

## Minutes of Parkfairfax Transportation and Land Use Committee (TLUC) Meeting of 08 April 2021

The Parkfairfax TLUC convened its monthly meeting “virtually” on 08 April 2021. The TLUC was privileged to welcome two members of the Landscape Committee who brought a fresh perspective to the discussions. The April 8<sup>th</sup> meeting deviated from its usual transportation-focused agenda and dealt primarily with lighting concerns.

### Issue 1 :

The topic du jour was the upcoming property-wide lighting survey. The TLUC had planned a preliminary Ward-by-Ward assessment starting late April, but due to unforeseen circumstances, the TLUC undertaking had to be postponed or reevaluated. It is also understood that Management has contracted with a professional consultant from Minnesota, On-Site Lighting & Survey, LLC, to conduct a walk-through in late April or early May, although at this time there are scant details as to how that effort will be conducted, or what is expected to result therefrom.

The intent of the TLUC assessment was to pinpoint areas where lighting is inadequate from a safety and security standpoint such as steps, walkways, parking lots, building surrounds, etc., as well as areas where lighting appears excessive, intrusive, improperly focused or not mounted at an appropriate height. While lighting is a deterrent to criminal activity, light intrusion into bedroom windows is of concern to many residents as is “light pollution” in general.

Discussions exposed widely-held concerns and misconceptions that LED lighting will not have a favorable impact on the community, and I was “volunteered” to attempt to clarify lighting characteristics and disabuse everyone of that notion. Not to be patronizing, but here goes...

Once upon a time, when incandescent bulbs were king, brightness and light color were defined INCORRECTLY by wattage and adjectives. A 60 watt bulb had a certain brightness that most people seemed familiar with, but in reality, wattage did not indicate brightness. Wattage defines power consumption which is reflected in your monthly electric bill. I have a coffeemaker that uses 750 watts to brew my java, but it produces no light at all. Ditto for my vacuum cleaner. Although we didn’t talk about it in the old days, brightness is actually measured in **LUMENS**. A 60 watt incandescent bulb produced about 800 lumens. As tungsten filament (incandescent) bulbs progressed into halogen, CFL and LED, it became possible to obtain the same brightness for far fewer watts. Manufacturers still mark bulb packaging “60 watt equivalent” to help humans make the transition, but the important piece of information is that the bulb is 800 lumens. And, depending on its design, an 800 lumen LED bulb consumes about 4.5 watts, versus 60 watts for an incandescent, an energy \$saving\$ of over 90 percent!!

When we choose a bulb, we should look at how many lumens we need for the intended application. For reading, cooking and other detailed work we probably want a brighter light. But for relaxing with a glass of wine or watching TV, a less bright (lower lumen) bulb is probably desirable. Thankfully, most LED bulbs are now available in dimmable versions. Again, it’s the brightness and not the color tone that is measured in lumens.

But, as I said there were two characteristic of incandescent bulbs and the second and more important is color temperature. In days of old, bulbs were subjectively marked as cool white, daylight, warm white, soft white, etc. Technically the color tone of a light bulb is measured as “color temperature” in degrees Kelvin. Thank you Lord Kelvin. Most studies I have seen indicate that people, animals, insects, and even the birds and the bees are more comfortable with a warm glow than with harsh bluish lighting designed to simulate the outdoor

sky in Montana. This is true for interior lighting as well as outdoor floodlights, porch lights, etc. There are places such as hospital corridors, restaurant kitchens, retail stores, etc. where bluish lighting may signal cleanliness, but for most interior and outdoor applications in residential neighborhoods such as ours, I strongly believe a softer tone is preferable.

So how do we control color temperature? It has NOTHING to do with brightness and EVERYTHING to do with degrees Kelvin. In general bulbs, including LEDs, are rated from 2700 deg. K up as high as 7000 deg. K. Yikes! Bulbs in the 2700 to 3000 deg K range cast a comfortable warm glow, whereas those at the high end of the scale produce a ghastly bluish tint, regardless of brightness. Making a bulb less bright does not change the color temperature. Making a bulb brighter likewise does not change its color temperature. I recommend this short but really excellent primer which contains a chart to clarify Lumens vs. Degrees Kelvin and relate everything back to the days of old.

<https://providerpower.com/power-to-help/led-terminology/>

Yes, of course it's possible that lighting can be too bright. That can be corrected by using bulbs with a lower lumen rating. But, more often, complaints involve color temperature being mistaken for brightness, and simply choosing bulbs at 2700 deg K is the magic solution. This is true whether the bulb is a screw-in type or a porch light containing multiple small build-in non-replaceable LEDs. It's true whether the bulb is clear or frosted. **So, in summary, if Parkfairfax installs additional outdoor lighting, or offers porch lights through the Unit Services Program, I strongly recommend they be specified as 2700 deg. K color temperature.** The TLUC will be pleased to work with the Board and Management to ensure any contemplated lighting upgrade is consistent with the foregoing. Not to beat a dead horse, but LUMENS determine brightness and should be chosen appropriate to the requirements. Conversely, color temperature is measured in DEGREES KELVIN and, in my judgment, choosing a low temperature of 2700-3000 deg. K is vital to maintain a happy community.

#### Issue 2:

Members reported protracted outages with streetlights at various locations in Parkfairfax. The concrete pole streetlights on city streets, as well as the Parkfairfax-controlled Lanes and the 3100 block of Ravensworth Place, are maintained by Dominion Energy. While underground utilities render our electric service less vulnerable during severe weather conditions, they tend to complicate and prolong repair time. Given the age of the underground network, seepage of road chemicals, and impact of other construction activity, most streetlight outages can be chalked up to underground cable issues. Dominion predicts a 2-3 week repair time for underground streetlight cables, although experience indicates it can take many months. The primary means of reporting streetlight issue is via the link below or the phone number contained therein. Within a few days the poles should be marked with a blue, green or yellow band, depending on the suspected cause of the outage. Then the wait begins. While the option exists, past experience indicates lobbying city or elected officials has little impact on expediting repairs.

<https://www.dominionenergy.com/virginia/report-outage-or-emergency/streetlight-outages>

#### Issue 3:

There was concern about the lighting in the median of N. Quaker Lane where LED lighting was installed as part of the City's program to replace sodium and mercury vapor with more energy efficient LEDs. The City's Eco-City and Vision Zero initiatives promote brighter lighting to enhance traffic and pedestrian safety. While Parkfairfax has no jurisdiction over these lights, citizens who have concerns may wish to address them directly to the Alexandria Department of Transportation and Environmental Services or elected representatives.

The next TLUC meeting will be May 13<sup>th</sup>, 2021 at 7PM and details will be announced prior to that date. I will also be presenting an overview of our accomplishments at the Parkfairfax Annual Meeting on April 21<sup>st</sup>.

Best regards,

Bob Gronenberg  
TLUC Chair