

22 March 2022

Chairman Pinsky  
2 West  
Miller Senate Office Building  
Annapolis, Maryland 21401

Re: Letter of Support for HB 0043  
Department of General Services – Energy Conserving Standards (Maryland Sustainable Buildings Act of 2022).

Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,

I am writing to voice AIA Maryland's support of House Bill 0043. AIA Maryland represents nearly 2,000 architects in the state of Maryland and advocates for the profession and the quality of the built environment. As we work to be good stewards of the built environment, we are equally cognizant of the natural environment that we interact with and we aim to minimize our impact on the natural world. This bill's primary purpose is clearly to reduce the number of bird strikes on buildings and we believe this bill takes practical measures that can help reduce the likelihood of these collisions from happening. This issue is particularly important in Maryland where we are on the Atlantic flyway, a heavily traveled path for migratory birds.

Member firms from our state chapter have tested the tool this bill implements, LEED Sustainable Sites pilot credit 55 on a couple of new 2-story sample projects. The process required for both projects only required a little extra design time. The process enables sufficient flexibility to be able to meet the design criteria without any undue hardship and we do not expect it would have any significant project cost impact. We also acknowledge that there may be energy reduction through window criteria, screening and opacity of materials that may reduce heat gain on buildings in addition to limiting night-time illumination of interior glass-enclosed spaces and exterior lighting. Based on the testing of projects that were completed, we believe such accommodations can be made on new designs, or when existing buildings are being substantially renovated. In either case, the building skins and systems can be designed to respond to the proposed criteria.

Maryland is not acting alone in adopting guidelines like these. Given our geophysical presence along the coast and the Chesapeake Bay, it is particularly important to provide an accommodating migratory path for birds. Other states and jurisdictions have already enacted regulations similar to this bill, those include the state of Minnesota, New York City, San Francisco, Oakland, Chicago, Toronto and others. Howard County passed a law through county council, requiring mandatory bird safe design as a part of the County Green Building standards. Building codes continue to move toward developing buildings with a more efficient building envelope and the bird friendly criteria can be incorporated into the design parameters. Studies have shown that by implementing bird friendly design parameters, bird collision deaths can be reduced by up to 90 percent.

AIA Maryland  
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Annapolis, MD 21401

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We recommend that the regulations be incorporated in the Maryland Green Building Council's program requirements documents so they are in a location where design professionals will reference criteria they need to meet. Starting with these measures early in the design process enables the design team to incorporate elements in the building design from the beginning where they may have limited to no effect on building cost.

AIA Maryland cares deeply about the quality of Maryland's natural and built environment. Sensible measures that diminish the impact of our built environment on the natural world are valuable to all of us. We therefore respectfully ask your committee to vote in favor of HB 0043 that provides thoughtful, responsible paths to birdfriendly design and may provide some added benefits of diminishing energy use.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Parts', with a long horizontal line extending to the right from the end of the signature.

Chris Parts, AIA  
Director, Past President, AIA Maryland

AIA Maryland Board of Directors



## **HB43 – Department of General Services – Energy-Conserving Standards (Maryland Sustainable Buildings Act of 2022)**

**Testimony before**

**Education, Health, and Environmental Affairs Committee**

**March 22, 2022**

**Position: Favorable**

Madame Chair, Madame Vice Chair and members of the committee, my name is Richard Deutschmann, and I represent the 750+ members of Indivisible Howard County. We are providing written testimony today in **support of HB43**, to increase energy efficiency in State buildings while protecting a bio-diverse bird population. Indivisible Howard County is an active member of the Maryland Legislative Coalition (with 30,000+ members).

This bill will require state of Maryland, for any buildings constructed, renovated, or acquired, to apply more stringent energy efficient standards, principally by utilizing bird-safe design. HB43 follows Howard County CB11-2020, which passed in 2020 and was signed into law by the County Executive. It also follows other states like New York, which has passed similar legislation with much success. Besides the obvious benefits of building more energy efficient structures and the associated positive effects to our contribution to climate change, this bill will reduce bird collisions with buildings, improve biodiversity, and support eco-tourism in the state.

Thank you for your consideration of this important legislation.

