



2019-2021 Report



## Program Objectives

Significantly reduce the bird mortality caused by building collisions in the Kansas City metro area by:

- ❁ Documenting buildings that are most prone to bird strikes and identifying specific windows or portions of windows that are most problematic
- ❁ Working with building owners and managers to employ cost-effective solutions, such as closing blinds, turning off lights and treating windows at the most strike-prone sites
- ❁ Encouraging tenants and building owners to extinguish lighting at night, particularly during spring and fall migration
- ❁ Raising public awareness of avian window collisions and encouraging personal action in residential as well as commercial settings
- ❁ Publicly commending companies and individuals that take steps to mitigate window strikes.

## Project Background

The glass of both residential and commercial buildings poses a significant risk to birds, particularly during migration (e.g., Banks 1976, Ogden 1996). Fully transparent glass with vegetation on either side can cause birds to attempt to fly "through". Highly reflective glass, such as that pictured on the right, can provide a disorienting view of vegetation that, to a bird, looks real and desirable to reach for foraging or shelter. As a taxonomic group, birds had millions of years of existence prior to the proliferation of glass across the planet – and our most densely populated cities are often right in the middle of migratory pathways. The proximity of birds to potential window-strike zones is compounded by the fact that many species migrate at night. The illuminated glow of urban and suburban areas can disorient migrants, particularly on nights with a low cloud ceiling, causing them to descend into developed areas (Parkins et al. 2016).



While avian collisions with windows have been studied intermittently across the US and Canada since the 1960s, most studies were typically small-scale and results were not widely published. However, over the past few years, researchers have been able to extrapolate the results of hundreds of such studies to estimate the nationwide rates of avian mortality from collisions with windows (Loss et al. 2014). Estimates range from 365 to 988 million bird mortalities each year in the US. This is in addition to large numbers of mortalities caused by birds colliding with vehicles, communications towers and energy infrastructure, which are significant but not as numerous as window collisions (Loss et al. 2015).



Photo: DeAnn Gregory

Recent data, extensively publicized by many media outlets in 2019, indicate that North America has lost almost 30% of its birds in the past 50 years (Rosenberg et al. 2019). While there are many causes of this significant decline, one of the most straightforward ways to contribute to bird conservation is to implement minor collision-reducing structural changes to windows on commercial and residential buildings.



BirdSafeKC is a project of the **Missouri River Bird Observatory** in partnership with Burroughs Audubon Society of Greater Kansas City, Johnson County Community College Center for Sustainability, and Lights Out Heartland.

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# Methods

## Site Selection

For the preliminary season of spring 2019, volunteer surveyors chose buildings to survey. Buildings were selected based on two factors: 1) numerous anecdotal reports of bird carcasses being spotted outside the building and 2) building and landscaping factors that are known to result in window strikes. These factors include window area, transparency and/or reflectivity and proximity and height of surrounding vegetation (Klem Jr. et al. 2009; Hager et al. 2013).

In the fall of 2019, most sites were retained in the survey sample and some were added in a similar fashion to that described above. We also established survey routes in situations where survey sites were clustered. Permission to survey individual buildings was requested from management staff and/or surveyors walked only on public sidewalks. Volunteer effort and the number of sites surveyed increased significantly during the fall season relative to spring.

We planned to cover the same survey sites in spring 2020, but the COVID-19 pandemic and associated stay-at-home orders resulted in a significantly curtailed season. A few volunteers were able to survey buildings that were near their places of essential employment, but not all routes were covered. The BirdSafeKC surveys were resumed at full capacity in fall 2020.

## Survey methods

Spring and fall migration were selected as the survey seasons due to the significantly higher number of window strikes that occur during these timeframes. Surveys are conducted from 1 April to 15 June, and from 1 September to 15 November. Survey frequency is dependent on volunteer availability, but sites are typically surveyed at least once per week. Since we are focused on documenting birds that had struck windows during their typical foraging activities (as opposed to the catastrophic but infrequent collision events that occur when a flock of migrants strikes a building during the night; see <https://www.houstonchronicle.com/neighborhood/bayarea/news/article/Houston-news-11125529.php>, for example), surveys occurred during the mid-morning to early-afternoon hours.

