the needs of the school or school district and earn points toward certification.

For many schools and school districts, O&M best practices and sustainable policies that contribute toward a facility's LEED certification will be established through campus- or district-wide policies, programs, and plans. In this way, the certification of an individual school facility can result in operational improvements that extend throughout the entire campus or school district. However, campus- or district-wide implementation of these practices is not a requirement of the rating system; only facilities registered to pursue certification need comply.

Why Use LEED to Green Existing Schools?

Demonstrate a Commitment to the Health and Achievement of Students, Teachers, and Staff

A LEED-certified school demonstrates a commitment to the health and well being of students, teachers, and staff. By improving indoor air quality, removing toxic materials, optimizing lighting conditions, and addressing cleanliness and comfort issues, a green school becomes a learning environment capable of improving the academic performance of students.

Improve Energy Efficiency and Generate Cost Savings

Improving an existing school's energy performance is a major component of LEED for Existing Buildings: O&M certification and can provide immediate and measurable reductions in operational costs, resulting in lower utility bills.

LEED certification also:

- Improves indoor air quality
- Removes toxic materials, including mercury from places and areas where children learn and play
- Promotes sustainable purchasing
- Encourages waste management efforts to benefit the local community and region
- Implements strategies to conserve fresh drinking water and help manage storm water runoff
- Controls local and regional pollution
- Encourages recycling
- Promotes habitat protection
- Reduces demand on the local landfill
- Decreases the burden on water and wastewater utilities

Third-Party Verification

While some schools or districts may claim to be energy efficient or green, LEED certification is an internationally recognized certification system, offering third-party verification that the school has achieved real energy and environmental performance goals, and created a healthier and more productive learning environment.

How much does LEED Cost?

The cost to register and certify a LEED project is based on the project's square footage. This process provides a comprehensive third-party review of the energy and environmental performance of the school and ensures that goals are met. For a 100,000-square-foot school, LEED for Existing Buildings: O&M registration and certification fees are less than $4,000.
**Prices are determined by GBCI and are subject to change. For complete pricing information, visit www.gbci.org.*

The School as a Teaching Tool

Teachers at green schools can use the building as the basis for innovative curricula. The school can serve as a tool for hands-on lessons, such as math students tracking and charting utility cost savings, science students analyzing the environmental impact of traditional cleaning products compared to eco-friendly ones, and students designing their dream sustainable homes using the types of systems and innovations used to green their school. Exercises like these help students connect to their environment and understand the effect that buildings have on land, natural resources, and their communities.

Appendix B: List of Policies, Programs and Plans

LEED for Existing Buildings: O&M prerequisites and credits related to policies, programs and plans are listed below. Some must follow USGBC's Policy Model or Plan/Program Model for document formatting and be uploaded to LEED-Online (See the *Green Existing Schools Implementation Workbook* for more information). These requirements are noted.

	Document	Policy or Plan/ Program Model Format	Required Upload
Policies			
1	WEp1 – Economic Assessment of Plumbing Fixtures Policy	No	Yes
2	MRp1 – Sustainable Purchasing Policy	Yes	Yes
3	MRp2 – Solid Waste Management Policy	Yes	Yes
4	IEQp2 – Smoking Policy	No	No
5	IEQp3 – Green Cleaning Policy	Yes	Yes
Programs			
6	EAc2.3 – Ongoing Commissioning Program	No	Yes
7	EAc3.1 – BAS Preventive Maintenance Program	No	Yes
8	MRc1 – Sustainable Purchasing Program (Ongoing Consumables)	No	No
9	MRc2 – Sustainable Purchasing Program (Durable Goods)	No	No
10	MRc3 – Sustainable Purchasing Program (Facility Alterations)	No	No
11	MRc7 – Waste Reduction and Recycling Program (Ongoing Consumables)	No	No
12	MRc8 – Waste Reduction, Reuse, and Recycling Program (Durable Goods)	No	No
13	IEQc1.1 – Indoor Air Quality (IAQ) Management Program	No	No
14	IEQc3.1 – High-Performance Cleaning Program	Yes	Yes
15	IEQc3.7 – Janitorial Equipment Program	No	No
Plans			
16	SSc2 – Building Exterior and Hardscape Management Plan	Yes	Yes
17	SSc3 – Integrated Pest Management, Erosion Control, and Landscape Management Plan	Yes	Yes
18	SSc4 – Stormwater Management Plan	No	No
19	WEc4 – Water Management Plan: Cooling Towers	No	Yes
20	EAp1 – Building Operating Plan	No	Yes
21	EAp3 – CFC Phase-out Plan	No	Yes
22	EAc2.1 – Commissioning Plan	No	Yes
23	EAc2.2 – Capital Improvement Plan	No	Yes
24	EAc2.3 – Ongoing Commissioning Plan	No	Yes
25	MRc4 – Lighting Purchasing Plan	No	Yes
26	IEQc1.5 – Indoor Air Quality Management Plan (Facility Alterations)	No	Yes
27	IEQc3.9 – Indoor Integrated Pest Management Plan	No	Yes

Appendix C: Sample Green Schools Resolution

Whereas deteriorating school infrastructure and poor indoor environmental quality threaten the health, well being, and achievement of staff and students;

Whereas current climate and energy challenges compound the structural and resource deficiencies of our district's schools;

Whereas green schools are schools that create a healthy environment that is conducive to learning while saving energy, resources, and money;

Whereas, green schools support student learning through improvements in indoor air quality, lighting, thermal comfort, and maintenance practices – all of which have an important impact on a child's ability to learn and a teacher's ability to teach;

Whereas, the benefits of superior indoor air quality – a key emphasis of green schools – have been linked to lower asthma rates, fewer allergies, reduced absenteeism, and increased teacher retention rates;

Whereas, green schools use significantly less energy compared to conventional schools;

Whereas, green schools cost less to operate, utilize durable materials, and greatly reduce water and energy use, which generates substantial financial savings;

Whereas, green schools provide an educational experience that transcends the classroom by creating a host of opportunities for curriculum innovation and hands-on, project based learning in which the building itself becomes an interactive teaching tool;

Therefore, be it resolved that:

Effective _____ (date), the district will register all facilities under the LEED for Existing Buildings: Operations & Maintenance rating system, or under a comparable system with requirements at least as equivalent to the LEED for Existing Buildings: Operation & Maintenance rating system. The district will pursue certification for each facility to the extent practicable.

