

Hartsfield-Jackson Atlanta International Airport

City of Atlanta

Department of Aviation

Operations – Airport Wildlife

Airport Facilities Landside/ Airside New Construction and Modifications

General Wildlife Design Criteria

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1.0 Purpose

- A. Federal Aviation Administration (FAA) Qualified Airport wildlife biologists have developed this criteria to incorporate and standardize Landside and Airside construction guidelines concerning Part 139.337 Wildlife Hazard Management in and around Hartsfield-Jackson Atlanta International Airport (H-JAIA). This Wildlife Mitigation Criteria shall be incorporated into all airport Capital Projects
- B. Airport operators accepting federal funding for airfield improvements and their associated contractors should implement guidelines set forth in AC150/5200-10H *Standard Specifications for Construction of Airports*, AC 150/5200-33C *Hazardous Wildlife Attractants on or near Airports*, *Wildlife Hazard Management at Airports-A Manual for Airport Personnel*, or other Federally drafted supporting documentation involving the mitigation of hazardous wildlife at airports.

2.0 Landside Mitigation

A. Buildings

1. Building design should incorporate the needs of the airport environment and wildlife hazard management. Generally, building façades/roofs/soffits should omit horizontal ledges and similar spaces to the maximum extent practical to reduce nesting, roosting, perching, and congregating birds. Supporting structures, utilities, or their containment boxes associated with the building should not present gaps, holes, spaces, or other voids that create opportunities for cavity dwelling birds, urban dwelling birds, or other wildlife to nest, roost, perch or congregate.

B. Plantings/Turf

1. Generally, landscape trees, shrubs, or other plants should be selected to reduce maintenance and watering that is appropriate for sandy and loamy soils identified in soil survey areas. Selected trees, shrubs, or other plantings will not produce fruits, berries, seeds, or provide dense roosting habitat attractive to wildlife including birds, mammals, or other wildlife.
2. Landscape turfgrasses will be limited to Bermudagrass for warm season plantings and Turf-type Tall Fescue (high-endophytic fescue preferred) for cool season plantings. Seed mixtures containing brown-top millet, ryegrasses, foxtails, and other large seedhead producing plants should be omitted from use. Grass plantings and sod areas should be left with sufficient coverage and left in a healthy state with limited bare patches of ground before considered complete. If bare patches are present, additional suitable covering may be required (i.e., tackifiers, asphalt emulsion, coconut wood fiber, excelsior erosion control).

C. Landscape Materials

1. Landscape materials that create shelter for rodents, lizards, or other small animals will be omitted from use (e.g., boulders, large stone, water features, etc.).

D. Light Poles/Communication Structures

1. Light poles should be outfitted with anti-perch devices that will reduce perching and roosting opportunity. Building lighting, signage, or other connecting structures should be designed with limited gaps, voids, or other access points to reduce nesting opportunity and if present, should be fitted with rigid exclusion materials and anti-perch devices.

E. Roadway Information Signage

1. Roadway signage (e.g., directional, hospitality, advertisement, etc.), lighting, and its supporting structures should be designed in a manner that reduces perching, roosting, and nesting opportunity. Roadway signage, lighting, or other supporting structures should have limited gaps, voids, or other access points. If perches, gaps, voids, or access points do exist, they should be retrofitting with anti-perch devices and rigid exclusion materials.

F. Ponding

1. Landscape materials and plantings will be selected to reduce the potential of ponding water from rain or irrigation. Grading and other sloped features should be designed to move water away to covered inlets quickly to reduce ponding and attracting wildlife.

G. Structures

1. Bridges
 - a. Bridge structures will be built with reduced ledges, cubbies, or cavities created by beams, crossmembers, and other supporting structures. These spaces and voids create nesting and roosting opportunities for hazardous bird species. Bridge sections that cannot be poured or formed without ledges, cubbies, or cavities will be retrofitted with rigid materials to exclude these areas long-term with minimal maintenance required. Bird netting should be substituted with other permeant materials.
2. Overhangs
 - a. Overhang structures will be fitted with appropriate anti-perch devices that will reduce perching and roosting opportunity.
3. Walkways
 - a. Walkway structures will be built with reduced ledges, cubbies, or cavities created by beams, supporting structures, or connection points to other structures or buildings. Ledges, cubbies, or cavities that cannot be avoided will be retrofitted with rigid materials to exclude these areas long-term with minimal maintenance required. Bird netting should be substituted with other permeant materials.

H. Trash

1. Trash containers in public gathering locations, construction sites, security gates, or other areas outside the Air Operating Area (AOA) should always remain covered to reduce food scraps and trash as wildlife attractants. Trash containers should also be regularly emptied by personnel to mitigate attracting wildlife.
2. Signage stating “No Feeding Birds” or similar with city ordinance code should be posted throughout public gathering areas and near trash containers to reduce wildlife attractants.

3.0 Airside Mitigation

A. Buildings

1. Building design should incorporate the needs of the airport environment and wildlife hazard management. Generally, building façades/roofs/soffits should omit horizontal ledges and similar spaces to the maximum extent practical to reduce

nesting, roosting, perching, and congregating birds. Supporting structures, utilities, or their containment boxes associated with the building should not present gaps, holes, spaces, or other voids that create opportunities for cavity dwelling birds, urban dwelling birds, or other wildlife to nest, roost, perch or congregate.