BirdSafeKC surveys follow methodology established by Johnson County Community College (K. Anton 2018, unpub.), Hager and Cosentino (2014) and the American Bird Conservancy (B. Lenz 2019, pers. comm). Surveyors walk the perimeter of buildings and scan within 30 feet of buildings for bird carcasses. Once a carcass is located, the surveyors use the smartphone application iNaturalist to photograph the bird and take a context photo showing a wide-angle view of the bird and the side of the building. The context photo allows us to identify the window with which the bird collided. These survey data are also entered into an Excel spreadsheet to facilitate the compilation of results. If a building or route is surveyed and no carcasses were found, that is recorded as a zero-bird visit.

Data are compiled by building to display the number of strikes, the average number of strikes per survey day and the windows where strikes occurred. Because there are a number of factors that affect whether or not a carcass remains in place – such as removal by maintenance staff, street-sweeping crews or scavenging by other wildlife species – our estimates of the number of bird strikes are extremely conservative.

## Our thanks to BirdSafeKC Volunteer Surveyors 2019-2021

Abbey Haines	Brett Creason	Joseph Mosley	Nicole LaPlante
Ann Manzardo	David Hiler	Laurie Kosmiski	Steve Rinne
Annette Talbot	DeAnn Gregory	Mark Mahaffey	Steven Johnson
Briana Anderson	Jeannine Steinhoff	Matt Gearheart	Sherry Leonardo

*With special thanks to Brett Creason and DeAnn Gregory, MRBO's Volunteers of the Year 2021.*

## Format of this report

This report combines Spring and Fall 2021 survey data with previously-reported data for 2019 and 2020. Separate tables are presented for each season and year, with all sites combined, to give the reader an understanding of the extent of bird collisions just within our limited KC study area (pages 4 to 9). Additional tables (pages 11 to 13) present comprehensive data for all seasons for each route and site, along with the most strike-prone windows of each building.

# 2021 Results

Volunteer surveyors conducted 259 surveys during spring migration and 150 surveys during fall migration. As in previous years, the number of surveys varied considerably by route. Within the context of survey effort (i.e. the total number of surveys) the number of carcasses documented throughout the KC metro study area was higher in Spring 2021 than previous springs, but slightly lower in Fall 2021.

## Spring Migration 2021

Species	Carcasses Found
American Coot	1
American Goldfinch	2
American Robin	12
Black-and-White Warbler	5
Black-capped Chickadee	1
Blackburnian Warbler	1
Blackpoll Warbler	3
Blue-headed Vireo	1
Brown Creeper	1
Blue-winged Teal	1
Canada Warbler	1
Cedar Waxwing	4
Common Nighthawk	1
Common Yellowthroat	25
Dark-eyed Junco	2
European Starling	6
Field Sparrow	1
Gray Catbird	5
Golden-winged Warbler	1
House Finch	4
House Sparrow	2
House Wren	2
Indigo Bunting	13
Kentucky Warbler	1
Lincoln's Sparrow	2
Magnolia Warbler	1
Mourning Dove	3

Species	Carcasses Found
Mourning Warbler	5
Nashville Warbler	16
Northern Cardinal	1
Northern Flicker	2
Northern Parula	1
Northern Waterthrush	2
Orange-crowned Warbler	1
Ovenbird	18
Rose-breasted Grosbeak	10
Red-bellied Woodpecker	2
Ruby-crowned Kinglet	1
Red-eyed Vireo	6
Red-headed Woodpecker	1
Rock Pigeon	2
Ruby-throated Hummingbird	2
Summer Tanager	3
Swamp Sparrow	1
Swainson's Thrush	31
Tennessee Warbler	24
Unid. Flycatcher	4
Unid. Hawk	1
Unid. Thrush	7
Unid. Warbler	6
Unid. Swallow	1
Unid. Swift	1
Unidentifiable	47
Warbling Vireo	1
White-breasted Nuthatch	1
Western Kingbird	1
Whip-poor-will	1
Wood Thrush	1
White-throated Sparrow	13
Yellow-billed Cuckoo	8
Yellow-bellied Flycatcher	1
Yellow-rumped Warbler	1
Yellow Warbler	4
<b>Total</b>	<b>330</b>

