

June 20, 2025

BY EMAIL

Matthew Yosgott, Deputy Director
California Transportation Commission
matthew.yosgott@catc.ca.gov

Re: Request for Letter of Interpretation – Auxiliary LED Flashing Lights

Dear Matthew Yosgott,

Auxiliary Light Emitting Diode (“LED”) flashing lights on vehicles in California are illegal. Despite the prohibition of LED flashing lights, they are now ubiquitous on vehicles owned by the California Department of Transportation (“Caltrans”), the California Highway Patrol (“CHP”), city vehicles, county vehicles, and private company vehicles. LED flashing lights are known to trigger seizures, migraines, and panic attacks, and impair vision and cognitive functioning. In short, LED flashing lights are hazardous, dangerous, and discriminatory, and yet they are everywhere. An investigation by the California Transportation Commission (“CTC”) is an absolute necessity because we now need a plan for how to eliminate all the LED flashing lights on vehicles in California to protect public health, safety, and civil rights.

The California Legislature has recognized the adverse impacts of vehicle flashing lights and the possibility of confusion, distraction, or injury to first responders and the public. The Legislature has codified the importance of this issue in California Vehicle Code Section 25250 which states, “Flashing lights are prohibited on vehicles except as otherwise permitted.”

However, the Legislature also recognizes that auxiliary flashing lights on vehicles may be used to enhance safety, if used wisely, with proper regulations, and in compliance with federal law, 49 C.F.R. § 571.108(S6.2.1). The Legislature has entrusted the CHP with the responsibility of developing any regulations that would permit the judicious and federally authorized use of auxiliary flashing lights on vehicles. The CHP has published motor vehicle regulations in Title 13, Division 2 of the California Code of Regulations. Chapter 2 contains regulations for vehicle lighting and Article 22 contains regulations for warning lamps. Section 810 provides the scope of Article 22 which states, “This article applies to warning lamps for emergency vehicles and special hazard vehicles governed by Vehicle Code Sections 25252 through 25282.

Section 817 of Article 22 provides photometric requirements that the CHP has developed. The photometric requirements state, for example, “Steady-burning warning lamps, and flashing warning lamps which alternate between on and off by electrically controlling the

current supplied to the lamp, shall meet the requirements in Table I.” The term “shall” means “must” in legal terms. Therefore, if the warning lamp is steady burning, or if the warning lamp is controlled by current, then the warning lamp must meet the requirements of Table I.

Item (e) of Section 817 states, “Alternative Technologies. Nothing in this standard shall be construed to prohibit the use of any appropriate technology for light sources provided the appropriate photometric and other requirements for the type of lamp are met. Steady-burning warning lamps, and flashing lamps which alternate between on and off by interrupting the electrical current to the lamp, shall meet the photometric requirements of Class A, B, C or D as shown in Table I. Warning lamps which approximate or simulate the appearance of revolving warning lamps shall meet the photometric requirements of Table II. Warning lamps which approximate or simulate the appearance of oscillating warning lamps shall meet the photometric requirements of Table III.” Therefore, the CHP recognizes that new technologies may be invented from time to time and the CHP has stated that those technologies are also approved, “provided the appropriate photometric and other requirements for the type of lamp are met.”

There is no mention in Section 817 of any type of warning lamp that turns on and off by use of voltage and while there is mention of gaseous discharge, revolving, and oscillating warning lamps, there is no mention of a warning lamp that uses Light Emitting Diode (“LED”) technology. There are no photometric requirements in Section 817 for LED lights. Therefore, with a straight reading of Cal. Veh. Code Section 25250 (which prohibits all flashing lights unless otherwise permitted) and Section 817 of the Cal. Code of Regs., auxiliary LED flashing lights have not been permitted by the CHP, nor have they been permitted by the California Legislature.

The maxim *Expressio Unius Est Exclusio Alterius* is the legal principal that the expression of one thing means the exclusion of other things. Thus, because Section 817 references steady-burning, alternating between on and off by electrically controlling the current, revolving, oscillating, and gaseous discharge warning lamps, all other types of lamps are prohibited. Since LED lamps are not listed, they are excluded and not permitted for use.

