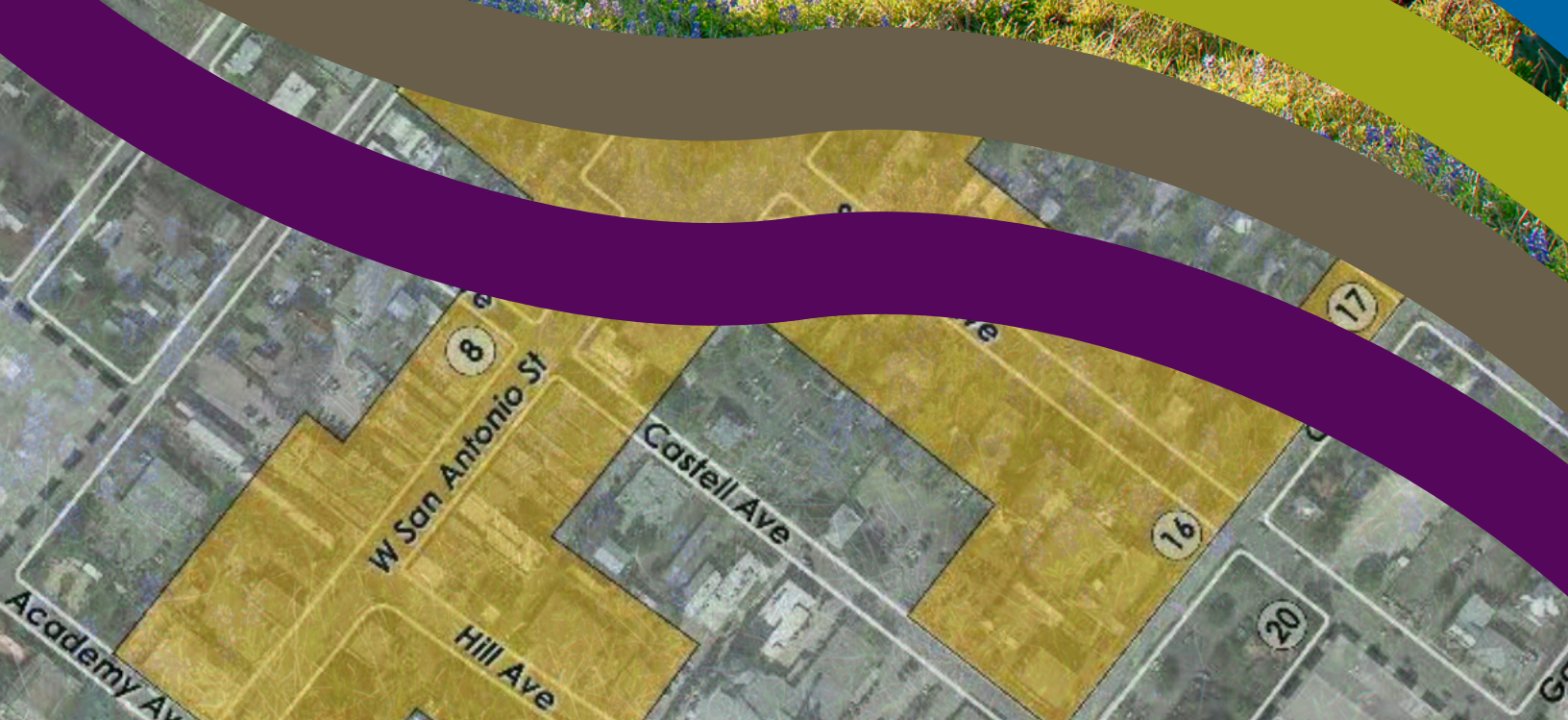


Leading by Example

ORDINANCES AND TOOLS FOR GROWING
HILL COUNTRY COMMUNITIES



Using the Guides

This project is organized into topical chapters: Water, Land and Skies, Transportation, and Zoning and Development. Each chapter contains *guides* that focus on a particular ordinance, or aspect of an ordinance, your community may be interested in adopting. Each guide introduces the ordinance topic and includes strong example ordinances, resources for further research, and a list of best practices.

EXAMPLE ORDINANCES

A selection of ordinances from the Hill Country and beyond are available for download throughout this guidebook. Strong components and necessary context are included as needed.

CITY NAMES and underlined text **link to ordinances and code sections.**

RESOURCES

The guides are snapshots of ordinances. Resources include relevant organizations and guiding documents that provide more in-depth information about each topic.

