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TESTIMONY IN SUPPORT OF S-2765

AN ACT RELATING TO PUBLIC PROPERTY AND WORKS - THE GREEN BUILDINGS ACT (LC500539)

Dear Chairperson Britto and the Esteemed Members the Senate Commerce Committee:

• REPRESENTATION, QUALIFICATIONS, and POSITION ON S-2765

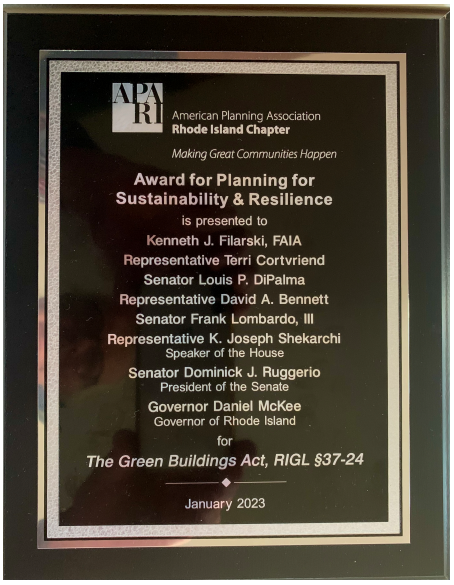
I am Kenneth J. Filarski, the founder and owner of a business that is proud to be in Rhode Island. I am a founder and Chair of the U.S. Green Building Council Rhode Island, a Chapter of the national U.S. Green Building Council, andthe Chair of the Rhode Island Green Buildings Advisory Committee established under RIGL 37-24-5. I am here today representing myself, the Rhode Island Green Buildings Advisory Committee, The U.S. Green Building Council Rhode Island (USGBC RI), and the firm of ***FILARSKI/****ARCHITECTURE+PLANNING+RESEARCH.* I am a Fellow of the American Institute of Architects and a LEED Fellow of the U.S. Green Building Council, one of only 41 professionals in the world from a 310,000+ membership in those two professional organizations. I am a Candidate for the national office of 2027 President-Elect / 2028 President of the American Institute of Architects. Additional professional credentials and qualifications are at the end of this document.

This is submitted in SUPPORT of S-2765 AN ACT RELATING TO PUBLIC PROPERTY AND WORKS - THE GREEN BUILDINGS ACT. (LC5539/1)

Paul Hawken, noted entrepreneur and environmentalist, **stated that the U.S. Green Building Council**, founded in 1993, ***"…may have had a greater impact than any other organization in the world on materials saved, toxins eliminated, greenhouse gases avoided and human health enhanced."***

• DISCUSSION - OVERVIEW

Rhode Island's historic Green Buildings Act, recognized nationally and globally, is aligned and integrated with Act On Climate RIGL 42-6.2, fully incorporating LEED with LEED for Neighborhood Development and SITES - The Sustainable SITES Initiative into the Act - including Green Globes and the Northeast Collaborative for High Performance Schools as originally intended and introduced in 2017. LEED, LEED-ND, and SITES fulfills the RIGL 37-24 statutory requirements for high performance green building standards for our public buildings, public structures, and the public real property of our cherished landscapes of lands and waters with a continuum and guiding framework of sustainability. Notably the American Planning Association/Rhode Island Chapter recognized the significance of The Green Buildings Act with their prestigious **APA/RI Award for Planning for Sustainability & Resilience.** To the best of knowledge this is the only time APA/RI has given an award for a legislative initiative.



S-2765 (LC500539) and the companion bill RI House H-7739 (LC004093) for The Green Buildings Act (GBA) represent the statutory solution to resolve the result of three driving and problematic factors which were not known until the period between the end of January, 2025 and September, 2025. The three factors are:

1. The separation of the Office of Energy Resources (OER) from the Department of Administration (DOA) resulted in a break in the statutory responsibility of a State agency to provide support for the implementation of the GBA and the GBAC.
2. The DOA stated that they had no staff capacity or technical expertise to provide support to the GBAC for implementation of the GBA.
3. State departments, State agencies, and municipalities are not following the GBA, and there is evidence that professionals are being discouraged to follow the GBA. There are exceptions including projects at the University of Rhode Island, and local schools designed and constructed to the North East Collaborative for High Performance Schools (NECHPS) standards which are part of the GBA.

After the January, 2025 meeting of the Green Buildings Advisory Committee (GBAC) numerous emails were sent to the Office of Energy Resources (OER) regarding follow up meetings of the GBAC and work products that were in process and required completion and implementation, including the promulgating the Rules and Regulations under the Administrative Procedure Act; Request for Proposal language for State agencies and Municipalities regarding the Green Buildings Act (GBA); GBA user guide narrative; process flow diagrams for the GBA; the GBAC Annual Report; GBAC agenda items and other GBAC matters. OER was the designated office by the Department of Administration (DOA) to provide the required support under provisions of The Green Buildings Act (GBA) RIGL 37-24.

OER became a separate State agency, from a programmatic and budget standpoint, during that time period following our January, 2025 GBAC meeting and June of 2025. The overall responsibility for administering the Green Buildings Act, by Statute, rests with DOA and the GBAC. As we are aware, DOA assigned staff and program support for the GBAC to OER, which OER provided. Because OER became a separate and discrete State agency, and no longer a part of DOA, OER did not provide program and staff support following our last GBAC meeting in January, 2025.

