#### Superior Court of California County of Sacramento 1 Mark Baker 9450 SW Gemini Drive PMB 44671 02/11/2025 2 Beaverton, OR 97008 A. Gray Deputy mbaker@softlights.org 234-206-1977 3 Pro Se 4 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA 5 SACRAMENTO COUNTY 6 7 MARK BAKER, Case No.: 25VVM 000026 8 Petitioner, PETITION FOR WRIT OF 9 ADMINISTRATIVE VS. MANDDATE AND COMPLAINT FOR 10 INJUNCTIVE RELIEF AND CALIFORNIA DEPARTMENT OF COMPENSATORY AND PUNITIVE 11 DAMAGES TRANSPORTATION, CALIFORNIA 12 Code of Civ. Proc. § 1094.5; California HIGHWAY PATROL, CALIFORNIA STATE Administrative Procedure Act § 11340 et seq.; 13 Americans with Disabilities Act §1201 et seq.; TRANSPORTATION AGENCY, AND DOES Rehabilitation Act, § 504; 14th Amendment 14 Equal Protection Clause. 1-20 15 Respondents. 16 **DOES 21-40** 17 Real Parties in Interest. 18 19 I. INTRODUCTION 20 California Vehicle Code Section 25250 states, "Flashing lights are prohibited on 1. 21 vehicles except as otherwise permitted." Thus, the California Legislature has recognized 22 that flashing lights must be vetted for safety and authorized prior to use on vehicles. The 23 California Highway Patrol has vetted and approved five technologies for flashing lights on DEFENDANT'S NAME - 1

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vehicles in Chapter 13, Section 817 of the California Code of Regulations: Steady Burning, Flashing Warning Controlled by Electrical Current, Revolving Warning, Oscillating Warning Lamps, and Gaseous Discharge Lamps. The use of LED or laser flashing lights on vehicles has not been permitted, and thus their use on vehicles is unlawful.

Despite the prohibition of supplemental LED flashing lights on vehicles, the California Department of Transportation ("CalTrans") has outfitted their vehicles with unapproved LED flashing lights, violating the law, putting public health, safety, and civil rights at risk, and causing physical, psychological, and neurological injuries, especially for certain individuals with disabilities who cannot neurologically tolerate the extreme intensity and digital pulsing of LED flashing lights.

On August 12, 2024, the Soft Lights Foundation submitted the citizen petition titled PETITION TO PROHIBIT SUPPLEMENTAL LED FLASHING LIGHTS ON MOTOR VEHICLES (EXHIBIT A) to the California Highway Patrol ("CHP"). The CHP failed to respond within 30 days, in violation of California Government Code Section 11340.7.

This Petition requests: 1) that this Court compel the California Highway Patrol ("CHP") to respond to the citizen petition and to review the use of LED flashing lights on vehicles; 2) enjoin CalTrans from operating supplement LED flashing lights on CalTrans vehicles to ensure protection of the public welfare; and 3) award compensatory and punitive damages to Petitioner.

## II. PARTIES

4. Petitioner MARK BAKER is the Founder and President of the Soft Lights

Foundation, a registered 501(c)(3) non-profit corporation dedicated to the protection of

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individuals and the environment from the harms of LED lights and is a resident of California. Petitioner files this complaint In Pro Per.

Over the past year and a half, Petitioner, on behalf of the Soft Lights Foundation, has contacted numerous officials associated with Respondents about the hazards and dangers of LED flashing lights on vehicles. Respondents have taken no action, and the Petitioner has exhausted all administrative remedies. Therefore, Petitioner seeks this extraordinary relief through the Court via this Petition.

Respondent CALIFORNIA DEPARTMENT OF TRANSPORTATION ("CalTrans") is responsible for maintaining California's roadway system.

6. Respondent CALIFORNIA HIGHWAY PATROL ("CHP") is the lead agency for regulating flashing lights on vehicles.

7. Respondent CALIFORNIA STATE TRANSPORTATION AGENCY ("CalSTA") oversees the CHP and CalTrans.

Petitioner does not know the true names and capacities, whether individual, corporate, associate, or otherwise, of Respondents DOE 1 through DOE 20, inclusive, and therefore sue said Respondents under fictitious names. Petitioners will amend this Petition to show their true names and capacities when they are known.

Petitioner does not know the true names and capacities, whether individual, corporate, associate or otherwise, of Real Parties in Interest DOE 21 through DOE 40, inclusive, and therefore sue said Real Parties under fictitious names. Petitioners will amend this Petition to show their true names and capacities when they are known.

## **III. JURISDICTION AND VENUE**

- 10. This Court has jurisdiction over the matters alleged in this Petition pursuant to Code of Civil Procedure sections 1085 and 1094.5.
- 11. Because this is an action or proceeding against agencies that operate in Sacramento County, venue is proper in this Court.
- 12. Petitioner has performed any and all conditions precedent to filing this instant action and has exhausted any and all available administrative remedies to the extent required by law.
- 13. Petitioner has no plain, speedy, or adequate remedy in the course of ordinary law unless this Court grants the requested writ of mandate to require Respondents to prepare an analysis of LED and laser flashing lights on vehicles. In the absence of such remedies, first responders, the public, and individuals with disabilities, including Petitioner, will suffer irreparable harm.
- 14. The maintenance of this action is for the purpose of enforcing important public policies of the State of California with respect to protecting the health, safety, and civil rights of employees, first responders, the public, and individuals with disabilities under the ADA, Section 504 of the Rehabilitation Act, and 14<sup>th</sup> Amendment Equal Protection Clause. The maintenance and prosecution of this action will confer a substantial benefit upon Petitioner and the public by protecting the public from health and safety harms, discrimination, and the violation of 14<sup>th</sup> Amendment Equal Protection requirements alleged in this Petition. The Petitioner is acting as a private attorney general, under the private attorney general doctrine, to enforce these public policies and prevent such harm.

IV. STANDING

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15. California recognizes, through case law and statute, citizen standing. Citizen standing is the doctrine that the illegal actions of a governmental entity injures a citizen's interest in the laws being observed, and that this interest can form the basis of an action seeking to correct the illegality. *Common Cause v. Bd. of Supervisors*, 777 P.2d 610, 613 (Cal. 1989).

## **V. STATEMENT OF FACTS**

## A. Light Emitting Diodes

- 16. A Light Emitting Diode ("LED") is a device that emits Visible Light radiation from a flat surface instead of from the curved surface of traditional light sources. The US Department of Energy states that LEDs are a "radically new technology" that emit a "directional" light with "unique characteristics." It is the directional, focused, and digital nature of LEDs and other unique characteristics that make LED devices hazardous and unsafe, and in the case of certain individuals with disabilities, discriminatory.
  - The US Food and Drug Administration is the responsible agency for regulating LED products as per 21 U.S.C. Part C. However, the FDA has failed to comply with the requirements of 21 U.S.C. Part C and thus there are no performance standards for LED products. The FDA has not tested or evaluated LED products, and the FDA has not published any limits on luminance, radiance, spectral power distribution, spatial distribution, square wave flicker, or digital flashing characteristics to ensure that LED light is safe for humans and the environment.

18. Figure 1 shows an example of intense LED flashing lights on a CalTrans vehicle.

The light that shines directly into a person's eyes is called glare, which is light that impairs vision.

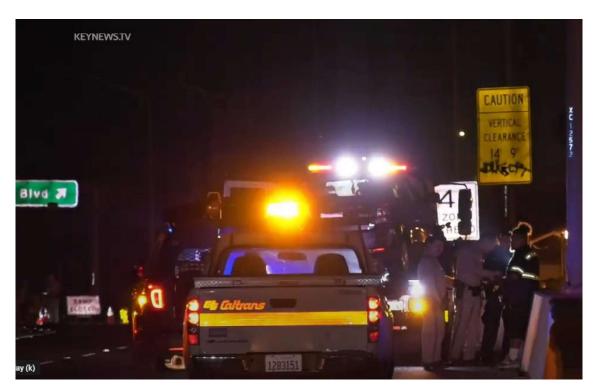


Figure 1 – CalTrans LED Flashing Lights<sup>1</sup>

## **B.** CHP Lighting Regulations

19. The CHP publishes lighting regulations for vehicles in Title 13, Division 2, Chapter 2 in the California Code of Regulations. As can be seen in a review of these regulations, there have been no updates to address the special physics characteristics of LED or laser flashing lights.

<sup>&</sup>lt;sup>1</sup> <u>https://www.youtube.com/watch?v=JCUISeTmAF4</u> DEFENDANT'S NAME - 6

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Warning, Oscillating Warning Lamps, and Gaseous Discharge Lamps. It is clear from this article that there is a pattern of specifying the approved lamp technology and the associated photometric requirements. However, there are no categories for LED or laser warning lamps which are controlled by voltage and turn on and off digitally, as would be expected if LED or laser warning lamps had been permitted.

21. The lack of photometric test requirements for LED and laser warning lamps proves that the CHP has not yet vetted LED or laser flashing lights for their impact on public safety, health, or civil rights. The lack of photometric requirements means that there are no limits on intensity or digital flashing to ensure photobiological, neurological,

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C. Individuals with Disabilities

Code Section 25250.

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LEDs have special characteristics that make the emitted light different from the light emitted by traditional light sources such as the sun, starlight, candle, tungsten filament, and High-Pressure Sodium. The flat surface geometry of the chip causes the LED light to be emitted in a directional beam. The beam is similar to a laser beam but more spread out and with spatially non-uniform energy within the beam. The spectral properties of LED light

psychological, hormonal, and physical safety. Until the CHP vets and sets standards for

LED and laser flashing lights and explicitly approves these technologies, the use of LED

and laser technologies for flashing lights on vehicles is prohibited by California Vehicle

For example, Article 22 – Warning Lights, Section 817 describes the photometric test

requirements for vehicle flashing lights. The five categories of warning lamp technology

are: Steady Burning, Flashing Warning Controlled by Electrical Current, Revolving

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do not match the spectral properties of natural light sources. LEDs have square wave flicker, as compared to the sine wave flicker or steady state of traditional light sources. LEDs can be turned on and off nearly instantly, creating a digital pulse of light. (EXHIBIT B).

- The combination of intense beam, directionality, non-uniform spatial distribution, spectral power distribution characteristics, square wave flicker, and digital pulsing is neurologically intolerable for a class of individuals with disabilities such as epilepsy, autism, PTSD, photophobia, Traumatic Brain Injury, migraines, electromagnetic sensitivity, Sjogren's Syndrome, and others. Adverse impacts from exposure to even tiny amounts of LED light include non-epileptic and epileptic seizures, migraines, thoughts of suicide, nausea, vomiting, and loss of balance. Many individuals with disabilities are now confined to their homes and unable to travel because of their severe reactions to LED lights.
- 24. These reports of harm from exposure to LED lights have been reported to the US Food and Drug Administration, but the FDA has taken no action to set performance standards for LED products. (EXHIBIT C).

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## C. CHP Administrative Actions

25. On April 25, 2023, Petitioner notified the CHP of hazardous and dangerous glare conditions caused by use of LED lights on vehicles and requested that the CHP study the situation. The CHP responded on May 5, 2023, by stating that CHP does not regulate vehicle lighting. (EXHIBIT D). This was a false statement, as the CHP is the authoritative 26.

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body for vehicle lighting and publishes vehicle lighting regulations in the California Code of Regulations, Title 13, Division 2 – California Highway Patrol, Chapter 2.