The LEED for Existing Buildings: Operations & Maintenance rating system helps building owners and operators measure operations, improvements, and maintenance on a consistent scale, with the goal of maximizing operational efficiency while minimizing environmental impacts. LEED for Existing Buildings: Operations & Maintenance addresses whole-building cleaning and maintenance issues (including chemical use), recycling programs, exterior maintenance programs, and systems upgrades. It can be applied both to existing schools seeking LEED certification for the first time and to projects previously certified under LEED for Schools.

Appendix D: Project Tracking Tool

The project tracking tool helps the LEED Coordinator organize the many tasks that must be coordinated among the project team members and other school/school district staff. It tracks project team efforts, milestones, and basic project information needed for LEED project registration.

1. Project Management Team

A. LEED Coordinator

Name:	
Office Phone:	
Cell Phone:	
Email:	

B. Assistant LEED Coordinator

Name:	
Office Phone:	
Cell Phone:	
Email:	

C. School/School District

Name:	
Address:	
County:	
Web site:	
Additional Information: (e.g. # students, # schools, etc.)	

D. Other Key Contacts

Name:	
Office Phone:	
Cell Phone:	
Email:	

Name:	
Office Phone:	
Cell Phone:	
Email:	

2. Project Milestones

A. Attend Initial Training and Orientation

TOPIC	Date Scheduled/Completed	Date Scheduled/Completed	Date Scheduled/Completed
Orientation			
Project Management			
Project Assessment			

B. Complete Project Registration Information

TOPIC	Date Scheduled/Completed
Complete information under Project Certification/ Project Information. (See item 3. Project Certification, below.)	

C. Establish Project Participants

Complete Project Participants List (ATTACHMENT 1)

D. Complete Preparations For the Project Charrette

TASK	Date Scheduled/Completed
1. Select school facility for certification.	
2. Complete initial Project Scorecard based on a review of the rating system and input from project team members.	
3. Identify a meeting facilitator.	
4. Select a date for the project charrette.	

5. Reserve a meeting room – large enough for 20 people (or more depending on invite list), computer (or laptop) with LCD projector, screen, and speakerphone. An Internet connection is desirable but not required.	
6. Send out invitations to participants.	
7. Prepare handout materials.	
8. Prepare proposed Certification Plan (see ATTACHMENT 2 – Project Certification Plan).	

E. Host Project Charrette

TASK	Date Scheduled/Completed
1. Conduct workshop.	
2. Update Certification Plan.	
3. Establish project milestones.	
4. Answer stakeholder questions.	

F. Host Trainings

TOPIC	Date Scheduled/Completed
Alternative Commuting	
Energy Auditing & Commissioning	
Energy Performance & EPA's Portfolio Manager	
Green Cleaning	
Green Grounds O&M	
IAQ Management	
Occupant Comfort	
Refrigerant Management	
Solid Waste Management	
Sustainable Purchasing	
Water Efficiency	
Using LEED-Online	

3. Project Certification

A. Record Project Information

Record project information using LEED-Online Registration Information (ATTACHMENT 2).

B. Project Codes

DESCRIPTION	Code
Project Number (8 digits)/Title:	
Project Access ID Code (16 digits):	

C. Collect and Compile Documents for Upload to LEED-Online

Assemble the general documents noted below.

GENERAL DOCUMENTS TO BE UPLOADED	Notes
Site Plan	
Typical Floor Plan(s)	
Typical Building Selections	
Typical or Primary Elevation	
Building Photos	
General Project Narrative (1 to 3 pages)	

ATTACHMENT 1 – Project Participants

PROJECT TEAM REPRESENTATIVES	Participant(s)
LEED Coordinator:	
Facilities & Planning:	
Maintenance Services:	
Custodial Services:	
Purchasing:	
Environmental & Safety:	
Energy Management:	
HVAC Shop:	
Plumbing Shop:	
School Principal:	

PROJECT TEAM REPRESENTATIVES	Participant(s)
Public Affairs Office:	
Other School/District Representative:	
Other School/District Representative:	
Other School/District Representative:	
Other School/District Representative:	
LEADERSHIP & STAKEHOLDERS	Participant(s)
Director of Facilities:	
Director of Operations and Maintenance:	
Assistant Superintendent for Operations:	
Superintendent:	
School Board Member(s):	
Sustainability (Green Schools) Committee Members:	
Other:	
Other:	
OTHER PARTICIPANTS	Participant(s)
Local USGBC Chapter Representative:	
Utility Company Representative:	
School PTO/SAC Representative:	
Media Representative:	
School/School District Advisors/Consultants (as appropriate):	
Other:	
Other:	
Other:	
Other:	
Other:	

ATTACHMENT 2 – LEED-Online Registration Information

ITEM	Description
PROJECT ADDRESS	
Project address:	
BASICS	
Project name:	
Project Access ID:	
How did you hear about LEED?	
Is this project confidential?	
PROJECT COST	
Project cost not including site work or furniture, fit-out, and equipment (FFE):	
Estimated FFE budget:	
Estimated site work budget, including surface parking:	
Estimated 20-year life-cycle savings through green/sustainable technologies, strategies, and design:	
Estimated cost to prepare documentation for LEED certification:	
PROJECT SITE	
Total property area (in SQ FT):	
Gross square footage:	
Total building footprint:	
Surface parking spaces:	
Structure parking spaces:	
Undisturbed site area:	
Site context/setting (urban, suburban, rural):	
Site conditions:	Previously developed

