

American Bird Conservancy Model Bird-Friendly Building Guidelines

December 2020

These model, or ideal, guidelines are intended to be a starting point for cities, towns, villages, counties, states, and any other entity interested in regulating or guiding building construction to reduce bird collisions with glass. They describe a truly bird-friendly building.

Summarized simply, these guidelines are based on a 100/100/100 framework: 100% of all glass and other building materials should be bird friendly in the first 100 feet of 100% of buildings. The guidelines also specifically include all hazardous features that can trap birds or push them in the direction of dangerous features.

Any group that adopts this ordinance as written will be at the leading edge of creating a bird-friendly built environment. However, many groups considering such guidelines will be interested in softening the language to exempt certain types of buildings or to reduce the amount of bird-friendly glass required. In anticipation of this, American Bird Conservancy (ABC) has created a discussion of the issues to be considered when revising the model guidelines. (See [ABC's Legislation, Ordinances, and Guidelines](#))

These guidelines will be most commonly adopted as an ordinance to modify municipal building codes. As a result, the guidelines below are written in the form of a model ordinance. However, the text can be easily adapted to fit other building guidance formats.

ABC will revise these guidelines as new science, materials, techniques, and technologies become available, so please make sure that you have the most current version before you begin the process of creating your own guidelines. (See [ABC's Legislation, Ordinances, and Guidelines](#))

PROPOSAL NUMBER:

PROPOSAL NAME: Bird-Friendly Building Design Requirements

SPONSOR(S):

PURPOSE: This building ordinance has been created to address the role of the (MUNICIPALITY)'s built environment in the annual loss of up to 1 billion birds due to glass collisions in the United States.

WHEREAS, birds provide valuable and important ecological services,

WHEREAS, (MUNICIPALITY) has recorded (XXX) species of resident and migratory bird species,

WHEREAS, birding is a hobby enjoyed by 46 million Americans with an annual \$107 billion total industry output in the United States,

WHEREAS, as many as 1 billion birds may be killed by collisions with windows every year in the United States,

WHEREAS, new buildings can be designed to reduce bird deaths from collisions without significant additional cost,

WHEREAS there exist strategies to mitigate collisions on existing buildings,

WHEREAS witnessing a collision is an upsetting, sad event,

WHEREAS no one wants to live or work in a building that kills wildlife,

WHEREAS more than 30% glass on a façade usually increases costs for heating and cooling,

WHEREAS, bird-friendly practices often go hand-in-hand with energy efficiency improvements,

And **WHEREAS** (ANY ADDITIONS SPECIFIC TO THE MUNICIPALITY),

NOW, THEREFORE, the (LEGISLATIVE BODY) of the (MUNICIPALITY) does hereby ordain as follows:

1. Section (XX.XXX) of the (MUNICIPALITY)'s General Ordinances is created to read as follows:
 - a. DEFINITIONS
 - i. Glazing: All glass, including spandrel glass, as well as any other materials, including but not limited to: plexiglass, polished metal, or materials that are transparent or highly reflective.
 - ii. Bird Activity Zone: The zone that that falls between 0-100' feet above grade.
 - iii. High-Risk Auxiliary Structures: Structures that pose significant collision risks to birds wherever they are found, including but not limited to:

1. Transparent or highly-reflective:
 - a. Railings, including balconies
 - b. Noise barriers
 - c. Wind barriers (including parking structures)
 - d. Transportation (e.g., bus stops) or weather shelters
 2. Small, stand-alone buildings that present conditions that can be both transparent and reflective and are often located in bird flight paths:
 - a. Gazebos
 - b. External ticket booths
 3. Any other free-standing glass, plexiglass, or other clear, transparent, or highly-reflective free-standing structure.
- iv. High-Risk Building Features:
1. Skyways/skywalks
 2. Building connectors, no matter the number of floors
 3. All outside corners where a bird can see in one side of the building and out the other (“fly-through conditions”) within 30 feet of the corner
 4. All interior corners within 30 feet of the corner
 5. Parallel glass walls ≤50 feet apart
 6. Courtyards, including internal atria
 7. Atria, open and enclosed.
 8. Three floors of glazing adjacent to and above green roofs
- v. Major Renovations Involving Glass: Any renovation in the Bird Activity Zone that:
1. Replaces at least 50% of a structure’s existing glass or other transparent or reflective materials, or
 2. Adds any new glass or transparent or reflective materials
- vi. Bird-Friendly Glass: Glass or materials that meet any of the following conditions:
1. Any product with an American Bird Conservancy Material Threat Factor Rating of 30 or less. (Visit www.birdsmartglass.org to view the continuously-updated database.)
 2. Glass with exterior surface (surface 1) obstructed and effectively covered by building-integrated structures that do not have gaps larger than 12” in any dimension, including non-glass double-skin facades, metal screens, fixed solar shading, exterior insect or solar screens, and other features as determined by the (BUILDING DEPARTMENT OR SIMILAR) that meet these conditions.

3. Un-tinted glass with an outer total reflectance of $\leq 15\%$ that contains a pattern of visual markers that are on surface 1 (preferred) or surface 2 of the glass that conforms to the following rules: a) dots or other isolated solid shapes that are $\geq \frac{1}{4}$ " in diameter and are \leq two-inches (2") apart in any direction or b) lines that are $\geq \frac{1}{8}$ " in width and spaced ≤ 2 " apart. (Note to designers: The greater the width or diameter, the better the collisions deterrence. The pattern should contrast with what is behind the glass and with what is reflected in it.)

b. REQUIREMENTS

- i. 100% of the glazing for all building types must be Bird-Friendly Glass for the following projects:
 1. New construction in the Bird Activity Zone
 2. Major Renovations Involving Glass in the Bird Activity Zone
 3. All High-Risk Auxiliary Structures
 4. All High-Risk Building Features
- ii. Transparent and highly-reflective materials are not permitted in any exterior application.