



# Bird Friendly Design in Austin

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Austin Watershed Protection

# City Staff



## **Watershed Protection**

Liz Johnston, Leslie Lilly, Elizabeth Funk  
Matt Hollon, Sean Watson

## **Austin Energy Green Building**

Garret Jaynes, Heidi Kasper

## **Development Services Department**

Farhana Biswas

## **Building Services**

Kit Johnson, Nate Jackson

## **Animal Services**

Emery Sadkin

## **Planning**

Jordan Feldman

# Resolution

## 20241121-073

- Came out of a recommendation from a working group and Resolution 20210902-050 on Lights Out Austin
- Directs staff to:
  - Update on Light's Out Austin
  - Explore integration of bird-friendly building techniques for new low-rise, mid-rise and high-rise buildings
  - Conduct a feasibility analysis on the potential impacts of these standards
  - Seek input from stakeholders, including developers, environmental organizations, and the public.



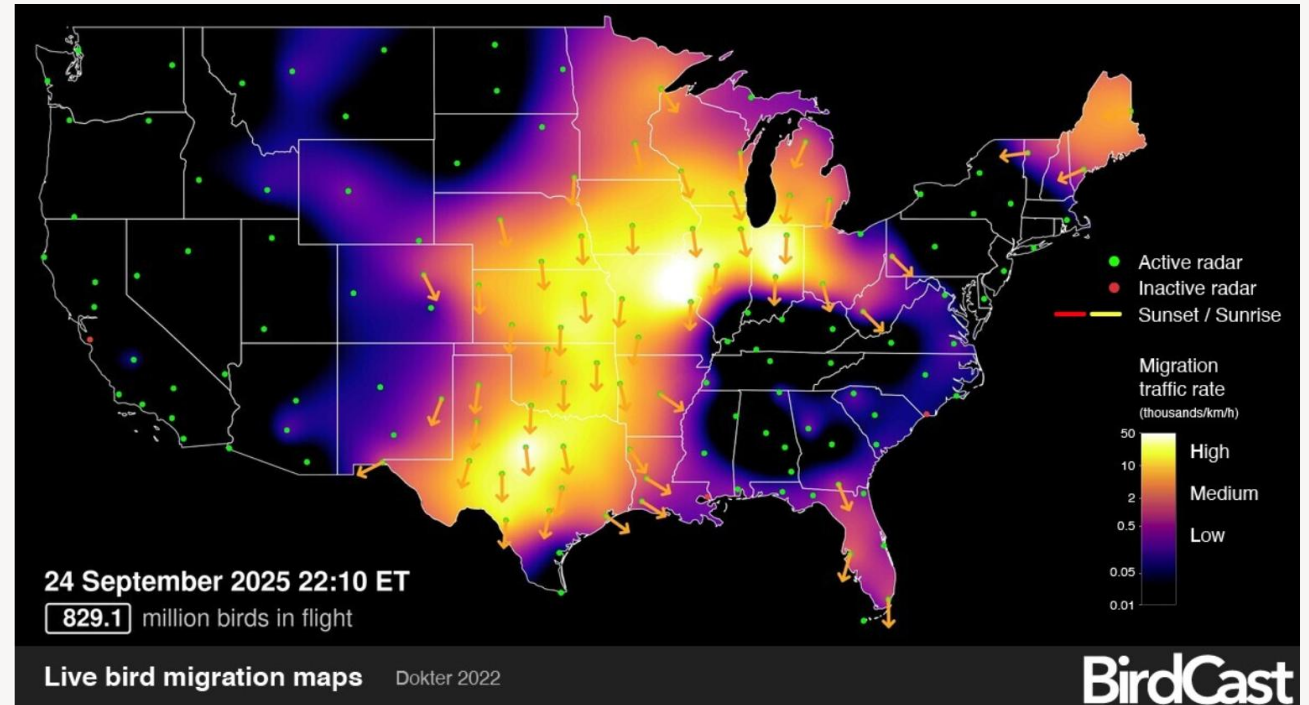
# Migration and Habitat

- Austin was designated a Bird City in 2023
- Austin within North America's Central Flyway
- Over **400** species of birds
- Edwards Plateau and the Blackland Prairies habitat
- Premier destination for birdwatchers throughout most of the year.
- Birding generates more than \$5 billion in annual ecotourism revenue in Texas (\$279 billion nationwide)



# The Problem

- Birds do not perceive glass as a barrier.
- In daytime, birds encounter reflective or translucent glass.
- At night, birds encounter artificial sources of light.
- Birds fly to these confusing features without seeing the glass barriers.
- The collision is deadly. An estimated **1 billion** birds die every year.