- On June 19, 2023, Petitioner submitted an Americans with Disabilities Act ("ADA") Request for Accommodation with the CHP related to LED flashing lights. (EXHIBIT E). In an act of Deliberate Indifference and in violation of the ADA, the CHP did not respond. The Petitioner followed up on the ADA request via an email on August 6, 2023 (EXHIBIT F). Again, the CHP did not respond.
- 27. On January 30, 2024, Petitioner submitted a PETITION FOR RULEMAKING TO REGULATE SIRENS AND FLASHING LIGHTS ON AMBULANCES. (EXHIBIT G). On February 29, 2024, the CHP responded by denying the petition, stating that the CHP believed that existing regulations were sufficient, but providing no supporting evidence that any investigation was undertaken to evaluate the impacts of flashing lights on public health, safety, or civil rights and citing no studies on the impacts of LED flashing lights and making no reference to California Vehicle Code Section 25250. (EXHIBIT H)
- 28. On June 19, 2024, Petitioner submitted a Notice of Dangerous Condition to the CHP regarding LED flashing lights. The CHP did not respond. (EXHIBIT I).
  - On August 12, 2024, Petitioner submitted a PETITION TO PROHIBIT SUPPLEMENTAL LED FLASHING LIGHTS ON MOTOR VEHICLES. The CHP did not respond. On August 23, 2024, and again on August 28, 2024, Petitioner sent follow-up emails to the CHP requesting confirmation that the petition to prohibit supplemental LED flashing lights was received. The CHP did not respond. (EXHIBIT J).
- 30. On August 20, 2024, Petitioner submitted a Notice of Private Enforcement Action to the CHP regarding the fact that California Vehicle Code Section 25250 prohibits flashing

lights unless otherwise permitted and that LED and laser technology has not been permitted. The notice also informed the CHP that the use of LED flashing lights on vehicles creates unlawful discriminatory barriers. The CHP did not respond. (EXHIBIT K).

31. Thus, the Petitioner has exhausted all administrative remedies with the CHP prior to filing this Petition for Writ of Administrative Mandate.

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#### D. CalTrans Administrative Actions

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On October 10, 2023, Petitioner was severely emotionally harmed by two of CalTrans' vehicles on Highway 395 Southbound about 5-10 miles south of Bridgeport which were emitting exceedingly intense, rapidly flashing LED lights into Petitioner's eyes as Petitioner was driving southbound. The LED flashing lights so severely impaired Petitioner's vision that Petitioner yelled out to Petitioner's passenger, "I can't see!". Petitioner involuntarily closed Petitioner's eyes. Petitioner tried to open them again, but Petitioner's vision was reduced by about 95%. Petitioner's cognitive functioning was also severely impaired by the flashing lights. The Petitioner suffered a panic attack and started screaming in fear and anger. Petitioner contemplated driving off the cliff to commit suicide but chose not to because of Petitioner's concern for Petitioner's passenger. On the same date as the incident, Petitioner wrote to CalTrans requesting accommodation. (EXHIBIT L).

33. On October 17, 2023, Michelle Bonk, CalTrans Infrastructure Program Analyst responded, "Your request is not ADA related and therefore, we have forwarded your concerns to the Public Information Office (PIO) in District 9". Despite additional requests

from Petitioner, CalTrans failed to enter an Interactive Process to find a mutually agreeable accommodation, failed to provide an accommodation, and failed to provide any recourse for Petitioner. (EXHIBIT M).

- On June 17, 2024, Petitioner filed a Claim Form with CalTrans for the October 10,2023 LED flashing light incident. (EXHIBIT N).
- 35. On September 30, 2024, CalTrans ADA Coordinator Vinh Nguyen denied Petitioner's ADA Request for Accommodation #11270, #11354, and #11393, claiming undue burden. (EXHIBIT O).
- 36. On November 5, 2024, Petitioner was again injured and discriminated against by LED flashing lights on a CalTrans vehicle. Petitioner filed a Claim Form with CalTrans on November 6, 2024. (EXHIBIT P). CalTrans denied the claim on November 20, 2024 (EXHIBIT Q).
- 37. On February 3, 2025, Petitioner was again injured and discriminated against by LED flashing lights on a CalTrans vehicle. Petitioner filed a Claim Form with the California Government Claims Program on February 4, 2024. (EXHIBIT R).
- 38. Thus, the Petitioner has exhausted all administrative remedies with CalTrans prior to filing this Petition for Injunctive Relief and Compensatory and Punitive Damages.

## VI. AMERICANS WITH DISABILITIES ACT

39. 42 U.S.C. § 12132 states, "Subject to the provisions of this subchapter, no qualified individual with a disability shall, by reason of such disability, be excluded from

participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity."<sup>2</sup>

As stated by the Court in *Hason v. Medical Bd. Of California* (2001), "Courts must construe the language of the ADA broadly in order to effectively implement the ADA's fundamental purpose of "provid[ing] a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities." "In sum, the ADA represents Congress' considered efforts to remedy and prevent what it perceived as serious, widespread discrimination against the disabled." *Coolbaugh v. State of Louisiana* (1998).

## VII. REQUIREMENTS TO SHOW DISCRIMINATION

Under Title II of the ADA, the U.S. Court of Appeals, Ninth Circuit, which covers California, has explained that a plaintiff can prove that a public program or service violates Title II of the ADA by showing: (1) plaintiff is a "qualified individual with a disability"; (2) plaintiff was either excluded from participation in or denied the benefits of a public entity's services, programs or activities, or was otherwise discriminated against by the public entity; and (3) such exclusion, denial of benefits, or discrimination was by reason of his disability. *Weinreich v. Los Angeles Cty. Metro. Transp. Auth*., 114 F.3d 976, 978 (9th Cir. 1997).<sup>4</sup>

#### A. QUALIFIED DISABILITY

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<sup>&</sup>lt;sup>2</sup> https://www.law.cornell.edu/uscode/text/42/12132

<sup>&</sup>lt;sup>3</sup> https://casetext.com/case/hason-v-medical-bd-of-california-2

<sup>&</sup>lt;sup>4</sup> https://www.cacities.org/Resources-Documents/Member-Engagement/Professional-Departments/City-Attorneys/Library/2017/2017-Annual-Conference-CA-Track/9-2017-Annual-S-Patterson-ADA-Act-Proceed-with-Cau

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42. Petitioner has been diagnosed with autism and autism is a qualified disability under the ADA.

43. The ADA prohibits discrimination based on the severity of the disability. Messier v. Southbury Training School, 916 F. Supp. 133 (D. Conn. 1996). Thus, even though Petitioner has been diagnosed with mild autism, CalTrans is still prohibited from discrimination against individuals with mild autism.

#### B. EXCLUSION AND DENIAL

- 44. Petitioner's encounters with the LED flashing lights have resulted in a denial of the benefits of the full and equal use of California roadways. The LED flashing lights cause Petitioner to involuntarily close his eyes and/or turn his head which is a denial of the full and equal use of the roadway. The LED flashing lights also cause Petitioner to suffer psychological trauma such as fear, agitation, anger, mental anguish, and suicidal thoughts when exposed to the LED flashing lights which denies Petitioner the benefit of using the roadways without risk of suffering psychological trauma.
- 45. Full use of state roadways means an unencumbered ability to use the roadways. For example, a wheelchair user is denied full access due to a lack of curb ramps. The wheelchair user may thus be forced to travel on the street until finding a curb ramp. This is a denial of full access. Similarly, Petitioner being forced to close his eyes to avoid being struck and traumatized by the LED flashing lights is a denial of full use.
- 46. Equal use of the state's roadways means that the state must ensure that individuals with disabilities can access the state's roadways with the same level of ease as individuals without disabilities. For example, while a wheelchair user may be able to figure out a way

to lift themselves up from the street and onto the sidewalk when there is no curb ramp, the amount of effort required does not equal the effort level of non-disabled individuals.

Similarly, Petitioner being forced to close his eyes or to suffer psychological trauma when exposed to the digitally flashing LED lights is unequal treatment by the state.

47. The use of the LED flashing lights creates a barrier for Petitioner and thus Petitioner is discriminated against by the state and denied the full and equal benefits of state services.

#### C. DISCRIMINATION CAUSED BY REASON OF DISABILITY

- 48. The denial of benefits and discrimination is by reason of Petitioner's disability of autism. Petitioner does not react adversely to all lights, only certain LED lights. For example, Plaintiff does not have difficulty with slow flashing tungsten filament lights that glow gently. The LED flashing lights, however, have an extreme intensity that Petitioner is unable to neurologically tolerate. The digital pulsing is truly unbearable for Petitioner, causing fight or flight reactions. The use of multiple LED flashing lights creates a wall of debilitating light that has caused Petitioner to turn to thoughts of suicide on many occasions.
- 49. Petitioner lived a traditional life prior to the switch to powerfully intense LED lights.

  Petitioner attended the university and graduated with a degree in Electrical Engineering.

  Petitioner had previously traveled to many locations in the world. Petitioner has been an engineer and middle school math teacher.
- 50. However, around 2016, LED lights began appearing on vehicle headlights, streetlights, on emergency vehicles, and at Petitioner's place of employment at the middle school. Over the next three years, Petitioner endured repeated exposure to LED lights and

began to suffer increased psychological trauma. Each new exposure to LED lights reduced Petitioner's tolerance level to additional exposures to LED lights. On April 3, 2019, Petitioner suffered a catastrophic mental breakdown and was taken against his will by the police to a psychiatric hospital.

- Petitioner's autism is the reason that the use of LED lights is discriminatory for Plaintiff.

  Prior to the switch to LED lighting, Plaintiff had no adverse reactions to lighting, including non-LED strobe lights such as used in dance and bar facilities in previous decades. It is the LED light and its unique characteristics, and Petitioner's reactions to this light due to his autism, that changed everything. The reason that the LED flashing lights denies Petitioner the full and equal benefits of the state's roadways is due to Petitioner's autism.
- 52. Petitioner has encountered LED flashing lights on numerous occasions and has reacted similarly each time. The adverse reactions are exacerbated by multiple emitters, digital pulsing, asynchronous patterns, and contrast with the ambient light. Petitioner's reactions have included screaming, self-harm, profanity, running away, nausea, and extreme fear, panic, and anxiety.
- 53. Thus, Petitioner's exclusion, denial of benefits, and discrimination is by reason of his disability of autism.

#### D. VIOLATION OF TITLE II OF THE ADA

54. As shown in this section, CalTrans' use of the LED flashing lights is a violation of Title II of the ADA because: 1) Petitioner has a qualified disability of autism; 2) The use of

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the LED flashing lights denies Petitioner full and equal benefits; and 3) Petitioner was denied these benefits by reason of his disability of autism.

## VIII. COMPENSATORY AND PUNITIVE DAMAGES

A monetary damage can be awarded for violation of the Americans with Disabilities 55. Act. For a compensatory damage award, Petitioner must show intentional discrimination via the Deliberate Indifference standard. For a punitive damage award, Plaintiff must show that CalTrans acted with malice.

#### A. Deliberate Indifference

56. The standard for intentional discrimination in an ADA claim is called Deliberate Indifference. For the Deliberate Indifference standard, which has been adopted by the Ninth Circuit which covers California, Petitioner must show that 'the defendant knew that harm to a federally protected right was substantially likely and [that the defendant] failed to act on that likelihood'. S.H. v Lower Merion School Dist.  $(2013).^{5}$ 

In this claim, CalTrans had this knowledge that harm was likely because Petitioner submitted documentation of the harm on October 10, 2023, June 17, 2024, November 6, 2024, February 4, 2025 and other dates. Despite all these notices from Petitioner, CalTrans failed to act to prevent additional harm and discrimination.

<sup>&</sup>lt;sup>5</sup> https://casetext.com/case/sh-v-lower-merion-sch-dist DEFENDANT'S NAME - 16

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Thus, CalTrans has acted with Deliberate Indifference. CalTrans *knew* that the LED flashing lights were harming Petitioner and interfering with Petitioner's path of travel. CalTrans *knew* that Petitioner is an individual with autism and protected by the ADA. CalTrans *knew* that the LED flashing lights cause Petitioner to suffer psychological trauma. Yet, CalTrans failed to act.

Because CalTrans has acted with Deliberate Indifference, the Court may award compensatory damages for violation of the ADA.

## B. Malice

California Civil Code Section 3294(c)(1) states: "'Malice' means conduct which is intended by the defendant to cause injury to the plaintiff or despicable conduct which is carried on by the defendant with a willful and conscious disregard of the rights or safety of others."

California Civil Code Section 3294(a) states, "In an action for the breach of an obligation not arising from contract, where it is proven by clear and convincing evidence that the defendant has been guilty of oppression, fraud, or malice, the plaintiff, in addition to the actual damages, may recover damages for the sake of example and by way of punishing the defendant."

