

# AviProtek<sup>®</sup>

Bird Friendly Acid-etched Glass

## effectiveness

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## Aviprotek® Bird Friendly Acid-etched Glass

## The Effectiveness of AviProtek<sup>®</sup> Bird–Friendly Glass

## Principles of Bird Deterrence

Bird collisions against building glass facades are a major cause of bird mortality, claiming the lives of up to a billion birds each year. The magnitude of the problem is such that an important trend has emerged across North America to make buildings safer for birds.

Municipalities, states and provinces are proactively adopting bird deterrence legislation. San Francisco's Standards for Bird-Safe Buildings and the California Coastal Commission lead the way in bird deterrence regulations on the West Coast. Further east, Toronto's Green Standard and New York City's Local Law 15 are influential voices in bird-friendly building legislation.

Thought leaders including The National Glass Association (NGA), the Canadian Standard Association, and ornithologists like Dr. Daniel Klem agree that visual markers on the first surface of a glazing unit provide the best protection against bird collisions. The CSA A460 standard requires first-surface treatment, while the NGA's updated Bird-Friendly Glazing Design Guide recommends first-surface markers as the most reliable method for all weather conditions.

## **Bird Deterrent Buildings**

One of the most asked questions is: Does it really work? Yes, it does.

The following examples provide information on real projects with a variety of performance requirements. Read on to see how effective AviProtek<sup>®</sup> acid-etched bird deterrent patterns on surface 1 can be.





## Aviprotek® Bird Friendly Acid-etched Glass

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## Berks Nature, The Nature Place

Location: Reading, PA Date of construction: 2017 Collision(s) since installation: 0 (as of August 2024)

Berks Nature is an organization that cares about land preservation, water protection, trail management, community gardens, and the state of the environment. The Nature Place is equipped with AviProtek<sup>®</sup> bird-safe glass with visual markers on the exterior surface to minimize the risk of collisions.

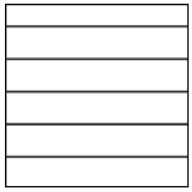


Kim Murphy, President of Berks Nature, describes the site's birdfriendly glass as an educational talking point that staff make sure to highlight during tours. It's so subtle that visitors often miss the bird-safe pattern at first. Murphy explains, "**It's almost like they didn't even see it until we pointed it out**."

 Kim Murphy, President of Berks Nature

#### **Glass Specs**

- AviProtek<sup>®</sup> E energy-efficient bird-friendly glass
  - 6mm Starphire Ultra-Clear<sup>®</sup> glass
  - Custom pattern (horizontal stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 30
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 60 on surface 2
  - SHGC: 0.41
  - VLT: 74%



Custom linear pattern





## Swarthmore College, PPR Apartments

Location: Swarthmore, PA Date of construction: 2017 Collision(s) since installation: 0 (as of February 2022)

Swarthmore College's PPR Apartments are linked by glass walkways, a notoriously dangerous feature for birds. To prevent strikes against these high-risk elements, the walkways are glazed with AviProtek<sup>®</sup> E bird-friendly glass. Along with the complex's other green components, like geothermal energy, this choice of bird-safe glazing reflects the college's commitment to ecological responsibility.

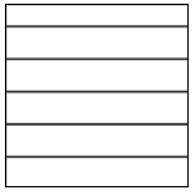


"The patterned Walker glass on the PPR Apartments and Whittier buildings at Swarthmore is **far more effective at preventing bird strikes than other glass patterns on campus**. Over several years, there has been fewer than one documented bird collision per year on the patterned glass."