The GBA and the GBAC fell between the administrative cracks of the State bureaucracy. Unfortunately, we were not informed of this dynamic with respect to the change in State responsibilities to the GBA and for the GBAC. The GBAC became an orphan of the State. In further discussions with DOA, they stated DOA does not have the technical expertise or the staff levels in place to the support the GBAC given the absence of OER. During the period of time wherein the GBAC was "orphaned" it became clear that the State agencies and municipalities were not following the GBA, nor enforcing the GBA.

- **RAMIFICATIONS OF THE INTERRUPTION IN STATE DEPARTMENT RESPONSIBILITIES FOR THE GREEN BUILDINGS ACT**

1. The Green Buildings Advisory Committee is not able to fulfill their statutory responsibilities, and to continue its work.
2. The State and its municipalities are not fulfilling their statutory responsibilities, and not fulfilling the intent of the GBA legislative findings, with emphasis on § 37-24-2 (2)(3)(4)(5):

§ 37-24-2. Legislative findings.:

It is hereby found and declared as follows:

(1) Energy costs for public buildings and public projects are skyrocketing and will likely continue to increase.

(**2)** Energy use by public buildings and public projects contributes substantially to the problems of pollution and global warming.

(3) Public buildings, public structures, public real property and public projects can be built, renovated, and located using high-performance methods that save and generate energy; reduce and conserve water consumption; improve indoor air and environmental quality; improve water quality; reduce transportation demand and emissions; preserve the environment; make workers and students more productive; and improve the quality of our individual and shared human experience and environmental justice for all citizens of the state.

(4) The green buildings act is a strategic tool to achieve the greenhouse gas emission reduction targets and other of chapter 6.2 of title 42 (“2021 act on climate”) and the work of the executive climate change coordinating council established in § 42-6.2-1.

(5) This law is necessary to more efficiently spend public funds

3. It was learned that State agencies and divisions of State agencies, were pushing back on compliance with the GBA. State agency/department push back included pushing back on architects, retained for those projects, so as to discourage architects from including GBA compliance in their scope of services. Several architects have communicated those circumstances. I offered to be a bridge between the architects and the State agency/department. However those architects requested that I not do so as those architects felt there would resulting repercussions to them. These circumstances of State push back on architects trying to what is right, and what is statutorily required, runs against the grain of - the AIA Code of Ethics, Canon VI - Obligations to the Environment; State statutes; the Act on Climate; and the legislative findings of the GBA noted above.

4. The State conceivably lost potential savings in building design and construction costs, and long term operating and life cycle costs.

• S-2765 SOLVES THE ISSUES OF STATE DEPARTMENT STATUTORY RESPONSIBILITY DISCONNECTS AND THE NON-COMPLIANCE WITH THE GREEN BUILDINGS ACT

The key components of S-2765 are (but not limited to):

1. S-2765 expands and strengthens the Legislative Findings.

2. Expands and strengthens the high performance green building standards.

3. Expands and strengthens the Definitions.

4. There will be an "evergreen" Statutory "home" for The Green Buildings Act (GBA) and what is proposed to be named the Green Buildings Act Commission (GBAC) ,rather than the now Green Buildings Advisory Committee (also GBAC).

5. The new Statutory home will be the Office of the RI State Building Code Commissioner. In the event that there is another State agency reorganization which shifts the GBA and the GBAC home to another State agency, the GBAC will be able to continue fulfilling their Statutory responsibilities without having to require another statutory amendment, as is now the case, which is not respectful of the General Assembly's time and resources.

6. Renaming the Green Buildings Advisory Committee to be the Green Buildings Act Commission will have the authority to implement and enforce the GBA without Statutory reliance on a State agency other than for administrative and other support services stated in the bill.

7. The composition of the GBAC is reduced from 19 to 17, and includes planners and the Department of Health.

8. The appointing authorities appointment responsibilities are clarified.

9. The responsibilities and reporting of the GBAC are enhanced and stengthened.

10. The GBA, while mandatory but ignored, is now enforceable in that State and municipal projects are required to be registered and certified (which would also mean being in the process of being certified) in order to receive a Building Permit, § 128 Certification according to the RI State Building Code, and the Certificate of Occupancy.

11. The GBA would be incorporated into the RI State Building Code in accordance with § 23-27.3-100.4 Specialized Codes Incorporated.

• NATIONAL AND GLOBAL CONTEXT OF THE GREEN BUILDINGS ACT

Rhode Island is rich in history. The incorporation of LEED in The Green Buildings Act of 2009 is historic as Rhode Island became the first state in the nation to adopt LEED into public law. The 2017 amendments to The Green Buildings Act once again made history as Rhode Island became the first state to adopt LEED for Neighborhood Development (LEED-ND) and SITES - The Sustainable SITES Initiative into public law. Rhode Island has received, and continues to receive national and global recognition and praise for our historic Green Buildings Act legislation including being recognized at a USGBC Global Town Hall, national webinars, at the Plenary Session of USGBC's Greenbuild, the largest sustainability conference in the world, and at the global USGBC Live! event presentation *"Can ECOLOGY Drive Legislation?"* on June 10, 2021.