BUILDING USE	
Owner type:	Other (school/district)
Will owner occupy completed project:	Yes
Occupant type:	Other (school/district)
Estimated date of occupancy (when project is complete):	
Current project phase:	Project planning
PROJECT INFORMATION	
% New construction:	
% Renovation:	
Located in historic district (yes/no):	
Year building constructed:	
Project scope (single building, multiple buildings):	
Hours/week building is in use/occupied:	
PROJECT BUILDING CODE	
Floors above ground plane (#):	
Construction classification code:	
Occupancy classification code:	
Project building code:	
Building occupants (#):	

Appendix E: LEED Certification Assessment

LEED CERTIFICATION ASSESSMENT SUMMARY		
All prerequisites are met or can be met: ☐ Yes ☐ No		
PREREQUISITE	**Is met:**	**Can be met:**
1. WEp1 – Minimum Indoor Plumbing Fixture and Fitting Efficiency	☐ Yes ☐ No	☐ Yes ☐ No
2. EAp1 – Energy Efficiency Best Management Practices – Planning, Documentation, and Opportunity Assessment	☐ Yes ☐ No	☐ Yes ☐ No
3. EAp2 – Minimum Energy Efficiency Performance	☐ Yes ☐ No	☐ Yes ☐ No
4. EAp3 – Fundamental Refrigerant Management	☐ Yes ☐ No	☐ Yes ☐ No
5. MRp1 – Sustainable Purchasing Policy	☐ Yes ☐ No	☐ Yes ☐ No
6. MRp2 – Solid Waste Management Policy	☐ Yes ☐ No	☐ Yes ☐ No
7. IEQp1 – Minimum Indoor Air Quality Performance	☐ Yes ☐ No	☐ Yes ☐ No
8. IEQp2 – Environmental Tobacco Smoke (ETS) Control	☐ Yes ☐ No	☐ Yes ☐ No
9. IEQp3 – Green Cleaning Policy	☐ Yes ☐ No	☐ Yes ☐ No
Notes:		

This prerequisite can be met: ☐ Yes ☐ No		
WEp1 – MINIMUM INDOOR PLUMBING EFFICIENCY		
Responsible Person:		
Performance Period:		
ASSESSMENT		
1. a. Building has previously achieved a LEED-NC or LEED for Schools certification.		☐ Yes ☐ No
b. OR building was initially constructed in 1993 or later. (Construction documents are available for verification.)		☐ Yes ☐ No
c. OR, building plumbing fixtures were installed prior to January 1, 1993. (Additional data required)		☐ Yes ☐ No
d. OR building plumbing fixtures were installed prior to 1993. (See instructions for Performance Calculations Worksheet.)		☐ Yes ☐ No
2. Describe the plumbing fixture and fitting inspection, testing, or preventive maintenance program in place for the project building. Describe how the inspection, testing, or program ensures the following: a. Flush and/or flow valves do not leak and b. Auto-flush and/or flow sensors are calibrated so fixtures flush and/or flow properly and at the proper time but not too often or for too long a time (i.e., generally only one flush per fixture use).		
3. Have on hand a copy of the policy mandating an economic assessment of conversion to high-performance plumbing fixtures and fittings as part of any future indoor plumbing renovation (*required upload*).		
Water Performance Calculation (See instructions for PERFORMANCE CALCULATIONS WORKSHEET)		
4. Describe the inputs in the Fixture Group Definitions Table (the methodology used to define each fixture group, the derivation of data in each row, and gender ratios if the default is not used for any fixture group).		
5. Enter flush fixture data for each fixture group defined in the Fixture Group Definitions Table. To account for dual-flush fixtures, enter a weighted average for GPF.		
6. Have on hand manufacturer or supplier data to verify flow rates for each flush fixture and flow fixture type that differs from UPC/IPC efficiency requirements or obtain measured data on flush or flow rates for at least 20% (by number of fixtures) of each type.		
Notes:		

CREATING A WATER FIXTURE PERFORMANCE CALCULATIONS WORKSHEET

The *Fixture Group Definitions Table* below allows project teams to group all plumbing fixtures in the project together or separate them into sub-groups. Buildings that have the same usage patterns across all fixtures and have fixtures of similar efficiencies or vintages can be addressed in a single group. Otherwise, a different fixture group may be created for each unique usage pattern. For example, if fixture usage patterns are different on the first floor of the project building compared to other floors, create a fixture group for the first floor and a fixture group for all other floors. In some cases, it may be necessary to have a single user represented in more than one group in the table. No fixture may be represented in more than one group. Fixtures considered to be "Completely Replaced" involve replacements of all components that affect the gallons per use (i.e., for urinals and toilets it includes both the flush valve and the porcelain).

Fixture Group Definitions Table

Fixture Group	# of Fixtures Installed or Completely Replaced before 1993	# of Fixtures Installed or Completely Replaced in or after 1993	Annual Days of Operation	# of Full-Time Employees	# of Students
(Construct a table with these headings. Add a row for each fixture group.)					

Flush Fixture Data Table

Fixture Group	Fixture ID (Optional)	Fixture Family[1]	Fixture Type[2]
Fixture Group A			
Fixture Group B			
(Construct a table with these headings and enter data for each fixture group.)			

[1] Select from the following:
Water Closet
Urinal

[2] Select from the following:
For Water Closets: IPC/UPC Equivalent Water Closet, Low-Flow Water Closet, Ultra Low Flow Water Closet, Composting Toilet, Other
For Urinals: IPC/UPC Equivalent Urinal, Non-water Urinal, Other

Flow Fixture Data Table

Fixture Group	Fixture ID (Optional)	Fixture Family[1]	Fixture Type[2]
Fixture Group A			
Fixture Group B			
(Construct a table with these headings and enter data for each fixture group.)			

