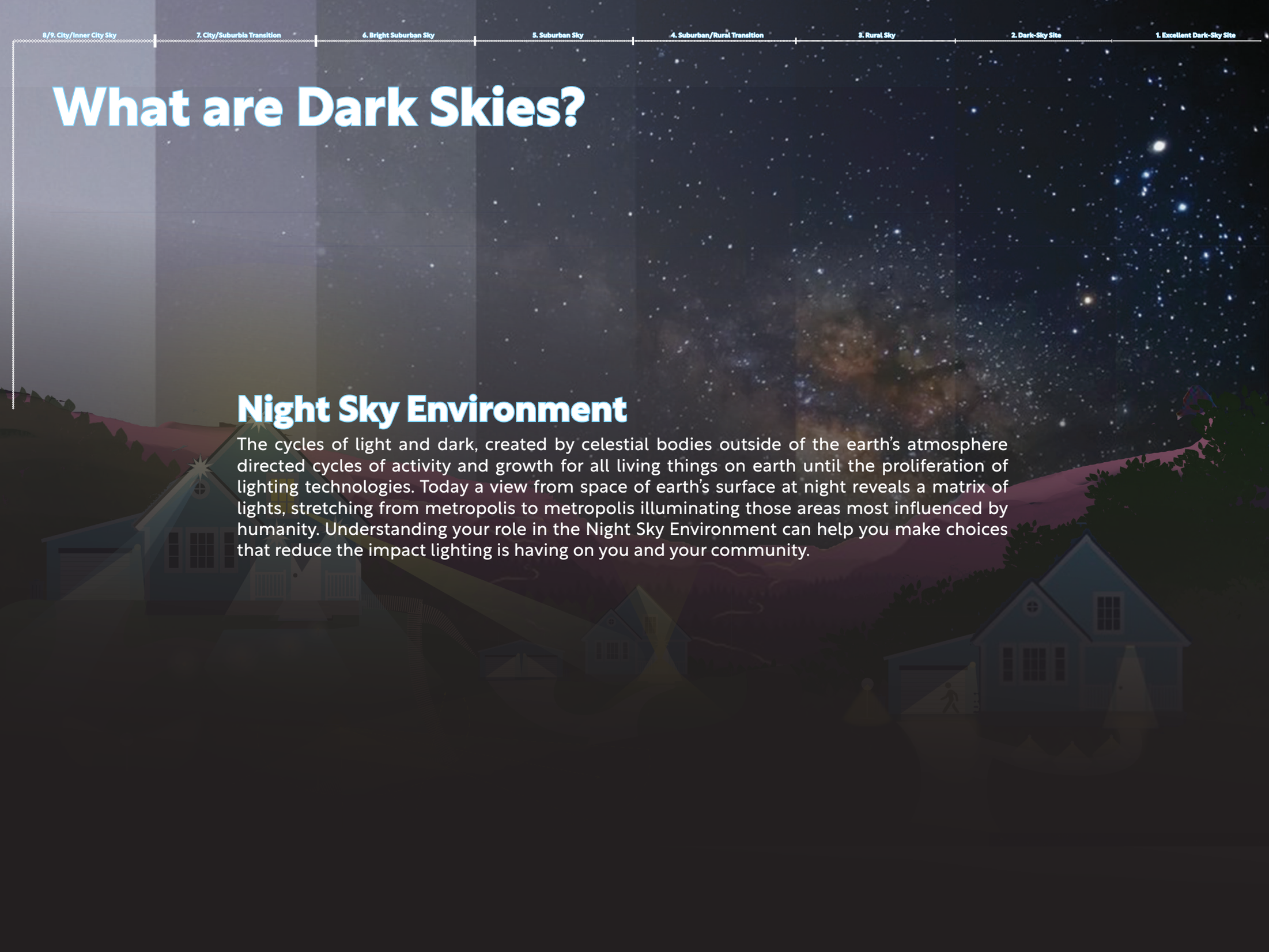
DARK SKY ORDINANCE
MUNICIPAL CODE: 19.73.110 NIGHT LIGHTING



What are Dark Skies?