Three of many examples:

- ***USGBC+ Magazine Article***
  https://www.usgbc.org/articles/rhode-island-advances-green-building-policy
- ***Green Buildings Act USGBC National Blog***
  https://www.usgbc.org/articles/sites-and-leed-nd-added-rhode-island-green-buildings-act
- ***Rhode Island, The Green Buildings Act, and SITES***
  http://www.sustainablesites.org/ken-filarski%E2%80%99s-mission-incorporate-sites-rhode-island-policy

LEED plays a significant role mitigating climate change:

- ***The Role of LEED in Climate Change Mitigation***
  https://www.usgbc.org/articles/role-leed-climate-change-mitigation

• OVERVIEW OF THE S-2765 THE GREEN BUILDINGS ACT (Act) - from previous testimony submitted for 2022 S-2700

The S-2765 legislation for The Green Buildings Act (Act) i*s a winner all-around and builds on the intent and objectives of 2022 S-2700*

The approach of S-2765 is comprehensive and holistic, from the legislative findings, statutory references, through making it effective with strengthened and defined high performance green building standards, a consolidated and defined Green Buildings Act Com mission. We no longer have time to wait.

S-2765 continues to do the following. It:

- Contributes to, compliments, and supports the State's ACT ON CLIMATE, RIGL 42-6.2 statutory initiatives, climate change and greenhouse gas emission reductions, completing the circle of resilience and sustainability for our buildings, structures, and landscapes;
- Incorporates LEED for Neighborhood Development and SITES - The Sustainable SITES Initiative into Act as was originally intended in the 2017 amendments to The Green Buildings Act, completing the high performance green building standards required by the statute RIGL 37-24 for public buildings (LEED), public structures (LEED for Neighborhood Development), and public real property (SITES - The Sustainable SITES Initiative);
- Extrapolates and leverages the ecosystem services provided by our buildings, structures, and landscapes. It is again historic, truly re-affirming Rhode Island as a national leader;
- Enhances and expands the Legislative findings, further describing the positive outcomes of the Act including improving the quality of our shared human experience and environmental justice for all citizens;
- Adds the Act On Climate in the Legislative findings, the reporting requirements, and as a responsibility of the Green Buildings Advisory Committee;
- Links the required actions of the Act, and references the Act to the Act On Climate, the Resilient Rhode Island Act of 2014, the Executive Climate Change Coordinating Council (EC4), the Advisory Board and the Science & Technical Advisory Board to the EC4;
- States in the Legislative findings that The Green Buildings Act is a strategic tool for achieving the objective and targets of Act On Climate and the work of the Executive Climate Change Coordinating Council;
- Clarifies and corrects the definitions and names of LEED, SITES, and the U.S. Green Building Council in the Definitions

- Makes clear that the LEED, LEED-ND, and SITES equivalent standard is one that requires an independent, third party verification and certification of a rating system or measurement tool;
- Accepted equivalent standards are Green Globes and the Northeast Collaborative for High Performance Schools;
- Clarifies "Major facility project" as a "public facility" building project and as a "public facility" renovation project, and includes "Private major facility project" in the Definitions;
- States that "Private major facility projects" that receive any economic benefit from the State shall comply with LEED, LEED for Neighborhood Development, SITES, and other provisions of the Act;
- Expands, details, and makes specific and robust the reporting requirements on the Act to include energy, water and air quality, waste, transportation, the human experience, environmental justice, and greenhouse gas emission reductions;
- Requires compliance with the Act to receiving state funding for both public and private major facility projects similar to the protocols in place for compliance with the Northeast Collaborative for High Performance Schools (NE CHPS), one of the high-performance green building standards identified in the Act, as a requirement for school construction funding;
- Expands and strengthens the makeup, purpose, obligations, and term limits of the Green Buildings Advisory Committee;
- Includes representatives from cities and towns on the Green Buildings Advisory Committee;
- Defines the Governor, Speaker of the House, and the President of the Senate as the appointing authorities for the public members of the Green Buildings Advisory Committee;
- Defines the agency directors and chief executive officers of the respective public agencies as the appointing authorities for the public agency members of the Green Buildings Advisory Committee;
- Defines the parameters, responsibilities, and limitations, of the public members and the public agency members of the Green Buildings Advisory Committee;
- Requires comparative reporting of information and data regarding the performance of projects as to energy, water, transportation, waste, the quality of the human experience and environmental justice that is publicly available and readily accessible in print and digital media;
- Requires the State, public agencies, and political subdivisions thereof to clearly state the requirements of compliance with The Green Buildings Act in all requests for proposals, requests for qualifications, requests for bids, design/build services, et cetera, and the like;
- Uses terminology consistently;
- Overall clarifies definitions and terminology;
- Takes effect upon passage; *and more….*

• STRATEGIC AND CRITICAL IMPORTANCE OF GREEN BUILDINGS AND THEIR CONNECTEDNESS

According to the most recent **IPCC report** (Intergovernmental Panel on Climate Change) a “rapid and far-reaching” sustainable transition in land, energy, buildings, transport and cities is needed to meet global carbon reduction goals. **Buildings account for almost 40 percent of global energy-related CO2 and will play a major role in a sustainable transformation.**

• LEED SYSTEM GOALS - THE GOAL OF LEED IS TO CREATE BETTER BUILDINGS THAT:

- Reduce contribution to global climate change
- Enhance individual human health
- Protect and restore water resources
- Protect and enhance biodiversity and ecosystem services
- Promote sustainable and regenerative material cycles
- Enhance community quality of life

- **LEED is a holistic system that doesn’t simply focus on one element of a building such as energy, water or health, rather it looks at the big picture factoring in all of the critical elements that work together to create the best building possible.** In fact, 35% of the credits in LEED are related to climate change, 20% of the credits directly impact human health, 15% of the credits impact water resources, 10% of the credits affect biodiversity, 10% of the credits relate to the green economy, 5% of the credits impact community and 5% of the credits impact natural resources. In LEED v4.1, a majority of the LEED credits are related to operational and embodied carbon. Learn more.