► *Underlined and italicized titles link to the corresponding document.*

BEST PRACTICES

A compilation of methods to undertake when crafting the ordinance. These suggestions are widely accepted as the most responsible and effective procedures for the given topic.



LAND & SKIES

The Hill Country is known for its sweeping scenic beauty and diverse wildlife, as well as its unique geological formations and water resources. Preserving open space, star-filled skies, native trees, and plant communities is essential to the health and well-being of the region's residents. Protecting these iconic open spaces and skies ensures that future generations of residents and visitors will have access to the natural resources, quality of life, and outdoor recreational opportunities that make the Hill Country unique.

OPEN SPACE PRESERVATION.....LS-4
TREE PRESERVATION.....LS-7
OUTDOOR LIGHTING.....LS-10

“The environment is where we all meet, where we all have a mutual interest; it is the one thing all of us share. It is not only a mirror of ourselves, but a focusing lens on what we can become.”

- Lady Bird Johnson

“MILKY WAY OVER TEXAS WILDFLOWERS”
ENCHANTED ROCK STATE NATURAL AREA 🌻
PHOTO COURTESY OF ROB GREEBON

Open Space Preservation

Open space is undeveloped land or land that is minimally developed for outdoor recreation or agriculture. Open spaces can be meadows, woodlands, savannahs, agricultural lands, river bottoms, floodplains, steep slopes, or hilltops. Preserved open spaces can be publicly owned lands or private lands where the owners have sold or donated the development rights, choosing to leave the land undeveloped in perpetuity.

BENEFITS OF PRESERVING OPEN SPACE

- Prevents sprawl and encourages efficient and fiscally responsible land use by clustering road, water, and sewer infrastructure in developed areas.
- Protects drinking water supplies from overuse and pollution.
- Increases groundwater recharge and preserves water quality by limiting development over critical recharge features where water can cleanly enter our aquifers.
- Increases property values in surrounding areas.
- Provides outdoor recreation opportunities for residents and visitors.
- Reduces habitat fragmentation for wildlife.
- Preserves natural landmarks that give our communities their specific identities and create a sense of place.
- Preserves land for farming and ranching.
- Provides buffers between incompatible land uses.
- Improves air quality and cools the surrounding area.

Open space preservation is a potent policy initiative because it is innately multi-functional and cost effective. Most preserved open spaces perform several, if not all, of the functions listed above for a fraction of the cost of traditional development. Open space can be preserved through a variety of approaches including overlay districts, cluster or conservation developments, public parks, greenbelts or corridors, and conservation easements. These and other strategies for open space preservation will be covered in subsequent portions of this guidebook.

EXAMPLE ORDINANCES

CITIES

DRIPPING SPRINGS

AUSTIN

▶ Traditional Neighborhood District

COUNTY

HAYS

see page 47

BONDS FOR PARKS AND OPEN SPACE

Public investments in land conservation can help offset the ever-growing impacts related to development. Conservation projects can help protect water quality, mitigate flood risks, preserve wildlife habitat, provide public recreation opportunities, and preserve rural lands that will help maintain the character of the Hill Country. Bonds to protect and preserve open space have been approved by the following communities:

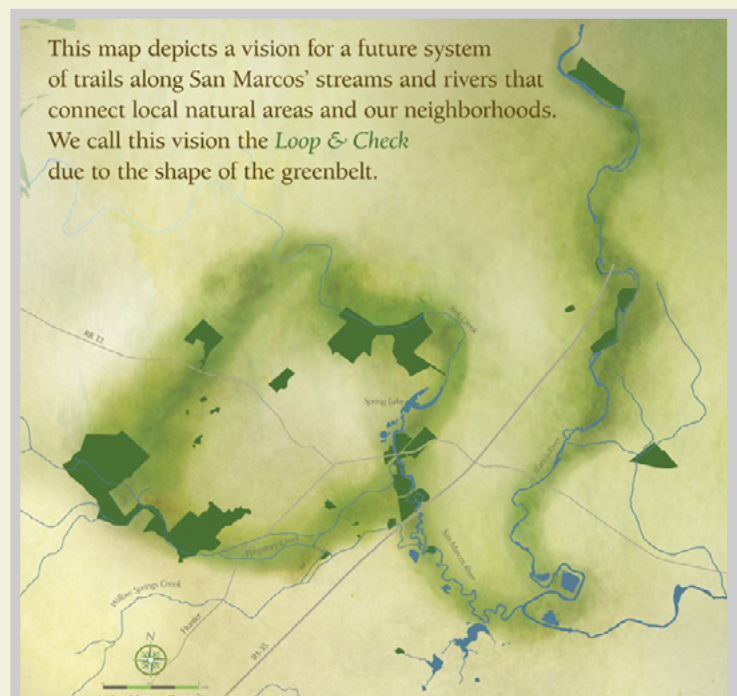
- **Hays County** voters approved, in November 2021, a \$75 million bond to protect Purgatory Creek Nature Preserve with a 1,068-acre conservation easement that permanently preserves the land from future development. Learn more at haysparksbond.com.
- **City of Boerne** voters approved \$13 million to improve several parks, trails and open spaces in November 2022.
- **Kendall County** voters approved in November 2022 a \$20 million bond for open space and conservation land to protect wildlife habitat and the water quality of creeks, rivers and springs.