Night Sky Environment

The cycles of light and dark, created by celestial bodies outside of the earth's atmosphere directed cycles of activity and growth for all living things on earth until the proliferation of lighting technologies. Today a view from space of earth's surface at night reveals a matrix of lights, stretching from metropolis to metropolis illuminating those areas most influenced by humanity. Understanding your role in the Night Sky Environment can help you make choices that reduce the impact lighting is having on you and your community.

Our Impact

Many of us have experienced this scenario: a neighbor installs a new light on their property. It's an unshielded fixture that casts a bright light that spills onto your property and perhaps even inside your home. Frustrating right?

Have you considered that you might be that neighbor in someone else's scenario? Steep slopes in Emigration Canyon can create scenarios in which light sources can directly effect homes at great distances. The four topics below; **Skyglow**, **Light Pollution**, **Light Trespass**, and **Glare**, can help you better understand the potential impacts of uncontrolled light.

My Neighbor's Lighting
International Dark Sky Association

8/9. City/Inner City Sky | 7. City/Suburbia Transition | 6. Bright Suburban Sky | 5. Suburban Sky | 4. Suburban/Rural Transition | 3. Rural Sky | 2. Dark-Sky Site | 1. Excellent Dark-Sky Site

What are Dark Skies?

Skyglow

Skyglow occurs when ambient manmade light floods the sky creating a glow that can be almost as bright as dawn or dusk. The accumulated light washes the night sky of its luminosity and brilliance, forcing urban and suburban dwellers who wish to enjoy a view of the Milky Way Galaxy or constellations to make a pilgrimage to areas where light pollutions does not exist or is better controlled.

Communities and areas can be rated as to the quality of their Night Sky Environment from 9 to 1 based on the levels of Skyglow effecting their night sky environment.

Where would you rate your community on the scale below?

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Why do Dark Skies Matter?

Human Health

Humans Need The Natural Day/Night Cycle

Our biological clocks help keep us healthy. When our master clock is out of sync with the day/night cycle, it's called circadian disruption. Altering or interrupting our normal circadian rhythm can put us at risk for physiological and behavioral impacts.

Light Pollution Can Put Your Health at Risk
International Dark Sky Association

Ecological Health

Artificial Lights Disrupt Ecosystems

Plants and animals depend on Earth's daily cycle of light and dark to govern life-sustaining behaviors such as reproduction, nourishment, sleep and protection from predators. Scientific evidence suggests that artificial light at night has negative and deadly effects on many creatures, including amphibians, birds, mammals, invertebrates, and plants.

Light Pollution Can Harm Wildlife
International Dark Sky Association

Waste

Light Pollution Costs Money And Wastes Resources

Poorly designed outdoor lighting wastes energy by not being shielded, emitting more light than necessary or shining when and where it's not needed. Wasting energy in this way has huge economic and environmental consequences.

Light Pollution Costs Money and Wastes Resources
International Dark Sky Association

Safety

Brighter Does NOT Mean Safer

Lighting up the nighttime environment does not necessarily improve safety or security. This may seem contradictory, but there is no clear scientific evidence that increased outdoor lighting deters crime and increases safety.

Outdoor Lighting, Crime, and Safety
International Dark Sky Association

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Dark Sky Friendly?

1 Take the Quiz

Do you know if your home lighting is community and night sky friendly? Follow the steps below to find out. Most people will find that a few simple changes can lead to lighting that is both beautiful and functional, without contributing to excessive light pollution.