• LEED BUILDINGS AND CARBON REDUCTION

LEED-certified buildings contribute to climate mitigation in several ways:

- **Use less energy and water**: When building projects are rewarded for deeper energy and water efficiency retrofits, there is an opportunity to reduce the consumption of fossil fuel and electricity. Similarly, LEED rewards reductions in water use and the "embodied carbon" used to produce, move and treat that water.
- **Consider life cycle impacts**: LEED encourages life cycle assessment (LCA) of building materials and products, and, in turn, whole buildings. Assessing alternatives based on life cycle GHG is a critical first step to selecting lower-impact approaches and providing market feedback.
- **Support sustainable strategie**s: Green buildings provide mechanisms to actively influence inhabitants in ways that support the climate. For example, buildings can create opportunities for more composting and reduced landfill waste and for alternative transportation.
- **Shrink carbon footprint**: LEED rewards thoughtful decisions about building location with credits that encourage connection with transit and amenities, as well as retention and creation of natural vegetated land areas and roofs.

LEED credit categories address topics such as reduction in energy use, connection with public transportation and the embodied energy associated with materials and water use.

- **Building operations energy use and source**: Credits in the **Energy and Atmosphere** category not only directly reduce energy use, but they also address systems that rely on carbon-based energy sources and award the use of low-carbon energy sources. LEED also targets the reduction of potent GHGs associated with refrigerants.
- **Renewables selection:** Credits in the **Energy and Atmosphere** category recognize the diverse contract mechanisms project teams use to procure renewable energy off-site and articulate a hierarchy for renewable energy generation and procurement that rewards selections that are high value. Establishing LEED criteria addressing the age of a renewable energy–generating asset helps to guide project team decision-making and direct investments toward increasing the supply of renewable energy on the grid (versus using existing renewable energy capacity where possible).
- **Transportation energy use**: Credits in the **Location and Transportation** category enable new buildings to improve land use patterns and position occupants to take advantage of public transportation, which contributes to a reduction of GHG emissions from single-passenger vehicles. **LEED for Neighborhood Development** integrates bulidings and land use patterns, providing efficient green infrastructure for water systems, transportation, natural landscapes, and people centered places.
- **Materials-embodied energy use**: **Materials and Resources** credits address a building's embodied carbon by targeting the energy use and processes required in the extraction, production, transportation, manufacturing, distribution and disposal of materials and products used throughout the entire life cycle of a building.
- **Water-embodied energy use and source**: **Water Efficiency** credits address the significant use of energy related to the treatment, processing and distribution of water by requiring a reduction of water used. Efficiencies that reduce the use of potable water, and replacing it when possible with non-potable water sources, will indirectly reduce energy use and help mitigate GHG emissions.
- **Green infrastructure and siting**: **Sustainable Sites** credits focus on the non-energy-related drivers of climate change, including land use changes, heat island effect and pollution through solutions such as green infrastructure and purposeful decisions on building location and siting. SITES embraces Ecosystem Services for carbon sequestration. SITES includes credits to Assess and Improve Site Carbon Performance. https://www.sustainablesites.org/sites/default/files/legal/SITES-PilotCredit-Carbon_0.pdf

• TANGIBLE BENEFITS OF LEED BUILDINGS

According to a 2018 assessment by the U.S. General Services Administration, its portfolio of high-performing buildings—many of them **LEED certified - used 23% less energy and 28% less water, and they generated 9% less landfill waste than GSA's legacy stock buildings. Each of these resources has associated GHG emissions, so reducing their use can shrink a building's total operational GHG footprint.**

A study from the University of California at Berkeley for the California Air Resources Board quantified the GHG reductions from non-energy categories for LEED-certified existing buildings in California. The study found that buildings **certified under LEED for Operations and Maintenance were associated with 50% less GHG emissions from water use, 48% less GHGs from solid waste and 5% less GHGs from transportation**.

Green buildings **reduce day-to-day costs year-over-year**. LEED buildings have reported almost 20 percent lower maintenance costs than typical commercial buildings, and green building retrofits typically decrease operation costs by almost 10 percent in just one year.

Green buildings help **reduce carbon, water, energy and waste.** The Department of Energy reviewed 22 LEED-certified buildings managed by the General Services Administration and saw CO2 emissions were 34 percent lower, they consumed 25 percent less energy and 11 percent less water, and diverted more than 80 million tons of waste from landfills.

The IPCC report calls for a reduction in energy demand and strong electrification of the building sector, as well as a shift to high-performance lighting, appliances and water heating equipment. LEED and Green buildings help building owners and managers, architects, developers and product manufacturers navigate this transition and verify performance.

According to the **EPA, heating and cooling accounts for about 43 percent of all energy use in the country,** which contributes to air pollution and generates the largest amounts of greenhouse gases. By improving energy efficiency, green buildings also help reduce indoor air pollutants related to serious health issues.

LEED projects are getting results across the board, scoring an average ENERGY STAR score of 89 points out of a possible 100. In a study of 7,100 certified construction projects, more than 90 percent were i**mproving energy performance by at least 10 percent.**

Buildings account for 12 percent of total water consumed in the U.S. while the average person uses 80-100 gallons of water per day. Water-efficiency efforts in green buildings help reduce water use and promote rainwater capture, as well as the use of non-potable sources. Standard building practices use and waste millions of tons of materials each year; green building uses fewer resources and minimizes waste.

