

**From:** [REDACTED]  
**Sent:** Monday, December 4, 2023 3:46 PM  
**To:** Comprehensive Residential Code Review Committee <CRCRC@rollingwoodtx.gov>  
**Subject:** Residential Exterior Lighting - draft ordinance No. 1

Hi committee members,

Please find attached a proposed draft of an lighting ordinance that is simple and without the complications that can be involved with a commercial property. Indeed I included the text of an exemption that City of San Marcos has for single-family residential properties for any lighting requirements. Then there is the City of Bee Cave which adopted IES Model lighting code that is very complicated in my opinion but an improvement over their previous one.

While there may not be much appetite in the City of Rollingwood for a lighting ordinance at this time, I offer this for your consideration and information.

Thank you for all your time and effort that you have spent on this committee.

Jerry Fleming

City of Rollingwood

Lighting Ordinance Draft/Outline

Lighting Issue/Concern/Problem	Remedy
Glare	Light Fixtures that are fully shielded or completely cut off.
Trespass - Lighting at lot line line. with	Light level shall not exceed blank footcandles at residential property line. Note: A full moon light level varies from about .05 to .02 footcandles several folks saying .01 fc typical level. Twilight is about 1 fc.
Dark Sky Friendly	Aim light fixtures down or fixture cutsheet shows dark sky friendly designation.
Brightness on certain areas TBD max (Pertains more to commercial properties)	Total lumens per square footage or maximum footcandle level or average footcandle level. Even maximum average ratio of max to average min.

City of Austin Exterior Lighting Ordinance partial verbiage (Compatibility Std 25-3-86):

Except for lighting in public right of way, all exterior lighting must be hooded and shielded so that the light source is not directly visible from adjacent properties. Exterior lighting may not exceed 0.4 footcandles across the source property line.

Suggested verbiage:

All exterior light fixtures must be fully shielded or completely cut-off and the light source is not directly visible from other properties.

Exceptions are the following:

1. Temporary lighting decorations such as Christmas lights.
2. Underwater swimming pool or underwater spa light fixtures.
3. Integral light fixtures that are mounted no more than 5 ft above grade on exterior equipment may not be fully shielded or completely cut-off but their light source shall not be visible from other properties. Examples include LED fixtures on side of a spa and Japanese landscape type lanterns.

Exterior lighting level may not exceed 0.25 footcandles across the source property line except at public right of way where the lighting level shall not exceed blank (5.0 ? ) footcandles.

Exceptions are the following:

1. Lighting level from City owned pole street lights may exceed 5.0 footcandles.

Other cities' Exterior Lighting Ordinances:

City of San Marcos – Section 7.5.1.2 | Applicability of Lighting and Glare Standard

- B. Exemption: Property located within a single-family residential district which is used for single-family residential use is exempt from standards applied to exterior lighting.

**From:** [REDACTED]  
**Sent:** Monday, December 11, 2023 11:27 AM  
**To:** brideraustin [REDACTED]  
**Cc:** Comprehensive Residential Code Review Committee <CRCRC@rollingwoodtx.gov>  
**Subject:** Re: Residential Exterior Lighting - draft ordinance No. 1

Brian,

Here are my answers to your questions.

Jerry

On Tuesday, December 5, 2023 at 01:51:43 PM CST, Brian Rider [REDACTED] wrote:

Jerry -- thank you. As a person new to the lighting issues, can you answer a few basic questions for me?

How is the light in foot candles measured "in the field" -- is there easily available equipment to do this? Light meters are available but ones that detect low light levels can be costly. Mine goes down to 10 fc which works for my interior projects.

Is that equipment portable? Hand held.

Is it expensive (like for a small city like Rollingwood?) Ones for parking lot can be over \$300. Attached is one.

I think that I understand "cut off" but I'm not sure how precise that is -- is it a cover or something like that which directs the light from a source only down and not at all horizontally? Measured from what heights? Attached are examples of fully shielded or completely cut off light fixtures.

