

Bird-friendly transit shelters and stations

San Francisco

Shelters designed with a **frit pattern** that looks like dissipating fog and makes the glass more visible to birds. Made by Lundberg Design.

http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards_for_Bird_Safe_Buildings_7-5-11.pdf
(pg. 5)



Minneapolis

Fritted bus shelters to deter vandalism, but the pattern is also effective against bird collisions. Also a public art project using **external metal screens** on a transit station.

<https://www.metrotransit.org/shelter-design>



Note: The current version of the LEED bird collision deterrence credit requires that 100% of glass on landscape structures be bird-friendly – a recognition that this type of structure can be a threat.

See also: "Magnitude and correlates of bird collisions at glass bus shelters in an urban landscape"
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0178667>

National Renewable Energy Laboratory

The bus shelters on the Colorado campus were retrofitted with **Collidescape** to reduce collisions.

<https://www.nrel.gov/about/assets/pdfs/ea-1968-swdea-2014.pdf> (p. 18)



Portland

Transit system (Trimet) has been **sandblasting** patterns on its bus shelters since 2001, using designs by local artists. This public art helps beautify bus shelters, reduce vandalism, and create neighborhood branding. The reduction of collision risk is an incidental benefit.

<https://trimet.org/publicart/busshelters.htm>



Cornell University

Bus shelter remediated with **ABC BirdTape**.



King County (Seattle)

Bus shelter **mural program**. Not done for bird-collision reduction per se, but the extent of the designs covering the glazing makes many of the shelters bird-friendly.

<http://metro.kingcounty.gov/prog/sheltermural/>



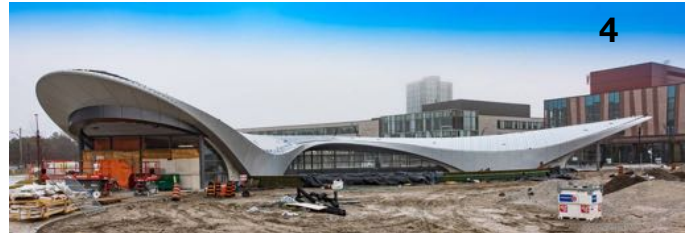
Toronto

Six transit stations that opened in December 2017 meet the bird-friendly requirements set out in the Toronto Green Standard. They use different techniques, with the most common being a **dotted frit pattern**:

1. 407 Station
2. Downsview Park Station
3. Finch West Station
4. York University Station
5. Pioneer Village Station
6. Vaughan Metropolitan Centre

The Toronto Transit Authority also uses bird deterrent materials for **noise barriers** in new construction. For example, the UP Express train service to Pearson International Airport uses Acrylite Soundstop panels.

<http://www.acrylite.net/product/acrylite/en/products/acrylite-soundstop/pages/default.aspx>



York Region

Pilot project to test the durability of bird deterrent window treatments on six bus shelters, with horizontal lines spaced 5 cm apart. If the material stands up, the striping will be used in future shelter designs across York Region.