 Professor E. Carr Everbach, Chair, Swarthmore College Environmental Studies

#### **Glass Specs**

- AviProtek<sup>®</sup> <u>E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Custom pattern (horizontal stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 30
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 67 on surface 2
  - SHGC: 0.29
  - VLT: 54%



Custom linear pattern

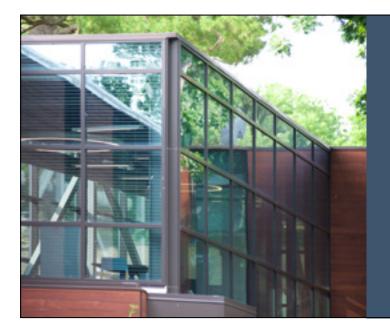




## Swarthmore College, Whittier Hall

Location: Swarthmore, PA Date of construction: 2018 Collision(s) since installation: 1 (as of February 2022)

The Whittier Hall pavilion at Swarthmore College is one of the institution's first projects to be built under its new sustainability plan, equivalent to LEED<sup>®</sup> Platinum criteria. Green features include a photovoltaic array for solar energy, geothermal heating, and energy-efficient bird-friendly glazing.

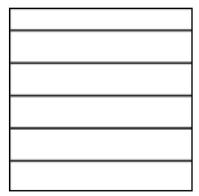


"At Swarthmore, staff have been able to reduce bird strikes dramatically at the PPR Apartments and Whittier Hall by installing AviProtek<sup>®</sup> bird deterrent glass. Imagine what a difference it would make if all university and college campuses adopted this kind of approach!"

Dr. Daniel Klem Jr., Professor of Biology; Sarkis Acopian Professor of Ornithology & Conservation Biology, Muhlenberg College

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Custom pattern (horizontal stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 30
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 60 on surface 2
  - SHGC: 0.39
  - VLT: 70%



Custom linear pattern





## National Aviary, The Garden Room

Location: Pittsburgh, PA Date of construction: 2020 Collision(s) since installation: 2020 - 2022: 0 collisions. 2022 - July 2024: 1 collision.

The Garden Room of The National Aviary features stunning views of the historic Rose Garden and Lake Elizabeth through AviProtek<sup>®</sup> E bird-friendly glass. The Aviary achieved LEED<sup>®</sup> Gold certification for this project, aided significantly by the glazing's energy-efficient and bird-friendly qualities.

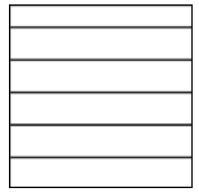


"[Having] tons and tons of glass, regularly monitoring that space and not having any bird strikes [from 2020 through 2022] ... I think it is a testament to the treatment of the glass, and to the intentionality with which that space was built."

Sam Moore, Director of Guest Operations, National Aviary

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> bird-friendly glass</u>
  - 6mm Acuity<sup>®</sup> glass
  - Custom pattern (horizontal stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 30
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 72 on surface 3
  - SHGC: 0.36
  - VLT: 67%



Custom linear pattern





## National Aviary, Tropical Rainforest

Location: Pittsburgh, PA Date of renovation: 2018 Collision(s) since installation: 0 (as of July 2024)

The National Aviary's Tropical Rainforest habitat uses Starphire Ultra-clear<sup>®</sup> glass with a Velour finish to prevent bird strikes and optimize natural daylighting. The result is a stunning, airy habitat. It's the perfect space for plants, visitors, and birds.



"Everything is really, really lush. It lends itself well to the birds that are in there, that sun themselves high up in the canopy. We got a tremendous amount of growth ... I'm frankly impressed and amazed at the amount of growth we have in there."

 Conor McGarvey, Director of Buildings and Grounds, National Aviary

#### **Glass Specs**

- <u>Walker Textures<sup>®</sup> full-surface acid-etched glass</u>
  - 3mm Starphire Ultra-Clear<sup>®</sup> glass
  - Velour finish on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - VLT: 92%



<u>Velour</u>





## National Aquarium, Upland Tropical Rain Forest Exhibit

Location: Baltimore, MD Date of renovation: 2022 Collision(s) since installation: 1 (as of February 2024)

The National Aquarium is known as the most important tourist attraction in Maryland, and the immense glass pyramid of its Upland Tropical Rain Forest is a landmark of the Baltimore skyline. The pyramid was renovated in 2022 with Walker Textures<sup>®</sup> Opaque acid-etched glass on a Starphire Ultra-Clear<sup>®</sup> substrate, replacing all 684 of its glass panels. The new glazing's first-surface etch deters bird collisions, while a Solarban<sup>®</sup> 60 low-e coating on surface 2 improves temperature control and light transmittance.