If it can be explained at all to a history major, what is the difference and relationship between foot candles and lumens? Think of water coming out of a lawn sprinkler. That'll be the lumens or luminous flux. If the water hits say a fence a few feet away, the amount of water hitting the fence can be like an amount of footcandles. Historically it all started with a frugal Englishman taking one candle and calling the amount of light hitting a 12" x 12" paper placed 1 ft away one footcandle. Then the Europeans took one meter square piece of paper and placed it one meter away from the candle and called it one lux. Anyway the lighting level as perceived by the human eye on a surface will vary with the distance from the light source and light source's lumens along with other things.

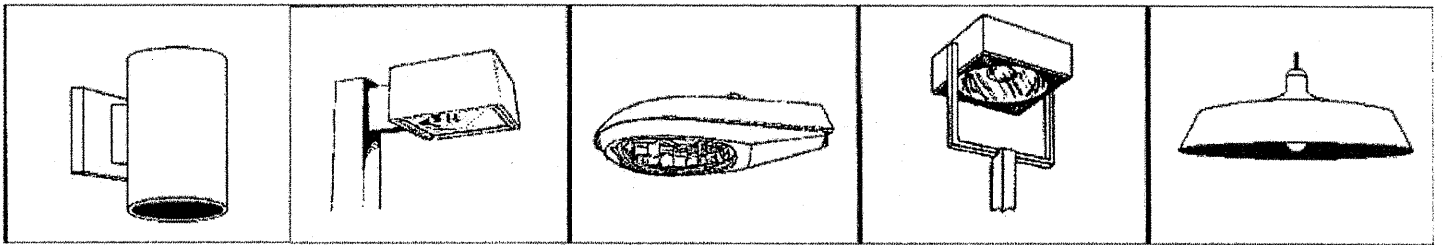
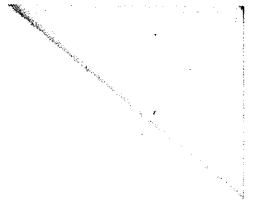
I'm OK with Christmas lights, but do we then need to get into when the lighting exception starts (like after July 4?) and when it ends (like after Easter?) Some ordinances define temporary to be 60 days max.

I'm not a pool or spa owner so do not understand the exception for such things. My neighbor has a new spa which is a good example but it's side LED light is not always visible or noticeable.

It seems to me that the exception in the San Marcos ordinance makes the whole exercise meaningless. We are dealing in the CRCRC only with the residential areas and so only SF Residential uses -- but if those are exempt from rules of exterior lighting, what is left? Correct. City ordinances pertaining to residential property exterior lighting requirements are not uniform. In fact, some have none like San Marcos at least for now. You could say they are home cooked and hence have different flavors.

I'm generally around for a phone conversation or even after supper for a walk around to do show and tell. My cell is 512.626.5943 and home phone (yes I still have a hard line) is 512.327.4811. It was good talking to you.

Brian Rider



**Figure 34:**  
Examples of fully-shielded light fixtures.

## Light Meter

Measures light intensity up to 20,000 Foot-candles or Lux  
With high resolution to 0.01 Fc/Lux

### Features:

- Relative mode indicates change in light levels
- Peak mode capture highest reading
- Remote light sensor on 12" (305mm) coiled cable — expandable to 24" (609mm)
- Utilizes precision photo diode and color correction filter
- Cosine and color corrected measurements
- High accuracy of  $\pm(5\% \text{ reading} + 0.5\% \text{FS})$
- MIN/MAX feature stores maximum and minimum readings
- Data Hold freezes reading in the display
- Large LCD display with analog bargraph
- Backlight for readings in low light levels
- Dimensions: 5.9 x 2.95 x 1.57" (150 x 75 x 40mm); Weight: 7oz (200g)
- Complete with 9V battery, light sensor with protective cover, and protective holster



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