**We respectfully urge a favorable report.**

Richard Deutschmann  
Columbia, MD 21045

Larry Hogan  
Governor

Boyd K. Rutherford  
Lt Governor



Ellington E. Churchill, Jr.  
Secretary

Nelson E. Reichart  
Deputy Secretary

OFFICE OF DESIGN, CONSTRUCTION & ENERGY

**BILL:** **House Bill 43**  
Department of General Services – Energy-Conserving Standards  
(Maryland Sustainable Buildings Act of 2022)

**COMMITTEE:** Education, Health, and Environmental Affairs  
Senate

**DATE:** March 22, 2022

**POSITION:** Letter of Information

Upon review of House Bill 43 – Department of General Services – Energy-Conserving Standards, the Department of General Services (DGS) provides these comments for informational purposes. The bill would require DGS to establish guidelines to minimize adverse impacts to birds on State buildings constructed, substantially altered, or acquired by DGS, to the extent practicable. House Bill 43 requires lighting to be reduced in existing buildings to the extent practicable. A few State buildings would have to implement this, by using automatic control technologies. The requirement to reduce lighting on existing buildings may cause a significant cost, however this is left to DGS to determine the appropriateness and could be included when lighting projects are considered at existing facilities.

For additional information, contact Ellen Robertson at 410-260-2908.



Testimony of  
Anne Lewis, FAIA  
President, City Wildlife, Inc.  
in support of the  
Maryland Sustainable Buildings Act of 2022 - HB 43  
MD General Assembly  
March 22, 2022

Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,

**City Wildlife is pleased to have this opportunity to support passage of the Maryland Sustainable Buildings Act of 2022.** As a non-profit organization in the District of Columbia, our mission is to protect wildlife and wildlife habitat in our region. We run the District's *Lights Out DC* program, which documents bird/glass collisions in downtown DC. **Since 2010, our we have documented more than 3,700 bird strikes in a small downtown area, 84% of which were fatal.** After picking up the dead birds, we then photograph them and donate their carcasses to the Smithsonian Migratory Bird Center for research. **But our goal is not to provide dead birds for research, but to prevent live ones from dying.**



annual bird collision count City Wildlife, Inc.  
Washington, DC

Part of an

The birds we find are almost all neo-tropical migrants -- beautiful birds -- many of whose populations are in serious decline. In fact, since 1970, North America has lost 29% of its birds, and bird/glass collisions are one of the most significant sources of fatality for these valued and dwindling species. **Nationally, up to one billion birds are killed each year by colliding with glass.**

**These strikes take a human toll, too.** Several years ago at a DC elementary school, 53 Cedar Waxwings collided with glass along a corridor over a period of several days during their spring migration. The teachers said the children were so traumatized that they had to be kept away from the corridor because it upset them too much to see the birds hitting the glass and dying on the ground. Many adults, too, have described how disturbing it is to see a bird hit a window -- an all-too-common experience that can disrupt a work environment.

**The techniques to prevent these collisions are now well-known. There are simple and effective means of reducing bird/glass collisions through design, and -- especially if included during the initial construction phase - - need not add any additional cost to the project.**

**Many jurisdictions have now passed laws mandating bird-safe design**, including New York City, San Francisco, Portland, Toronto, the states of Illinois and Minnesota, and others. Locally, the District of Columbia has added two optional bird-safe building credits to its Green Construction Code, and Howard County passed bird-safe legislation in 2020. In addition, the US House of Representatives has passed a law requiring all GSA's federal buildings to be bird-safe.

**Bird Safe design is effective.** In 2016, one of DC's problem buildings, the Washington Convention Center, installed bird-safe film at its L Street glass overpass, a feature that was killing many birds. The results have been dramatic: to date, we have seen an 85% reduction in bird strikes at this overpass. What's more, the film is nearly invisible. But it is always less expensive to construct a bird-safe building at the outset than to retrofit one.

**In addition to reducing collisions, bird-safe measures can significantly reduce energy costs.** The DC Court of Appeals, which now dims its atrium lights during migratory seasons, has reduced its atrium lighting costs by 15%. And the Thurgood Marshall Judiciary Building now dims its atrium lights at night all year, for a lighting cost reduction of 28%. **Many buildings will find that dimming the lights all year can produce substantial savings with no loss of safety or functionality. And bird-safe glass design can also reduce heating and cooling costs.**

We are thrilled that Maryland is considering this legislation and strongly support its passage. Establishing requirements for state owned or operated buildings will be highly effective, setting an important and highly visible standard for private construction to follow.