GREENBELTS & CORRIDORS

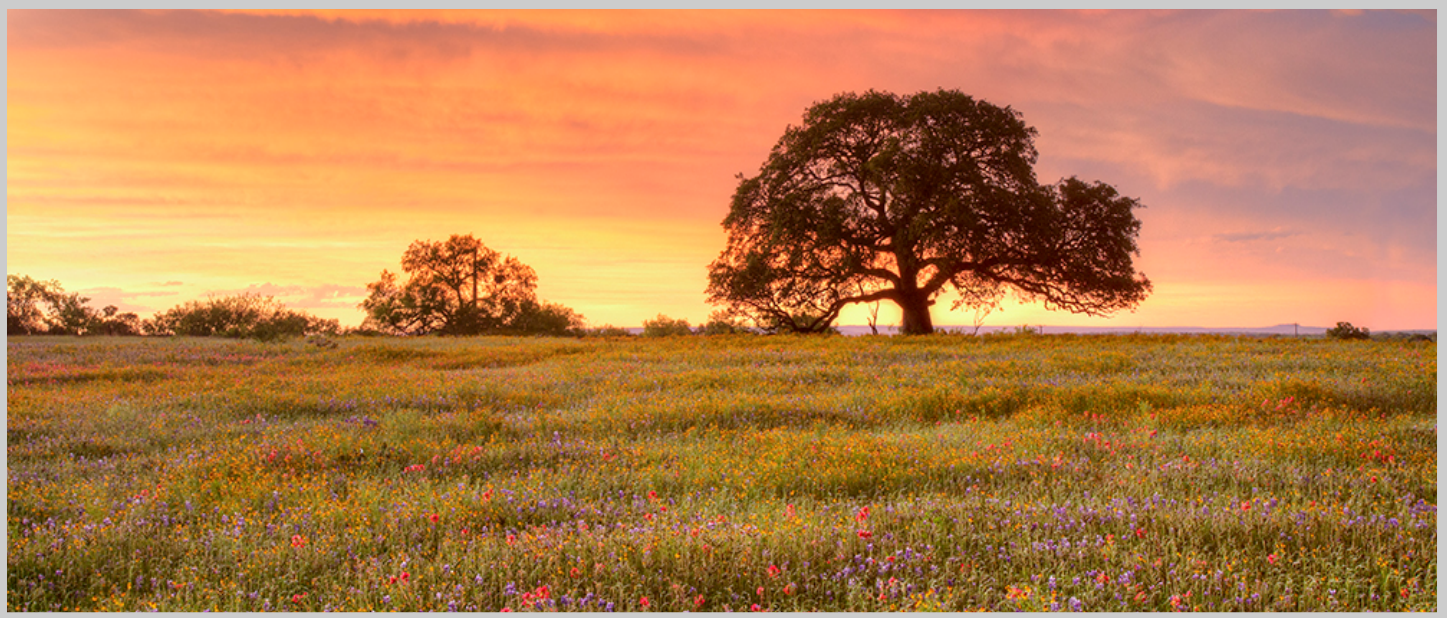
Greenbelts, or green corridors, are a great way to link parks, open spaces, and mixed use land in cities. For greenbelts to add the most value, they must be large enough to provide opportunities for people and wildlife to access and enjoy. Whenever possible, greenbelts should provide connections between existing green spaces, local amenities, commercial hotspots, and transportation hubs.