"A year has now passed, and I am super happy with the glass panels provided for that project. It was an excellent choice for this application. I have paid close attention to any possible bird strikes occurring on this glass and that number appears to be zero ... In addition, the plants and animals living under the glass in the rainforest exhibit have responded very favourably to the glass provided."

• Ken Howell, Curator of Australia and Rainforest, National Aquarium

#### **Glass Specs**

- <u>Walker Textures<sup>®</sup> full-surface acid-etched glass</u>
  - 6mm Starphire Ultra-Clear<sup>®</sup> glass
  - Opaque finish on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 60 on surface 2
  - SHGC: 0.27
  - VLT: 70%

Walker Glass Company Ltd.

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## Central USA

## Cedar Hill Library

Location: Cedar Hill, TX Date of construction: 2024 Collision(s) since installation: 0 against AviProtek<sup>®</sup> glass, 1 against unmarked glass (as of August 2024)

PGAL describes this project as "a library within a park", a nod to a nearby Texas State Park. Surrounded by trees, the design on the glass deliberately blurs the boundaries between indoor and outdoor spaces. It's all about caring for birds and people at the same time. AviProtek<sup>®</sup> E bird-friendly glass with a low-e coating fulfills its role perfectly in this installation.

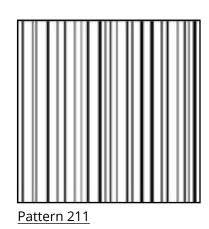


"Not only are the windows functioning beautifully, but they are a conversation piece and the community loves them!"

Correne Constantino, Library
 Customer Experience Manager,
 Cedar Hill Library

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 211 (vertical stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 23
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 2
  - SHGC: 0.27
  - VLT: 64%







## Central USA

## Prairie Shores, The Hub

Location: Chicago, IL Date of construction: 2022 Collision(s) since installation: TBD

The Hub at Prairie Shores features complex custom acid-etched patterns on its façade. Etched onto Starphire Ultra-Clear<sup>®</sup> glass from Vitro Architectural Glass, these custom patterns are a finely-tuned solution that optimizes comfort, deters bird strikes, and creates a welcoming, contemporary atmosphere.

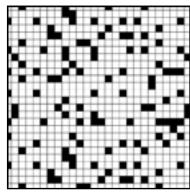


"Given the site's proximity to the lakefront, special consideration was given to the migratory paths of native birds with the use of a bird-safe acid etched glass, the first of its kind in Chicago."

Gensler, <u>The Hub at Prairie Shores</u>

#### **Glass Specs**

- <u>Walker Textures<sup>®</sup> custom patterned acid-etched glass</u>
  - 6mm Starphire Ultra-Clear<sup>®</sup> glass
  - Custom pattern on surface 1
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 72 on surface 3
  - SHGC: 0.37
  - VLT: 70%



Custom pattern



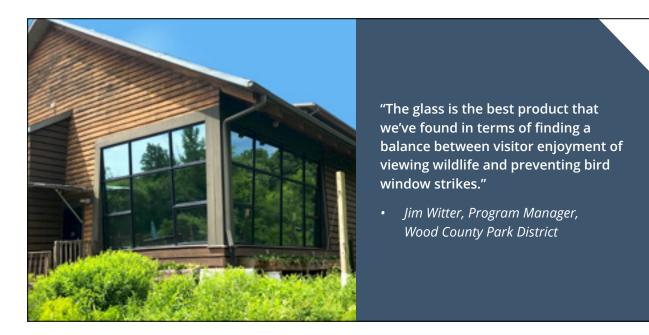


## Central USA

## W.W. Knight Nature Preserve, Nature Center

Location: Perrysburg, OH Date of renovation: 2018 Collision(s) since installation: 1 per year (average, as of August 2024)

The W.W. Knight Nature Preserve in Perrysburg, OH includes 44 acres of trails, water activities, and bird watching. The preserve's Nature Center, surrounded by trees and wildlife, would be a risk for bird strikes if its windows weren't fitted with bird-friendly glass. A transparent UV-reflective pattern on surface one makes the windows safe for birds while being barely visible to visitors.