I am pleased to have been able to write in support of this legislation and would be glad to provide any information that might be helpful about our bird-collision data or experiences.

Respectfully submitted,  
Anne Lewis, FAIA  
President, City Wildlife, Inc.  
3400 Reservoir Road NW Washington,  
DC 20007 [anne.lewis@citywildlife.org](mailto:anne.lewis@citywildlife.org)

**March 22, 2022**

**Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,**

**HB0043, Energy-Conserving Standard, Maryland Sustainable Buildings Act of 2022**

**One billion birds die in the U.S. every year** colliding with transparent or reflective building glass (and the number of glass-dominated buildings is growing exponentially)

- People walk into glass when they don't see the frame; birds never recognize a frame
- Nearly all species are affected; even the best and brightest birds collide and die
- Declining populations of migratory songbirds are significantly attributable to this unsustainable loss
- Birds are both an ecological mainstay and an economic driver through factors such as pest control
- Maryland receives \$333 million in revenue from bird watching each year)

Building design and treated glass are an existing solution

- Flight tunnel tests have demonstrated the degree of safety provided by different kinds of glass
- Green Business Council LEED program has codified a bird-friendly building pilot credit 55
- Building façade, screens, and shades work
- Glass with UV or visible patterns of narrow lines or dots in 2x4" arrangement work
- Bird-friendly design is generally cost neutral at the design phase
- Bird-friendly designs and glass are energy efficient and saves dollars over time

Bird Safe Building designs and retrofits are already being implemented

- Many beautiful glass buildings are bird friendly such as Anchorage Museum and the Inuit Headquarters in Mountainview CA
- Expansive Jacob Javits Conference Center in NYC was retrofitted to be bird friendly and has reduced bird deaths by 90% and energy consumption by 25%
- Locally the Maryland DNR Tawes Building, National Aquarium, universities, nature centers and others are retrofitting their glass to be bird friendly

Bird Safe Building laws are already being implemented

- States of Illinois (2021) and Minnesota (2013) have mandatory bird safe building laws and Howard County MD passed a comprehensive law in July 2020
- Mandatory laws are also in place in New York City, San Francisco, Oakland, Toronto, Ontario Province, and many other cities in US and Canada, with voluntary laws in other places
- Federal General Services Administration has instituted bird-safe standards, following passage in US House of a bi-partisan bill Bird-Safe Buildings Act earlier

March 22, 2022

Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,

My name is Benjamin Gantz, I am representing the Audubon Society of Central Maryland and testifying as a volunteer with the Phoenix Wildlife Center and speaking in favor of passing bill HB0043 – Department of General Services – Energy – Conserving Standards (Maryland Sustainable Buildings Act of 2022). This bill would require new Leadership in Energy and Environmental Design (LEED) buildings in the state to implement specified bird friendly design features to prevent window collisions. I am a board member of Audubon Society of Central Maryland, which is a 501 (c)3 non-profit organization with members throughout Howard, Frederick, and Carroll counties in Maryland. Window collisions are a leading factor in the decline of North American bird populations. Birds have numerous benefits to both the environment and economy. A few of their important services include pest control, seed dispersal, and providing opportunities for outdoor recreation. Birds are also an important part of tourism in the state. The diversity of unique species found across Maryland's geography draws in birders and photographers.

I have been very fortunate in being able to volunteer with the Phoenix Wildlife Center, which is also a 501 (c)3 non-profit based in Baltimore County dedicated to the rehabilitation and release of Maryland's wildlife. We receive a wide variety of wildlife species throughout the year that need help from different situations. One issue in particular, window collisions, is responsible for a large majority of the birds brought in. This problem is at its highest during Spring and Fall migration, when birds are making their way from wintering grounds to their summer breeding sites. Many of the birds we receive during these times are found in Baltimore City. Volunteers with an organization called Lights out Baltimore (LOB) walk around the city regularly, picking up any birds that fall victim to window collisions. Unfortunately, many are killed. Those that aren't are brought in to the wildlife center where they are treated appropriately.