CalTrans has acted with malice because CalTrans willfully and consciously disregarded the rights and safety of Petitioner by continuing to operate the LED flashing lights, despite being fully aware that the use of supplemental LED flashing lights on vehicles is unlawful and that LED flashing lights cause life-threatening reactions for Petitioner.

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Because CalTrans has acted with malice, the Petitioner may be awarded punitive damages by this Court. The purpose of the punitive award is to punish CalTrans for their discriminatory actions with the goal of preventing such discriminatory actions in the future.

## IX. FIRST CAUSE OF ACTION

## Violations of California Code of Civil Procedure and the California Administrative Procedure Act

- 64. California Code of Civil Procedure section 1094.5 states, "Abuse of discretion is established if the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence."
  - In this situation, the CHP has ignored the fact that the California Legislature prohibits the use of flashing lights on vehicles, as per California Vehicle Code Section 25250, except for those flashing lights that are explicitly permitted. The CHP has ignored their own regulations, California Code of Regulations Title 13, Division 2, Chapter 2 Section 817, which establishes the 5 specific technologies that are permitted for supplemental flashing lights on vehicles and that this list of approved technologies does not include LED or laser flashing lights. The CHP has ignored the fact that LED and laser flashing lights on vehicles endanger the health, safety, and civil rights of the public. The CHP ignored the petitions by the Soft Lights Foundation. The CHP does not issue citations for use of supplemental LED flashing lights on vehicles, even though the use of LED flashing lights on vehicles is unlawful and their use puts public safety at risk.

66. Therefore, the CHP has abused their discretion, has acted arbitrarily and capriciously, and has not engaged in reasoned decision making.

## X. SECOND CAUSE OF ACTION

## **Violations of ADA**

67. LED flashing lights are a neurological hazard for certain individuals with disabilities.

Reports submitted to the US Food and Drug Administration indicate that individuals with epilepsy, autism, migraines, photophobia and other qualified disabilities have suffered non-epileptic and epileptic seizures, migraines, nausea, vomiting and thoughts of suicide when exposed to LED flashing lights. The Americans with Disabilities Act prohibits government agencies from interfering with the path of travel for individuals with disabilities.

68. CalTrans has installed unlawful supplemental LED flashing lights on their vehicles, and the use of these LED flashing lights interferes with the path of travel for individuals with disabilities, including Petitioner, in violation of the ADA.

## XI. THIRD CAUSE OF ACTION

## **Violations of Rehabilitation Act**

69. Section 504 of the Rehabilitation Act prohibits discrimination against individuals with disabilities for projects that receive federal funding. CalTrans receives large amounts of federal funding from the Federal Highway Administration and Federal Transit Administration, and thus the use of LED flashing lights that create a discriminatory barrier for individuals with disabilities is prohibited. CalTrans has failed to comply with Section 504 of the Rehabilitation Act.

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## XII. FOURTH CAUSE OF ACTION

# Violations of 14th Amendment Equal Protection Clause

- 70. The 14<sup>th</sup> Amendment to the U.S. Constitution requires equal protection for all individuals. The use of LED flashing lights on vehicles separates the public into two classes: those individuals without disabilities who can neurologically tolerate LED light, and those individuals with disabilities who cannot neurologically tolerate LED lights.
- 71. The Respondents have not published any policies that ensure that both classes of individuals are given equal protection. While individuals without disabilities may not suffer acute adverse reactions when exposed to LED flashing lights, the class of individuals who cannot be exposed to LED light are suffering seizures, migraines, or thoughts of suicide. By failing to implement a policy to equally protect individuals with disabilities from exposure to LED flashing lights, Respondents have failed to comply with the 14<sup>th</sup> Amendment Equal Protection Clause.

## XIII. RELIEF REQUESTED

- 72. Petitioner respectfully requests that the Court enter judgment:
- A) Writ of mandate directing the CHP to analyze and publish a comprehensive report on the use of LED and laser flashing lights on vehicles and the impacts on public health, safety, and civil rights.
- 74. B) Writ of mandate directing the CHP to amend Title 13, Chapter 2 of the California Code of Regulations within 180 days of this judgment to either prohibit the use of supplemental LED and laser flashing light technology on vehicles or to set limits on DEFENDANT'S NAME 20

1		radiance, digital pulsing, and other characteristics of supplemental LED and laser flashing
2		light technology to ensure the comfort, health, safety, and civil rights of the public;
3	75.	C) Declaring that CalTrans discriminated against Petitioner by using unlawful LED
4		flashing lights on CalTrans vehicles and awarding compensatory and punitive damages.
5	76.	D) For costs of the suit;
6	77.	E) For Petitioner's attorneys' fees as authorized by Code of Civil Procedure section
7		1021.5 and/or other provisions of law; and
8	78.	F) For such other and further relief as the Court deems just and proper.
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11		Dated: February 11, 2025
12		Respectfully Submitted,
13 14		By: /s/ Mark Baker 9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008
15		mbaker@softlights.org
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# Exhibit A

## BEFORE THE CALIFORNIA HIGHWAY PATROL

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# PETITION TO PROHIBIT SUPPLEMENTAL LED FLASHING LIGHTS ON MOTOR VEHICLES

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SUBMITTED BY
SOFT LIGHTS FOUNDATION
ON
AUGUST 12, 2024

## A. <u>CITIZEN PETITION</u>

The undersigned submits this petition under Title 2, Division 3, Part 1, Chapter 3.5, Section 11340.6 of the California Government Code<sup>1</sup>, to request that the Commissioner of the California Highway Patrol issue regulations to explicitly prohibit the use of supplemental Light Emitting Diode ("LED") flashing lights on motor vehicles to ensure the comfort, health, safety, and civil rights of all individuals, as authorized by California Vehicle Code Section 2402.<sup>2</sup>

## **B. STATEMENT OF GROUNDS**

#### I. Introduction and Summary

California Vehicle Code ("CVC") Section 25250 states, "Flashing lights are prohibited on vehicles except as otherwise permitted." There is no California statute that authorizes the use of LED flashing lights, and thus all LED flashing lights are prohibited by CVC Section 25250. However, since there has been no enforcement of this section by any state agency, including the CHP, DMV, or any local government agency, this petition requests that the CHP publish regulations that explicitly prohibits the use of LED flashing lights on vehicles.

The US Department of Energy states that LEDs are a "radically new technology" that emit a "directional" light with "unique characteristics".<sup>3</sup> It is the directional nature of LEDs and their unique characteristics which cause individuals with disabilities to suffer non-epileptic and epileptic seizures, migraines, vomiting, panic attacks, impaired cognitive functioning, loss of vision, and suicidal ideations when exposed to LED flashing lights such as on police cars, ambulances, fire trucks, utility trucks, garbage trucks, and tow trucks.

A vehicle is manufactured by the Original Equipment Manufacturer ("OEM"). An OEM vehicle may come with flashing turn signals or hazard lights and these lights are regulated by the National Highway Traffic Safety Administration in FMVSS-108. This petition does not address OEM flashing lights. This petition addresses supplemental LED flashing lights which are an alteration to the OEM vehicle and includes the amber and white LED flashing lights on garbage trucks, utility trucks, and tow trucks, and the red, blue, and white LED flashing lights on emergency vehicles. These supplemental LED flashing lights are installed on a vehicle as part of a process to supposedly enhance the conspicuity of the vehicle when parked on the side of the road or in emergency travel situations, but which cause severe and life-threatening adverse neurological reactions for individuals with disabilities.

<sup>&</sup>lt;sup>1</sup> https://law.justia.com/codes/california/2022/code-gov/title-2/division-3/part-1/chapter-3-5/article-1/section-11340-6/

 $<sup>\</sup>frac{\text{https://leginfo.legislature.ca.gov/faces/codes}}{\text{r=2.\&article=3.}} \text{ displayText.xhtml?lawCode=VEH\&division=2.\&title=\&part=\&chapte}$ 

https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/ssl lessons-learned 2014.pdf

LEDs can be used to pulse intense, flashing, directed energy visible radiation using electronics that can create synchronous and asynchronous flash patterns with a digital on/off characteristic. Prior to the invention of LEDs, emergency and utility vehicles typically used a tungsten filament bulb as the source of the light and a rotating disc that would create a flashing pattern. The intensity of this type of light source is measured by the metric luminous intensity in candela. These are the types of flashing lights that are permitted in California Vehicle Code Section 25251.

LEDs are a radically new technology which emits light in a directed energy beam which can be turned on and off nearly instantly to generate a digital pulsing pattern. The intensity of an LED source is measured by the metric radiance in Watts per steradian per square meter, which is the same metric used to measure the intensity of lasers. These types of directional flashing lights (e.g. LEDs and lasers) have never been approved for use on vehicles and are thus prohibited by California Vehicle Code Section 25250.

Due to their directional nature, high radiance, digital pulsing, and lack of regulation on intensity, spectral power distribution, and digital flashing characteristics, LED flashing lights have been documented to cause life-threatening non-epileptic and epileptic seizures, multi-day migraines, anxiety, panic attacks, severely decreased cognitive functioning, impaired vision, and suicidal ideations for individuals with disabilities such as epilepsy, autism, PTSD, migraineurs, photophobia, and other neurological disabilities.

Because of the severe adverse reactions suffered by individuals with disabilities when exposed to LED flashing lights, the use of LED flashing lights creates a discriminatory barrier, interfering with path-of-travel. Because individuals with disabilities require government protection from the harms of LED flashing lights, the decision by the California Highway Patrol ("CHP") to not explicitly prohibit the use of LED flashing lights on vehicles is a violation of the 14th Amendment of the U.S. Constitution's Equal Protection Clause.

This petition requests that the California Highway Patrol publish regulations in the California Code of Regulations ("CCR"), Title 13, Division 2, Chapter 2 prohibiting the use of supplemental LED flashing lights on vehicles, to ensure equal protection for individuals with disabilities who cannot neurologically tolerate such intense, digitally pulsing LED flashing lights.

#### **II. Statement of Facts**

#### A. NHTSA Does Not Regulate Supplemental Flashing Lights

The National Highway Traffic Safety Administration does not regulate supplemental flashing lights and defers to the States for such regulation.<sup>4</sup>

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<sup>&</sup>lt;sup>4</sup> https://www.nhtsa.gov/interpretations/nht87-233

#### B. CHP Has Authority to Regulate Flashing Lights on Vehicles

CVC Section 25250 states, "Flashing lights are prohibited on vehicles except as otherwise permitted." California Vehicle Code Section 2402 states, "The commissioner may make and enforce such rules and regulations as may be necessary to carry out the duties of the department." CHP has previously published rules in California Code of Regulations, Title 13, Division 2, Chapter 2 – Lighting Equipment. Thus, the publication of a new regulation by the CHP which explicitly prohibits LED flashing lights simply clarifies an existing California statute as an explicit CCR rule.

## C. 14<sup>TH</sup> Amendment Equal Protection Clause

The Equal Protection Clause of the 14th Amendment of the U.S. Constitution states:

All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.<sup>5</sup>

The use of supplemental LED flashing lights on vehicles segregates members of the public into two classes: those without disabilities who are provided the purported safety benefits of using supplemental LED flashing lights, and those with disabilities for whom those very same supplemental LED flashing lights cause acute neurological and psychological trauma and an obstruction to path-of-travel. The Equal Protection Clause of the 14th Amendment requires the CHP to provide equal protection to both non-disabled and disabled individuals. While non-disabled individuals may not suffer acute adverse reactions to LED flashing lights and thus may not need CHP regulations, individuals with disabilities are dependent on CHP regulations to protect them from harm. Because no safe level of LED flashing lights (e.g. radiance, spectral power distribution, digital pulsing, number of devices, asynchronous and synchronous flashing), has been established for all individuals with disabilities, the CHP must issue regulations which prohibit LED flashing lights to comply with 14th Amendment Equal Protection requirements to protect individuals with disabilities from harm and discrimination.

