



Rashi Kesarwani
Councilmember District 1

SUPPLEMENTAL AGENDA MATERIAL for Supplemental Packet 2

Meeting Date: June 6, 2023

Item Number: 18

Item Description: Bird Safe Building Requirements; Adding Berkeley Municipal Code Section 23.304.150

Submitted by: Rashi Kesarwani

This supplemental item proposes returning to the staff recommendation, with amendments, for adopting a Bird Safe Ordinance. The reasons for doing so are out of concern for challenges related to costs, availability of bird-safe glass, energy efficiency standards, view corridors as well as the lack of evidence on the benefit of bird-safe glass for low-rise smaller residential structures.



Rashi Kesarwani
Councilmember, District 1

ACTION CALENDAR
JUNE 6, 2023

TO: Honorable Mayor and Members of the City Council

FROM: Councilmembers Rashi Kesarwani and Susan Wengraf
(Co-Authors)

SUBJECT: Supplemental Material for Bird Safe Building Requirements; Adding
Berkeley Municipal Code Section 23.304.150

RECOMMENDATION

Bird collisions with windows are a leading cause of human-induced bird deaths in the United States, second only to outdoor cats. We support the requirement to use bird-safe glass.

Research to date has not determined what bird-safe measures are effective for low-rise small residential structures. For these ordinary homeowners, a mandate to use bird-safe glass adds a cost burden that could be significant. Further, bird-safe glass is currently unavailable from local suppliers, and California's Title 24 Building Efficiency Code includes environmental requirements for windows that may not be met by all bird-safe products. Finally, bird safe glass may impose significant and unknown negative effects on view corridors for smaller residential buildings and single-family homes.

Because of these challenges related to costs, availability, energy efficiency, view corridors, as well as the lack of evidence on the benefit of bird-safe glass for smaller developments (single-family homes, duplexes, or smaller residential projects up to 35 feet), we propose following the staff recommendation, with three amendments (see Attachment 1). The staff's recommendation was developed pursuant to Planning Commission and Subcommittee policy recommendations, with consideration of recent

precedent standards from other jurisdictions (such as Richmond, Mountain View, and San Francisco).

The proposed bird safe requirements apply exclusively to projects based on the primary land use when such projects require a building permit and meet the following criteria:

1. New non-residential buildings, or residential and mixed-use buildings with a total gross floor area of 10,000 square feet (sf) or greater;
2. Materials on the facades of residential and mixed-use buildings of less than 10,000 sf where transparent materials consist of more than 50 percent of that façade's total square footage;
3. New or replacement windows on existing buildings;
4. A minimum transparent material size of 12 sf for bird-safe requirements, or 24 sf for transparent buildings or building features.

Four pathways are provided for compliance with the Ordinance:

1. Threat factor rating. An element or material would comply with the Ordinance if it is listed in the ABC's online Glass Collisions Products and Solutions Database with a Threat Factor Rating of 30 or less at the time of Building Permit issuance.
2. Surface treatment. An element or material would comply with the Ordinance if it includes patterns that are etched, fritted, stenciled, silk-screened or otherwise permanently incorporated into the transparent material.
3. Screens and shutters. An element or material would comply with the Ordinance if it were covered with an exterior screen, shutter or shading device, or insect or solar screen that was permanently installed on the building exterior.
4. Biologist certification. A proposed project could also comply with the Ordinance if a qualified biologist were to indicate that the proposed construction methods and materials would reduce the risk of bird collision to an extent comparable to the other compliance paths.