[1] Select from the following:
Private Lavatory Faucet
Public Lavatory Faucet
Kitchen Sink
Shower

[2] **For Private Lavatories:** IPC/UPC Equivalent Lavatory, Low-Flow Lavatory, Ultra Low Flow Lavatory, Other
For Public Lavatories: IPC/UPC Equivalent Lavatory, Low-Flow Lavatory, Ultra Low Flow Lavatory, Other
For Kitchen Sinks: IPC/UPC Equivalent Kitchen Sink, Low-Flow Kitchen Sink, Other
For Showers: IPC/UPC Equivalent Shower, Low-Flow Shower, Other

The data in the three tables above will be needed to calculate the water efficiency performance of the project. Project teams can use the "LEED 2009 Green Operations & Maintenance Reference Guide" or the LEED Online submittal template (WEp1) to calculate the water efficiency percentage.

Notes:

This prerequisite can be met: ☐ Yes ☐ No	
EAp1 – ENERGY EFFICIENCY BEST MANAGEMENT PRACTICES: PLANNING, DOCUMENTATION AND OPPORTUNITY ASSESSMENT	
Responsible Person:	
Performance Period:	
ASSESSMENT	
Required Documentation	
1. Building Operating Plan	☐ Yes ☐ No
2. Systems Narrative (see Systems Documentation Worksheet)	☐ Yes ☐ No
3. Sequence of Operations (see Systems Documentation Worksheet)	☐ Yes ☐ No
4. Narrative describing the building's preventive maintenance plan and schedule for the equipment described in the Systems Narrative.	☐ Yes ☐ No
ASHRAE Level 1 Walk-Through Analysis	
5. Annual energy use breakdown by major end uses or applications (data table or graphical summary).	☐ Yes ☐ No
6. Energy Utilization Index using Portfolio Manager and comparison for potential cost savings. (Must be documented in submittal template for EAc1.)	☐ Yes ☐ No
7. List of potential low/no-cost changes, expected savings (kW and kWh), and maintenance cost savings.	☐ Yes ☐ No
8. Can all "No" items be resolved during the project?	☐ Yes ☐ No
Notes:	

SYSTEMS DOCUMENTATION WORKSHEET

Systems documentation required for EAp1 includes a *Systems Narrative* and an excerpt of the *Sequence of Operations*.

Document:	Requirements:
Systems Narrative	**The following systems are addressed (at a minimum):**
	☐ Space heating (e.g. group all boilers)
	☐ Space cooling (e.g. group all chillers)
	☐ Ventilation
	☐ Lighting
	☐ Building control systems
	The following additional systems are addressed:
	☐ Domestic water heating
	☐ Humidification and/or dehumidification
	The narrative addresses the following aspects of the control system:
	☐ Central automatic
	☐ Local automatic
	☐ Occupant control
	The narrative addresses the differences in system types:
	☐ Different floors
	☐ Interior zones
	☐ Perimeter zones
	The narrative includes summaries of the following:
	☐ Central plant
	☐ Distribution
	☐ Terminal units (as applicable)
Sequence of Operations A 1 to 2-page representative excerpt from the current Sequence of Operations for at least two different systems summarized in the Systems Narrative. The systems must be of different types (e.g., a chiller and a boiler).	**The excerpt addresses the following minimum content details relating to desired operational states:**
	☐ Which systems are running vs. idle
	☐ Whether operation is full-load or part-load
	☐ Staging or cycling of compressors, fans, or pumps
	☐ Proper valve positions
	☐ Desired system water temperatures
	☐ Duct static air pressures
	☐ Reset schedules or occupancy schedules in place
	☐ Information on operating phases, setpoints and controls, and feedback systems to monitor performance
Notes:	

This prerequisite can be met: ☐ Yes ☐ No	
EAp2 – MINIMUM ENERGY EFFICIENCY PERFORMANCE	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. An ENERGY STAR Portfolio Manager Account has been properly established for the project building, including all energy fuels:	☐ Yes ☐ No
2. Performance Determination Methods:	
a. Case 1: Projects Eligible for ENERGY STAR Rating	☐ Initial ENERGY STAR rating: _____ ☐ A rating has not been obtained.
b. Case 2, Option 1: Projects Not Eligible for ENERGY STAR Rating	☐ Initial adjusted benchmark score: _____ ☐ A score has not been obtained.
c. Case 2, Option 2: Projects Not Eligible for ENERGY STAR Rating	☐ Initial alternative score: _____ ☐ A score has not been obtained.
3. The minimum energy efficiency performance has been met.	☐ Yes ☐ No
4. Potential rating/score after project completion:	Projected rating/score: _____
5. Project has the potential to meet the minimum energy efficiency performance requirement.	☐ Yes ☐ No
6. Describe how the projected rating was determined:	
Notes:	

This prerequisite can be met: ☐ Yes ☐ No	
EAp3 – FUNDAMENTAL REFRIGERANT MANAGEMENT	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. Building uses CFC-based refrigerants:	☐ Yes ☐ No
2. If yes, refrigerant conversion or system replacement can be done with a simple payback of 10 or fewer years:	☐ Yes ☐ No
Notes:	

This prerequisite can be met: ☐ Yes ☐ No	
MRp1 – SUSTAINABLE PURCHASING POLICY	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. Project has an environmentally preferable purchasing policy.	☐ Yes ☐ No
2. If yes, policy includes all the USGBC required elements.	☐ Yes ☐ No
3. Policy addresses ongoing consumables (at a minimum: paper, toner cartridges, binders, batteries, and desk accessories).	☐ Yes ☐ No
4. Policy addresses at least one of the following additional purchasing categories (check all that apply): ☐ Durable goods (furniture, electrical appliances), or, ☐ Facility alterations and Additions, or, ☐ Mercury containing lamps	☐ Yes ☐ No
Notes:	

This prerequisite can be met: ☐ Yes ☐ No	
MRp2 – SOLID WASTE MANAGEMENT POLICY	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. Organization has a solid waste management (recycling) policy/contract.	☐ Yes ☐ No
2. If yes, policy/contract includes all the required elements.	☐ Yes ☐ No
3. Policy addresses reducing, reusing, or recycling of all waste categories noted below (check all that apply): ☐ Ongoing consumables ☐ Durable goods ☐ Facility alterations and additions ☐ Mercury-containing light bulbs	☐ Yes ☐ No
Notes:	