#### **Glass Specs**

- <u>AviProtek<sup>®</sup> T transparent bird-friendly glass</u>
  - 6mm clear glass
  - UV-reflective pattern 701 (textured) on surface 1







## Oregon Zoo, Education Center

Location: Portland, OR Date of construction: 2017 Collision(s) since installation: 0 (as of February 2022)

The Oregon Zoo's Education Center punches above its weight in sustainability, performance and use of daylighting. Throughout the Center, Opsis Architecture used AviProtek<sup>®</sup> E bird-friendly glass in pattern 211. A low-e coating on the second surface of the glass minimizes energy waste and helped the project achieve LEED<sup>®</sup> Platinum status.



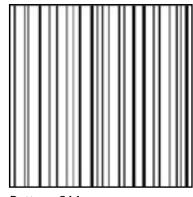
"There were some places where we didn't need the pattern at all, by percentages, so initially we left it out. The zoo came back and asked, 'Why wouldn't we put it everywhere? The staff in the admin offices feel like they've been left out because they don't have that in their area.'

"For them, this was a value that was so important, and they said, 'We want it everywhere.' "

• Heather DeGrella, Sustainable Design Director, Opsis Architecture

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 211 (vertical stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 23
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 2
  - SHGC: 0.27
  - VLT: 64%



Pattern 211





## City of Seattle's Cedar River Municipal Watershed

Location: North Bend, WA Date of construction: 2018 Collision(s) since installation: 1 per year (average, as of July 2023)

The City of Seattle's Cedar River Municipal Watershed Headquarters supports the work of Seattle Public Utilities to protect the ecological health of the region's water supply. AviProtek<sup>®</sup> bird-friendly glass with low-e coating on surface three contributed to this building's LEED<sup>®</sup> Gold certification.

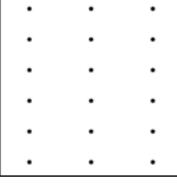


This building is located in a densely wooded area heavily populated with wild birds, which increases the likelihood of bird-glass collisions.

The pattern used for the glazing is AviProtek<sup>®</sup> 221, a 2" x 4" dot pattern with 0.7% etch coverage. While this pattern reduces bird strikes significantly compared to regular glass, a 2" x 2" dot or linear pattern can be even more effective.

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 221 (5mm dots, 2" x 4") on surface 1
- Bird Deterrence:
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 3
  - SHGC: 0.36
  - VLT: 64%



Pattern 221





## Pikes Peak Summit Visitor Center

Location: Colorado Springs, CO Date of construction: 2021 Collision(s) since installation: 0 (as of July 2023)

Known as "America's Mountain", Pikes Peak has inspired visitors' imaginations for centuries. Built at over 14,000' elevation, it is one of the highest buildings in America and a beacon for sustainable development in challenging environments. Green strategies such as bird-friendly glazing, greywater reclamation, and energy-efficient windows helped the building meet the rigorous standards of the Living Building Challenge.



#### Awards include:

- **2021 CSI Environmental Stewardship Award,** presented by the Construction Specifications Institute (CSI)
- 2022 PCI Design Awards,
  Special Award: Sustainable
  Design, presented by Precast/
  Prestressed Concrete Institute

See the full list of awards **here**.

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Custom pattern (horizontal stripe) on surface 1
- Bird Deterrence:
  - ABC Threat Factor: 30
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 2
  - SHGC: 0.27
  - VLT: 64%

Custom linear pattern

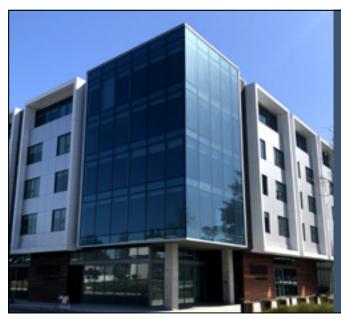




## Shashi Hotel

Location: Mountain View, CA Date of construction: 2021 Collision(s) since installation: 0 (as of July 2023)

The Shashi Hotel is an upscale urban resort in the middle of Silicon Valley that caters to a fastmoving tech clientele. The hotel's blue-tinted glass and sleek profile fit perfectly among neighbouring buildings like the Google and Microsoft campuses and NASA's Ames Research Center. AviProtek<sup>®</sup> bird-friendly markers on surface one make the façade safer for birds, while a Solarban<sup>®</sup> 70 low-e coating on surface three reduces the building's cooling loads.