#### D. Americans with Disabilities Act

The Americans with Disabilities Act was passed in 1990 to protect individuals with disabilities from discrimination. The ADA was further strengthened by the Americans with Disabilities Act Amendments Act of 2008 to ensure that the ADA is broadly interpreted. The US Department of Justice states on its ADA website, "Title II requires that State and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities (e.g. public education, employment, transportation,

<sup>&</sup>lt;sup>5</sup> https://www.law.cornell.edu/wex/equal protection

recreation, health care, social services, courts, voting, and town meetings)." (emphasis added). Supplemental LED flashing lights on vehicles deny individuals with disabilities this equal opportunity and it is thus incumbent on the California CHP, as an ADA Title II entity, to publish regulations that protect individuals with disabilities from the harms and discriminatory barriers created using LED flashing lights.

Title II regulation 28 C.F.R. § 35.151(b)(1) states:

Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.

A facility is broadly construed to mean any government operation; thus, the term facility includes vehicles. The alteration of adding a supplemental LED flashing light on a government motor vehicle creates an obstruction to path-of-travel for individuals with disabilities because the individual may suffer a non-epileptic or epileptic seizure, migraine, panic attack, or other acute adverse reaction. Therefore, the California CHP is required to publish regulations that prohibit the use of supplemental LED flashing lights on police cars, fire trucks, ambulances, and other government-controlled vehicles.

Title III regulation 28 C.F.R. § 36.402(a)(1) states:

Any alteration to a place of public accommodation or a commercial facility, after January 26, 1992, shall be made so as to ensure that, to the maximum extent feasible, the altered portions of the facility are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

A facility is broadly construed to mean any business operation; thus, the term facility includes vehicles. The alteration of adding a supplemental LED flashing light on a motor vehicle owned or operated by a place of public accommodation creates an obstruction to path-of-travel for individuals with disabilities, because the individual may suffer a non-epileptic or epileptic seizure, migraine, panic attack, or other acute adverse reaction. Therefore, the California CHP is required to publish regulations that prohibit the use of supplemental LED flashing lights on tow trucks, garbage trucks, company utility trucks and all commercial vehicles.

A decision by the California CHP to not publish regulations explicitly prohibiting the use of supplemental LED flashing on vehicles is a violation of CHP's requirements under the 14<sup>th</sup> Amendment Equal Protection Clause.

#### E. California Government Code

California Government Code Section 835 states:

Except as provided by statute, a public entity is liable for injury caused by a dangerous condition of its property if the plaintiff establishes that the property was in a dangerous condition at the time of the injury, that the injury was proximately caused by the dangerous condition, that the dangerous condition created a reasonably forseeable risk of the kind of injury which was incurred, and that either:

(a) A negligent or wrongful act or omission of an employee of the public entity within

- (a) A negligent or wrongful act or omission of an employee of the public entity within the scope of his employment created the dangerous condition; or
- (b) The public entity had actual or constructive notice of the dangerous condition under Section 835.2 a sufficient time prior to the injury to have taken measures to protect against the dangerous condition.

Local government agencies that receive constructive notice that LED flashing lights on government motor vehicles create a dangerous condition for individuals with disabilities are liable if the agency takes no steps to remove the supplemental LED flashing lights. The Soft Lights Foundation has already submitted a Constructive Notice of Dangerous and Discriminatory Condition to a substantial number of cities in California. (EXHIBIT B). A decision by the California CHP to not publish regulations explicitly prohibiting the use of supplemental LED flashing lights on motor vehicles will lead to unnecessary, expensive, and time-consuming litigation for each California city, county, and state agency. To protect all individuals and to establish uniform standards, the CHP must publish state-wide regulations that prohibit the use of supplemental LED flashing lights on all vehicles.

#### F. Seizure Reactions to LED Flashing Lights

Below are three videos showing LED flashing lights. Each video is labeled with a seizure warning.

1. My LED Lights (epilepsy/seizure warning):

(https://www.youtube.com/shorts/qvtmhHbPeMU)

2. LED Strobe Lights - Blue \*\*Warning May Cause Seizure\*\*:

(https://youtu.be/K\_oIWfOMKel)

3. How to Have a Seizure 101 (Warning Flashing Lights)

(https://www.youtube.com/shorts/1fGBrt2D9s4)

The next four videos demonstrate the use of supplemental LED flashing lights on vehicles. No seizure warning is provided either on the video, or by the government agency or company operating the vehicles.

- 4. 2015 Dodge Charger Police Car LED Police Lights outfitted by HG2 Emergency Lighting: (https://youtu.be/KJ 1CiNVtTo)
  - 5. Ambulances with Flashing Lights: (<a href="https://youtu.be/amoR1QSIBHw">https://youtu.be/amoR1QSIBHw</a>)
  - 6. Fire Trucks: (https://youtu.be/r8VdWLIAzr0)
  - 7. Utility Truck: (https://youtu.be/ma0hGwHivO4)

## 8. Tow Truck: (https://youtu.be/cJKgMtXJ-IE)

Seizure reactions are primarily a function of radiance, flash rate, and cycle depth. The higher the radiance, the more risk. The faster the rate, the more risk. The closer to digital pulsing, the more risk. All three factors play a role. A very high radiance LED can cause a seizure with zero flashing. A low radiance light can cause a seizure if the rate is high. A digital on/off has a higher risk of seizure than sine wave.

There is a disconnect between the well-known fact that intense and/or rapidly flashing lights can trigger seizure life-threatening seizure reactions, and the use of those same intense rapidly flashing lights on vehicles that operate in public spaces. While the online videos may post seizure warning labels to alert the viewer, there is no similar warning label for police cars, ambulances, fire trucks, utility trucks, garbage trucks, or tow trucks. There has been a systemic failure by government agencies at all levels which has allowed intense, digitally pulsing LED lights to appear on vehicles, when it has already been well known for decades that such flashing lights are unsafe for individuals with disabilities.

Due to the directionality of LED light, there is no known safe level of pulsed LED light. While it is already known that LED flashing lights create life threatening hazards for individuals with disabilities such as autism, epilepsy, PTSD, and migraines, there is no known level at which the LED flashing light becomes safe. Therefore, to ensure the safety and equal protection of individuals with disabilities, the CHP must explicitly prohibit the use of supplemental LED flashing lights on motor vehicles.

#### G. LED Flashing Lights Reports of Harm

Reports of harm due to exposure to LED flashing lights have been documented.

- Minnesota Department of Human Rights LED RRFB (https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf)
- LED RRFB Seizure / Concussion (https://www.softlights.org/wp-content/uploads/2022/09/MA-Incident-Report.pdf).
- Emergency Vehicle Seizure Reaction / Panic Attack (<a href="https://www.softlights.org/wp-content/uploads/2021/09/Encounter-with-Emergency-Vehicle.pdf">https://www.softlights.org/wp-content/uploads/2021/09/Encounter-with-Emergency-Vehicle.pdf</a>)
- LED Incident Reports Soft Lights Foundation (<a href="https://www.softlights.org/led-incident-reports">https://www.softlights.org/led-incident-reports</a>/)
- Petition to Ban Blinding Headlights (<a href="https://www.change.org/p/u-s-dot-ban-blinding-headlights-and-save-lives">https://www.change.org/p/u-s-dot-ban-blinding-headlights-and-save-lives</a>)

- New York State Public Service Commission Case 23-E-0727 –
   (https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseN o=23-E-0727)
- Food and Drug Administration Accidental Radiation Occurrence Reports (EXHIBIT C)

#### H. US Food and Drug Administration

On May 24, 2024, the US Food and Drug Administration issued a decision to not publish performance standards for any LED product, despite the requirements of 21 U.S.C. 360ii.<sup>6</sup> In issuing this ruling, the FDA made conclusory statements and failed to show evidence of reasoned decision making, and therefore the FDA's decision does not comply with the Administrative Procedure Act of 1946 and is subject to litigation. Nevertheless, the FDA's decision to not regulate LED flashing lights is further proof that regulation of LED flashing lights falls to state agencies such as the California CHP.

Given the numerous reports of harm and discrimination caused by LED flashing lights and the lack of regulation from the FDA, the CHP must explicitly prohibit the use of supplemental LED flashing lights to comply with its 14<sup>th</sup> Amendment Equal Protection Clause requirements for individuals with disabilities, including, but not limited to, individuals with epilepsy, migraines, autism, electromagnetic sensitivity, photophobia, and PTSD.

#### I. Administrative Procedure Act

The California Administrative Procedure Act ("APA"), codified as California Government Code Section 11350 et seq., requires that the CHP render its decision on this petition using reasoned decision making. A decision to not explicitly prohibit the use of supplemental LED flashing lights may not be arbitrary or capricious and the CHP may not use conclusory statements that are not supported via evidence provided in the CHP's response.

For example, to conclude that the CHP does not have a 14<sup>th</sup> Amendment requirement to provide equal protection to individuals with disabilities and is not required to publish regulations explicitly prohibiting the use of supplemental LED flashing lights on vehicles, the CHP would need to conclusively demonstrate that the either that the use of LED flashing lights do not segregate the population into two groups, or that existing regulations provide equal protection for both groups (individuals without and with disabilities).

<sup>&</sup>lt;sup>6</sup> https://www.softlights.org/wp-content/uploads/2024/05/Final-Response-Citizen-Petitions-FDA-2022-P-1151-FDA-2023-P-0233-FDA-2023-P-3828-FDA-2023-P-3879.pdf

As another example, if the CHP were to conclude that this petition does not provide enough evidence of the harm to individuals with disabilities caused by supplemental LED flashing lights on motor vehicles, the CHP would need to provide strong evidence that LED flashing lights are safe for individuals with disabilities and that LED flashing lights do not cause seizures, do not cause panic attacks, and do not impair cognitive functioning in individuals with disabilities.

The two most likely responses from the CHP are that there is no essential difference between traditional flashing lights and LED flashing lights, or that LED flashing lights are necessary for safety. First, there is a drastic difference between traditional light sources which emit light that disperses gently, and LED and laser sources which are directional and do not disperse gently. Second, using LED flashing lights for "safety" violates the 14<sup>th</sup> Amendment Equal Protection requirement because the purported safety benefits are only available to individuals without disabilities who do not suffer acute adverse reactions such as seizures, vomiting, migraines, etc. when exposed to LED flashing lights.

This petition makes clear that when reasoned decision-making is applied, the CHP is required to act to protect individuals with disabilities from the harms and discriminatory barriers created by supplemental LED flashing lights on vehicles, and that, because these harms and discrimination are already occurring, the CHP must act promptly to implement regulations that explicitly prohibit the use of supplemental LED flashing lights to protect the lives of individuals with disabilities who are already suffering life-threatening non-epileptic and epileptic seizures, migraines, anxiety, panic attacks, impaired cognitive functioning, and suicidal ideations from LED flashing lights on police cars, ambulances, fire trucks, garbage trucks, tow trucks, and utility vehicles.

#### III. Conclusion

In this petition, we have shown the following:

- 1. California Vehicle Code Section 25250 already prohibits the use of LED flashing lights because LED flashing lights have not been permitted.
- 2. Supplemental LED flashing lights on motor vehicles must be regulated at the state level by the California CHP.
- 3. Supplemental LED flashing lights on motor vehicles have been shown to cause serious adverse reactions to individuals with disabilities, including non-epileptic and epileptic seizures, anxiety, panic attacks, vomiting, impaired cognitive functioning, and suicidal ideations.
- 4. The alteration of adding supplemental LED flashing lights to motor vehicles creates a discriminatory barrier to path-of-travel for individuals with disabilities, in violation of the Americans with Disabilities Act's statutes and regulations.
- 5. The California CHP is required under the U.S. Constitution's 14<sup>th</sup> Amendment Equal Protection Clause to ensure equal protection of individuals with disabilities and

therefore the CHP must explicitly prohibit the use of supplemental LED flashing lights on motor vehicles in the California Code of Regulations.

## C. PROPPOSED REGULATIONS

Petitioner requests that the CHP issue regulations which explicitly prohibits the use of supplemental LED flashing lights on vehicles in the California Code of Regulations, Title 13, Division 2, Chapter 2 – Lighting Equipment.