This prerequisite can be met: ☐ Yes ☐ No					
IEQp1 – MINIMUM INDOOR AIR QUALITY PERFORMANCE					
Responsible Person:					
Performance Period:					
ASSESSMENT					
Air Handling Units:	**AHU-1**	**AHU-2**	**AHU-3**	**AHU-4**	**AHU-n**
1. Constant Volume (CV) or Variable Air Volume (VAV):	☐ CV ☐ VAV	☐ CV ☐ VAV	☐ CV ☐ VAV	☐ CV ☐ VAV	☐ CV ☐ VAV
2. AHU provides outside air flow required by 62.1-2007:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
3. Minimum required outside air flow (CFM):					
4. Measured outside air flow (CFM):					
5. Date of measurement:					
6. AHU Compliance?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
7. If ASHRAE 62.1 ventilation rates cannot be met, can a rate of at least 10 CFM/person be met?			☐ Yes ☐ No		
8. Describe the measurement method (measurement device, accuracy, and how measurements are taken).					
9. For VAVs describe how the VAV outside air flow is set up during the air flow measurements to operate at the worst-case condition expected during normal operations (i.e., fan speeds set at minimum normal operating level, OA dampers set at their minimum normal operating opening, etc.).					
10. Describe the ventilation maintenance program, including a description of the periodic checks and scheduled maintenance performed. Describe whether the checks are manual, based on a building automation system, or both.					
11. If a building automation system is used for any ventilation components, have on hand a periodic system maintenance status report taken during the performance period which covers those components. If any ventilation components are handled manually, have on hand a copy of the maintenance log written during the performance period which covers those components (*required upload*).					
12. Have on hand documentation verifying implementation of a preventive maintenance program during the performance period (*required upload*).					
13. Project team will perform or oversee tests on all local, dedicated exhaust systems within the project building during the performance period to confirm proper function. Have on hand at least one testing report for each separate type of exhaust system (*required upload*).					
Notes:					

This prerequisite can be met: ☐ Yes ☐ No	
IEQp2 – ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. State or local statutes or regulations govern smoking.	☐ Yes ☐ No
2. OR, the building has a smoking policy that bans smoking in the building/grounds.	☐ Yes ☐ No
3. OR, a previous LEED certification governs ETS Control.	☐ Yes ☐ No
Notes:	

This prerequisite can be met: ☐ Yes ☐ No	
IEQp3 – GREEN CLEANING POLICY	
Responsible Person:	
Performance Period:	
ASSESSMENT	
1. Organization has a Green Cleaning Policy.	☐ Yes ☐ No
2. Custodial operation is outsourced to a private contractor.	☐ Yes ☐ No
3. Policy/contract includes all the required elements.	☐ Yes ☐ No
4. Policy addresses all of the following topics noted below: (Select all that currently apply.) ☐ Guidelines for purchase of sustainable cleaning and hard floor and carpet care products meeting the sustainability criteria outlined in IEQc3.3. (The project team is not required to apply for IEQc3.3, but the Green Cleaning Policy must adhere to the requirements of the credit.) ☐ Guidelines for purchase of cleaning equipment meeting the sustainability criteria outlined in IEQc3.4. (The project team is not required to apply for IEQc3.4, but the Green Cleaning Policy must adhere to the requirements of the credit.) ☐ Standard operating procedures (SOPs) addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed, and audited. If applicable, it specifically addresses cleaning to protect vulnerable building occupants. ☐ Strategies for promoting and improving hand hygiene, including both hand washing and the use of alcohol-based waterless hand sanitizers. ☐ Guidelines addressing the safe handling and storage of cleaning chemicals used in the building, including a plan for managing hazardous spills or mishandling incidents. ☐ Requirements for staffing and training of maintenance personnel appropriate to the needs of the building. Requirements address the training of maintenance personnel in the hazards of use, disposal, and recycling of cleaning chemicals, dispensing equipment, and packaging. ☐ Provision for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures, and processes.	☐ Yes ☐ No
Notes:	

Appendix F: Project Certification Plan

The Project Certification Plan template is used in the project kickoff workshop to note the credits that the project team will pursue. The template includes a section for identifying the lead and supporting team members responsible for each prerequisite or credit, as well as any milestones associated with their completion.

Project: _____

Organization: _____

LEED 2009 for Existing Buildings: O&M

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Sustainable Sites (SS)						
SSc1 – LEED Certified Design and Construction	4					
SSc2 – Build Ext & Hardscape Management Plan	1					
SSc3 – IPM, Erosion Control & Landscape Plan	1					
SSc4 – Alternative Commuting Transportation	3-15					
SSc5 – Site Development—Protect/Restore Open Habitat	1					
SSc6 – Stormwater Quality Control	1					
SSc7.1 – Heat Island Reduction (Nonroof)	1					
SSc7.2 – Heat Island Reduction (Roof)	1					
SSc8 – Light Pollution Reduction	1					
TOTALS:	26					
CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Water Efficiency (WE)						
WEp1 – Minimum Indoor Plumbing Efficiency						
WEc1 – Water Performance Measurement	1-2					
WEc2 – Additional Plumbing Efficiency	1-5					
WEc3 – Water Efficient Landscaping	1-5					
WEc4 – Cooling Tower Water Management	1-2					
TOTALS:	14					

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Energy & Atmosphere (EA)						
EAp1 – Energy Efficiency BMPs						
EAp2 – Minimum Energy Efficiency Performance						
EAp3 – Fundamental Refrigerant Management						
EAc1 – Optimize Energy Performance	1-18					
EAc2.1 – Commissioning—Investigation & Analysis	2					
EAc2.2 – Commissioning—Implementation	2					
EAc2.3 – Commissioning—Ongoing	2					
EAc3.1 – Performance Measurement—BAS	1					
EAc3.2 – Performance Measurement—System	1-2					
EAc4 – On/Off Site Renewable Energy	1-6					
EAc5 – Enhanced Refrigerant Management	1					
EAc6 – Emissions Reduction Reporting	1					
TOTALS:	35					