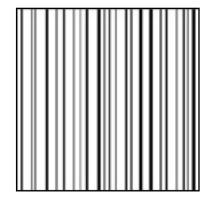


"I'm happy to report zero bird strikes. I think it's safe to say the bird-safe pattern works!"

 Agustin Sanchez, Director of Engineering, Shashi Hotel

#### **Glass Specs**

- AviProtek<sup>®</sup> bird-friendly glass
  - 6mm Solarblue<sup>®</sup> glass, 6mm Optigray<sup>®</sup> glass
  - Pattern 211 (vertical stripes) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 23
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 3
  - SHGC: 0.26
  - VLT: 41%



Pattern 211





## Cap Tourmente National Wildlife Area

Location: Saint-Joachim, QC Date of retrofit: 2014 Collision(s) since installation: 3 against AviProtek<sup>®</sup> windows (fewer than 0.4 per year) Before the retrofit, this building had 24 or more bird strikes per year.

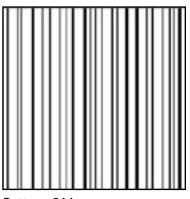
The Cap Tourmente National Wildlife Area interpretation centre is an access point to over 180 species of Quebec wildlife, including more than 30 warbler species. Natural vegetation all around the building increased the potential for bird strikes, so it was essential that the glazing be bird-deterrent. AviProtek<sup>®</sup> patterns fit the bill perfectly.



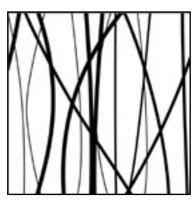
#### **Glass Specs**

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- <u>AviProtek<sup>®</sup> bird-friendly glass</u>
  - 6mm clear glass
    - Patterns 211, 214 and custom stripes on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factors: 23-30



Pattern 211



Pattern 214 Walker Glass Company Ltd. info@walkerglass.com walkerglass.com

Custom linear pattern





## Villeroy Rest Area

Location: Villeroy, QC Date of construction: 2020 Collision(s) since installation: 0 (as of July 2024)

In July 2018, Quebec's Ministry of Transport announced a multi-year campaign to modernize the province's rest stops and service areas to provide greater comfort for travellers and more ecofriendly structures in four sites across the province. First-surface AviProtek<sup>®</sup> markers ensure maximum visibility for birds and helped the project achieve LEED<sup>®</sup> Silver certification.



The LEED<sup>®</sup> Innovation credit for bird deterrence is typically evaluated through calculations using Threat Factors assigned to various elements in the building's envelope. However, this credit was granted for the Villeroy rest area based on its compliance with the CSA A460:19 bird-friendly building design standard, which takes a prescriptive approach by specifying 2" x 2" spacing of visual markers.

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> bird-friendly glass</u>
  - 6mm clear glass
  - Custom pattern (horizontal stripe) on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 30

Custom linear pattern





## 115 Echo Drive

Location: Ottawa, ON Date of construction: 2023 Collision(s) since installation: 0 (as of August 2024)

This apartment building near the Rideau Canal features bird-friendly windows with AviProtek<sup>®</sup> pattern 226: scattered squares with 2" x 2" spacing. This is one of our newest AviProtek<sup>®</sup> patterns, and 115 Echo Drive is the first project to use it.



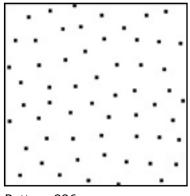
"I have confirmed with building management that there have been no bird strikes reported at 115 ECHO.

The acid-etched glass has been performing to date."