Dark Sky Friendly Home Lighting Program
International Dark Sky Association

2 Review YOUR Ordinance

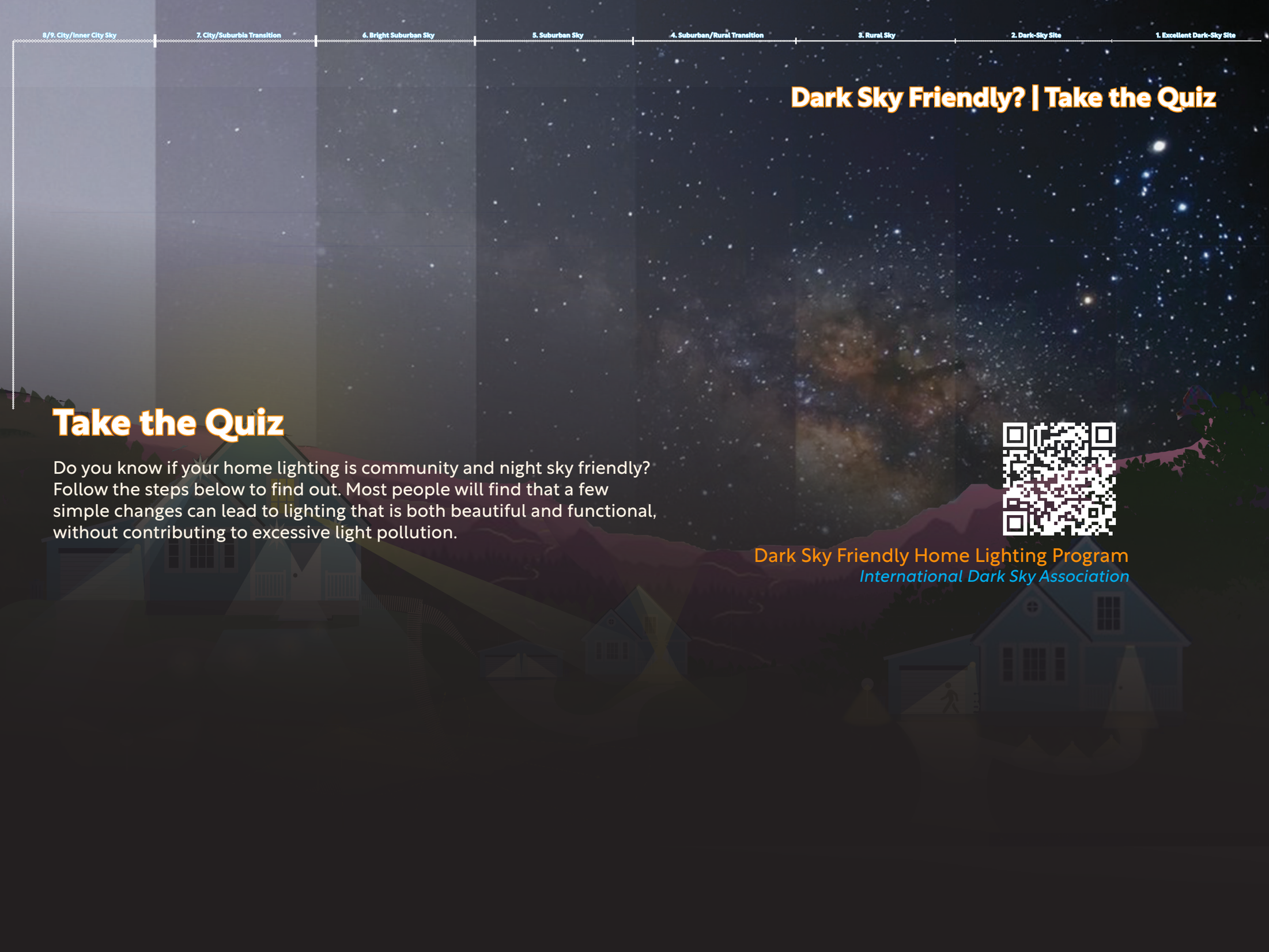
Emigration Canyon Metro Township
DARK SKY ORDINANCE | MUNICIPAL CODE: 19.73.110 NIGHT LIGHTING

Municode
Emigration Canyon Metro Township

3 Develop YOUR Plan

Follow the steps below and utilize the Emigration Canyon Dark Skies Do's and Dont's guide to develop a Dark Sky Adapted Lighting Plan for your Property!

1. Draw a simple sketch of your property
2. Differentiate the Hardscape Areas From the Softscape Areas
3. Identify all the places you would like to light, and when you would like to light them.
4. Mark on your plan where you will place a light source.
5. Create a list of the luminairs you will use, and identify on the plan which luminairs will be used at each light source.