# Solutions

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# Glass Strategies

Bird-friendly design includes:

- Reducing the use of glass
- Reducing glass exposure (using solar shading, external insect/solar screens, louvers, etc.)
- Incorporating bird-friendly signals (markers) in or on the glass
- UV coating, glazing, and etched or fritted glass patterns that follow the "2x2 rule"



# Lighting

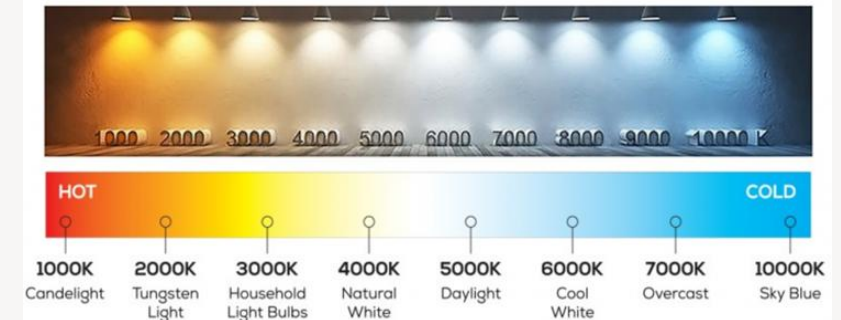
## Exterior

- Eliminate uplighting, use fully shielded fixtures that direct light downward, and avoid event searchlights
- Use lighting management systems that can automatically reduce non-essential lighting during peak migration
- Also beneficial to bats and lightning bugs year-round
- Use warmer lightbulbs (as white/blue light can disorient birds)



## Interior

- Program automatic controls with timers and occupancy sensors
- Use window treatments to reduce light spillage
- Schedule janitorial services during daylight hours



# Benchmarking

## What have other cities done?



### New York City (2021)

- 90% of the first 75 feet of a new building's envelope use bird-friendly materials, including alterations to existing glazing.
- Structures such as glass awnings and handrails must also comply.
- The materials must have a Threat Factor (TF) of 25 or less.

### Arlington County, VA

- Bird friendly design tied to voluntary density bonus incentives
- Evaluates facade 8 and 36 feet, maximum weighted average TF of 15
- Exception for non-compliant materials, 10 ft<sup>2</sup> of every 100 ft<sup>2</sup> of facade may exceed TF 15
- Includes outdoor lighting requirements
- Non-compliant projects pay into a Green Building Fund

# **Current Bird Friendly Design in Austin**

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# Austin Energy Green Building Program



- Austin-specific green building rating program administered by Austin Energy
- Integrated as a minimum requirement in zoning ordinances and density bonus programs as well as all COA buildings
- Ten core requirements plus several voluntary measures, which include criteria for bird collision deterrence and light pollution reduction



# Glass and Lighting Requirements in COA Code



- Site Development Standards Exterior Lighting requires fixtures that are either fully shielded or full cut-off for development in the zoning jurisdiction.
- Building Design Standards Glazing and Façade Relief Requirements provide design standards for development of any non-residential land use in the zoning jurisdiction.
- Hill Country Roadway Overlay requirements. Buildings within the overlay may not be constructed with mirrored glass with a reflectance of more than 20 percent
- Waterfront Overlay Combing District limits exterior mirrored glass or glare producing glass surface building materials
- Traditional Neighborhood District development standards have requirements for hooded and shielded exterior lighting and some prohibitions on "highly reflective surfaces"

# **Feasibility Analysis**

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# Cost Analysis: Commercial Glass