CURRENT SITUATION AND ITS EFFECTS

Data on the Efficacy of Bird-Safe Glass is Not Based on Western U.S. Bird Species. The available data on bird-building collisions comes entirely from the eastern United States and Canada, based on bird species that are not found in the western

U.S., which may have created a bias in the effectiveness of recommended mitigation measures. The Conservation Biology’s 2014 research (referenced throughout the staff report) synthesized field research from 23 different studies. They concluded that the effectiveness of measures (i.e., glass treatment, night lighting, proximity of vegetation, type of building, urban versus rural, migrations versus resident-bird populations) vary by species. A few species—not found in the western U.S.—account for the majority of birds affected. We do not know if these conclusions apply to species found in the western U.S.:

“Because of this data limitation, the mortality rate distributions that we applied to all U.S. buildings were primarily based on data from the eastern U.S. This could have biased our estimates if mortality rates in the West differ consistently from those documented in the East; however, the lack of western data prevents conclusions about such regional variation.” See footnote 2 of staff report: *Bird-Building Collisions in the United States: Estimates of annual mortality and species vulnerability*. The Condor, volume 116, 2014, pg. 8-23., p. 9.

“Most sampling has occurred during migration and in the eastern U.S. Further research across seasons and in underrepresented regions is needed to reduce this bias.” See footnote 2 of staff report: Scott Loss, et. al. *Bird-Building Collisions in the United States: Estimates of annual mortality and species vulnerability*. The Condor, volume 116, 2014, pg 8-23., p. 8.

Research to Date Has Not Determined What Bird-Safe Measures Are Effective for Low-Rise Residential Structures. The 2014 study (above) recommends starting with a fewer number of buildings that have high bird mortality rates, and not residential structures. Effectiveness at residences differ by age of building, rural versus urban locations, time of year, migration timing, weather, vegetation, presence and location of bird feeders, light emission at night, etc. See pgs. 9, 11, 13, 14, 15, 16, 17, 21 of Scott Loss, et. al., *Bird-Building Collisions in the United States: Estimates of annual mortality and species vulnerability*. The Condor, volume 116, 2014, pg. 8-23., p. 19.

Bird-Safe Materials are Not Available in Berkeley and the Costs Can Be As Much as \$28 More Per Square Foot of Window Glass. The staff report (June 6, 2023, pgs. 7-8 of 49) noted that Berkeley-based businesses do not carry bird-safe materials and businesses contacted reported that customers chose not to use bird safe materials because of cost. Specifically, compliance could cost as much as \$28 per square foot of window glass. New buildings (such as Accessory Dwelling Units and additions to single-family homes) would be subject to these cost increases under the proposal from the Planning Commission. Further, the staff report noted that California’s Title 24 Building

Efficiency Code includes environmental requirements for windows that may not be met by all bird-safe products.

CONTACT PERSON

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Attachment:

Adding Berkeley Municipal Code Section 23.304.150

BIRD SAFE BUILDING; ADDING BERKELEY MUNICIPAL CODE SECTION 23.304.150

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That the Berkeley Municipal Code is amended to add a new Section 23.304.150 to read as follows:

23.304.150 Bird Safe Building.

A. Purpose. The purpose of this section is to reduce bird mortality from windows and other transparent buildings or building features known to increase the risk of bird collisions.

B. Applicability.

1. *Applicability.* The bird safe building requirements apply to the following types of projects based on the primary land use when such projects require a building permit.

Table 1 - 23.304-10. Bird Safe Building Requirement Applicability

Project Type	Applicable Building Location(s)	
Non-Residential		
New Construction or Addition	Continuous transparent materials of 12 sf or larger located between the ground and 100 feet above grade.	
New or Replacement Transparent Materials on Existing Building	Continuous transparent materials of 12 sf or larger located between the ground and 100 feet above grade where 50% or more of the elevation's total square footage consists of transparent material.	
High-Risk Features	All high-risk features located at any grade.	
Residential or Mixed Use		
New Construction or Addition	Building with 10,000 sf or more gross floor area	Continuous transparent materials of 12 sf or larger located between the ground and 100 feet above grade.
	Building with less than 10,000 sf gross floor area	Continuous transparent materials of 12 sf or larger located between the ground and 100 feet above grade where 50% or more of the façade's total square footage consists of transparent material.
New or Replacement Transparent Materials on Existing Building	Building with 10,000 sf or more gross floor area	Continuous transparent materials of 12 sf or larger located between the ground and 100 feet above grade where 50% or more of the façade's total square footage consists of transparent material.
	Building with less than 10,000 sf gross floor area	Not applicable