LEED projects are responsible for diverting more than 80 million tons of waste from landfills, and by 2030 that number is expected to grow to 540 million tons.

• PRIORITIZING PEOPLE'S HEALTH AND WELL-BEING

USGBC public opinion research found that **almost a third of respondents have had direct, personal experience with bad health associated with poor environments or living situations. We spend about 90 percent of our time indoors and green buildings create spaces that promot**e health and comfort. Read about inspiring work from around the world in our Project Directory.

USGBC's research also showed that when it came to the **green building benefits that resonated the most, respondents said clean air and water and less exposure to toxins.** Hear from communities that are prioritizing health across buildings and spaces.

Green buildings **positively affect public health. Improving indoor air quality can reduce absenteeism and work hours affected by asthma, respiratory allergies, depression and stress and self-reported improvements in productivity.** USGBC's own research reinforces that employees in LEED green buildings feel happier, healthier and more productive.

A 2018 National Institute of Building Sciences (NBIS) study found that **each $1 spent on mitigation activities – such as strengthening buildings and improving drainage conditions – saves $6 in response and recovery costs.**

Green buildings promote resilience-enhancing designs, technologies, materials and methods. To support these efforts, green buildings promote the use of durable materials, thoughtful site selection, rainwater collection, demand response, grid islanding, energy efficiency, onsite renewable generation and more. Explore more resilience strategies at USGBC's Center for Resilience.

There is value in incorporating resilience into individual projects, but also on a larger scale. Pursuing resilience on a community or portfolio level can encourage greater collaboration among residents and property owners. **LEED for Neighborhood Development and SITES, LEED for Cities and LEED for Communities provides the tools needed to improve quality of life for people through resilience planning. Read some of the profiles of resilience.**

• BENEFITS OF LEED FOR NEIGHBORHOOD DEVELOPMENT (LEED-ND)

LEED-ND inspires better neighborhood planning and development in three areas:

SMART LOCATION AND LINKAGE: Locations with access to existing infrastructure and transit service leverage efficiencies in public contributions to infrastructure construction and maintenance. Protecting natural resources and sensitive lands ensures resilient ecological systems.

NEIGHBORHOOD PATTERN AND DESIGN: Compact, walkable, vibrant, mixed-use and mixed-income neighborhoods with good connections to nearby communities contribute to thriving local economies and create destinations where we can all live, work, play and learn.

GREEN INFRASTRUCTURE AND BUILDINGS: Building and infrastructure performance at the district scale reduces energy and water use, reuses materials, and minimizes waste.

There are many benefits to green neighborhood development practices and local governments play an essential role in promoting and incentivizing superior neighborhood planning and design. Below are some of the key benefits of integrating LEED ND into municipal planning processes.

The efficient use of land and resources reduces strain on public infrastructure and contributes to a robust tax base. A study from Smart Growth America shows that LEED-ND style development:

- Saves an average of 38 percent on up front costs for new infrastructure including roads, sewers and water lines.
- Saves municipalities an average of 10 percent on delivery of emergency services.
- Generates 10 times more tax revenue than conventional suburban development, on a per-acre basis.
- Only 35 percent of people who prefer to live in a walkable community actually do so. Spurring LEED ND development is a way to attract new renters, homeowners and local businesses.
- The rating system is composed of proven strategies that can help meet existing greenhouse gas emissions reduction targets.
- Locating projects in smart locations and employing proven urban design principles can help the bottom line of the local government and developer alike. But the benefits of green development extend well beyond the quantifiable energy, water, and fiscal savings outlined above to include equity and quality of life issues as well. LEED ND is founded on an inclusive, integrated planning and design process that delivers results for every member of the community.

• BENEFITS OF SITES - The Sustainable SITES Initiative

SITES - The Sustainable Sites Initiative is a program based on the understanding that land is a crucial component of the built environment and can be planned, designed, developed, and maintained to avoid, mitigate, and even reverse these detrimental impacts. **Sustainable landscapes create ecologically resilient communities** better able to withstand and recover from episodic floods, droughts, wildfires, and other catastrophic events. They benefit the environment, property owners, and local and regional communities and economies.

In contrast to buildings, **built landscapes and green infrastructure have the capacity to protect and even regenerate natural systems, thereby increasing the ecosystem services they provide**. These services are **the beneficial functions of healthy ecosystems** such as **sequestering carbon, filtering air and water, and regulating climate. Their economic value is highly significant**, yet the cost of replacing these functions is rarely reflected in conventional decision-making. For example, wetlands filter pollutants and provide protection against storm surges and flooding. When wetlands are lost to development, new and costly levees, pipes, and pollution-control technology must perform the functions those wetlands previously provided naturally. Nevertheless, estimates for a project's total cost or value typically include neither these subsequent expenses nor additional benefits such as wildlife habitat.

• BENEFITS OF SITES AND ECOSYSTEM SERVICES

Ecosystem services are goods and services of direct or indirect benefit to humans that are produced by ecosystem processes that involve the interactions of living elements, such as vegetation and soil organisms, and non-living elements such as bedrock, water, and air. The Sustainable Sites Initiative has consolidated the following list of ecosystem services that a sustainable site can protect or regenerate through sustainable land development and management practices.