 Emily Meyers, Marketing Manager/ Planning Coordinator, Uniform Urban Developments

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 266 (5mm squares, scattered, 2" x 2") on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 67 on surface 2
  - SHGC: 0.29
  - VLT: 54%



Pattern 226





## Carleton University, Mackenzie Engineering Building

Location: Ottawa, ON Date of construction: 2022 Collision(s) since installation: TBD

Carleton University commits to a minimum rating of three out of five globes under the Green Globes rating system for all their new builds. Windows featuring AviProtek<sup>®</sup> E bird-friendly markers on surface one and a Solarban<sup>®</sup> low-e coating on surface two help the Engineering Centre meet this goal.

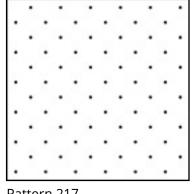


Sustainable Buildings and Biodiversity Goal 4.2:

- Maximize the use of green space on campus and maintain university grounds in an environmentally sensitive way having regard for the enhancement of local ecosystems,
- Enhance conservation and biodiversity outcomes through the management of our campus and increase communications and engagement towards biodiversity efforts.
- Carleton University Sustainability Plan 2020-2025, p17

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 217 (5mm dots, 2" x 2") on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 2
  - SHGC: 0.27
  - VLT: 64%



Pattern 217





## **OSSTF Headquarters**

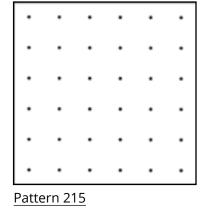
Location: Toronto, ON Date of construction: 2023 Collision(s) since installation: TBD

The OSSTF Headquarters is Moriyama Teshima's first completed mass-timber building. In fact, the whole project stands out as an exercise in sustainable and biophilic design. AviProtek<sup>®</sup> E windows contribute bird deterrence and energy efficiency to the design strategy.



#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 215 (5mm dots, 2" x 2") on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 90 on surface 2
  - SHGC: 0.23
  - VLT: 51%





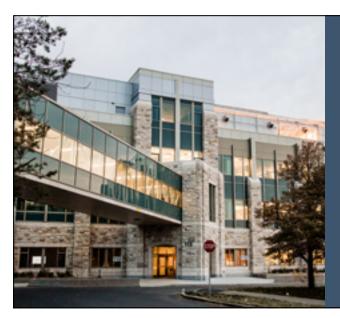


## Central Canada

## University of Saskatchewan, Collaborative Science Research Building

Location: Saskatoon, SK Date of construction: 2018 Collision(s) since installation: 0 (as of February 2022)

This research facility's curtain walls and walkways use bird-friendly AviProtek<sup>®</sup> glass with a Solarban<sup>®</sup> 70 coating. These high-performance glass products deter bird strikes and contribute toward this building's Two Green Globes certification for sustainable design and energy efficiency.

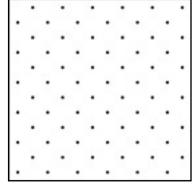


"As the building we were constructing was to focus primarily on research aimed toward life and natural sciences, we wanted to provide a facility that would not only support the work they do, but the principles that their research is dedicated to which involves the conservation, preservation and prevention of harm to the natural environment and those living in it."

• Dr. Christy Morrissey, Associate Professor at U of Sask, with a specialty in health of wild bird populations.

#### **Glass Specs**

- <u>AviProtek<sup>®</sup> E energy-efficient bird-friendly glass</u>
  - 6mm clear glass
  - Pattern 217 (5mm dots, 2" x 2") on surface 1
- Bird Deterrence:
  - Meets CSA A460-19 standard (2x2 rule)
  - ABC Threat Factor: 25
- Energy / Performance:
  - Vitro Solarban<sup>®</sup> 70 on surface 2
  - SHGC: 0.27
  - VLT: 64%



Pattern 217



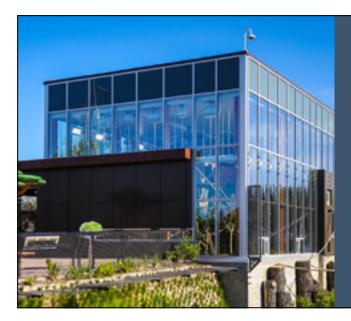


## Central Canada

## Calgary Zoo, Land of Lemurs Exhibit

Location: Calgary, AB Monitored since: 2017 Collision(s): 4 (as of August 2024). Fewer than 1 per year on average.