## ▪ Other Considerations:

- Glass is sold in bulk
- Consider a non-directional pattern
- Energy code requirements/lamination requirements

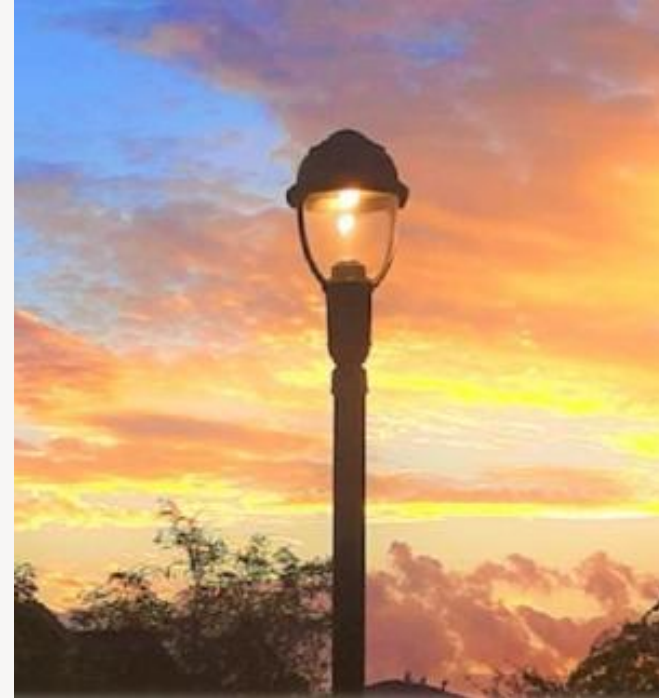
## ▪ Retrofit Options:

- Apply treatments to the outside of windows
- Range from \$12.75-\$14.00+ sq ft for both product and installation.
- Warranty of up to 15 years
- Options that have additional benefits for graffiti prevention

Window Type Cost (Price Range Per Square Foot)	
Standard	\$12-\$15
Fritted	\$15-\$25
Etched	\$25-\$35
Ultra-Violet (UV)	\$32-\$45

# Cost Analysis: Lighting

- Bird-friendly lighting in commercial buildings is a relatively low-cost strategy with high returns
- Products are often aligned with broader sustainability goals and typically result in energy savings that offset costs in under a year.
- Informed decision making
- Solutions include:
  - Automatic lighting controls
  - Shielded light fixtures
  - Bulb temperature



# Feasibility: Review and Inspection

- DSD Building Plans Examiners
- Commercial Plan review already looks at facades for projects > 10,000 sqft
- AEGB staff familiar with review criteria
- Complaint based compliance



# **Initial Staff Considerations for Response**

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# Considerations

- **Land Development Code Amendment**

- Commercial and multifamily buildings exceeding 10,000 square feet would be required to meet bird-safe design performance standards as measured by Material Threat Factor rating of 20 or less for all building surfaces up to 100 ft.
- Implementation of dark sky lighting requirements
- A potential waiver option for deeply affordable housing projects

- **Austin Energy Green Building Program**

- Update planned for 2030 may propose Bird Friendly Design as core measure (currently elective)
- Update Green Building Policy

- **Residential Opportunities**

- Residential education campaign (handouts provided as appendices in report)

# Proposed Timeline



Boards and Commissions	Date	Stakeholder Feedback
Environmental Commission	Sept. 17 <sup>th</sup> , 2025	Positive support and considerations for city buildings
Animal Advisory Commission	Oct. 13 <sup>th</sup> , 2025	Positive support and considerations for city buildings
Joint Sustainability Committee	Oct. 22 <sup>nd</sup> , 2025	TBD
Design Commission	Oct. 27 <sup>th</sup> , 2025	TBD
Planning Commission	Nov 12 <sup>th</sup> , 2025	TBD
Downtown Commission	Nov 19 <sup>th</sup> , 2025	TBD

# **Thank you!**

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**Leslie Lilly**

Environmental Conservation Program Manager

Leslie.Lilly@austintexas.gov

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