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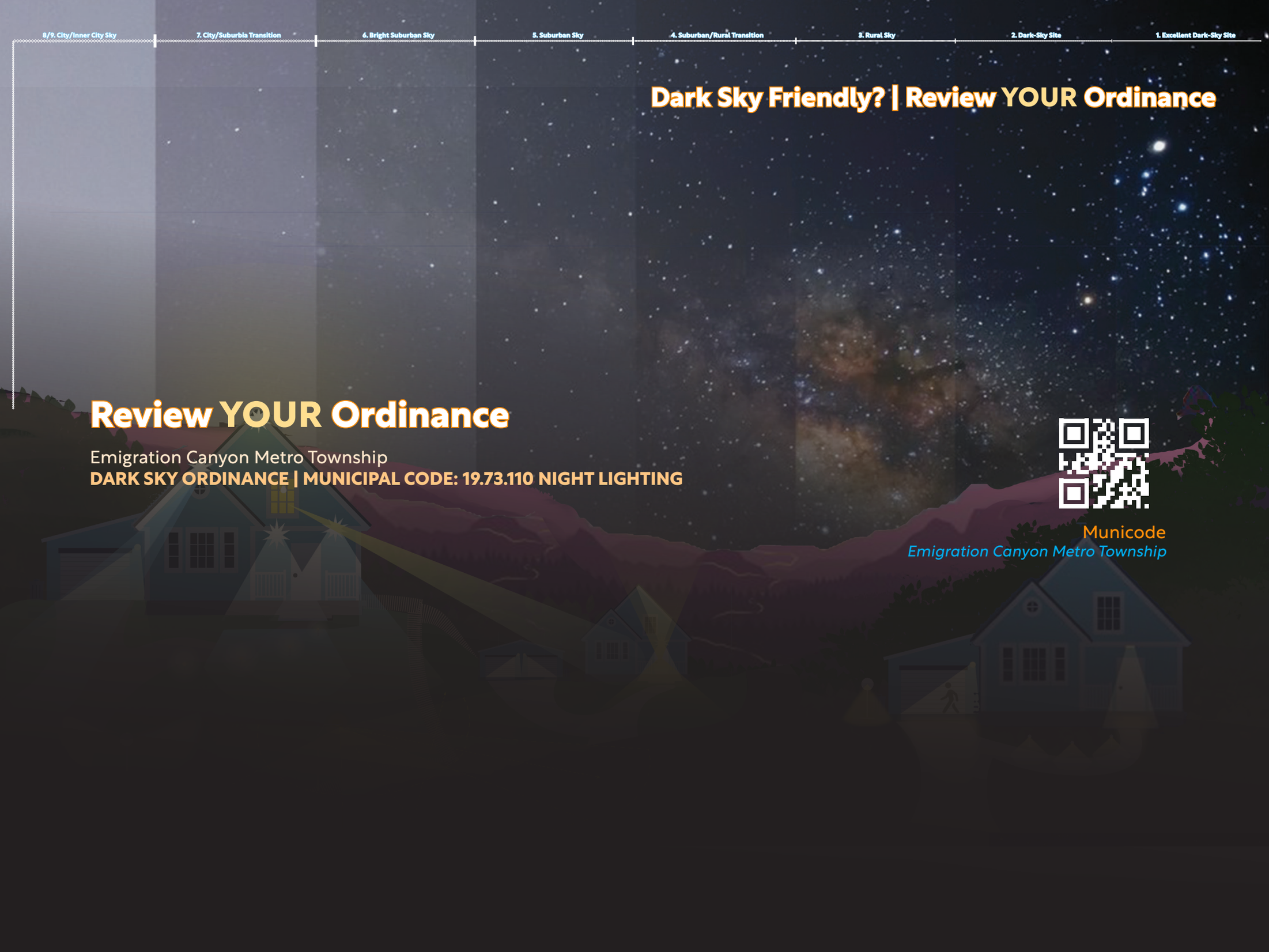

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Useful

Use light only if it is needed

All light should have a clear purpose. Consider how the use of light will impact the area, including wildlife and their habitats..

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Targeted

Direct light so it falls only where it is needed

Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

Low Level

Light should be no brighter than necessary

Use the lowest light level required. Be mindful of surface conditions, as some surfaces may reflect more light into the night sky than intended.

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Controlled

Use light only when it is needed

Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.