B. Culverts/Scuppers

1. Culverts, scuppers, improvised designs, or other stormwater structures should be designed and installed in a manner that reduces the ability for wildlife to enter through the device onto the AOA. Designs that reduce access such as catch basins, closed storm drains, slot drains, or covered culverts should be incorporated as a 139.337 wildlife mitigation standard when designing stormwater or other drainage inlet/outlet structures. Spacing of exclusion and covers should be no greater than three inches (3") to reduce entry by most hazardous wildlife observed outside the airport environment.

C. Erosion Control

1. Erosion control should incorporate the needs of the airport environment and wildlife hazard management. Standards listed in the "Manual for Erosion Sediment Control in Georgia" do not consider specific requirements for FAA certificated airports. Omit the use of ryegrasses, millets, sudangrasses, hays, straws, corn stalks, or other material for planting or cover that could contain seeds of problematic plants. Tackifiers, asphalt emulsion, coconut wood fiber, excelsior erosion control matting, low seed-producing temp grasses, permanent turf-type fescue and Bermudagrass seed, or their sod equivalents are approved materials for erosion control. Grass plantings and sod areas should be left with sufficient coverage and left in a healthy state with limited bare patches of ground before considered complete. If bare patches are present, additional suitable covering may be required (i.e., tackifiers, asphalt emulsion, coconut wood fiber, excelsior erosion control).

D. Fencing

1. All airport fencing should incorporate Part 139.337 wildlife mitigation standards. Fencing should provide exclusion of wildlife including underneath fence fabric, overtop fabric, and at corners, and associated gates. Fencing should be at least 10 feet in height with at least three stranded barbed wire outriggers. New fence lines should be developed on concrete barrier or with at least two feet of fence fabric material buried into the ground under the footprint of the fence line. A buffer of 10 feet should be maintained on either side of the fence line for safe and effective inspections and maintenance.

E. Gates

1. All airport manual or mechanical gates should incorporate wildlife mitigation standards. All new manual gates should be built on a reinforced concrete pad with no more than a three-inch (3") gap when closed anywhere within the gate system. Automated gates should incorporate some form of speed bumps, shoulders, or humps directly underneath the gate panels to reduce gaps that may exist when gates are in the closed position. Weep holes or channels can be incorporated into the speed bump design if concerns for proper water flow through the system are present. Preexisting gates should be retrofitted with speed bumps or other devices to reduce gaps underneath the gate panels.

F. Ponding/Detention Basins

1. Construction Site Ponding. Construction sites should incorporate 139.337 wildlife mitigation standards. Grading of disturbed areas should effectively move stormwater to nearby stormwater structures. If grading is no longer effective, temporary trenching may be required and area regraded. Silt traps or other sediment barriers should be regularly viewed after rain events and managed for the buildup of silt and other debris. Standing water that is not effectively moving to storm drains should be pumped out mechanically to ensure water has been properly drained within 48 hours of rainfall. Areas mentioned above should be dry after 48 hours and in between rain events.
2. Pre-existing Detention Basins. Pre-existing detention basins must drain within a 48-hour period after rainfall or be supplementally pumped out during a 48-hour period to ensure timely movement of water. Additionally, detention ponds should remain completely dry between rain events. If excessive rain at construction sites causes sedimentation and transfers materials downstream, downstream structures, detention basins, and their parts should be reviewed and managed to adequately support its continuous use and functionality as intended.
3. Temporary Detention Basins. Temporary detention basins are not approved within the AOA or within airport separations. If temporary detention basins are needed under special circumstances, airport operators must use physical barriers such as wire grids, floating covers, or netting (mesh size <5 cm to reduce entanglement) and reviewed by the airports qualified wildlife biologist before implementation.

G. Seed/Sod/Turf

1. Landscape turfgrasses will be limited to Bermudagrass for warm season plantings and Turf-type Tall Fesue (high-endophytic fescues preferred) for cool season plantings. Seed mixtures containing brown-top millet, ryegrasses, foxtails, and other large seedhead producing plants should be omitted from use. Grass plantings should be full and healthy with little to no bare patches before considered complete. If bare patches are present, additional coverings with suitable methods may be required. Weed management during and after sod establishment should be the responsibility of the contractor until a healthy stand of grass has been established.

H. Trash/FOD

1. Trash containers in gathering locations, construction sites, security gates, or other areas outside the AOA should always remain covered to reduce food scraps and trash as wildlife attractants. Trash or other items that create FOD should be picked up and removed promptly. Approved trash containers should be emptied regularly by personnel to mitigate attracting wildlife.

4.0 Project Close-Out and Transfer

Proper close out and transfer of ownership should be implemented when a project is completed. This should include a plan for continued maintenance and transfer of other information such as training, training materials, pamphlets, guides, or other pieces of information for success and management of infrastructure or grounds after the project has been transferred.

5.0 References

1. Hartsfield-Jackson Atlanta International Airport - Airport Facilities/Landside/Airside New Construction and Modifications Design Standards (<https://atlstandards.com>).
2. Cleary, E. C., and R. A. Dolbeer Wildlife Hazard Management at Airports, A Manual for Airport Personnel. U.S. Department of Transportation, Federal Aviation Administration, Office of Airport Safety and Standards, July 2005
3. DFW Dallas Fort Worth International Airport-DFW Development Design Guidelines, March 2021
4. U.S. Department of Transportation Federal Aviation Administration-Hazardous Wildlife Attractants on or near Airports-AC 150/5200-33C, February 2020
5. U.S. Department of Transportation Federal Aviation Administration-Standard Specifications for Construction of Airports-AC 150/5370-10H, December 2018