During Spring and Fall, downed birds are put into brown paper bags for transport and to help them recover. It is not uncommon to see these bags filling incubators in the clinic. Although these birds are alive, not all of them can be saved. Their injuries from the collision are too severe. Many of them can be released, but are injured and require treatment. One of the most common injuries is brain trauma, and the birds must be medicated properly to heal them. Many of the birds only suffer from shock and after being allowed to stabilize and rest in the bag for several hours, they can be released. Some of the migratory bird species that we receive include American Redstarts, Common Yellowthroats, Ovenbirds, and American Woodcocks. Some species suffer from higher mortality from window collisions than others. Woodcocks are an example. This species is also one of the more common brought to us, and at times many have come in within just a few days. I remember at one point, in less than a weeks' time, around 10 individuals were brought to us.

Although the majority of window-struck birds brought to us are from Baltimore City during migration, we also receive calls from people who have had birds hit their window from many other places throughout the year. Window collisions occur throughout the state and are more likely to occur in urban areas with large buildings. However, they can also occur in less populated areas. Passing bill HB0043 would save the lives of many birds by preventing them from colliding with windows of new LEED buildings. This would be especially important for migratory birds making their way through Maryland, and it would also make a difference for our resident bird species. Not only would the window design standards in HB0043 benefit birds, they would also increase the cooling efficiency of the buildings during summer. Since window collisions are a major contributor to bird declines, passing this bill would make a big difference. Different places in Maryland, such as Howard County have already retrofitted certain buildings to make them bird friendly, and there are new buildings planned that will also eliminate the risk of window collisions. Passing HB0043 would further protect our birds. I ask that you support bill HB0043 – Department of General Services – Energy – Conserving Standards (Maryland Sustainable Buildings Act of 2022).

Thank you,

Benjamin Gantz





*Bringing back the birds*

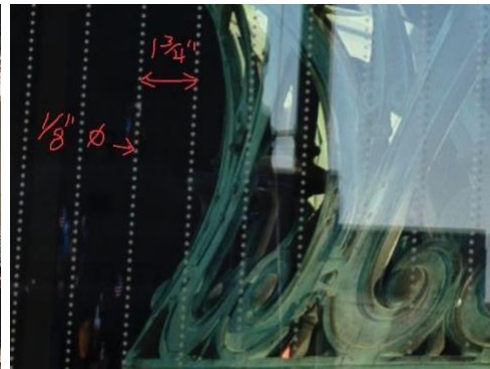
March 22, 2022

Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,

I'm Doctor Christine Sheppard, director of American Bird Conservancy's Glass Collisions Program. Thank you for allowing me to contribute my testimony. I've been working on this issue for over 20 years. People have been designing bird-friendly buildings as long as they have been building structures – it is only recently that the expanded use of glass has begun to threaten the existence of birds, with hundreds of millions of fatal collisions every year. Luckily, it is possible to retain the advantages of glass, providing clarity of view, insulation and structure, while significantly reducing the risk of collisions by birds. For humans, this is self-serving – birds provide billions of dollars to us in services we often don't notice, bringing seeds so that habitat can regrow after fires, eating insects that can spread diseases, or ruin our crops and forests. Birdfriendly design should not be considered an extra or an add on. It uses the same strategies and materials used to control heat and glare, so there is usually no incremental cost. Almost any style of architecture can be safe for birds, using well tested techniques. Two examples are shown below. New York City Local Law 15, in effect as of January 11, 2021, requires bird-friendly design for all new structures and major retrofits in all five boroughs. I hope that Maryland will become only the second state to pass legislation requiring bird-friendly design.



Statue of Liberty Museum, NYC



Museum glass close up, with vertical lines



Intuit Headquarters, Mountainview, CA



Interior view of glass with horizontal stripes

ABC is a 501(c)(3), non-profit organization dedicated to the conservation of wild native birds and their habitats throughout the Americas. Founded in 1994, ABC has long been a leader in Partners in Flight and the North American Bird Conservation Initiative, and is the only U.S.-based group dedicated solely to overcoming the greatest threats facing native birds in the Western Hemisphere. ABC is also the leading force in ongoing efforts to protect birds from collisions with the only national bird collisions program. 4301 Connecticut Avenue, N.W., Suite 451 ● Washington, D.C. 20008

March 22, 2022

**Energy-Conserving Standards (Maryland Sustainable Buildings Act of 2022) – HB0043**

TESTIMONY OF DR. MARK SOUTHERLAND -- SUPPORT

Dear Chairman Pinsky, Vice-chair Kagan, and Committee Members,

I am a professional ecologist who has served on the boards of Maryland Academy of Sciences' Science Council, Maryland Water Monitoring Council, Howard County Environmental Sustainability Board, Howard County Conservancy, Patapsco Heritage Greenway, and Safe Skies Maryland.