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Dark Sky Friendly? | Review YOUR Ordinance

Color

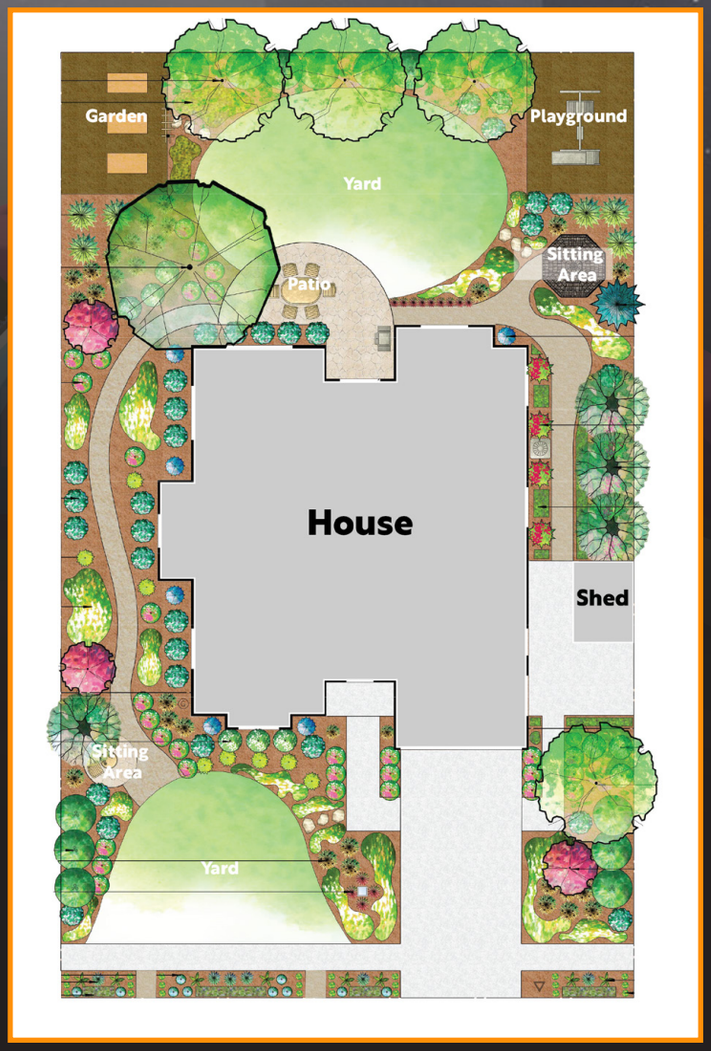
Use warmer color lights where possible

Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

Develop your Night Lighting Plan In 5 basic Steps

1. Sketch your Property's Landscape Plan

Measure distances and areas in Google Earth
Google Earth Help



Use what you have!

Do you already have a landscape plan?

What are looking for is a calculation of the square footage (sq. ft.) of the areas you would like to light.

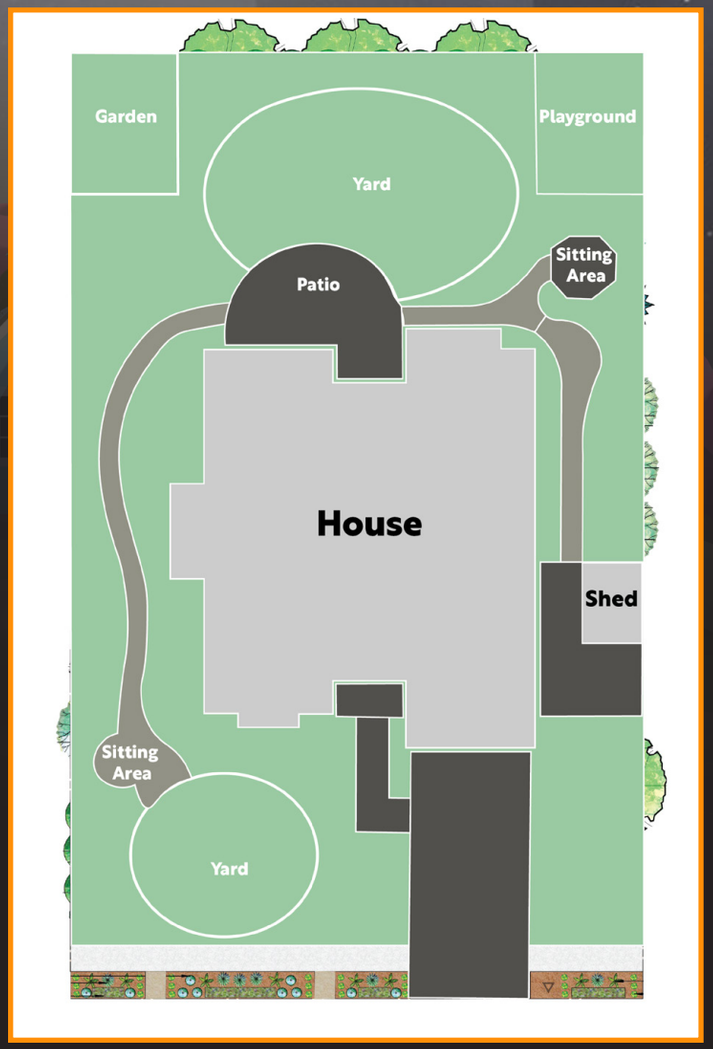
If not, a pen and paper will do.