Respectfully Submitted By:

/s/ Mark Baker

President Soft Lights Foundation 9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008 mbaker@softlights.org

## APPENDIX A - Bibliography

- 1. Visually Sensitive Seizures: An Updated Review by the Epilepsy Foundation. <a href="https://onlinelibrary.wiley.com/doi/10.1111/epi.17175">https://onlinelibrary.wiley.com/doi/10.1111/epi.17175</a> Flashes brighter than 20 candela per square meter create a risk of seizure.
- IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers. - <a href="https://www.bio-licht.org/02 resources/info">https://www.bio-licht.org/02 resources/info</a> ieee 2015 standards-1789.pdf - Flasher brighter than 20 nits and greater than 1 Hz is creates a high risk of seizure.
- 3. Flashing Lights Induce Prolonged Distortions in Visual Cortical Responses and Visual Perception. Flashing Lights Induce Prolonged Distortions in Visual Cortical Responses and Visual Perception PMC (nih.gov) A flashing light induces an anomalously delayed response in the primary visual cortex of mice, rats, and humans.
- Hazardous Effects of Light Stimulation in the Central Nervous System - https://austinpublishinggroup.com/clinical-neurology/fulltext/ajcn-v1-id1010.php - High- temporal-frequency visual stimuli can yield hazardous responses in the central nervous system.
- 5. Associations Between the Pupil Light Reflex and the Boarder Autism Phenotype in Children and Adults <a href="https://www.frontiersin.org/journals/human-neuroscience/articles/10.3389/fnhum.2022.1052604/full">https://www.frontiersin.org/journals/human-neuroscience/articles/10.3389/fnhum.2022.1052604/full</a> An individual with autism has a slower pupil light reflex, causing difficulty reacting to LED flashing lights.
- 6. Hyper-focus, sticky attention, and springy attention in young autistic children: Associations with sensory behaviors and cognitive ability <a href="https://onlinelibrary.wiley.com/doi/10.1002/aur.3174">https://onlinelibrary.wiley.com/doi/10.1002/aur.3174</a> Individuals with autism may not be able to disengage from LED flashing lights.

# Exhibit B

Physics of LED Light
By Soft Lights Foundation

LEDs emit light that has drastically different spatial, spectral, and temporal properties as compared to light emitted by traditional light sources such as tungsten filament.

## **Spatial Properties**

A traditional light source, such as shown in the column on the left in Figure 1, emits light essentially uniformly in all directions in space. An LED, on the other hand, due to the flat surface geometry, emits light in a direction, and the light within the directional beam is not spatially uniform, as shown in the column on the right.

A lux meter can be used to measure the intensity of the light from a traditional light source by measuring the illuminance and then calculating the luminous intensity. However, a lux meter cannot be used for an LED light source because the LED chip emits high intensity light from such a tiny flat surface and because the light is not uniform in energy. Only computer modeling can be used to accurately calculate the intensity pattern of light from an LED source.

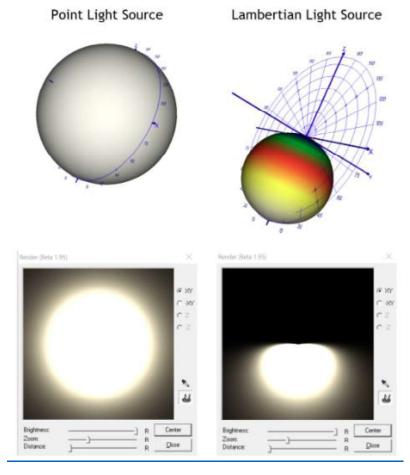


Figure 1 - Spatial Properties<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> https://luminusdevices.zendesk.com/hc/en-us/articles/4411289188109-Optical-What-do-the-Radiation-Plots-in-LED-datasheets-mean-and-how-do-I-calculate-Lux

## **Spectral Properties**

A tungsten filament light has a smooth curve of spectral power distribution, ranging from low blue to high red and infrared, as shown in Figure 2.

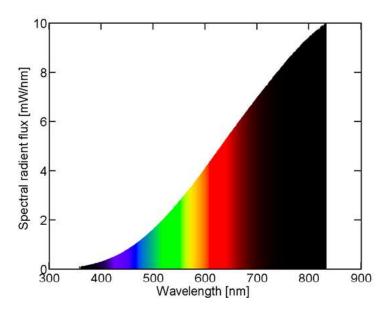


Figure 2 - Spectral Power Distribution of Incandescent

A 4000K LED has a spectral power distribution consisting of a sharp peak of blue wavelength light, very little red, and no infrared, as shown in Figure 3

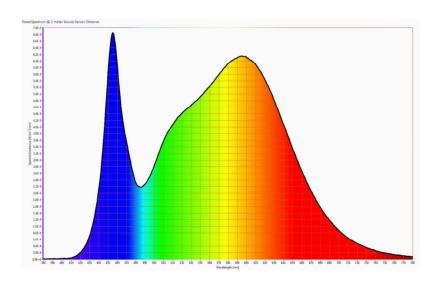


Figure 3 - Spectral Power Distribution LED

## **Temporal Properties**

An incandescent light bulb has sine wave flicker with about 6.6% percent flicker when connected to an A/C source, as shown in Figure 4.

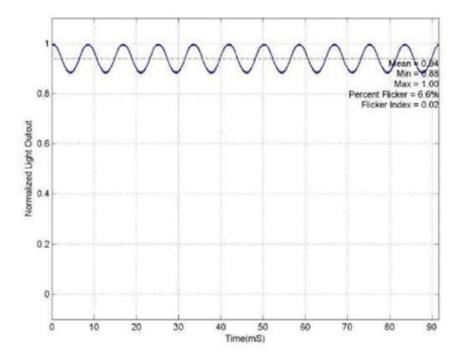


Figure 4 - Sine Wave Flicker

An LED exhibits square wave flicker with 100% percent flicker when connected to an A/C source, as shown in Figure 5. This graph also shows the effects of Pulse Width Modulation using an LED.

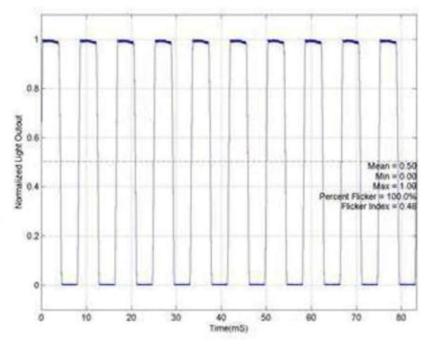


Figure 5 - Square Wave Flicker

# Exhibit C

## **LED Incident Reports**

https://www.softlights.org/led-incident-reports/

#### January, 2025

January 12, 2025 – Glenside, PA – Photophobia

I had a recent situation in the movie theater while watching "Wicked" that sent me into a blackout paranoid state; after leaving the theater, the oncoming auto lights/traffic lights/police lights just exacerbated the situation. I have no memory of the evening. I went to the emergency room in the morning and blood/urine tests showed no drugs or alcohol. I do not have epilepsy and have no medical conditions. I have been using candlelight and red lights at night in my home since 2020 and rarely drive (2018 car with only 17,000 miles). I had a similar event about two years ago after watching a TV series that used flashing strobe lights. I have a PhD and have been looking for research and case studies on the topic of the health consequences of light/flashing lights at night. My goal is to 1) figure out what happened to me, and 2) help others who would just attribute this to being "crazy." Thank you!

#### November, 2024

November 25, 2024 – Vacaville, CA – Autism

I was driving East on E. Monte Vista Ave. when I struck by the LED flashing lights on an RRFB. Instead of the RRFB making me stop, I start yelling fuck, fuck, fuck, fuck, fuck, fuck as I tilted my head down and drove straight through to escape the LED assault and save my life.

November 23, 2024 – Sacramento, CA – Autism

I was driving in town when I was struck by a debilitating blue LED flashing light in a store window. I have previously notified the owner of this store twice that I cannot neurologically tolerate the intensity and digital pulsing of this light, but they haven't acted to turn it off.

November 22, 2024 - Springfield, MO - Migraine

After a TBI years ago, I am now a migraine sufferer. I cannot look at the flashing or strobe lights without instant pain. It has been so hard to safely pass by emergency vehicles as flashing and LEDs both blind and cause instant splitting pain. Trying to get by a wreck or incident is really really tough while you are trying go around and not hit people or cars in the road. I have literally stopped my car in the middle of the road at night, even on a curve, multiple times because I was so blind I could not see the road, the other vehicle – nothing! It's as if someone suddenly blindfolded me while driving. How are people navigating this terrible issue? Tonight was a little darker than usual, without a moon, and I was struggling to repeatedly get blinded/see on a long 2-lane rural road. Going over a curvy set of river bridges with rails was terrifying, leaving me blinded for a moment trying to navigate curves. Halfway through the 7-mile trip, the repeated brightness moved to migraine, nausea, and fear I was going to wreck. I was literally wondering what my future holds if I can't drive to see my kids, or even get home from work safely after dark because of these lights. It feels like no one cares

– even insurance companies. They HAVE to know; they drive too! Even LED Christmas lights are too much when flashing. We also been blinded by directly placed LED garage lights on houses recently. It's like a direct police spotlight at a T-intersection. I can't see if anyone is coming to the left, due to one homeowners LED beacon staying trained right in my eyes. Tonight, I also made a right turn at a 4-way stop. Because of being blinded mid-turn, I couldn't tell how close the car waiting to turn was in front of me as I rounded to the next road. Not only did I fear hitting the other car right in the door I heard a sickening crunch as my back tire fell off the road edge and hit much further than the wheel rim.

November 14, 2024 - Mangonui, New Zealand - Migraine

Swimming in a remote lake, 200m from road access, when a car pulled up flashing the red LED tail lights. I felt immediately nauseated and blacked out with brief loss of consciousness for a few seconds. I came quickly to and swam with difficulty back to the shore having developed blurred vision, pain at the occiput, numb left side of face and left arm (hemiplegic migraine)

#### October, 2024

October 27, 2024 – Los Angeles, CA – Autism

My partner and I took turns driving from Sacramento to San Diego during the day. For the most part, the drive was without incident. At about 4pm, we were in the Los Angeles area.

First, we witnessed the result of a fatality crash, with about 6 emergency vehicles with red LED flashing lights. I was the passenger, and was forced to shield my eyes from the flashing LEDs. Then I was struck at close range by the blue LED lights on a highway patrol car further down the freeway, causing me pain and anxiety.

Around 5pm, the blue-rich LED headlights started appearing, causing me to have to look out the passenger window. Then the blue-rich LED streetlights started turning on, causing me to flinch with each exposure. Then there were blue-rich LED wall packs and floodlights on my right and left which increased my agitation at each exposure.

As the sun set, we exited on a ramp, and tiny yellow LED flashing lights on multiple curve signs struck me directly at close range. After dark, we were inundated with blue-rich LED headlights, blue-rich LED streetlights, blue-rich flood lights, LED business signs, parking lot lighting, and intense LED red taillights. A commercial truck had red LEDs wrapped around the entire back of the truck.

When we arrived at my my mother's house, a place I know well, I was hyper vigilant. Every light was now too bright. Every light was a danger. Everything was too bright. For the first time in my life, I was unable to greet my mother with enthusiasm. I was in shock.

My mother turned off all but one incandescent lamp, but when she asked me if she could turn on one more lamp, I broke down crying. I am now on edge. I am on hyper alert. Every light is an enemy.

October 12, 2024 - Esparto, CA - Autism

I was driving behind a vehicle when it suddenly pulled to the side of the road. Coming towards us was an ambulance with LED flashing lights. I felt like I was electrocuted and was going to go unconscious. I instantly closed my eyes and stopped my car. After a few seconds, a car behind me

honked, and when I opened my eyes, the ambulance was already gone. Now I'm suffering the psychological after-effects.

# October 11, 2024 – Yolo County, CA – Autism

I was driving East on a County road in the day when a vehicle came towards me with intense, rapidly flashing amber LED lights. I felt panic rushing in and put my arms up to block the assault. Since I now couldn't see the road, I came to a full stop. Then somebody honked a horn. I moved my arms, and saw that the lead truck had passed, but a wide-load mobile home on a truck was inches from the left side of my car. These LED flashing lights are a menace and violation of our civil rights. My anxiety ran high for 30 minutes after the encounter.