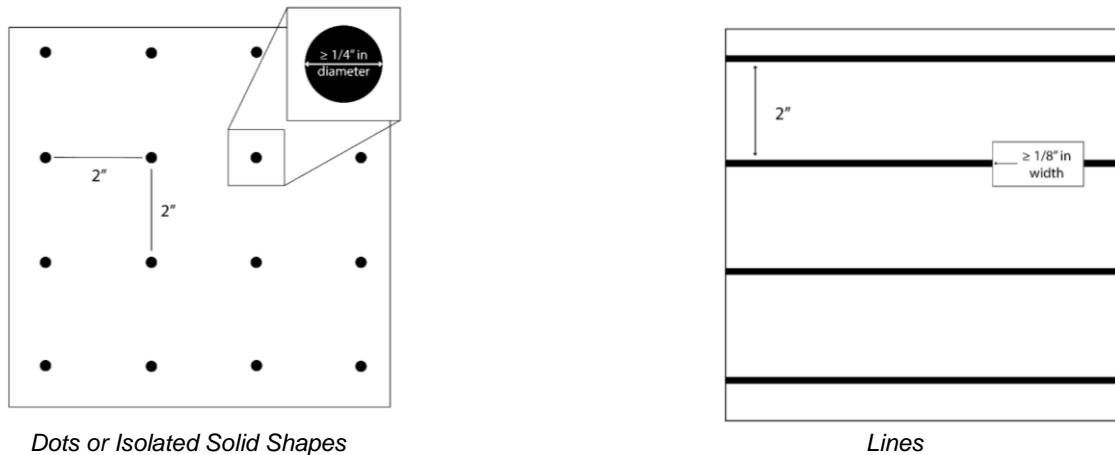
2. Exemptions.

- a. The bird safe building requirements do not apply to existing windows or other transparent materials that are not proposed to be replaced.
 - b. Residential projects, including the residential portion of mixed-use projects, with greater than 50 percent of the residential unit floor area ~~the majority of the units are~~ subject to recorded affordability restrictions. If added to an existing building or property, the entire building or property is exempt.
 - c. Residential structures of 35 feet in height or less.
 - d. Structures that are a designated landmark and/or a structure of merit pursuant to BMC Chapter 3.24.
3. *Continuous Transparent Material.* Transparent material that is not interrupted by a line, spacer, mullion, grille or other visible material at least 1/2" in width.

C. **Bird Safe Requirements.** Any regulated continuous transparent material must meet at least one of the following conditions:

1. *Threat Factor Rating.* A product with an American Bird Conservancy Threat Factor Rating of 30 or less.
2. *Patterned Glazing Treatment.* Panes with patterns that are etched, fritted, stenciled, silk-screened, or otherwise permanently incorporated into the transparent material. If the pattern utilizes dots or other isolated solid shapes, each dot or shape must be at least a 1/4" in diameter and be no more than 2' apart in any direction (see Figure 23.304-2, left). If the pattern utilizes lines, they must be at least 1/8 inch in width and spaced no more than 2 inches apart (see Figure 23.304-2, left).

Figure 23.304.-2 Patterned Glazing Treatment Requirements



3. *External Screens, Shutters, or Shading Devices.* Panes with exterior screens, shutters or shading devices installed permanently over windows, structures, or building features such that there is no gap larger than 9 inches in one dimension. Building integrated treatments include, but are not limited to, metal screens, shutters, fixed solar shading such as louvres, and exterior insect or solar screens.
4. *Biologist Certification.* Analysis by a qualified biologist indicating that the proposed construction would reduce collision risk to an extent comparable to the requirements of this section.

D. **Effective Date.** The effective date of this ordinance is April 1, 2025.