

Bird-Safe and Dark Sky

February 20, 2020



CUPERTINO



Tonight's Agenda

- Presentations
- Group discussion
- Report out



Background

- Awareness on bird strikes
- FY 2019/2020 City Council Work Program Item
- PC Study Session 10/28/2019



Bird-Safe Regulations Intent

- Reduce building design elements and lighting features that are hazardous to birds
- Help protect natural environment



Cities with Bird-Safe Policies

- San Francisco
- Toronto
- Portland
- Alameda
- Santa Cruz
- Oakland
- Sunnyvale



Factors Linked to Bird Strikes

- Glazing:
 - Large expanses of exposed reflective and
 - Transparent glass
- Bright lighting

Bird Hazards - Reflectivity



Bird Hazards - Transparency



Bird Hazards - Lighting





Bird Safe Consideration 1: Applicable Projects

- New Buildings/new additions
- Remodels and retrofits
- Window replacements
- Existing buildings



Bird Safe Consideration 2: Applicable Locations

- City-wide or specific neighborhoods/zones
- Sensitive areas near parks, green space, bodies of water, vegetated areas



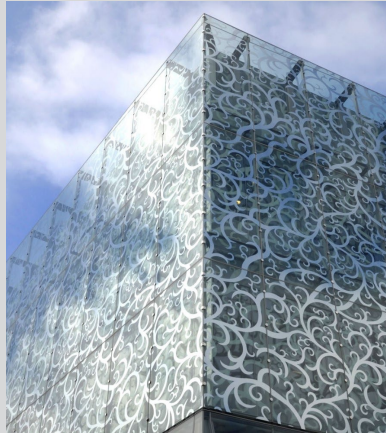
Bird Safe Consideration 3: Exemptions

- Historic buildings
- Small residential buildings
- Retail frontages

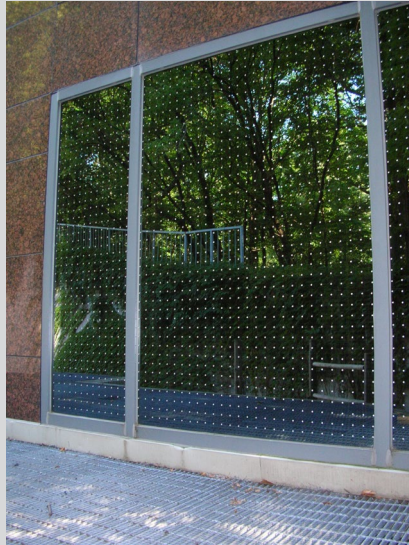
Bird Safe Consideration 4: Mitigation Measures

- Prohibit or limit glass in specific areas on a building
- Glazing/Exterior treatments
- Exterior design elements
- Interior design elements
- Documentation (Bird Collision Reduction Plan)
- Donation of dead bird specimens to conservation organization

Bird-Safe Solutions



Bird-Safe Solutions



Bird-Safe Solutions





Background

- Part of the 2019-20 FY Work Program
- Dark Sky Movement
- Light pollution negative effects
 - Humans (sleep)
 - Animals
 - Insects
- Match lighting with use



Dark Sky Regulations Intent

- Reasonable lighting
- Prevent light pollution and intrusion
- Reverse degradation of night sky
- Help protect natural environment



Current Lighting Regulations

- Color (white type light)
- Fixture Orientation and Glare
- Uniform intensity
- Critical Areas

Current Regulations (Contd.)

- Residential Hillside Zone
 - Outdoor Lighting
 - Motion-Activated Lighting
 - Recreational Courts



Dark Sky Consideration 1: Applicability

- All properties (residential, commercial, etc.)
- New Permits (planning and building)
- Existing lighting to continue



Dark Sky Consideration 2: Exemptions

- Holiday/temporary lighting
- Permitted lighting for signs
- Accent lighting
- Lighting in the public right-of-way
- Art work lighting





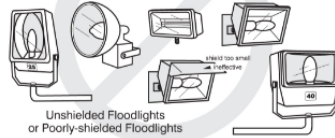
Dark Sky Consideration 3: Lighting Fixtures

- Shielded lighting
 - Light trespass

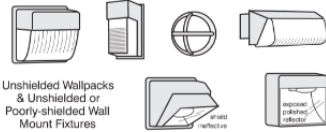
Examples of Acceptable / Unacceptable Lighting Fixtures

Unacceptable / Discouraged

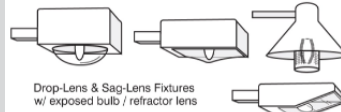
Fixtures that produce glare and light trespass



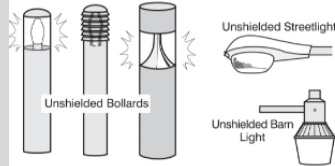
Unshielded Floodlights or Poorly-shielded Floodlights



Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures



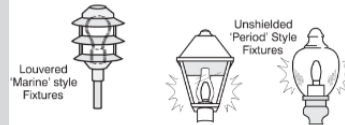
Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens



Unshielded Bollards

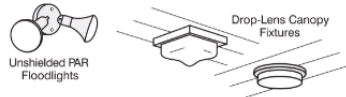
Unshielded Streetlight

Unshielded Barn Light



Lowered 'Marine' style Fixtures

Unshielded 'Period' Style Fixtures

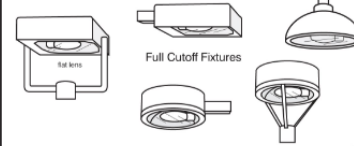


Unshielded PAR Floodlights

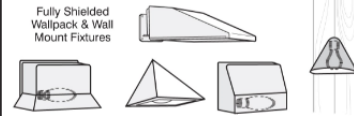
Drop-Lens Canopy Fixtures

Acceptable

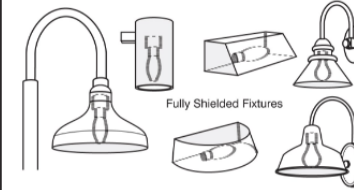
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



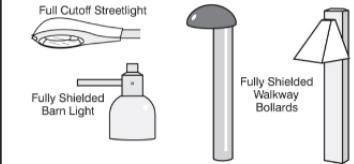
Full Cutoff Fixtures



Fully Shielded Wallpack & Wall Mount Fixtures



Fully Shielded Fixtures



Full Cutoff Streetlight

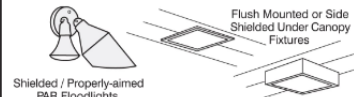
Fully Shielded Barn Light

Fully Shielded Walkway Bollards



Fully Shielded Decorative Fixtures
bulbs shielded in recessed trap

Fully Shielded 'Period' Style Fixtures
bulbs shielded in recessed trap



Shielded / Properly-aimed PAR Floodlights

Flush Mounted or Side Shielded Under Canopy Fixtures

Dark Sky Consideration 4: Lighting Controls

- Automated control system
 - Motion sensor, photo-cells, self-extinguishing
- Light the use/area



Dark Sky Consideration 5: Deviation from Lighting Standards

- Allow for deviation in standards



Dark Sky Consideration 6: Prohibited Lighting

- Flashing or blinking
- Up-lighting
- Lights for game courts
- Flood lights
- Aerial lights

For more information

Website:

www.cupertino.org/birdsafedarksky

Ellen Yau

Associate Planner

Phone: 408-777-1360

Email: elleny@cupertino.org

Erick Serrano

Senior Planner

Phone: 408-777-3205

Email: ericks@cupertino.org