Go analog. Pace of your areas for a ruff estimate, draw them on a piece of paper to use as a reference.

Use Google Earth

There are a number of applications online that can help you measure the square footage of an area. You may find the tools available in Google Earth quite useful for this. (LINK)

2. Differentiate the Hardscape Areas From the Softscape Areas



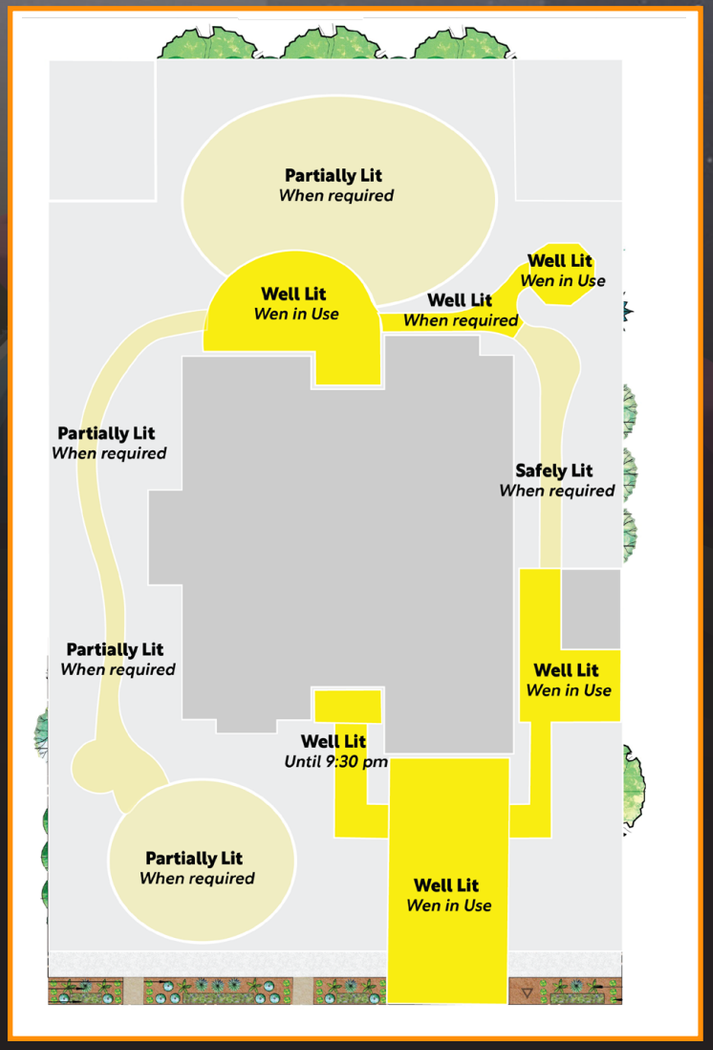
Why differentiate?

We typically have very different expectations about how we light hard and softscape areas.
By prioritizing hardscape first, you will ensure you are being targeted and useful with your lighting choices.

Hardscape Any non-living horizontal site element, including but not limited to patios, decks, walkways, sidewalks, driveways, and steps.
Any surface that you intentionally installed to move around on or park a car.