The Calgary Zoo is on a journey "to become Canada's leader in wildlife conservation", and that goes beyond the species under its care. Buildings like the Land of Lemurs support this goal by deterring bird strikes and protecting local bird populations. UV-reflective markers mean that the building can be covered in glass, filled with natural daylight, and still be safe for birds.



"Land of Lemurs experiences fewer bird strikes than other habitats during the same period and our Animal Care, Health and Welfare team feels the glass is working well."

Alison Archambault, Director of Brand
 & Engagement, Calgary Zoo

#### **Glass Specs**

- AviProtek<sup>®</sup>\_T transparent bird-friendly glass
  - 6mm clear glass
  - UV-reflective pattern 714 (organic lines) on surface 1
- Energy / Performance:
  - low-e coating on surface 3

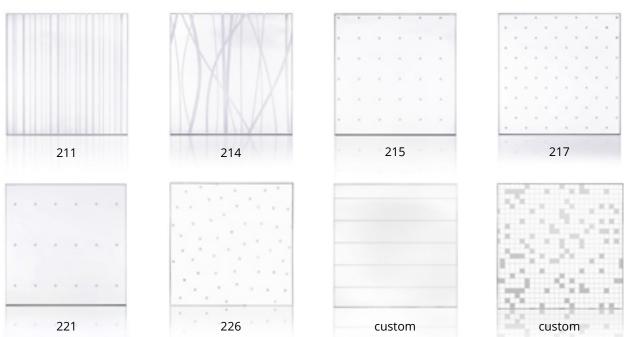






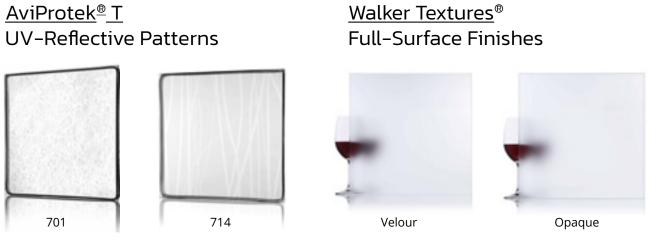
## **Bird-Friendly Product Options**

There are many ways to build bird-safe windows into your design. This page shows the solutions used by projects within this document, but there are more options available with AviProtek<sup>®</sup> and Walker Textures<sup>®</sup> glass. You can see other bird-friendly solutions at <u>walkerglass.com</u>.



## <u>AviProtek<sup>®</sup> and <u>AviProtek<sup>®</sup> E</u> Patterns</u>

Custom patterns may be suitable for bird-friendly applications, provided they meet the criteria of the applicable bird-friendly standard or legislation.







## **Our Architectural Managers**

Walker's North American architectural managers are here to support you at every step of your design process. Please refer to the list below to find the architectural manager for your area.



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## The AviProtek<sup>®</sup> eBooks of Bird-Friendly Glass

Bird-friendly building is a real and growing concern. Across North America, cities are implementing and strengthening their regulations for bird deterrent building. How to keep up with all of this? The AviProtek<sup>®</sup> eBooks of bird-friendly glass provide busy building professionals with guides to the latest bird deterrent legislation and sustainable building codes.



The eBooks are available in five regionallyadapted publications:

> United States New York City Pacific Coast Canada Toronto

Download the document for your region





## **Education: AIA Accredited Courses**

See course outlines

Our architectural directors are experts on acidetched glass and mirror for use in interior, exterior and bird-friendly applications. Let us share our knowledge with you in our convenient "Lunch and Learn" context: on-site or online presentations from our team to yours.

Choose from our four specialized courses:

- Bird-friendly glazing challenges and solutions
- Using and specifying acid-etched glass or mirror in interior or exterior glass application
- How to effectively integrate acid-etched glass in exterior glazing systems
- How to use acid-etched glass and mirror to meet design intents in interior applications

To book a session, do not hesitate to contact one of our Architectural Managers or email us at info@walkerglass.com.











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