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Materials & Resources (MR)						
MRp1 – Sustainable Purchasing (SP) Policy						
MRp2 – Solid Waste Management Policy						
MRc1 – SP—Ongoing Consumables	1					
MRc2 – SP—Durable Goods	1-2					
MRc3 – SP—Facility Alterations & Additions	1					
MRc4 – SP—Reduced Mercury in Lamps	1					
MRc5 – SP—Food	1					
MRc6 – Solid Waste—Waste Stream Audit	1					
MRc7 – Solid Waste—Ongoing Consumables	1					
MRc8 – Solid Waste—Durable Goods	1					
MRc9 – Solid Waste—Facility Alterations & Additions	1					
TOTALS:	10					

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Indoor Environmental Quality (IEQ)						
IEQp1 – Minimum Indoor Air Quality Performance						
IEQp2 – Environmental Tobacco Smoke Control						
IEQp3 – Green Cleaning Policy						
IEQc1.1 – IAQ BMP—IAQ Management Program	1					
IEQc1.2 – IAQ BMP—O/A Delivery Monitoring	1					
IEQc1.3 – IAQ BMP—Increased Ventilation	1					
IEQc1.4 – IAQ BMP—Reduced Particulates	1					
IEQc1.5 – IAQ BMP—Facility Alterations & Additions	1					
IEQc2.1 – Occupant Comfort—Occupant Survey	1					
IEQc2.2 – Controllability of Systems—Lighting	1					
IEQc2.3 – Occupant Comfort—Thermal Comfort	1					
IEQc2.4 – Daylight & Views	1					
IEQc3.1 – Green Cleaning—HP Cleaning Program	1					
IEQc3.2 – Green Cleaning—Custodial Assessment	1					
IEQc3.3 – Green Cleaning—Purchasing	1					
IEQc3.4 – Sustainable Cleaning Equipment	1					
IEQc3.5 – Indoor Chemical & Pollutant Control	1					
IEQc3.6 – Indoor IPM	1					
TOTALS:	15					

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Innovation in Operations (IO)						
IOc1.1 – Innovation in Operations	1					
IOc1.2 – Innovation in Operations	1					
IOc1.3 – Innovation in Operations	1					
IOc1.4 – Innovation in Operations	1					
IOc2 – LEED Accredited Professional	1					
IOc3 – Documenting Sustainable Cost Impacts	1					
TOTALS:	6					

CREDIT/PREREQUISITE	Pts	Try	Submit	Lead	Support Member	Next Milestone
Regional Priority (RP)						
RPc1.1 – Regional Priority	1					
RPc1.2 – Regional Priority	1					
RPc1.3 – Regional Priority	1					
RPc1.4 – Regional Priority	1					
TOTALS:	4					
PROJECT TOTALS:	**110**					
Certified: 40-49; Silver: 50-59; Gold: 60-79; Platinum: 80+						

Team Member List for LEED Online as of: _____ (insert date)

LEED ONLINE ROLE	Name
(Below is a list of standard project roles found in LEED Online. Add other roles if needed.)	
Project Team Administrator:	
Project Team Manager:	
Architect:	
Builder:	
Building Engineer:	
Building Operator:	
Civil Engineer:	
Commissioning Agent:	
Construction Manager:	
Contractor:	
Custodial Supervisor:	
Energy Manager:	
Environmental Health & Safety:	
Facility Manager:	
HVAC Engineer:	
HVAC Shop Supervisor:	
Landscape Architect:	
MEP Engineer:	
Paint Shop Supervisor:	
Plumbing Shop Supervisor:	
LEED Coordinator:	
Site/Grounds Manager:	
Supply/Purchasing Manager:	

Appendix G: Press Release Template

Date: _____

Contact: _____

On _____ (date), the U.S. Green Building Council (USGBC) notified (Principal/ Superintendent) _____ (name) that the _____ (school name) had earned the LEED for Existing Buildings: Operations & Maintenance certification.

Developed by USGBC, the LEED rating system is the nationally accepted benchmark for the design, construction, and operation of high-performance green buildings. This distinction awarded to _____ (school name) is a third-party verification that the school is being operated in a manner that maximizes operational efficiency and minimizes environmental impacts.

LEED is like a "nutritional label" for a green, healthy school. It gives parents and the community confidence in the environment in which their children, teachers, and staff are spending their days.

The certification process guided the _____ (school/school district) facilities team in identifying opportunities for _____ (school name) to reduce energy, water and resource consumption; enhance the indoor environment; and drive down operational costs. Improvements to _____ (school name) include:

- (improvement 1)
- (improvement 2)
- (improvement 3)
- (improvement 4)
- (improvement 5)

_____ (school/school district) Facilities Manager _____ (name) had the following to say about the LEED Certification, "------- (comment) ---------."
For additional information about green schools and the LEED for Existing Buildings: Operations & Maintenance rating system, please visit www.GreenSchoolBuildings.org.