The San Marcos Greenbelt Alliance (SMGA) is a non-profit organization that works to preserve and protect the natural areas of San Marcos while connecting the community to its natural beauty.

▶ Learn more about SMGA at smgreenbelt.org.



MAP OF FUTURE TRAIL SYSTEM ALONG SAN MARCOS' STREAMS AND RIVERS
PHOTO COURTESY OF SAN MARCOS GREENBELT ALLIANCE



FIELD OF WILDFLOWERS BETWEEN LLANO AND MASON COUNTIES
PHOTO COURTESY OF ROB GREEBON

BEST PRACTICES

Identify types of open space. Not all open space needs to be parkland, or even be publicly owned. Open space can be categorized into natural, recreational, and agricultural types, each representing varying levels of human impact on the environment. By identifying these types, a community can determine the desired amount of each and make informed decisions about how to allocate resources.

Designate policies for acquisition of open space areas in community comprehensive plans. Open space is a vital land use and should be considered in a variety of local planning efforts from transportation to parks and recreation. Long-term goals for open space preservation are necessary for reducing habitat fragmentation, managing municipal and regional stormwater, and protecting sensitive natural resources and wildlife from the effects of transportation projects and other development.

Connect open spaces in order to reduce habitat fragmentation and preserve recreational opportunities. Collaborating with other municipalities, regional partners, area non-profits, and land trusts can help in creating larger tracts of connected open space.

Create equitable access to open space. Everyone deserves access to nature. While contiguous tracts are ecologically beneficial, it is equally as important that the benefits of open space are enjoyed and shared across multiple neighborhoods within a community.



Tree Preservation

A tree ordinance helps a city manage and protect its urban forest by providing for the preservation of existing trees, communicating tree health maintenance practices, and setting short and long-term management standards. Heritage trees have been growing for decades, often centuries, making them precious and finite resources that are vital to protect.



PROTECTED LIVE OAK ON THE CAPITOL GROUNDS IN AUSTIN. SIGN IN PHOTO BELOW READS "PLEASE HELP PRESERVE THIS HISTORIC TREE, KEEP OFF."



PHOTOS COURTESY OF SYDNEY BECKNER

EXAMPLE ORDINANCES

JOHNSON CITY

BLANCO

BULVERDE

MARBLE FALLS

- Includes language around penalties for properties that are clear-cut for any reason making them ineligible for approval of other permits for three years

HELOTES

BOERNE

NEW BRAUNFELS

- Includes one of the more extensive lists of protected tree and shrub species of any community

AUSTIN

SAN ANTONIO

- An example of a thorough ordinance including helpful images, graphs and equations



TREES ALONG SOUTH GRAPE CREEK IN LUCKENBACH.
(CC) DIANN BAYES / FLICKR

RESOURCES

This in-depth resource from the **International Society of Arboriculture** examines existing tree ordinances, discusses community forest management strategies, methods for evaluating tree ordinances and urban forests, performance standards for tree ordinances, and more.

► [*Guidelines for Developing and Evaluating Tree Ordinances*](#)

City Hall Essentials, a Texas-based firm, provides background on legal issues related to tree ordinances, specifically private property and takings law precedents. The document also contains example ordinances and best practices for providing a sound legal backdrop to your city's legislation. This resource is specific to Texas communities.

► [*Municipal Regulation of Trees and Landscaping*](#)

Penn State College of Agricultural Sciences provides an overview of a maintenance strategy for your community's urban forest.

► [*Annual Working Plans for Tree Commissions*](#)

NC State provides a broad overview of tree ordinances that covers types of tree ordinances, ordinance components, aspects of community involvement, and offer guidance on the ordinance writing process.

► [*Developing Successful Tree Ordinances*](#)

Levels of Tree Ordinance Protection



8" and larger

- Survey required on commercial site plan submittals



19" and larger are Protected Trees

- All species are protected
- Tree permit required for removal or impacts (residential and public)



24" and larger may be Heritage Trees

- Only specific species qualify
- Variance required for removal or impacts that exceed code requirements
- Variances can be administrative
- Greater penalties for unpermitted impacts



30" and larger Heritage Trees

- Proposed variances must go through public process

ON PRIVATE PROPERTY, THE CITY OF AUSTIN USES THREE CLASSIFICATIONS OF TREES FOR PROTECTION PURPOSES: 8- TO 18-INCH DIAMETER, PROTECTED TREES, AND HERITAGE TREES.