# Fall Migration 2021

Species	Carcasses Found
American Coot	1
American Goldfinch	2
American Redstart	1
American Robin	1
American Woodcock	2
Black-and-White Warbler	5
Brown Creeper	3
Brown Thrasher	3
Canada Warbler	1
Clay-colored Sparrow	1
Cedar Waxwing	4
Chipping Sparrow	1
Common Grackle	1
Common Yellowthroat	8
Dark-eyed Junco	14
European Starling	1
Field Sparrow	2
Fox Sparrow	1
Gray Catbird	2
Grasshopper Sparrow	1
Golden-winged Warbler	1
House Sparrow	2
House Wren	11
Killdeer	1
Lincoln's Sparrow	7
Magnolia Warbler	1
Mourning Dove	9
Mourning Warbler	1
Nashville Warbler	4
Northern Cardinal	1
Northern Waterthrush	1
Orange-crowned Warbler	1
Ovenbird	3
Rose-breasted Grosbeak	1



A Blackburnian Warbler retrieved from a sidewalk after being stunned by flying into a window. The bird later appeared to recover and was released.

Species	Carcasses Found
Red-breasted Nuthatch	3
Ruby-crowned Kinglet	3
Rock Pigeon	3
Ruby-throated Hummingbird	10
Scarlet Tanager	1
Song Sparrow	9
Swamp Sparrow	7
Unid. Flycatcher	2
Unid. Sparrow	3
Unid. Warbler	17
Unidentifiable	20
Virginia Rail	1
Wood Thrush	1
White-throated Sparrow	32
Yellow-bellied Sapsucker	2
Yellow-throated Warbler	1
<b>Total</b>	<b>214</b>

## 2020 Results

Spring 2020 surveys were significantly curtailed by the COVID-19 pandemic and associated stay-at-home orders in the Kansas City region. Nonetheless, three surveyors were able to conduct a limited number of BirdStrikes surveys near their homes or places of essential employment. Fall 2020 saw a recommencement of the project at full capacity. Ten volunteers conducted over 400 unique survey visits to buildings throughout the KC metro area.

It is possible that the shift in human activity due to the pandemic – such as many people working from home throughout 2020 and therefore potentially less commercial building illumination - may have contributed to safer migration seasons for birds. This is virtually impossible to quantify, but it is notable that an increase in BirdStrikesKC surveys in fall 2020 did not produce significantly more carcasses than fall 2019. There are many factors that influence the data, from overall bird populations to weather patterns during migration, to the time of day a building is surveyed. Nonetheless, the 2019 and 2020 survey seasons have clearly identified several portions of buildings, and structures such as glass walkways, that deserve attention and mitigation.



A stunned Nashville Warbler.  
Photo: DeAnn Gregory

## Spring Migration 2020

Species	Carcasses Found	Species	Carcasses Found
American Coot	2	Mourning Warbler	3
American Redstart	3	Nashville Warbler	8
American Robin	2	Northern Waterthrush	1
Black-and-White Warbler	3	Ovenbird	8
Blackpoll Warbler	2	Red-eyed Vireo	2
Brown Thrasher	2	Rock Pigeon	2
Canada Warbler	1	Rose-breasted Grobeak	1
Carolina Wren	1	Sora	1
Chimney Swift	1	Swainson's Thrush	10
Clay-colored Sparrow	1	Tennessee Warbler	11
Common Grackle	1	Tufted Titmouse	1
Common Yellowthroat	15	Unidentifiable	6
Dark-eyed Junco	1	Unid. Flycatcher	9
European Starling	4	Unid. Sparrow	1
Grasshopper Sparrow	3	Unid. Warbler	2
Gray Catbird	4	White-throated Sparrow	7
Great-tailed Grackle	1	Wilson's Warbler	3
House Finch	4	Wood Thrush	1
House Sparrow	1	Worm-eating Warbler	1
House Wren	2	Yellow Warbler	2
Indigo Bunting	6	Yellow-billed Cuckoo	1
Magnolia Warbler	2	<b>Total</b>	<b>145</b>
Mourning Dove	2		



A BirdStrikesKC surveyor with an American Coot, a waterbird similar to a duck. This individual was found wandering the intersection of 12th and Main, dazed after apparently striking a building. It was taken to Lakeside Nature Center but did not recover.