Appendix H: Tracking and Record-keeping for Recertification

Appendix H – Tracking and Record-keeping for Recertification

Topic	Practice/Recordkeeping
Green Grounds	• Building Exterior and Hardscape Management Plan (SSc2) • Integrated Pest Management, Erosion Control, and Landscape Management Plan (SSc3)
Alternative Commuting	• Ongoing tracking of employee participation in alternative commuting modes (SSc4)
Water Efficiency	• Economic Assessment of Plumbing Fixtures Policy (WEp1) • Water performance measurement data (monthly and annual summaries) (WEc1) • Water Management Plan for cooling towers (WEc4)
Energy Efficiency Best Management Practices	• Building Operating Plan (EAp1) • American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Level I Walk-through Energy Audits (EAp1) • Ongoing Commissioning Program (EAc2.3) • Building automation system calibration and system testing (EAc3.1)
Energy Performance and Portfolio Manager	• Minimum energy performance, with an ENERGY STAR performance rating of at least 69 (EAp2) • Tracking, recording, and reporting of greenhouse gas emissions for building energy use and employee commuting emissions (EAc6)
Refrigerant Management	• CFC-based refrigerant Phase-out Plan (EAp3) • Manufacturer's documentation on refrigerants being used (EAp3, EAc5)
Sustainable Purchasing	• Environmentally Preferable Purchasing (EPP) Policy (MRp1) • Maintain product manufacturer's or supplier's product documentation for verification of credit compliance (MRc1 through MRc5) • Tracking system for purchases of both sustainable and non-sustainable purchases by cost (MRc1 through MRc5) • Lighting purchasing plan (MRc4)
Solid Waste and Recycling	• Solid Waste Management Policy or contract (MRp2) • Waste reduction and recycling program for ongoing consumables (MRc7) • Waste reduction, reuse, and recycling program for durable goods (MRc8) • Track waste stream for materials used in facility alterations or additions (MRc9)
Indoor Air Quality Program	• Ventilation maintenance program (IEQp1) • Maintenance of signage for smoking policy (IEQp2) • Maintain air filtration media (IEQc1.4) • Track construction activities for compliance with IAQ Management Plan for facility alterations and additions (IEQc1.5)
Occupant Comfort	• Continuous monitoring of air temperature and humidity in occupied spaces (IEQc2.3)
Green Cleaning	• Green Cleaning Policy (IEQp3) • High-Performance Cleaning Program (IEQc3.1) • Tracking system for cleaning products and materials for both sustainable and non-sustainable purchases by cost (IEQc3.3) • Track purchases of new janitorial equipment to ensure compliance (IEQc3.4) • Indoor Integrated Pest Management (IPM) Plan (IEQc3.6)

USGBC MEMBERSHIP APPLICATION

For more information on becoming a member or to apply online visit **www.USGBC.org/membership**.

Organizational Information

ORGANIZATION NAME (40 character limit)

WEBSITE ADDRESS

GROSS ANNUAL REVENUE

NUMBER OF EMPLOYEES

ANNUAL DUES (see reverse)

Annual membership includes a subscription to *GreenSource* valued at $9.00.

Primary Contact Information

The Primary Contact is the only employee with the ability to process membership renewals, edit organization contact information and view associates connected to the membership. The Primary Contact wil receive comunication from USGBC regarding membership renewals and benefits. They are encouraged to share relevant information with all other full-time employees within the organization.

NAME

TITLE

EMAIL ADDRESS

PHONE

FAX

STREET ADDRESS

CITY

STATE

ZIP

☐ Please check here if you do **NOT** want your mailing information shared with others.

Member Directory Contact Information

The Member Directory contact information will be displayed in USGBC's online member directory.

☐ **SAME AS ABOVE**

NAME

TITLE

EMAIL ADDRESS

PHONE

FAX

STREET ADDRESS

CITY

STATE

ZIP

☐ Please check here if you do **NOT** want your organization name listed in the online Member Directory.

Payment Information

☐ **CHECK** - Please mail this form with your check payment (Payable to: U.S. Green Building Council) to USGBC, P.O. Box 404296, Atlanta, GA 30384-4296

☐ **CREDIT CARD** - Fill out information and fax to 202.828.5110 ☐ **VISA** ☐ **MASTERCARD** ☐ **AMEX** ☐ **DISCOVER**

NAME ON CARD

CREDIT CARD NUMBER

EXPIRATION DATE

Pursuant to the unanimous resolution of the Council at its July 19, 1994 meeting in Washington D.C., each member of the Council must sign the following Code of Conduct: As a member of the U.S. Green Building Council, I hereby agree to adhere to the principles of improving the energy and environmental efficiency of the whole building environment. This includes following and promoting the concepts of: Improving energy efficiency and conservation; Improving indoor environmental quality; Increasing resource and material efficiency; Improving occupancy health and productivity; Improving environmental quality including air, water, land, limited resources and ecosystems; Promoting sustainability as defined as "providing for the needs of the present without detracting from the ability to fulfill the needs of the future."- USGBC/PTI Sustainable Buildings Guidebook, 1994.

SIGNATURE

DATE

Mail to: USGBC - P.O. Box 404296, Atlanta, GA 30384-4296 - Fax to: 202.223.7299
U.S. Green Building Council - Federal Tax ID # 52-1822816 - Member Services: 800-795-1747 membership@usgbc.org

USGBC Membership Dues

Select your organizational category and the corresponding dues category to determine your annual dues. Transfer the dues amount to the appropriate field on the reverse of this form.

ORGANIZATIONAL CATEGORY — DUES

☐ Contractors & Builders

Construction Volume	*Dues*
Less than $250,000	$300
$250,000 - $1 million	$500
$1 million - $5 million	$750
$5 - $25 million	$1,500
$25 - $50 million	$2,500
$50 - $250 million	$3,500
$250 million - $5 billion	$4,000
More than $5 billion	$5,000

☐ Corporate & Retail

Gross Annual Revenue	*Dues*
Less than $50 million	$1,000
$50 - $250 million	$2,500
$250 million - $5 billion	$3,500
More than $5 billion	$5,000

☐ Educational Institutions

Type	*Dues*
Individual K-12 school	$300
District K-12 school system	$500
1-2 University/Institute campuses	$750
3-5 University/Institute campuses	$1,000
5-20 University/Institute campuses	$1,500
More than 20 University/Institute campuses	$2,000

☐ Federal Government

Type	*Dues*
Government Owned Contractor Operated Lab (GOCO)	$750
Federal Agency	$1,000

Financial Institutions & Insurance Companies

☐ Financial Institutions
☐ Insurance Companies

Asset Base	*Dues*
Less than $250 million	$2,500
More than $250 million	$3,500

☐ Non-Profit & Environmental Organizations (501c3 only)

