

Sign Illumination: Keeping the Stars Visible

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It might not be something you think about every day, but the way that a sign is lit can have a dramatic effect on the overall appearance of your community. There are several ways to illuminate a sign, and some work better than others by providing an appropriate amount of light without creating unnecessary light pollution.

Start looking at how signs are lit in your community and decide for yourself whether they are enhancing or detracting from your community's appearance.

Here is an overview of sign illumination choices – some are preferred over others:

Did You Know?

International Dark Sky Week is
April 20th–26th

Visit [Dark Skies Awareness](#) for more info.

External Illumination

Signs that are externally illuminated have light shining on to the outer surface of the sign. The two most common methods of external illumination are **downlit** (lit from above) and **uplit** (lit from below). A third and relatively recent addition to this type of lighting is **backlit**.

Downlit signs are preferred because it is easier to ensure that all light is directed downward, therefore reducing light pollution. It is also easier to ensure that no bare light sources are visible to the naked eye, which can be a safety concern. However, light should be cast evenly enough to allow for easy readability and without causing unnecessary glare --- if spot lights are used, the light direction and intensity should be designed to ensure uniform readability of the content.



Well-directed downlighting makes this sign clear and readable.



A portion of this sign is unreadable because of the bright spotlight from poorly-directed downlighting.

Uplit signs can create more light pollution since the light is directed upwards at the sign. It is difficult to fully shield the bare light source to prevent direct glare from the bulb into the eyes of passersby. Even the addition of landscaping around the base of an uplit sign is often not enough of a visual barrier to solve this problem. Towns that allow uplit signs should be sure to evaluate the light source from all angles to ensure that the light is never directly visible to passersby. Although the impact passes quickly, being able to see the bulb can create a safety hazard — when someone looks at the sign to read it, they can often also view the bare bulb of the light source.



The bare bulb is visible even with landscaping surrounding this uplit sign.

Backlit signs are a somewhat new approach to external lighting. Backlighting is typically utilized with wall-mounted or monument signs, and involves a low level of external light shining out from behind solid lettering, creating a soft glow around the outside of the letters. The light can be white or a color, with colored lighting creating a more subdued effect while still maintaining the effectiveness and readability of the sign. Municipalities should ensure that the background surface that the light shines on to is not reflective.



The subtle glow around the backlit letters provides enhanced readability without creating glare.

Internal Illumination

Signs that are internally illuminated have light shining through the surface of the sign. Typically, these either involve a rectangular-shaped box sign or individual letters (channel letters) that are lit from inside. Neon signs may be considered “internally illuminated” as well.

Internally-illuminated signs can reduce readability and contribute to light pollution. Towns that allow internal illumination can have main streets and commercial areas that seem to glow at night. It is difficult to measure and track the light pollution from these types of signs, but the cumulative visual effect over time can be negative. One way to reduce some of these impacts is to require that the background color be dark and the lettering light or white. This design approach results in much less glare and glow being given off from the entire sign surface, instead focusing the light through just the transparent letters.



All of these internally-lit channel letter signs cause this shopping plaza to give off a "glow" at night.



The combination of internal illumination and light/white colors make this sign overly bright.

Another negative aspect of internal illumination is frequently caused by poor upkeep. At some point or other, we've all seen a sign whose message and meaning have changed because some of the letters are not lit. This detracts from the look of the sign and reflects poorly on the overall community.



The missing and partially-lit letters detract from both the sign and the plaza where it's located.



The meaning of this sign is altered by the absence of lighting through some of the letters.

Can Signs Really Contribute to Light Pollution?

The short answer is yes. Anything that has illumination which does not point downward contributes to light pollution. Although exact amounts are difficult to measure, the cumulative effect of improper lighting can be seen by anyone driving through many of our main streets and commercial areas at night.

Why Does Light Pollution Matter?

Research is starting to uncover some negative effects related to light pollution. According to the Dark Skies Awareness Project, "a growing body of evidence links the brightening night sky directly to measurable negative impacts on human health and immune function, on adverse behavioral changes in insect and animal populations, and on a decrease of both ambient quality and safety in our nighttime environment."

So in the interest of ensuring your safety, health, and quality of life, take a look at your local sign regulations and see if the sign illumination methods permitted help to prevent unnecessary light pollution. If not, work with your municipality to update the sign code and ensure that the night sky and stars remain visible for future generations.

More Information

[Greenway Guide on Lighting](#)
[International Dark Sky Week](#), April 20th–26th
[Practice Good Lighting](#), American Planning Association publication
[Dark Skies Awareness Project](#)
[International Dark-Sky Association](#)

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