# Fall Migration 2020

Species	Carcasses Found
American Robin	5
American Woodcock	5
Black-and-White Warbler	1
Blackpoll Warbler	1
Brown Creeper	6
Cedar Waxwing	2
Chimney Swift	2
Chipping Sparrow	2
Clay-colored Sparrow	2
Common Yellowthroat	18
Dark-eyed Junco	9
Dickcissel	2
Downy Woodpecker	2
Eastern Phoebe	1
Grasshopper Sparrow	1
Gray Catbird	3
Hermit Thrush	2
House Finch	2
House Wren	5
Indigo Bunting	2
Lincoln's Sparrow	10
Marsh Wren	4
Mourning Dove	8
Mourning Warbler	1
Nashville Warbler	17
Northern Cardinal	2
Northern Flicker	5
Northern Waterthrush	3
Orange Crowned Warbler	3
Ovenbird	8
Red-bellied Woodpecker	1
Red-breasted Nuthatch	2
Red-eyed Vireo	1
Red-headed Woodpecker	3
Rose-breasted Grosbeak	3

Species	Carcasses Found
Ruby-throated Hummingbird	10
Sedge Wren	2
Song Sparrow	9
Swainson's Thrush	1
Swamp Sparrow	6
Tennessee Warbler	2
Unidentifiable	32
Unid. Flycatcher	1
Unid. Sparrow	6
Unid. Warbler	8
Unid. Woodpecker	1
Unid. Wren	1
Virginia Rail	1
White-throated Sparrow	13
Yellow Rail	1
Yellow Warbler	1
Yellow-bellied Sapsucker	3
Yellow-billed Cuckoo	3
<b>Total</b>	<b>245</b>



American Woodcock, a game bird that has an elaborate courtship ritual.  
 Photo: Carol Weston

# 2019 Results

In spring 2019, volunteers conducted a total of 122 surveys of 12 buildings and associated structures such as pedestrian skybridges. During April and May, 51 bird carcasses were documented representing 19 species, plus specimens that were unidentifiable due to carcass condition.

Fall 2019 surveys included several of the same buildings, plus the establishment of several new routes (e.g., downtown) and the consolidation of clusters of sites into logical routes (e.g., Crown Center, Ward Parkway). Volunteers conducted more than 200 surveys of six routes and an additional four individual buildings. A total of 228 bird carcasses were recorded representing 54 species plus those unidentifiable. Thirteen window-struck birds were also reported to BirdSafeKC from buildings that were not regularly surveyed, which we term incidental reports.

We also note that surveyors documented 13 bats that had likely struck windows. None of these were mortalities, but all were either stunned or torpid due to temperature. They were taken to Lakeside Nature Center for recovery.

Based on the 2019 dataset, some patterns emerged regarding the windows that are particularly strike-prone. This allowed us to further refine the survey focus for 2020.

## Spring Migration 2019

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Species	Carcasses Found
American Robin	2
Black-and-White Warbler	1
Chipping Sparrow	1
Common Yellowthroat	1
Eastern Kingbird	1
European Starling	1
Gray Catbird	4
House Wren	2
Mourning Dove	2
Nashville Warbler	1
Prothonotary Warbler	1
Red-eyed Vireo	2
Rose-breasted Grosbeak	2
Summer Tanager	1
Swainson's Thrush	9
Tennessee Warbler	5
Unidentifiable	10
White-throated Sparrow	1
Yellow-bellied Sapsucker	1
Yellow-billed Cuckoo	3
<b>Total</b>	<b>51</b>



Rose-breasted Grosbeak, a species that breeds in Missouri and further north, and makes a long-distance migration to wintering habitat in Central and South America.