Softscape Any area within the site plan where hardscape is not present.
These areas are your turf grass, your planter beds, your garden.

3. Identify places you would like to light, and when you might need them lit



Think Safety. Think Fun.

Remember the 5 guiding principles: **Useful**, **Targeted**, **Low Levels**, **Controlled**, & **Color**
Prioritize areas that will be most heavily traveled. Plan for activities that you would like to take place you your yard.

Calculate the sq. ft. of each **individual hardscape area** you wish to light.
This will help you calculate how much lighting you will need to light each individual area.

Combine the total sq. ft. of all the hardscape areas you wish to light.
You can get a general sense of how much light you will be allowed on your property. Assuming a typical mounting height a 60 lumen will illuminate approximately a 60 sq. ft. area for outdoor residential properties.

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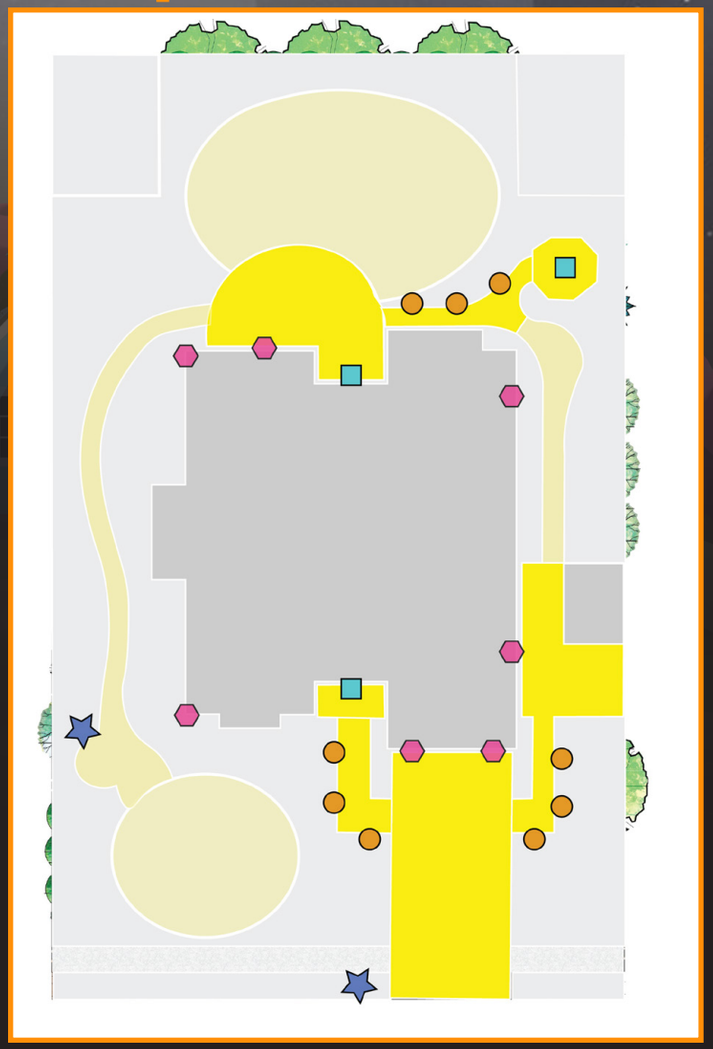
4. Mark on your plan where you will place each light source

Find Dark Sky Friendly Lighting
International Dark Sky Association



Lighting Choice

X Foot candles Allowed **/** Sq. Ft. Hardscape **=** Total Lumen

Use this simple formula to curate a lighting plan that meets the standards adopted by your community.

Use only **Full Shielded Fixtures**!

Do not shine or reflect light upwards! Choose luminairs and fixtures that emit no light above the horizontal plain. Need help? **Use the QR Code above for advice.**

Use bulbs with **color temperature** of less than three thousand degrees kelvin (3000°K).

Don't use lights that are blue or over white in color.

Take advantage of exemptions.

Using motion sensors, and pathway lights under 18" in height allows you to install lighting that is excluded from your total lumen count.

5. Create a list of the products used for each light source.

Demonstrate compliant lighting. Identify exceptions.

Follow your lighting plan.

The easiest and most cost effective way to be Dark Sky Friendly is turn off lights when they are not in use.

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