Two events brought me to conceiving and advocating for this bill:

1. Glass Buildings as Energy Sinks. As a scientist working in the fields of energy conservation and green buildings, I was struck by the exponential growth of buildings with extensive glass facades. I realized that these majority glass buildings would be an energy sink and erode the energy conservation gains from decades of green building policies. While the extensive use of glass was originally considered green, because it reduced the need for artificial lighting, technological advances in LED lighting meant that the heat gain from windows and the need for additional air conditioning far outweighed the benefits. If future building was dominated by extensive glass facades, then we were setting up society for increasing energy costs and greenhouse gas emissions for decades.

2. Glass Buildings as Killers of Birds. As a consultant to Maryland DNR on the licensing of windpower turbines, I learned that, while we could avoid major bird mortality at windpower turbines (with proper lighting and siting), building glass was a thousand times much larger killer of birds. Then I witnessed the construction of the first of several new large glass buildings being built in Downtown Columbia and realized that we were creating a deathtrap for birds migrating through our community. I realized that, as the number of glass buildings statewide and nationwide was growing rapidly, bird deaths from building collisions was about to become much worse. Then, in September 2019, scientists reported that we have lost 29% of all birds in North America since 1970, confirming the dire state of this treasured resource.

Win-Win Solution. Most importantly, I learned that both problems were easily solvable. The building standards embodied in this bill would both conserve energy and reduce bird mortality by 90%. So, I was compelled to act and, working with Senator Guzzone and others, began efforts to solve this problem at the local and state level.

I leave it to the national expert, Dr. Chris Shepard, and others to provide the technical details, but here is a summary of the problem and the solution:

**This is an important problem with existing solutions and a diverse concerned citizenry**

1. The number of majority glass buildings is increasing exponentially, setting up society for long-term energy costs as building envelopes will be in place or at least 50 years.

- There are no daylighting or energy benefits with window-to-wall ratios over 60 percent, and in most cases an area of 25-40 percent is optimum, i.e., lowest energy consumption
- When glass treated to be bird friendly is used, energy loss is much reduced

2. 1 billion birds die in the U.S. every year colliding with transparent or reflective building glass (and the number of glass-dominated buildings is growing exponentially)
  - People walk into glass when they don't see the frame; birds never recognize a frame
  - Nearly all species are affected; even the best and brightest birds collide and die
  - Declining populations of migratory songbirds are significantly attributable to this unsustainable loss
  - Birds are both an ecological mainstay and an economic driver through factors such as pest control and tourism (Maryland receives \$333 million in revenue from bird watching each year)
3. Building design and treated glass are an existing solution
  - Flight tunnel tests have demonstrated the degree of safety provided by different kinds of glass
  - Green Business Council LEED program has codified a bird-friendly building pilot credit 55
  - Building façade, screens, and shades work
  - Glass with UV or visible patterns of narrow lines or dots in 2x4" arrangement work
  - Bird-friendly design is generally cost neutral at the design phase
  - Bird-friendly designs and glass are energy efficient and saves dollars over time
4. Bird Safe Building designs and retrofits are being implemented
  - Many beautiful glass buildings are bird friendly such as Anchorage Museum and the Inuit Headquarters in Mountainview CA
  - Expansive Jacob Javits Conference Center in NYC was retrofitted to be bird friendly and has reduced bird deaths by 90% and energy consumption by 25%
  - Locally the Maryland DNR Tawes Building, National Aquarium, universities, nature centers and others are retrofitting their glass to be bird friendly
5. Bird Safe Building laws are being implemented
  - States of Illinois (2021) and Minnesota (2013) have mandatory bird safe building laws and Howard County MD passed a comprehensive law in July 2020
  - Mandatory laws are also in place in New York City, San Francisco, Oakland, Toronto, Ontario Province, and many other cities in US and Canada, with voluntary laws in other places
  - Federal General Services Administration has instituted bird-safe standards, following passage in US House of a bi-partisan bill Bird-Safe Buildings Act earlier

**Maryland has a chance to act locally to save money, fight climate change, and reduce the unsustainable deaths of economically important birds. Waiting even one year will see more glass buildings built and more money lost, more greenhouse gas emissions, and more birds dying.**