*Photo: Erik Ost*



# Fall Migration 2019

Species	Carcasses Found
American Coot	1
American Crow	1
American Goldfinch	1
American Redstart	1
American Robin	8
American Woodcock	4
Black-and-White Warbler	1
Brown Thrasher	2
Cedar Waxwing	1
Chimney Swift	2
Chipping Sparrow	3
Clay-colored Sparrow	3
Common Yellowthroat	9
Dark-eyed Junco	16
European Starling	2
Field Sparrow	1
Fox Sparrow	2
Grasshopper Sparrow	2
Gray Catbird	2
Hairy Woodpecker	1
Harris' Sparrow	1
House Finch	1
House Sparrow	3
House Wren	3
Indigo Bunting	2
Lincoln's Sparrow	10
Marsh Wren	1
Mourning Dove	7
Mourning Warbler	2
Nashville Warbler	16
Northern Cardinal	2
Northern Flicker	3
Orange-crowned Warbler	4
Ovenbird	5
Red-eyed Vireo	2
Red-headed Woodpecker	1

Species	Carcasses Found
Red-winged Blackbird	2
Rock Pigeon	3
Rose-breasted Grosbeak	1
Ruby-crowned Kinglet	1
Ruby-throated Hummingbird	8
Sedge Wren	1
Song Sparrow	8
Sora	2
Summer Tanager	1
Swainson's Thrush	1
Swamp Sparrow	10
Tennessee Warbler	2
Unidentifiable	27
White-throated Sparrow	22
Wilson's Warbler	1
Yellow Warbler	1
Yellow-bellied Sapsucker	4
Yellow-billed Cuckoo	6
Yellow-rumped Warbler	1
<b>Total</b>	<b>228</b>



**Lincoln's Sparrow**, a species that migrates through Missouri on its way to and from breeding grounds in Canada to wintering areas in Mexico and the Gulf Coast.

*Photo: Cornell Lab of Ornithology*

# Top 15 Species found on BirdStrikesKC surveys, 2019 - 2021

With the exception of Mourning Dove, all of the species for which we found the most carcasses were migrants. Some, such as Dark-eyed Junco and White-throated Sparrow, winter in Missouri. Some only breed here, such as Common Yellowthroat, Nashville Warbler, and Ruby-throated Hummingbird. Others, such as Lincoln's Sparrow and Swainson's Thrush, just migrate through Missouri on long journeys to and from their breeding grounds. Bird migration is an inherently risky endeavor requiring amazing feats of navigation and enormous energy reserves. Many species, such as the Ruby-throated Hummingbird, make non-stop flights across the Gulf of Mexico on their way from Central and South American wintering grounds to breeding grounds in the US and Canada. At BirdSafeKC, we'd like to make their journey a little less dangerous.



**Common Yellowthroat**  
Photo: Araks Ohanyan



**White-throated Sparrow**  
Photo: Steve Garr



**Nashville Warbler**  
Photo: Erik Ost



**Dark-eyed Junco**  
Photo: Matt Longabaugh



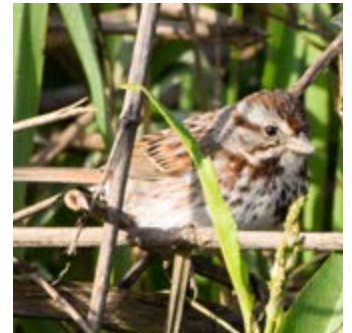
**Swainson's Thrush**  
Photo: James Gorski