Global climate regulation

- Maintaining balance of atmospheric gases at historic levels • Maintaining healthy air quality
- Sequestering carbon

Local climate regulation

- Regulating local temperature, precipitation, and humidity through shading, evapotranspiration, and windbreaks

Air and water cleansing

- Removing and reducing pollutants in air and water

Water supply retention

- Storing and conserving water within watersheds and aquifers

Erosion and sediment control

- Retaining soil within an ecosystem
- Preventing damage from erosion and siltation

Hazard mitigation

- Reducing vulnerability to damage from flooding, storm surge, wildfire, and drought

Pollination

- Providing for the reproduction of crops and other plants

Habitat functions

- Providing refuge and reproduction habitat to plants and animals, contributing to the conservation of biological and genetic diversity and evolutionary processes

Waste decomposition and treatment

- Breaking down waste • Cycling nutrients

Human health and well-being

- Enhancing physical, mental, and social well-being as a result of interaction with nature

Food and renewable non-food products

- Producing food, fuel, energy, medicine, or other products for human use

Cultural benefits

- Enhancing cultural, educational, aesthetic, and spiritual experiences as a result of interaction with nature

OPINION

R.I. can be green-building leader

KENNETH FILARSKI AND MIKE MCNALLY
GUEST COLUMN

Rhode Island may be the smallest state in the country, but it is creating big opportunities when it comes to developing sustainable infrastructure. Oftentimes the emphasis is placed on greening buildings, while landscapes and open spaces remain underutilized and overlooked. Yet sustainably designed and managed landscapes – from plazas and streetscapes to commercial and residential projects – create more resilient communities. The Environmental Protection Agency has estimated that capital cost savings associated with green infrastructure can range from 15-80 percent compared to traditional site infrastructure.

An amendment to the state's Green Buildings Act, H-5427, proposed by Rep. Christopher Blazejewski, D-Providence, would work to elevate the value of Rhode Island's land by formally adopting The Sustainable SITES Initiative framework, a comprehensive program for designing, developing and maintaining sustainable landscapes. It would also make Rhode Island the first state in the nation to adopt the comprehensive green rating system.

The amendment proposes that all state-owned, operated and funded property, beyond the built infrastructure already covered in the Act, achieve certification under the SITES rating system, which is currently used by the U.S. General Services Administration. Reaching certification through LEED for Neighborhood Development, which was engineered to help create better, more sustainable, well-connected neighborhoods, would also be an acceptable standard under the amendment.

For Rhode Island, green construction is big business. Currently, the state has more than 7.5 million square feet of real estate that is LEED (Leadership in Energy & Environmental Design) certified and is home to more than 400 LEED professionals. LEED is an internationally recognized green-building standard created, maintained and improved upon by the U.S. Green Building Council. The SITES rating system serves as a complement to LEED, extending the principles of sustainability beyond the physical building to landscapes, including parks, streetscapes, residential projects and more.

According to the 2015 Green Building Economic Impact Study by U.S. Green Building Council and Booz Allen Hamilton, from 2015-2018, green construction in the state will account for $2.14 billion in state GDP and support approximately 25,000 jobs.

This amendment would continue the outstanding work of the General Assembly in both the House and the Senate, including the January 2016 Rhode Island Senate's "Grow Green Jobs – A Legislative Action Plan." It would also increase demand for employment services, increasing the workforce, and providing economic-development opportunities.

For Rhode Island, **green construction is big business.**

SITES was developed through a collaborative, interdisciplinary effort of the American Society of Landscape Architects Fund, the Lady Bird Johnson Wildflower Center at the University of Texas at Austin and the U.S. Botanic Garden. The rating system takes a systematic approach to defining, measuring and elevating the value of landscapes, waterways and other forms of green infrastructure through sustainable best practices that help create more resilient communities that are better able to withstand and recover from catastrophic events, such as floods and wildfires, which cost states money and resources.

The GSA adopted SITES in the 2016 version of Facilities Standards for the Public Buildings Service, and stated that it "allows land-based projects to better protect ecosystems and enhance the mosaic of benefits they continuously provide our communities, such as climate regulation, carbon storage and flood mitigation."

Businesses, governments, universities and more are embracing sustainable landscapes and helping to create regenerative systems that foster resiliency and enable communities to better withstand and recover from catastrophic events.

By adopting best practices, projects can find cost-effective ways to conserve resources and promote human health and well-being. ■

Kenneth Filarski is founder of Filarski Architecture+Planning+Research and chairman of the U.S. Green Building Council Rhode Island. Mike McNally is chairman of the U.S. Green Building Council and retired president and CEO of Skanska USA.

• THE NEXT LEVEL OF CLIMATE REPAIR

LEED projects achieving the highest level of sustainability can now obtain an additional certification recognition with the **LEED Zero program, including LEED Zero Carbo**n, which recognizes buildings operating with net zero carbon emissions over 12 months. Carbon from energy consumption and occupant transportation is compared to carbon avoided due to renewable energy generation. Capturing data is a vital step in understanding what contributes to the carbon footprint of a building.

In addition to mitigation, adaptation of buildings to be more resilient is a critical piece of the work being done in green building. The **LEED Resilient Design pilot credits** were formulated to ensure that a design team is aware of and addresses risk and vulnerabilities in a project's design, including weaknesses to any natural and human-caused disasters, including those exacerbated by climate change.

Aiming even higher is a vision that will help us push the market beyond lessening the negative impact of buildings to reach a future that allows buildings, cities and communities to become vehicles of restoration and repair.