### September, 2024

### September 16, 2024 - Nashville, TN - Other

I have Mast Cell Activation Syndrome. My body produces an allergic reaction to things that wouldn't normally cause anyone else a problem, including LED lights. My brain interprets the rapid flashing light as if there's something attacking my body, resulting in what we call a "histamine dump." Histamine dumps lower blood pressure. But given I have a condition known as Postural Orthostatic Tachycardia Syndrome, which already gives me low blood pressure, the combination of this condition with MCAS histamine dump causes me to go into hypovolemic shock. It causes the worst pain I've ever known, where my brain is screaming for oxygen and nutrients, fading in and out of being hyperaware of how much pain I'm in only to dissociate from it as a way to protect myself from the mental anguish of that pain. I've almost died from this several times. For almost a decade, I exhibited symptoms of hypovolemic shock at the end of nearly every day, only to be told it was a cervicogenic headache or migraine. Now that I'm diagnosed, I'm on a medication to treat it. But that medication isn't strong enough to counteract the effects of extremely bright LED headlights, let alone LED streetlights. Every time I leave the house at night, I get sick. I'm already disabled my multiple chronic conditions. My life is already limited. I don't know how to live life unable to even go outside at night.

### September 14, 2024 – Vacaville, CA – Autism

I was driving at dusk when a fire truck or ambulance suddenly appeared with LED lights flashing. I immediately threw both of my arms in front of my face and hit the brakes to stop the car. I thought that this might be the end of my life. The LED flashing lights are sheer terror and I can't function. After the fire truck/ambulance passed by, I felt like I was going to cry from the emotional trauma. My brain then feels like it's dead even hours later.

#### August, 2024

### August 28, 2024 - Esparto, CA - Autism

I was driving and encountered a utility truck with both sets of headlights turned on. I turned on my non-LED high beams in the hope that the driver would turn off the high beams. Instead, the driver turned on amber LED flashing lights that incapacitated me. I was unable to proceed forward and stopped my car. Instead of driving off, the driver of the utility truck stopped also. My vision and cognitive abilities were severely impaired, with panic setting in. Finally, I started to inch forward, and then so did the utility truck. It seems like the driver was doing it on purpose. After he left, I spent

several minutes simply stopped in the middle of the road, trying to breathe and let the panic subside.

### August 6, 2024 – Winters, CA – Autism

I was driving on a country road in the daytime. Over 1 mile ahead of me was a utility truck on the side of the road with amber LED flashing lights. For the entire mile, I was either glued to these LED flashing lights, or forcing myself to look away. As I approached the truck, the LED strobe lights were overwhelming and I could not see through the lights. I stopped my car in the road and started to panic. I put my hand in front of my right eye, and then tried to use my left eye to navigate around the truck. It is impossible for me to think or see with these LED flashing lights blasting me and I suffer extreme anxiety and panic.

### August 4, 2024 – Spokane Valley, WA – Epilepsy

The use of LED lights in public spaces has and continues to become a more and more serious issue as more and more are being used and lights are being switched to this. In department stores like Walmart, I can only be in there for about 10 minutes max and it sets off my epilepsy. I get nauseous, and dizzy and begin to have auras. I have to immediately go outside to natural light. They are being used as street lamps and at night with it already dark outside, it makes them that much more awful for people like me. They are being used in headlights and I made a serious note of this when my son and I drove to Denver and back from WA. If there was oncoming traffic at night and older cars with older style headlights, there is no issues driving at night. Sure they are bright and you always have a little of that bright headlight thing going on, but those new LED headlights are just obnoxious beyond belief. Not only are they bright, but when you get a row of them and you have epilepsy - they flicker, and some flicker noticeably because when it is temperature change ie colder they seem to have an issue and cause flickering. As a person with epilepsy you only have the instinct to close your eyes and you can't because you are driving the car. Same with going down a street light with LED street lamps. And while I get that if you have epilepsy and they say don't drive. I CAN drive, and DO have my license and it is unfair to me to take away my license because of some light bulbs!!!! When I am otherwise allowed to drive. In my recent drive to Denver and the flickering head lights – some were almost to a point of flashing like an emergency vehicle. How on earth is that even safe for any driver encountering that in the dark at night? It is visually distracting like a strobe light. And then finally – I can not even have lighting in my own home or my office any more. You have completely gotten rid of any light bulb that a person with epilepsy or a person with strokes etc can use in their own home and using those ones that change the lighting tone from natural lighting to bright lighting really doesn't help sorry. So what do you expect all of us to do? Go back to only lighting our houses by candlelight? You, as the FDA need to LISTEN! I am in architecture and interior design, I am well aware of design and lighting. This is a very REAL issue that needs to be looked at. It is a health/ medical concern. My mom recently had a serious of mild strokes, and upon researching it since I have epilepsy – I discovered that strokes including decreasing blood flow to the brain CAN because by LED lighting! Before this is dismissed as a whim, you need to actually look at this. It is a real problem. If I go in to Lowe's or Home Depot in their lighting section I can last about 2 minutes and I have to go running out of there and want to throw up it is so bad. I used to love their lighting section – even just a couple years ago it was still ok because not all the lighting had been switched out yet – there was still a balance. Today I can make it about 2 minutes – you want to tell me that is not a serious health concern? I am just one person out of millions with epilepsy, strokes,

migraines...... This effects a lot of people – not a handful. On my same adventure drive to Denver the other day – we stopped at hotel and stayed the night. When I came to the reception counter, the woman behind the counter had the lights above the counter area turned off. So I asked her about it and told her I had epilepsy and just wondered if she did and that's why she had the lights off. She told me that ever since the hotel had switched to the new lights, she can't keep them on any more. that she had a car accident and now had a serious stigmatism that caused her migraines. The new lights make it so bad she gets sick and can not be around them at all so she had no choice but to turn off the lights just to be in that space.

The FDA needs to listen – it is a REAL problem! Thank you

### August 3, 2024 - Onsted, MI - Astigmatism

Led headlights (low beams), white led running lights, LED brake lights, emergency flashing Led lights and Led streetlights have adversely affected my ability to drive safely. I do not drive at dusk or Night anymore unless I have to (for work). I live in Michigan with snow covered roads and the most dangerous aspect of driving is being blasted by someone's Led headlights. I cannot use my read view or side mirrors anymore because of the vehicles behind me blinding my visions with their Led headlights. I have to constantly shield my eyes to be able to see the road due to oncoming Led headlights. I love nature and now my ability to enjoy the Night skies is ruined because of bright Led lights on at night. I never had any problems driving at night prior to Led headlights. Now driving has become a nightmare and a very dangerous task. Led headlights should be banned or at least some type of regulation regarding luminance and Kelvin temperature. Many Led low beams are much brighter than halogen highbeams. In addition to the dangers of led headlights being dangerous, they cause me headaches and eye pain. It's common knowledge that blue light is detrimental to the health of humans and don't understand why this type of lighting is being used in the public.

### August 3, 2024 – Fountain Hills, AZ – None

Apparently the plan to get drivers off the road is working with the BLINDING LED vehicle headlights. The police LED flashing lights are SUPER BLINDING.

#### August 3, 2024 - Fort Collins, CO - Other

At 74 and having cataract replaced and it is nearly impossible to drive safely with the blinding blue white glaring LED lights. It is so distracting and frustrating I loose my concentration to drive properly. The lights seem to bounce up and down with a blinding flashing impact. Even police vehicles red and blue flashing on the side of the road are so blinding it is difficult and unsafe to go around them. I can't see what is in front of me. The contrast from dark to blinding flashing lights is too much to see what's in front of me.

### August 1, 2024 – London, United Kingdom – Other

Council lawnmower with flashing LED lights drove past me while I was walking along the road. I felt immediate severe head pain, nausea and discoordinated, and fell into the roadside ditch. I then vomited, climbed out with blurred vision and pounding head.

### July, 2024

#### July 9, 2024 - Mangonui, New Zealand - Migraine

While traveling in the passenger seat along the state highway felt sudden thunderclap pain to the left occiput passing three flashing LED lights on three diggers repairing the road. My left eye began

to stream, my speech became slurred, then dysaesthesia to the left side of my face and arm occurred. I felt as though I had a concussion. The symptoms of this hemiplegic migraine event resolved gradually over a three day period.

#### June, 2024

June 1, 2024 – Fairfield, CA – Autism

During the day, I was driving a vehicle on a freeway when I struck by an LED flashing light from a bicycle on a parallel road. I reactively closed my eyes and then suffered a seizure reaction, which I would describe as like an electrical shock and loss of cognitive functioning and vision. I then had to emotionally fight off a panic attack.

### **April, 2024**

4/27/2024 - Elk Grove, CA - Autism

The Ziosk portable kiosk payment system has a bright LED screen. During dinner at a Chilis restaurant, we placed the kiosk face down on the table to avoid exposure to the LED Visible Light radiation from the LED screen. At payment time, my partner inserted the credit card for processing. At the completion of the processing, a large white LED light on the side of the kiosk suddenly irradiated me with white LED Visible Light radiation.

Due to the intensity of the white light, everything around me became black, except for the overwhelming feeling of bright white light. I felt disconnected from reality and as if I had entered a nightmare dream. I believe that I was partially unconscious. As I began to recover consciousness, I thought that perhaps I was staring at the LED flash on a cell phone, but that this was much more powerful. Then, as I became more aware of my surroundings, I realized that that the white light was from a large, white LED from the side of the Ziosk device.

I felt nauseous, so I fell to my stomach and tried to vomit, but I only ended up coughing. I then felt overwhelming anxiety and panic and went to the kitchen, demanding accommodation. A staff person then began yelling at me. I ran outside screaming. I continued to try to vomit, but only spit came out. At some point, both of my hands went numb and tingly.

The police were called. I dialed 911 to tell them not to turn on their LED flashing lights, but they had the red and blue flashing lights on, which further debilitated me.

4/21/2024 – Beaverton, OR – Autism

LED flashing lights cause me to suffer severe anxiety, panic attacks, and fear.

From: Davis, Kevin M@CHP < KMDavis@chp.ca.gov>

Date: Fri, May 5, 2023 at 6:44 PM

Subject: FW: LED Lights and Wrong Way Drivers
To: mbaker@softlights.org <mbaker@softlights.org>
Cc: Doko, Nicholas@CHP <NDoko@chp.ca.gov>

# **Exhibit D**

Mr. Baker,

Commissioner Duryee received your e-mail regarding LED lighting, and requested I respond on his behalf. In your e-mail you expressed concerns regarding LED lighting, and requested the California Highway Patrol (CHP) conduct a study regarding potential glare from LED light sources, and corresponding impacts to traffic safety.

The CHP is committed to providing the highest level of safety, service, and security, and routinely engages with the public and industry regarding specified equipment on vehicles and statutory and regulatory compliance in California. However, the CHP does not regulate any of the lighting installations you referenced.

Original equipment manufacturers (OEM) are mandated to meet the Federal Motor Vehicle Safety Standards (FMVSS) contained in Title 49 of the Code of Federal Regulations, Part 571, Standard No. 108, regarding required lighting devices. The FMVSS for OEM equipment preempts California statutory and regulatory requirements, pursuant to Section 24011 of the California Vehicle Code (CVC). Further, the CHP does not evaluate OEM equipment for the purpose of testing compliance with FMVSS. The National Highway Traffic Safety Administration (NHTSA) is the federal agency responsible for developing FMVSS for lighting devices.

The CHP is statutorily required by the CVC to defer to federal standards established by NHTSA regarding compliance testing and performance evaluations for lighting and other safety devices. As such, the CHP is unable to conduct independent studies on these devices. Notwithstanding, the CHP appreciates your interest in traffic safety and will keep the information you provided in mind as we engage with our traffic safety partners.

I appreciate the opportunity to assist you with this matter. Questions regarding this e-mail should be directed to Captain Nicholas Doko, of our Commercial Vehicle Section, at (916) 843-3400.