**Tennessee Warbler**  
Photo: Erik Ost



**Ovenbird**  
Photo: Matt Longabaugh



**Song Sparrow**  
Photo: Erik Ost



**Ruby-throated Hummingbird**  
Photo: Reva Dow



**Mourning Dove**  
Photo: Mark Gutchen



**Lincoln's Sparrow**  
Photo: Erik Ost



**Gray Catbird**  
Photo: Matt Longabaugh



**Swamp Sparrow**  
Photo: Carol Weston

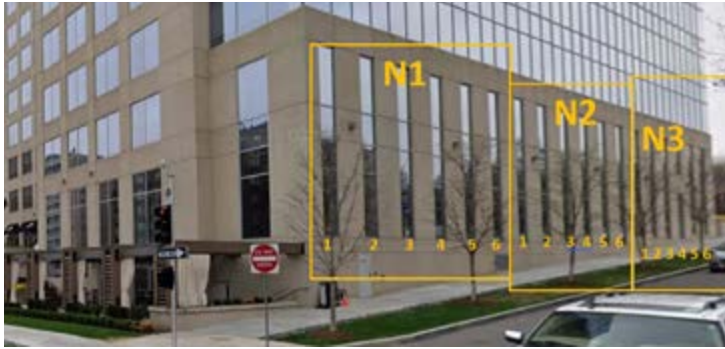


**American Robin**  
Photo: Tom Tucker



**Indigo Bunting**  
Photo: Chris Valentine

# Comprehensive Data by Route 2019 - 2021



The ultimate goal of BirdSafeKC is to treat high-risk windows to reduce strikes. Therefore, an important part of the data is the section of the building where the most strikes occur, along with window numbers (please see photo at left for example). In all of the following tables, windows where three or more carcasses were found during one season, or more than ten across all seasons, are highlighted in red.

Data shown are cumulative over all survey seasons. Tracking the amount of survey effort (i.e. number of visits) is crucial to compare relative mortality rates between buildings.

The number of times each building was surveyed varies

due to owner permission or volunteer availability. Sites with more than 0.50 carcasses documented per survey are highlighted in red; these are sites that could significantly reduce bird mortality by treating certain windows.

## Downtown Kansas City

The Downtown North survey route is bordered by 10th Street to the north, Truman Street to the south, Main Street to the west, and Cherry Street to the east. Downtown South surveys covered several buildings between Truman Street to the north and 18th Street to the south. With few exceptions, surveys were done on public sidewalks only, therefore some sides of buildings were inaccessible. We note that street-sweeping by the KC downtown Community Improvement District and by private contractors likely means that fatal bird collisions on these survey routes are underestimated. Additionally, BirdSafeKC volunteers were denied access to the main public entrance of 1001 Walnut in May 2021; this likely resulted in a significant undercount at that site. Downtown will remain a survey priority in 2022.

### Downtown North

Building	Total # Visits	Total Carcasses	Carcasses/ Survey	Problematic Sections/Windows
720 Main	65	25	0.38	E1, W1, S1, S2, S4
1100 Main	86	20	0.23	E1, E3, N2, N5
1200 Main	103	22	0.21	E1, E2, E3, E4, N8, W2, W3
1000 Walnut	95	19	0.20	E9, E11, N4, N8, W1, W6
1100 Walnut	100	26	0.26	East side, Entrance, S8, S10
1101 Walnut	52	22	0.42	South side, NW1
1201 Walnut	97	23	0.24	N4, N6, N7, N8, W4, B4
1001 Locust	117	82	0.70	E1, N1, N2, W1, W2, W4, Courtyard
1407 Grand	117	102	0.87	E2, E3, E4, E5, E6, E7, N1, N2, N3, N4, W1
Various buildings (incidentals)		52		

### Downtown South

Building	Total # Visits	Total Carcasses	Carcasses/ Survey	Problematic Sections/Windows
1601 McGee	170	135	0.79	Patio area, northeast treed alcove
1741 McGee	115	21	0.18	2S, 2W, 3W, 4W, 5W, S1
Various buildings (incidentals)		27		

# Crown Center

Anecdotal reports of window strikes at Crown Center have been circulating in the KC community for years. Standardized surveys have shown that there are several extremely strike-prone locations in this area of the city. The buildings and structures included on this route have varied slightly by season and volunteer availability, but portions of Crown Center were surveyed during both migration seasons in 2019, 2020, and 2021. This route remains a survey priority in 2022.

Building/Structure	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Sections/Windows
Link 1	96	25	0.26	E16, E20/21, N7, S8, W3, W6
Link 2	94	9	0.10	S6
Link 3	119	84	0.71	Section E17
2501 McGee dock	113	89	0.79	Section N16
2450 Grand	61	5	0.08	E9, E11
2380 McGee	29	4	0.14	No pattern
2323 Grand	39	15	0.38	N16, S1, S2, S3, W7, W8
2345 Grand	55	22	0.40	N3, W2, W5

# Ward Parkway

The Ward Parkway route was established in Spring 2019 due to the configuration of landscaping with mirrored buildings. While several buildings on this route have shown relatively low window strike frequency, two buildings have some of the highest rates in the BirdSafe dataset. Unfortunately, permission to survey these buildings has been withdrawn by the property managers.