SOURCE: CITY OF AUSTIN

BEST PRACTICES

Fostering community support is critical to an ordinance's effectiveness. Before drafting an ordinance, develop a working relationship with interested civic groups, such as neighborhood associations, environmental groups, community clubs, etc.

Consider establishing a citizen advisory board and/or appointing a city arborist. This approach gives appointed residents the authority to propose and review revisions to the tree ordinance to city council. It also provides an avenue for community education of tree conservation and provides an additional forum for public input. Another approach can be to appoint a city arborist with expertise in forestry or horticulture to oversee compliance.

Develop and implement a master tree management plan. A successful management plan reflects the goals and values of the community and helps ensure that tree preservation is part of a community's larger natural resource management strategy. Successful implementation of a master tree plan requires commitment of personnel and resources. Developing an implementation schedule, delegating roles, and setting aside resources will ensure the success of an ordinance.



Outdoor Lighting

Outdoor lighting ordinances help communities keep their rural nighttime character, preserve star-filled skies, and maintain public safety while growth occurs. To be clear, outdoor lighting ordinances do not prohibit outdoor lighting - they simply limit the amount of light pollution. When nighttime lighting is shining where it's not intended - onto neighbors' properties, into the eyes of drivers and pedestrians, or up into the sky - it is considered light pollution. Reducing light pollution in our communities benefits human health, safety, and quality of life while also saving money in energy costs. Proper outdoor lighting protects starry views, which increases the tourism draw of our communities, benefits wildlife, and preserves a connection to the stars for children and adults.

Remember, it's not about "no lighting," it's about thoughtful lighting.

EXAMPLE ORDINANCES

BLANCO

- Addresses the city's extraterritorial jurisdiction (ETJ).

WIMBERLEY

LIBERTY HILL

- Uses the Texas Model Outdoor Lighting Ordinance (from Texas IDA).

FREDERICKSBURG

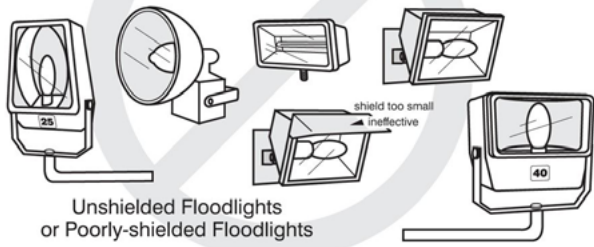
The Hill Country Alliance Night Sky Program helps Hill Country communities minimize the impacts of light pollution through education and outreach, the establishment of outdoor lighting policies, and the celebration of designated Dark Sky Places in our region.

- ▶ Explore our resources at hillcountryalliance.org/our-work/night-skies

Examples of Acceptable / Unacceptable Lighting Fixtures

Unacceptable / Discouraged

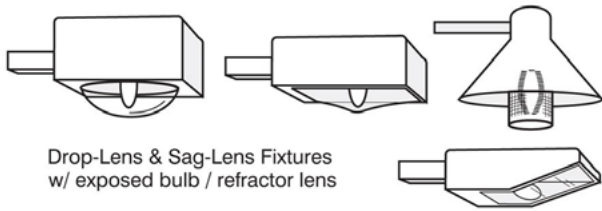
Fixtures that produce glare and light trespass



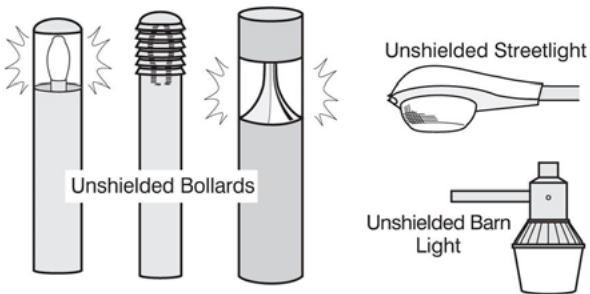
Unshielded Floodlights or Poorly-shielded Floodlights



Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures



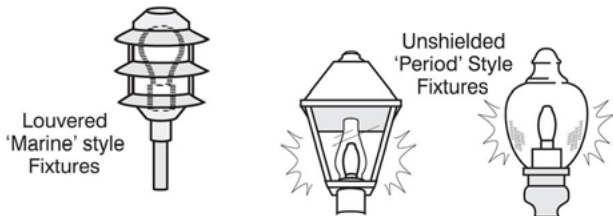
Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens



Unshielded Streetlight

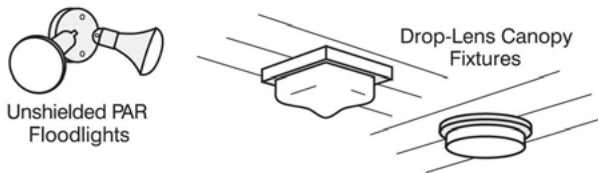
Unshielded Bollards

Unshielded Barn Light



Louvered 'Marine' style Fixtures

Unshielded 'Period' Style Fixtures

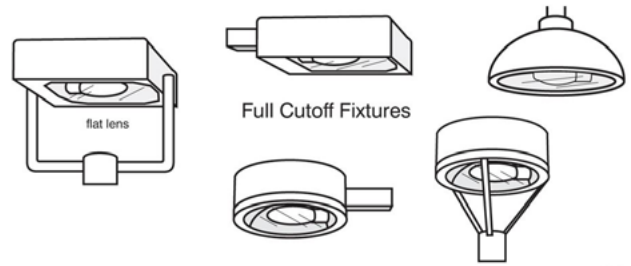


Unshielded PAR Floodlights

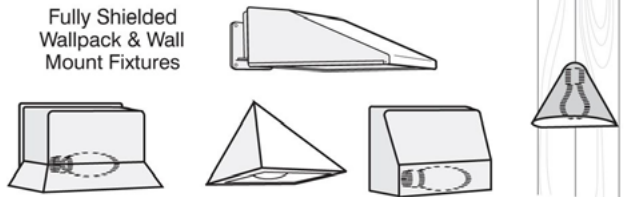
Drop-Lens Canopy Fixtures

Acceptable

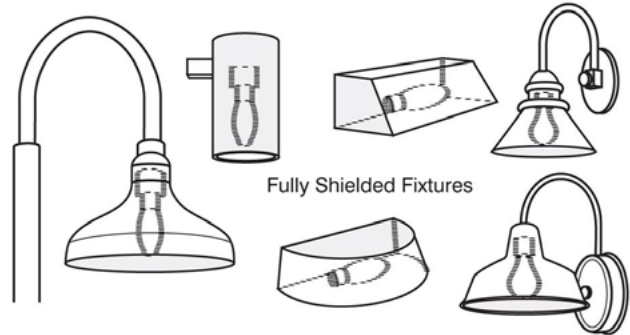
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



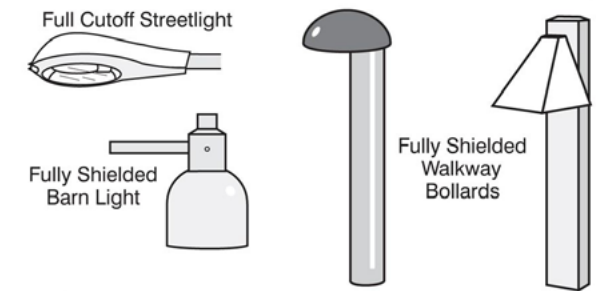
Full Cutoff Fixtures



Fully Shielded Wallpack & Wall Mount Fixtures



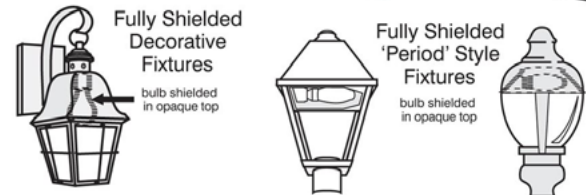
Fully Shielded Fixtures



Full Cutoff Streetlight

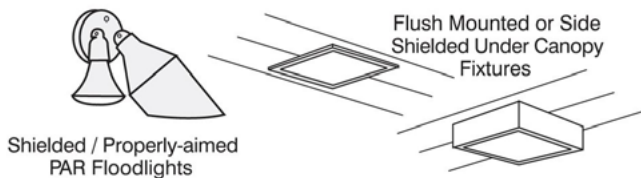
Fully Shielded Barn Light

Fully Shielded Walkway Bollards



Fully Shielded Decorative Fixtures

Fully Shielded 'Period' Style Fixtures



Shielded / Property-aimed PAR Floodlights

Flush Mounted or Side Shielded Under Canopy Fixtures

(CC) ILLUSTRATION BY BOB CRELIN

IDSC

INTERNATIONAL DARK-SKY COMMUNITY

Established by the **International Dark-Sky Association (IDA)**, the IDSC designation is granted to towns, cities, or otherwise legally organized communities that show exceptional dedication to night sky preservation through the implementation and enforcement of a quality outdoor lighting ordinance, dark sky education, and citizen support of dark skies.