Thank You,

Kevin Davis
Chief, Enforcement and Planning Division
California Highway Patrol
(916) 843-3330
kmdavis@chp.ca.gov

# Exhibit E



9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008

June 19, 2023

### **BY EMAIL**

Sean Duryee, Commissioner California Highway Patrol SDuryee@chp.ca.gov

# Re: Request for Accommodation – LED Products

Dear Commissioner Duryee,

On June 15, 2023, the Minnesota Department of Human Rights issued a precedent-setting legal ruling addressing discrimination caused by the use of high-luminance, strobing LED lights.<sup>1</sup>

The MDHR determined that "there is **PROBABLE CAUSE** to find that the Respondent discriminated against Charging Party because of her disability." The primary reasons for the MDRH finding are as follows:

- 1. High-luminance, strobing LED lights triggered the disability in the Charging Party.
- 2. The Charging Party made numerous requests for accommodation to the Respondent.
- 3. The Charging Party's accommodation request was reasonable.
- 4. The Respondent failed to reasonably accommodate the Charging Party.
- 5. There is no evidence that removing the LED strobe lights would impact public safety.
- 6. The Respondent failed to truly investigate the request for accommodation.
- 7. The Respondent made only performative gestures, and did not engage in good faith efforts to provide an accommodation.

The following facts are known about LED visible radiation devices:

- 1. The US Food and Drug Administration has not vetted or approved any LED product, in violation of 21 U.S.C. 360ii.
- 2. The use of LED products is discriminatory, in violation of 42 U.S.C. Chapter 126 and 29 U.S.C. Chapter 16.
- 3. LED visible radiation is a human health hazard, causing seizures, migraines, panic attacks, and eye injury.

The California Highway Patrol uses discriminatory LED strobe lights on its vehicles.

<sup>&</sup>lt;sup>1</sup> https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf

Neither the Food and Drug Administration, Department of Energy, Department of Transportation, Consumer Product Safety Commission, Occupational Health and Safety Administration, nor Environmental Protection Agency has published performance standards for LED strobe lights, in violation of 21 U.S.C. 360ii.

The California Highway Patrol cannot claim an undue cost burden for removal of the LED products because the FDA has never approved LED products. It was the CHP's choice to install unvetted, unapproved LED strobe lights on their vehicles without having waited for FDA approval, and without having waited for guidelines from the US Access Board. With the ruling from the MDHR, it has now been established that the use of LED strobe lights is discriminatory. As a reminder, the Defendant in an ADA discrimination lawsuit cannot recover attorney fees from the Plaintiff.<sup>2</sup>

Therefore, on behalf of myself and all others similarly affected, I request that the CHP fully investigate the lack of vetting and regulation of LED products, fully investigate the discrimination caused by the use of LED products, fully investigate the adverse health impacts of LED visible radiation, provide a publicly accessible written report of these investigations, and provide an accommodation for those who cannot neurologically tolerate LED visible radiation and who are discriminated against by the CHP's use of LED strobe lights. The accommodation that I am requesting is the removal of the LED strobe lights from the CHP's vehicles because they harm and discriminate.

Sincerely,
/s/ Mark Baker
President
Soft Lights Foundation
mbaker@softlights.org

2 of 2

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<sup>&</sup>lt;sup>2</sup> https://supreme.justia.com/cases/federal/us/434/412/

# Exhibit F



9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008

August 6, 2023

### **BY EMAIL**

Nicholas Doko, Captain Commercial Vehicle Section, California Highway Patrol ndoko@chp.ca.gov

### Re: Discriminatory LED Strobe Lights

Dear Nicholas Doko,

We are writing to alert you to the devastating impacts of the use of LED strobe lights, such as on emergency vehicles.

On June 15, 2023, the Minnesota Department of Human Rights in the USA issued a precedent-setting legal ruling that the use of high-luminance, strobing LED lights is discriminatory. The MDHR determined that "there is **PROBABLE CAUSE** to find that the Respondent discriminated against Charging Party because of her disability." <sup>1</sup>

Across the world, there has been a failure by government officials to publish standards for LED products, including LED strobe lights. LEDs emit a directed energy beam of light that has little divergence, and yet no agency in the USA, the UK, New Zealand, or the United Nations has set a limit on the peak luminance of LED visible radiation to ensure the comfort, health, and safety of the public. There has also been a failure to set restrictions on the digital on/off flashing of LED strobe lights. According to the review study published in the journal Epilepsia on February 7, 2022, there is a risk of seizure from flashes brighter than 20 candela per square meter.<sup>2</sup> Yet, LED strobe lights used on city vehicles are likely in the range of hundreds of thousands of candelas per square meter.

For those with neurological intolerance to the extreme intensity and digital pulsing of LED strobe lights, the results have been catastrophic, with citizens forced to drive with hands over their eyes, suffering photosensitive seizures, migraines, panic attacks, and possible eye injury. Now that the MDHR has made the legal determination that LED strobe lights are discriminatory, cities across the country are obligated to eliminate the LED strobe lights from city vehicles.

LED strobe lights on emergency vehicles are a hazard and danger to everyone, including the CHP officers and the public. LED strobe lights have never been vetted or approved by the Food and Drug Administration in accordance with 21 U.S.C. 360ii, and thus there is no legal basis for their use.

<sup>&</sup>lt;sup>1</sup> https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf

<sup>&</sup>lt;sup>2</sup> https://onlinelibrary.wiley.com/doi/10.1111/epi.17175

Research studies prove that the high intensity and rapid flashing impair vision, interfere with cognitive functioning, and are a dangerous distraction for drivers.<sup>3</sup> Research also shows that there is no change in outcome when using lights and sirens, and thus the use of LED flashing lights risks the lives of others, while not providing any beneficial outcome.

On July 28, 2023, Congressman Mike Thompson of California sent a letter to the Food and Drug Administration requesting that the FDA publish the required performance standards for LED headlights as required by 21 U.S.C. 360ii.<sup>4</sup> While this letter only requests regulation of LED headlights, the FDA is required to publish performance standards for all products, including LED strobe light products. This letter from Representative Thompson is the start of an awakening by Congress that LEDs emit hazardous and dangerous radiation that currently is completely unregulated. On July 31, 2023, the FDA CDRH held a meeting with experts in the field of visible radiation to discuss the need to regulate LED radiation, thus initiating the process of publishing performance standards for LED products such as strobe lights.

Therefore, on behalf of all citizens who are adversely impacted affected by LED strobe lights, the Soft Lights Foundation requests that the California Highway Patrol adhere to the conclusions of the research studies and replace LED strobe lights on CHP vehicles with a soft, static, tungsten filament light to greatly improve safety, and because LED strobe lights are unvetted, unregulated, hazardous, dangerous, and discriminatory.

Sincerely,
/s/ Mark Baker
President
Soft Lights Foundation
mbaker@softlights.org

cc:

Kevin Davis, Chief, Enforcement and Planning Devision - kmdavis@chp.ca.gov

Sean Duryee, Commissioner, CHP – sduryee@chp.ca.gov

Barbara Rooney, Director, California Office of Traffic Safety – barbara.rooney@ots.ca.gov

<sup>&</sup>lt;sup>3</sup> http://www.softlights.org/flashing-lights/

<sup>&</sup>lt;sup>4</sup> https://www.softlights.org/wp-content/uploads/2023/07/Thompson.pdf

# Exhibit G

# BEFORE THE CALIFORNIA HIGHWAY PATROL

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# PETITION FOR RULEMAKING TO REGULATE SIRENS AND FLASHING LIGHTS ON AMBULANCES

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SUBMITTED BY
SOFT LIGHTS FOUNDATION
ON
JANUARY 30, 2024

# **CITIZEN PETITION**

The undersigned submits this petition under Title 2, Division 3, Part 1, Chapter 3.5,

Section 11340.6 of the California Government Code<sup>1</sup>, to request that the Commissioner of the

California Highway Patrol issue California Code of Regulations Title 13, Division 2, Chapter 5,

Article 1<sup>2</sup>, Section 1110 – Lights and Sirens, as authorized by California Vehicle Code Section

2512.<sup>3</sup>

# A. ACTION REQUESTED

Petitioner requests that the Commissioner issue California Code of Regulations Title 13, Division 2, Chapter 5, Article 1, Section 1110 – Lights and Sirens to regulate ambulances that operate with lights and sirens. Specifically, this petition requests that the Commissioner act to prohibit or restrict the use of high intensity flashing lights and loud sirens to ensure first responder, patient, and public comfort, health, safety, and civil rights.

# **B. STATEMENT OF GROUNDS**

### I. Introduction and Summary

Light Emitting Diodes can be used to pulse intense, flashing, directed energy visible radiation using electronics that can create synchronous and asynchronous flash patterns with a digital on/off characteristic. The luminance of these LED strobe lights may be as high as 100,000,000 candela per square meter, whereas maximum human comfort level is about 300

<sup>&</sup>lt;sup>1</sup> https://law.justia.com/codes/california/2022/code-gov/title-2/division-3/part-1/chapter-3-5/article-1/section-11340-6/

<sup>&</sup>lt;sup>2</sup> https://regulations.justia.com/states/california/title-13/division-2/chapter-5/article-1/

<sup>&</sup>lt;sup>3</sup> https://codes.findlaw.com/ca/vehicle-code/veh-sect-2512/

cd/m² and seizures can be induced as low as 20 cd/m². LED flashing lights have been documented to cause life-threatening photosensitive seizures, multi-day migraines, and anxiety panic attacks. The intensity of LED flashing lights may be causing permanent eye damage. Research has shown that flashing lights, especially with such high intensity, puts the patient, the public, and first responders at risk of injury or death because they impair vision and cognitive functioning. LED flashing lights create discriminatory barriers for people with disabilities such as those with epilepsy, autism, PTSD, and migraineurs. LED flashing lights violate basic civil rights such as the right of visual freedom.

The sirens used on emergency vehicles are typically omni-directional and can exceed 100 decibels. As an emergency vehicle travels while using such a siren, large numbers of people who are uninvolved in the emergency are impacted, with certain individuals and animals suffering anxiety, fear, panic attacks, and pain. The use of sirens increases stress.

This petition requests that the California Highway Patrol publish regulations prohibiting the use of flashing lights and restricting the directionality and limiting the volume of sirens used on ambulances to protect the comfort, health, and safety of the public, to eliminate the discriminatory barriers created by sirens and LED flashing lights, and to ensure that the civil rights of citizens are not violated.

#### **II. Statement of Facts**

# A. Examples of Flashing Lights

 Tungsten Filament Flashing Lights - This link shows non-LED flashing lights which are unlikely to trigger seizures, migraines, or panic attacks or cause eye injury: https://youtu.be/DHJZTb7qXQo
Notice the slow rise and decay times, the gentle glow, and low luminance. The light from a flashing tungsten filament such as the one shown in this video disperses over distance following an inverse square law.

2. **Fire Trucks** – This video shows the use of intense LED flashing lights and excessively loud sirens on fire trucks. <a href="https://youtu.be/r8VdWLIAzr0">https://youtu.be/r8VdWLIAzr0</a>



Figure 1 - LED Flashing Lights and Sirens on Fire Trucks

3. **Ambulances** – This video shows LED flashing lights on ambulances.

https://youtu.be/amoR1QSIBHw



Figure 2 - Flashing Lights on Ambulance

# **B.** Patient Outcomes and Safety

In the research study titled, <u>Is Use of Warning Lights and Sirens Associated with</u>

<u>Increased Risk of Ambulance Crashes?</u> the researchers conclude, "Ambulance use of

lights and sirens is associated with increased risk of ambulance crashes." In the article

published in FireRescue1 titled <u>Why Running Lights and Sirens is Dangerous</u>, the author

writes "No evidence links lights and sirens use to better patient care or improved patient

outcomes." 5

In an article in EMS1, the authors wrote, "[The Plum EMS] crew came upon road construction and chose not to light it up. This resulted in a 5-6 minute delay, which turned out not to have a measurable impact on the patient." The author of the article

<sup>4</sup> https://pubmed.ncbi.nlm.nih.gov/30648537/

<sup>&</sup>lt;sup>5</sup> <a href="https://www.firerescue1.com/fire-products/vehicles/ambulances/articles/why-running-lights-and-sirens-is-dangerous-nHnR5EPEXd3Szflt/">https://www.firerescue1.com/fire-products/vehicles/ambulances/articles/why-running-lights-and-sirens-is-dangerous-nHnR5EPEXd3Szflt/</a>

<sup>&</sup>lt;sup>6</sup> https://www.ems1.com/ems-products/ambulance-safety/articles/team-driven-improvement-in-the-use-of-lights-and-sirens-6YcxOle9akfbNZUn/

titled <u>A Ten-Point Toolkit for Effective Warning Lights</u> published in Ambulance Visibility wrote, "There is now no doubt that the dazzling display of (no less than) seven uncoordinated flash patterns will definitely amplify the confusion felt by drivers as they strain to decode the crazy light show."