Building	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Sections/Windows
9200	55	6	0.11	W2
9221	11	9	0.82	No pattern discernable; not surveyed since October 2019.
9229	48	18	0.38	N1, N2, N8, S1, S3, W2
9233	63	22	0.35	N2, N4, S2, S3, S4, S6
9237	14	15	1.07	No pattern discernable; only surveyed in Fall 2020.

# Heartland Financial

Anecdotal reports of bird carcasses from tenants at the Heartland Financial building prompted surveys in Spring and Fall 2019, Fall 2020, and Spring 2021 at this location. Several seasons of regular surveys showed that the building has a moderately high strike rate. Permission to survey the building was withdrawn prior to Fall 2021 despite some tenants previously expressing concern for bird mortality.

Building	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Windows
1600 NE Coronado	62	22	0.35	No pattern discernable. Slightly more strikes on south and west sides.

## Cliff Professional Buildings

Mirrored buildings, coupled in some cases with vegetation at a distance likely to be dangerous to birds, led to the decision to survey several Cliff Drive buildings beginning in 2019 and continuing through 2020 and 2021. A change in ownership at Cliffview Professional Building during the Summer of 2021 resulted in the temporary suspension of surveys during Fall 2021.

Building	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Sections/Windows
4721 Cliff	108	21	0.19	E1, E2, S5, W1, W3
4801 Cliff	141	36	0.26	A3, B1, B3, B4, B6, B9
4741 S. Cochise	141	45	0.32	N1, N2, N3, S1, S2, S3, W1

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## West Country Club Plaza

Several buildings just west of Country Club Plaza have been reported as potentially dangerous to birds. Surveys in Fall 2020 and 2021 indicated that one of the three (4520 Madison) had very few strikes despite its mirrored exterior and nearby vegetation. Anecdotal reports for several years leading up to 2020 suggested that 4600 Madison was moderately strike-prone, however our survey data show that it is less so than many other buildings. The highly mirrored building at 900 W. 48th Place does show relatively high rates of window collisions during migration, particularly on the north side of the building.

Building	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Sections/Windows
4600 Madison	72	12	0.17	A3, E1, E2, E4, S3, S5, W3, W4
900 W. 48th Place	46	29	0.63	North side

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## Holmes Road/Executive Hills

The Holmes Road/Executive Hills area contains 8-10 completely mirrored buildings within a landscape that is potentially attractive to foraging birds. Permission to survey around buildings has varied across sites and seasons; this route has previously encompassed four additional buildings.

Webster University was surveyed regularly in Spring 2019, while several other nearby buildings were surveyed intermittently. Preliminary data indicate that at least one portion of the University building - the glass walkway or "link" between the building and the parking garage - is extremely strike-prone. Intermittent surveys were done at this site throughout 2020 and 2021. Surveys at 1200 and 1300 104th Street occurred intermittently in Spring 2019, and regularly during 2021. Data indicate that they are moderately strike-prone, particularly parts of the 1300 building.

Building	Total # Visits	Total Carcasses	Carcasses/Survey	Problematic Sections/Windows
10450 Holmes	22	23	1.05	Link
1200 104th	36	8	0.22	E1, S3
1300 104th	35	15	0.43	SE1, SW2