GREEN BUILDING + LEED ECONOMIC IMPACT BY THE NUMBERS IN

RHODE ISLAND

GREEN CONSTRUCTION IMPACTS

CONTRIBUTION TO GDP 2015-2018

$2.14 BILLION

JOBS 2015-2018

25,000

LABOR EARNINGS 2015-2018

$1.43 BILLION

LEED

CONTRIBUTION TO GDP 2015-2018

$570 MILLION

JOBS 2015-2018

7,000

LABOR EARNINGS 2015-2018

$390 MILLION

TAX REVENUE 2018

$9 MILLION

Source: 2015 *Green Building Economic Impact Study* – prepared by Booz Allen Hamilton (BAH) for the U.S. Green Building Council (USGBC)
For further information: USGBC State Market Briefs • GBIG Places

USGBC Statistics

Membership

- Over 10,000 individual members
- Nearly 8,000 national members
- More than 49 Platinum members

Education @USGBC

- More than 30 Education Partners
- Nearly 800,000 hours of content delivered
- More than 65,000 individual subscribers

Center for Green Schools

- 149 Green Apple Day of Service Projects
- Since 2012, Green Apple Day of Service has impacted more than 3,740,000 students and more than 1,300,000 volunteers
- LEED Lab operates 43 institutions out of 12 countries
- Over 2,400 students have participated in LEED Lab

LEED Projects Globally

- More than 2.6 million certified square feet per day
- 50 states with LEED Projects
- More than 180 countries and territories with LEED project**s**

Commercial + residential + neighborhood developments

- More than 106,000 total commercial projects registered and certified projects (excludes LEED: ND)
- More than 2,400 K-12 projects certified globally
- More than 2,100 K-12 projects registered globally
- More than 5,300 higher education projects certified globally; more than 5,100 higher education projects certified in the U.S.
- More than 3,500 higher education projects registered globally; more than 3,100 higher education projects registered in the U.S.

Federal + Tribal government

- More than 2,800 federal government projects certified
- More than 4,100 federal government projects registered

State government

- Nearly 1,165 state government projects certified
- More than 1,160 state government projects registered

Local government

- More than 3,600 local government projects certified
- More than 3,600 local government projects registered

Retail

- More than 8,500 retail stores certified
- More than 5,400 retail stores registered

Healthcare

- More than 1,450 healthcare projects certified
- More than 2,000 healthcare projects registered

Data Center

- More than 340 data center projects certified
- More than 370 data center projects registered

Warehouse and distribution

- More than 1,500 warehouse and distribution projects certified
- More than 1,540 warehouse and distribution projects registered

Industrial manufacturing

- More than 1,700 industrial manufacturing projects certified
- More than 2,270 industrial manufacturing projects registered

Military

- More than 670 military base projects certified
- Nearly 1,000 military base projects registered

LEED credentials globally

- More than 236,000 total LEED credentials
- More than 23 billion total commercial square feet registered and certified (excludes ND)
- More than 52,000 certified commercial projects
- More than 9 billion certified commercial square feet
- More than 865 million certified commercial square meters
- More than 1.6 million registered and certified residential units
- More than 590,000 certified residential units

Cities and communities

- More than 190 registered cities and communities, representing 65 million people
- The first city to certify through LEED for Cities was Washington, D.C.
- The first community to certify through LEED for Communities was Arlington County, VA

We welcome your support for S-2765 of The Green Buildings Act, and how collaboratively, we can best move this legislative proposal forward, intelligently and expeditiously, to successful passage.

Again we thank you the Rhode Island House Committee on Environment and Natural Resource and the Sponsors of this legislation for your time and attention to this historic opportunity for the State of Rhode Island.

Sincerely,

Kenneth J. Filarski FAIA, LEED FELLOW, LEED AP BD+C, SITES AP, AICP, CFM, SAP+AEER, NCARB

FILARSKI*ARCHITECTURE+PLANNING+RESEARCH*

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Laurentia Bioregion

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Chair, U.S. Green Building Council Rhode Island

Fellow, The American Institute of Architects
LEED Fellow, U.S. Green Building Council
Chair, U.S. Green Building Council Rhode Island
Vice Chair, USGBC LEED Location + Planning Technical Advisory Group
USGBC LEED Technical Committee
USGBC Faculty, LEED, SITES
Co-Chair, National Disaster Assistance Committee, American Institute of Architects
Richard Upjohn Fellow, American Institute of Architects
Morse Stone Fellow, American Institute of Architects Rhode Island
AIA State Disaster Assistance Coordinator, Rhode Island
President and Founder, Rhode Island Architects and Engineers Emergency Response Task Force 7
Advisory Board, Rhode Island Executive Climate Change Coordinating Council
Vice Chair, Rhode Island Floodplain Management Association
Vice Chair, Rhode Island Ratepayers Advisory Board
Executive Committee, Providence Cranston Workforce Development Board
Commissioner, Rhode Island State Building Code Standards Committee

innovation and excellence in design and planning
creating a working landscape of

ecology

directed toward social responsibility and stewardship, lifelong learning,
sustainable and renewable environments, appropriate technology and economics,
in our urban, rural, coastal, and corporate communities

Kenneth J. Filarski FAIA, LEED FELLOW, LEED AP BD+C, SITES AP, AICP, CFM, SAP+AEER, NCARB

Ken is Principal and Founder of ***FILARSKI/****ARCHITECTURE+PLANNING+RESEARCH* is an integrated architecture and planning, ecology design studio and research workshop, recognized with national, regional, and state awards for his work in architecture and planning, including the *"Building Value Into Housing"* national award for his innovative, affordable and energy efficient housing design from the U.S. Department of Housing and Urban Development. The firm's practice is *dedicated to excellence in design and planning creating our working landscape of ecology directed toward social responsibility and stewardship, lifelong learning, sustainable and renewable environments, and appropriate technology and economics in our urban, rural, coastal, and corporate communities.* Ken was a Graduate Teaching Fellow in the innovative and renown Design & Construction Program at Goddard College, designing and building the college's buildings, receiving a Master of Arts Degree in Architecture and Environmental Design. His Master's Degree Thesis, *"The Design of Logic/The Logic of Design"* demonstrated the parallels and congruency of cognitive development in children with the creativity thinking of the design process and design itself. The thesis demonstrated the integration of design and ecology.