Cal. Veh. Code § 24005 states, “It is unlawful for any person to sell, offer for sale, lease, install, or replace, either for himself or as the agent or employee of another, or through such agent or employee, any glass, lighting equipment, signal devices, brakes, vacuum or pressure hose, muffler, exhaust, or any kind of equipment whatsoever for use, or with knowledge that any such equipment is intended for eventual use, in any vehicle, that is not in conformity with this code or regulations made thereunder.” Therefore, any company that sells auxiliary LED flashing lights and any agency that installs auxiliary LED flashing lights is acting unlawfully. The purpose of such a regulation is clear: protection of public health, safety, and civil rights from the use of unvetted, unapproved, unregulated technology such as auxiliary LED flashing lights.

Cal. Veh. Code § 26104(a) states, “Every manufacturer who sells, offers for sale, or manufactures for use upon a vehicle devices subject to requirements established by the department shall, before the device is offered for sale, have laboratory test data showing

compliance with such requirements. Tests may be conducted by the manufacturer.” No manufacturer of auxiliary LED flashing lights has laboratory test data showing compliance with Cal. Code Regs. Title 13 Section 817 – Photometric Test Requirements because the CHP has not “other permitted” LED flashing lights on vehicles. Every single manufacturer that has sold an auxiliary LED flashing light to the CHP, Caltrans, a city, a county, or a private company has violated this regulation. LED flashing lights are hazardous and dangerous and have never been approved for use in California.

Federal law 49 C.F.R. § 571.108(S6.2.1) states, “No additional lamp, reflective device, or other motor vehicle equipment is permitted to be installed that impairs the effectiveness of lighting equipment required by this standard.” The CHP has not published any guidelines for CHP officers to determine when an auxiliary flashing light “impairs the effectiveness of lighting equipment” required by federal law. The public, however, has submitted numerous complaints regarding LED flashing lights. For example, in reports that have been submitted to the US Food and Drug Administration, one individual wrote, “And we shouldn’t forget that the light bars on police vehicles and tow trucks are also retina-searing bright.” Another wrote, “Also, the flashing LED lights for ambulances/police cars at intersections make me feel nauseous and like I am going to get a migraine.”¹ The reports thus suggest that LED flashing lights impair the effectiveness of federally required lighting and are thus illegal under federal law.

In a December 13, 2024, Letter of Interpretation, the National Highway Traffic Safety Administration (“NHTSA”) wrote, “NHTSA has long believed that flashing amber lighting can unduly divert driver attention and cause confusion among drivers, even among those who have seen them before.”² In addition, NHTSA wrote to the petitioner, “After carefully considering your letter, we reaffirm our previous interpretations that, under current law, “emergency warning lights” may not be installed as original equipment and that persons subject to the make inoperative provision of the Safety Act may not legally install the lamps as original or aftermarket equipment.” NHTSA, therefore, believes that even auxiliary flashing amber lights, regardless of the technology, are a safety hazard and may not be legally installed.

If the CHP had permitted LED flashing lights, we would have expected that the CHP would have issued a Notice of Proposed Regulatory Action. For example, in 2022, the CHP issued a Notice of Proposed Regulatory Action titled “Vehicle Sound Measurement” and requested public comment.³ There has been no similar Notice of Proposed Regulatory Action for the use of LED flashing lights and no opportunity for public comment, and therefore our conclusion is that LED flashing lights on vehicles have not been permitted by the CHP.

Despite the clarity of the statutes and regulations, auxiliary flashing lights are now ubiquitous on California roadways, used by city, county, and state entities, and private companies. LED flashing lights have been documented to impair vision and cognitive functioning, and trigger seizures, migraines, and panic attacks. Research shows that the use of

¹ <https://www.softlights.org/led-incident-reports/>

² <https://www.nhtsa.gov/interpretations/ncc-241023-001tsei-tima-letter-interpretation-571108-flashing-amber-lights-12-13>

³ <https://www.chp.ca.gov/AdministrativeServicesDivisionSite/Documents/NPR1.pdf>

LED flashing lights puts first responders and the public at risk of injury or death due to the extreme intensity and digital flashing characteristics of LED lights.

The Soft Lights Foundation has repeatedly contacted the CHP and Caltrans on this issue, and neither agency has agreed to open an investigation. Therefore, the Soft Lights Foundation respectfully requests that the California Transportation Commission open an investigation and publish a publicly accessible report on the issue of illegal auxiliary LED flashing lights on vehicles.

Sincerely,

/s/ Mark Baker

President

Soft Lights Foundation

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