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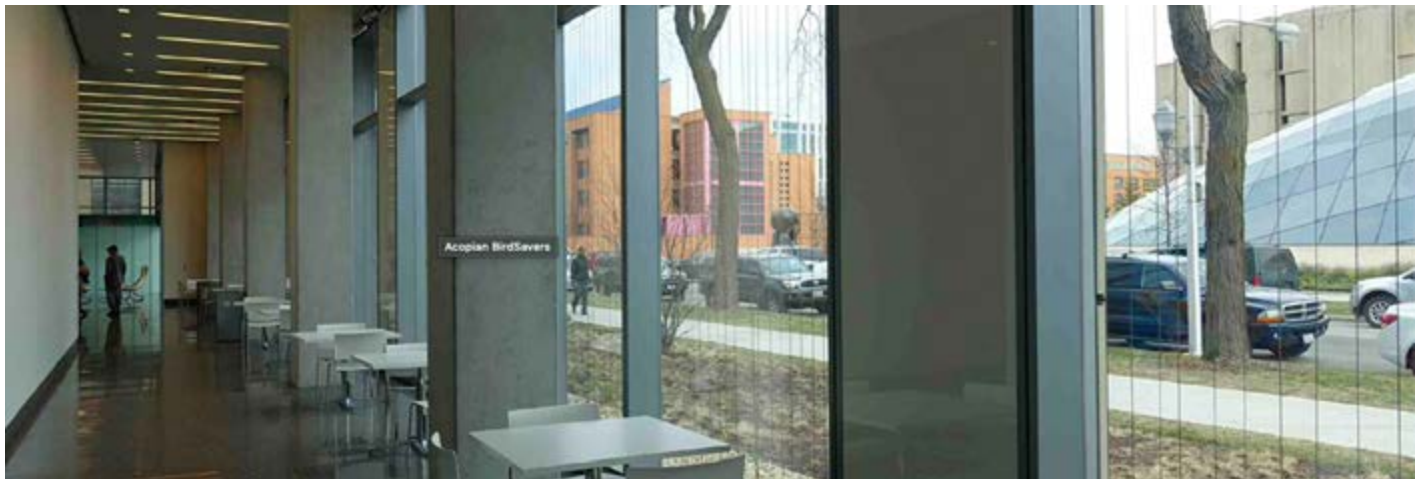


# Window Strike Solutions



There are actions that can be taken to reduce avian window strikes, as well as many window treatment products that significantly reduce collisions. One of the easiest and most cost-effective mitigation techniques is to use bird-safe glass in the construction of new buildings. This is a popular trend among commercial architects and bird-safe glass carries its own Leadership in Energy and Environmental Design (LEED) certification credits. However, if you have an existing structure, there are still many options for reducing bird strikes.

- ❁ Lights Out: By simply extinguishing exterior, and some interior, lighting at night – particularly during migration – you will greatly reduce the possibility that birds will be attracted to your building while in flight. See: <https://lightsoutheastland.org> for more information.
- ❁ Closing curtains and blinds: Window transparency and sometimes reflectivity can be mitigated by engaging interior window coverings.
- ❁ Placement of landscaping: Often, birds are trying to fly from one tree or bush to the one they “see” reflected in the window. Birds can reach fatal flight speeds when flying to a window from vegetation located 10-30 feet from a building, while they are unable to reach such speeds when starting from trees and shrubs planted close to buildings.
- ❁ Window treatments: Numerous after-market products and artistic possibilities exist for treating problematic windows. Some building owners have chosen to engage artists to create murals on particular windows. Others chose to place patterned tape (above right) or “Zen curtains” (below) to disrupt birds’ visual perception of a window. Most window treatments are either attractive or almost unnoticeable to the human eye. To be effective, only the most collision-prone windows need to be treated – this is why the BirdSafeKC project records not just the building that a bird hit, but the specific window or column of windows.



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## Helpful Links

American Bird Conservancy – Preventing Window Strikes: <https://abcbirds.org/glass-collisions/>

Cornell Lab of Ornithology: <https://www.allaboutbirds.org/news/why-birds-hit-windows-and-how-you-can-help-prevent-it/>

BirdLife International: <https://www.birdlife.org/worldwide/news/how-can-we-really-prevent-birds-flying-our-windows>

BirdWatching Daily: <https://www.birdwatchingdaily.com/gear/preventing-bird-window-collisions/15-products-prevent-birds-hitting-windows/>

Michigan Audubon Bird-Friendly Communities: <https://www.michiganaudubon.org/bfc/bird-window-collisions/>

## Please consider supporting the BirdSafeKC project

❁ Donate to the project at [mrbo.org/supportMRBO](http://mrbo.org/supportMRBO). Though surveys are conducted by volunteers, funds are needed for project coordination, data compilation and report production.

❁ If you are a KC resident, please spread the word about the BirdSafeKC project. Share this report with others.

❁ If you are a commercial building owner or property manager in KC, we would be delighted to work with you to reduce bird strikes on your structure.

Please email [dana.ripper@mrbo.org](mailto:dana.ripper@mrbo.org) for more details.



**Together, we can save hundreds of birds each year in the Kansas City metro area!**



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Tennessee Warbler  
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