Holistic and multi-disciplinary in mindset and design, Ken is a Fellow of the American Institute of Architects and a LEED Fellow of the U.S. Green Building Council, being one of a very few professionals in the world honored and recognized with these prestigious dual Fellowships. In addition to being an AIA Fellow and a LEED Fellow, his multidisciplinary credentials include being a LEED Accredited Professional with specialty in Building Design and Construction, one of the very first SITES Accredited Professionals in the world, an AICP Certified Planner, and a Certified Flood Plain Manager. Ken is also nationally certified by the State of California Office of Emergency Services (Cal-OES) as a Disaster Assistance Trainer, Disaster Responder, and as a Disaster Train the Trainer. Founder and President of the RI Architects and Engineers Emergency Response Task Force 7, they were deployed in Superstorm Sandy, receiving a National Service Award from the AIA, and proclamations from the communities they served in the disasters. Ken served on the ASCE 24-05 and 24-14 Committees co-authoring the ASCE *"Flood Resistant Design and Construction"* code publications.

Ken is 2021, 2022 Co-Chair, and member since 2020 of the American Institute of Architects Disaster Assistance Committee developing local and national AIA response to disaster events and the COVID-19 pandemic. Ken is the AIA Disaster Assistance Coordinator for the State of Rhode Island and the New England Region. He is a co-author of the AIA *"Re-occupancy Assessment Tool V1.0, V2.0, V3.0"* addressing COVID-19 and other COVID-19 response guidelines including the *"Re-opening America"* series. Ken collaborated with the USGBC to adopt the *"Tool"* as the foundation for one of the initial *LEED Safety First Pilot Credits.* He also co-authored and shepherded the publication of the heralded *AIA Disaster Assistance Handbook, 4th edition*. Ken served on the American Institute of Architects Board of Directors, is an AIA Richard Upjohn Fellow, and Chaired three national AIA Committees: the Component Resources Committee, publishing *The Component Operations Manual*; the Public Education Committee; and the Environmental Education Committee co-authoring the award winning *Learning By Design Program* and the *Sourcebook* a compendium of architectural and environmental education programs. Walter Wagner FAIA, editor of Architectural Record praised his Committee's work in two key 1982 editorials: *"On getting more of the public to care about good design"* and "*AIA's new Sourcebook - the most effective tool yet for encouraging public education in architecture"*. His work in early design education reached all the 4th to 6th grades in the Providence schools with the *City Spirit* program. In Charlestown, RI his *Yesterday/Today/Tomorrow* program joined the school children planning and designing the Town with their families, culminating in a six month exhibit, instrumental in preventing a nuclear plant being built.

A three time President of AIA Rhode Island, Ken is also a founder and Chair of the U.S. Green Building Council RI. He co-authored the historic original Rhode Island Green Buildings Act with RI being the first state incorporating LEED into public law. Ken then authored and was responsible for the historic amendments to the Green Buildings Act wherein LEED for Neighborhood Development, and SITES - The Sustainable Sites Initiative became public law, Rhode Island being the only State to do so. LEED, LEED for Neighborhood Development and SITES now form a continuum of sustainability for Rhode Island's "public buildings", "public structures", and "public real property" as called for in the law. Ken chaired the USGBC Upper Northeast Regional Committee, and created the highly acclaimed *"Doing the Extraordinary"* Regional Summit series. He is Vice Chair of the USGBC LEED Location + Planning Technical Advisory Group, serves on the LEED Technical Committee, and served on the LEED Fellow Evaluation Committee. Ken is a founding faculty member of the Roger Williams University School of Architecture, Art, and Historic Preservation.

Always, and very active in public service, Ken serves on the Advisory Board for the Executive Climate Change Coordinating Council for the State of Rhode Island charged with developing policies and the action plan to achieve net zero in the State by 2050 in accordance with the Act On Climate statute. He is a member of the Executive Committee of the Providence/Cranston Workforce Development Board. He is Vice Chair of the RI Ratepayers Advisory Board; Vice Chair of the Board of Directors of the RI Floodplain Managers Association; served as Vice President and Treasurer of the Environmental Council of Rhode Island; Co-Chair of EnergizeRI authoring carbon dividend legislation; and the RI Green Infrastructure Coalition.

Honored by Clean Water Action as their prestigious Environmental Advocate of the Year in 2018, the award marked the only time the honor was given to a person in the design or construction community in the now 22 years of the awards. In 2019 Ken was honored as one of 25 Rhode Island's prestigious "Leaders and Achievers", the only architect so honored. He has presented his design work and LEED, LEED for Neighborhood Development, SITES, the *"Re-occupancy Assessment Tool"*, *"The Disaster Assistance Handbook"*, and his legislative successes at national conferences, conventions, and global forums of the American Institute of Architects, the American Society of Landscape Architects, the U.S. Green Building Council, and the Association of State Flood Plain Managers, in addition to presentations across the country to numerous regional and state organizations.