Gross Annual Revenue	*Dues*
Less than $15 million	$300
$15 - $250 million	$500
More than $250 million	$750

ORGANIZATIONAL CATEGORY — DUES

Product Manufacturers

☐ Building Controls
☐ Distributors
☐ Product Manufacturers
☐ Service Contractors

Gross Annual Revenue	*Dues*
Less than $1 million	$500
$1 - $5 million	$1,500
$5 - $25 million	$2,500
$25 - $50 million	$3,500
$50 - $250 million	$5,000
$250 million - $5 billion	$7,500
$5 - $10 billion	$8,500
More than $10 billion	$12,500

Professional Firms

☐ Accountants
☐ Architects
☐ Architects/Engineers
☐ Attorneys
☐ Commissioning Providers
☐ Consultants
☐ Engineers
☐ Interior Designers
☐ Landscape Architects
☐ Planners
☐ Press
☐ Residential Designer

Gross Annual Revenue	*Dues*
Less than $250,000	$300
$250,000 - $1 million	$750
$1 million - $5 million	$1,000
$5 - $25 million	$1,500
$25 - $50 million	$2,500
More than $50 million	$3,500

☐ Professional Societies & Trade Organizations

Gross Annual Revenue	*Dues*
Less than $1 million	$500
$1 - $5 million	$1,500
$5 - $25 million	$2,500
$25 - $50 million	$3,500
More than $50 million	$5,000

☐ Real Estate & Real Estate Providers

Gross Annual Revenue	*Dues*
Less than $5 million	$750
$5 - $25 million	$1,500
$25 - $50 million	$2,500
$50 - $250 million	$3,500
More than $250 million	$4,000

State Government & Local Government

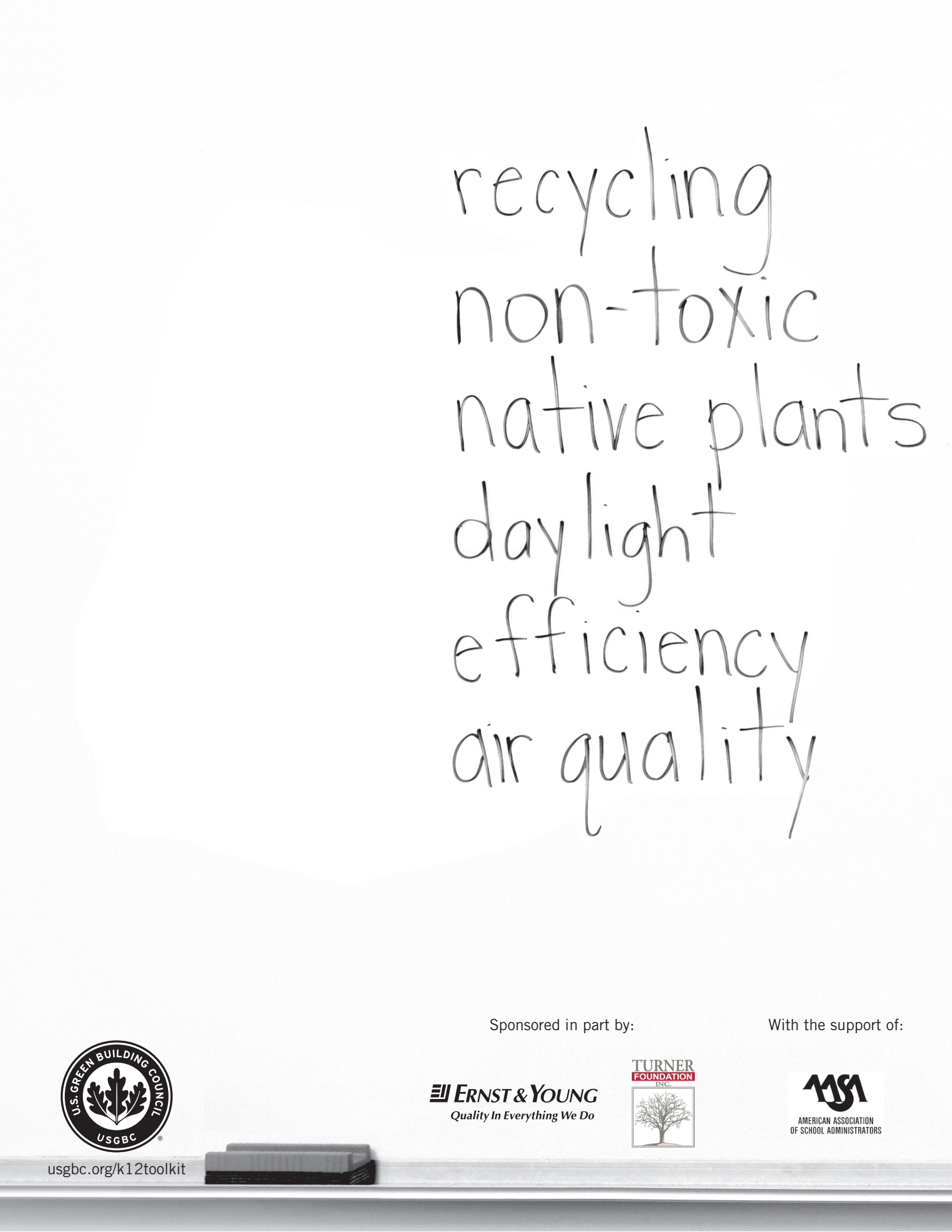
☐ Local Government
☐ State Government

Population	*Dues*
Under 500,000	$500
500,000 - 1 million	$750
More than 1 million	$1,000

Utilities & Energy Service Companies

☐ Energy Service Companies
☐ Utilities

Gross Annual Revenue	*Dues*
Less than $10 million	$750
$10 - $50 million	$1,500
$50 - $250 million	$2,500
More than $250 million	$3,500



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