The **IDA** is an advocacy network working to protect night skies.

- ▶ Learn more about IDSC and IDA resources at darksky.org
- ▶ Visit the Texas chapter at idatexas.org

The IDA and **Illuminating Engineering Society (IES)** developed a Model Lighting Ordinance to simplify the ordinance process (see Liberty Hill).

- ▶ [Model Lighting Ordinance](#)

TEXAS IDSC CITIES

DRIPPING SPRINGS (2014)
HORSESHOE BAY (2015)
WIMBERLEY VALLEY (2018)
LAKEWOOD VILLAGE (2019)
FREDERICKSBURG (2020)
BLANCO (2022)
BEE CAVE (2023)

CHAPTER 3000 OF THE TEXAS GOVERNMENT CODE mandates that any municipality that adopts or enforces an outdoor lighting ordinance must also adopt a resolution stating the community's intention to pursue an International Dark-Sky Community (IDSC) designation through the International Dark-Sky Association (IDA). The resolution does not need to indicate a timeline for pursuing the IDSC designation.

- ▶ [City of Liberty Hill Resolution Supporting Dark-Sky Certification](#)



"THE STARGAZER"
PHOTO COURTESY OF TODD WINTERS

BEST PRACTICES

Use visual aids and approachable language to encourage understanding and support. Lighting is a visual subject and diagrams and images are helpful for illustrating permitted designs. Lighting is also a technical subject and uses terms and concepts that will likely require community education. Some terms, like "lumens" and "correlated color temperature (CCT)" are less important to understand technically, and more important to simply get the gist (e.g. "lumens" is a measure of brightness, and "CCT" refers to the color of the light). It is important to discuss the value of an outdoor lighting ordinance with the community to gain support and cooperation.

Limit the amount of unshielded lighting per acre. One of the primary components of an outdoor lighting ordinance is the requirement that outdoor lighting be fully shielded. However, it is typical to allow for some low output lights to remain unshielded, to accommodate string lights and other special uses, provided they do not shine onto neighboring properties or into streets.

Require that outdoor lighting be warmer (amber) in color, using a cap of 3000 Kelvin, CCT. The move to LEDs has led to the proliferation of bright blue-white or “daylight” fixtures in our night time streetscapes. Warmer tones - lights that have less blue in them (lower CCT ratings) - are better for our bodies as well as those of animals and plants. They also create less glare in the eyes of drivers and pedestrians and do less to wash out our view of the stars in the sky. While warmer tones from LEDs were once more expensive, that is no longer the case.

Limit the total amount of lighting on an acre of commercial property or residential property. Typical numbers to use are 17,500 lumens per acre of residential property and 75,000 lumens per acre of commercial property. It is a best practice to define the acreage of the property using “net acres,” meaning the portion of the property not covered by a building.

Prohibit light trespass. Light trespass occurs whenever light shines directly across a property line. Reducing light trespass is a key motivator for many residents to support outdoor lighting ordinances. A fully shielded light will not create light trespass, unless it is very close to the property line, so the requirement to fully shield lighting will address most, but not all, instances of light trespass.

Address streetlights and sports lighting. In general terms, the same standards (e.g. CCT maximum of 3000K, full shielding, light trespass restriction) should apply to street lighting. Sports lighting policies should follow similar standards, and have a curfew for what time the lights go out if no scheduled game is underway.

Allow nonconforming lighting to stay in place for a set number of years before needing to be replaced. Grace periods of 5 years or 10 years are typical for this provision.

Address signage, if there is not a sign ordinance that already addresses sign lighting. Lighting for externally lit signs should conform to the same standards as other lighting. Internally lit signs should have a dark background with lighter lettering, as opposed to a white background with darker lettering.

Require a lighting plan and inspection. It is best to require evidence (e.g. an inspection) that the ordinance has been followed, prior to issuing a certificate of occupancy.





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Learn more at HILLCOUNTRYALLIANCE.ORG/LEADINGBYEXAMPLE