Given the information presented above, the question must be asked, "Why are lights and sirens used on emergency vehicles if there is no improvement in patient care or patient outcome, but there is a higher risk of injury or death to the patient, the first responder, and the public? The answer is that there are companies that sell flashing lights and sirens, and these companies seek to make a profit. There is no research that supports the use of lights and sirens, while there is substantial evidence that supports the prohibition of lights and sirens. (See Appendices).

### C. Neurological Impacts

A January 2022 study titled, <u>Visually Sensitive Seizures</u>: An <u>Updated Review by the Epilepsy Foundation</u> published in the journal Epilepsia contains vital information on the negative impacts of flashing lights.<sup>8</sup> The opening line in the abstract states, "Light flashes, patterns, or color changes can provoke seizures in up to 1 in 4000 persons." For the American population, this translates to approximately 83,000 people who must be protected from the risk of suffering a life-threatening seizure.

The abstract also states, "Images with flashes brighter than 20 candelas/m² at 3-60 (particularly 15-20) Hz occupying at least 10 to 25% of the visual field are a risk, as are red color flashes or oscillating stripes." This report uses 3Hz as a lower limit and 60Hz as the upper limit,

<sup>&</sup>lt;sup>7</sup> https://ambulancevisibility.com/web\_images/EMSAC%20Star%20-%20Lighting2%20-%20October%202011.pdf

<sup>&</sup>lt;sup>8</sup> https://onlinelibrary.wiley.com/doi/10.1111/epi.17175

but other research uses 1Hz or 5Hz. While the author of this petition has been unable to obtain the luminance specs from the manufacturers for LED flashing lights, it is likely that that the luminance exceeds 100,000 cd/m². Considering that seizure risk increases at a luminance greater than 20 cd/m², it is clear that LED strobe lights are dangerous for people who have been diagnosed with photosensitive epilepsy. The authors of the Epilepsia review write, "Prevention of seizures includes avoiding provocative stimuli..." Government officials thus have an obligation to eliminate the use of high-luminance flashing lights to remove the provocative stimuli from public spaces such as emergency vehicles. The last line in the abstract states, "Visually-induced seizures remain significant public health hazards so they warrant ongoing scientific and regulatory efforts and public education." This petition to the California Highway Patrol is one of those regulatory efforts.

In the article <u>IEEE Recommended Practices for Modulating Current in High-Brightness LEDs</u> for <u>Mitigating Health Risks to Viewers</u><sup>9</sup>, there is a diagram showing the risk of seizure. Notice that in any situation in the chart, there is at least a medium risk of seizure. The high risk of seizure begins at a luminance of 20 cd/m<sup>2</sup> and a flash rate greater than 1 Hz. Given that LED flashing lights are likely 100,000 cd/m<sup>2</sup> or greater, LED flashing light intensity is essentially off the chart in intensity and would likely trigger seizures regardless of the flash rate. It should be clear from this diagram that the use of LED flashing lights should be avoided in almost all situations.

<sup>9</sup> https://www.bio-licht.org/02 resources/info ieee 2015 standards-1789.pdf

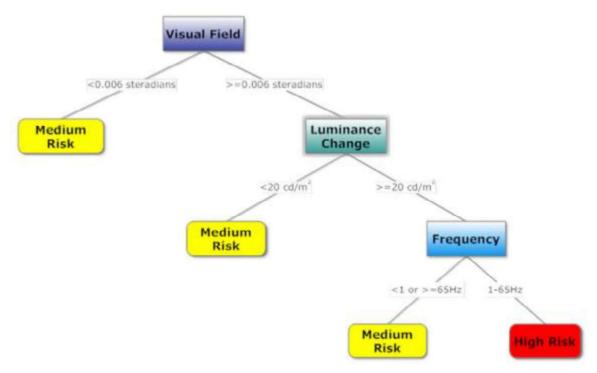


Figure 3 - IEEE Photoepilepsy Diagram

A study published in Frontiers in Psychology on June 8, 2021 stated that individuals with autism displayed, "dislike for extreme or flashing lights." A February 21, 2023 study published in Frontiers in Human Neuroscience stated that, for individuals with autism, "increased sensitivity to sensory input, such as light, can lead to experienced overstimulation that might cause distress..." The research article titled A Review of Decreased Sound Tolerance in Autism: Definitions, Phenomenology, and Potential Mechanisms stated that "many autistic adults continue to experience anxiety in response to loud noises" 12

# D. Personal Injury Stories

12

<sup>&</sup>lt;sup>10</sup> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8217662/

<sup>11</sup> https://www.frontiersin.org/articles/10.3389/fnhum.2022.1052604/full

The possibility of injury such as seizure, migraine, or panic attack is not theoretical. These injuries have already occurred in the real world. Here are stories of personal injury from LED flashing lights (edited for clarity and brevity).

# Individual 1 – September 9, 2021 – Email to Oregon Department of Transportation

"LED lights are now so intense, they are causing injury. I personally have suffered repeated psychological trauma from being poked in the eyes by LED lights. Many times, when I drive on Highway 101, I am attacked by these devices and poked in my eyes by the light. My nervous system is now completely frazzled by having been assaulted by these strobing lights so many times. I most likely have Complex PTSD. LED lights have such an intense peak luminance and peak radiance that they overwhelm my central nervous system. I cannot properly see, think, or concentrate. I have mild autism, so these RRFBs are illegal barriers to access and are discriminatory."

# <u>Individual 2 - March 17, 2022 – Email to Little Canada, Minnesota</u>

"I have photosensitive epilepsy and experience epileptic auras. One day I was driving home from work and I encountered an RRFB (Rectangular Rapid Flashing Beacon). A pedestrian pushed the button on the RRFB and the strobing RRFB was so distracting and blinding that I almost drove into the pedestrian. My epileptic auras began and I was immediately nauseous, my left leg started to twitch, and I felt pain in my eyes. My legs were wobbly, and I felt physically unstable. I drove to my apartment, stepped inside, and then felt like I was losing control of my bladder. Instead, I vomited. I then did almost nothing but sleeping for the next two days and missed work."

### Individual 3 – July 8, 2022 – Email to Williamstown, Massachusetts

"This incident occurred on Friday, July 8th of 2022 in Williamstown Massachusetts around 3:50 in the afternoon. My mother and I were driving west on Rt. 2 through Williamstown MA, as we approached the intersection of Park St and Rt. 2, a pedestrian approached the crosswalk positioned on the west side of the intersection which triggered the strobe lights on the crosswalk sign. There were no other visible strobe lights in the area and there is a small rise in the road just before the intersection, so the crosswalk came into view suddenly. My mother, a photosensitive epileptic, had an immediate and violent seizure in the passenger seat sitting next to me. Her head and her right arm smashed against the passenger side window a couple of times and her left hand hit my arm a few times while her limbs flailed. Thankfully, I was able to maintain control of my car and rapidly decided to turn right (north) onto park street, to reduce any prolonged exposure to the strobe light facing Rt. 2.

There is no curb on Rt. 2 to pull over and I did not want to risk my mother coming into contact with another strobe light, so I felt it best to take this course of action. The crosswalk is positioned to the west of the intersection so I was able to make the turn immediately without needing to wait for the pedestrian to cross. After turning down park street, I turned right again into the first available driveway to get myself and my mother off the road. That entire maneuver, from contact with the strobe light to when I ultimately pulled into the driveway off of Park St. took about 20-25 seconds, and my mother's seizure was ongoing this entire time. I turned the car off in the driveway and put my arms around my mother to help prevent any further physical injury to her limbs which are still flailing around the cabin of the car. Her seizure progressed for another 60 seconds before she began choking, so I tilted her head forward a bit.

Her body stopped seizing after another 30 seconds and then she remained unresponsive for another 2 minutes. I could tell she was breathing so I remained in the driveway until she recovered. I had no ability to administer actual first aid and I could not take her to a hospital

without risking further exposure to strobe lights or other seizure triggers. She finally recovered enough to talk to me and asked me for some water/milk to drink. I helped her get a drink of water and I decided to remain on the driveway for another 10 minutes while she regained some strength. We exited Williamstown by heading north on Park St. until it eventually meets up with Rt. 7 north. We had no further incidents on our drive home to Cambridge NY however, my mother was in visible pain the entire ride home. This was one of the most violent seizures I had ever witnessed my mother having and my ability to respond would have been even more limited if it weren't for the position of Park St being east of the strobe light."

# Individual 4 – September 3, 2021 – Incident in Yachats, Oregon

"On September 3, 2021, at approximately 8:00pm, my partner and I were driving south on Highway 101 at Yachats when we came across an emergency vehicle that was attacking us with high luminance LED flashing lights. Neither of us could see properly, and my partner, the driver, started swearing because of the assault and because she was afraid for my life. I have been diagnosed with Autism Spectrum Disorder. LED flashing lights exceed my tolerance level and cause sensory overload. I tried to leap out of the car, but my partner grabbed onto me, trying to protect me. Eventually I freed myself and ran to the emergency vehicle and told them to stop assaulting us, that we couldn't see, and that their flashing lights were killing us. They refused to turn off the assault weapons. Here is a link to the video I took just as I suffered my sensory overload panic attack. WARNING: MAY CAUSE SEIZURES:

https://youtu.be/GULzdBENYqA I could not get immediately up to the truck because the light weapons were overpowering. I ran to the front of the truck and closed my eyes and waved my arms around to try and get them to stop, but they kept attacking me. Every time I opened my eyes I was stabbed by the lights. I finally ended up rolling around on the street in front of the

emergency vehicle, screaming my head off and telling them to stop assaulting us. My partner came over and got me off the road, and another woman came over to try and help. I was crawling around on the ground, pulling the grass, pulling my hair, screaming. I eventually ran away from the scene. I began hyperventilating and could not stop. My partner eventually found me, and we took a number of side streets to get home."

### <u>Individual 5 – February 11, 2022 – LED Strobe Lights on Utility Vehicles</u>

"It's hard to tell exactly how much of my sensitivity to LED lights comes from my autoimmune condition (Sjogren's — which is known to cause photophobia in some patients), and how much comes from having the innate trait of high sensitivity. I get very stressed now when I drive to work and sometimes, I have to work from home to have a break from driving. Even the daytime running lights on cars are nauseating for me. And the only tinted lenses that work for me are amber ones, which create other safety issues in that it's harder to spot the traffic light color changes etc. Strobing LED lights are becoming so common on utility vehicles and they actually cause me to go into a completely overloaded state where I can't think straight. So, I have to block them with my arm — also a hazard as I might not see a cyclist or pedestrian. I have friends and acquaintances who tell me about their aversion to LEDs also. They have a range of conditions that make LEDs harder to bear. E.g., post-concussion syndrome, migraines, high sensory sensitivity, PTSD and more. If you add up all the people in society who have one of these disorders or inherited traits then there are A LOT of people who have a reduced quality of life due to LEDs."

# E. Warnings On Other LED Products

# IMPORTANT WARNING!

CAUTION! DO NOT LOOK DIRECTLY AT THESE LED'S WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

GearLight states that a person should not stare directly into an LED light beam.

WARNING: To avoid eye injury, do not stare directly into the light beam or shine the beam directly into anyone's eyes. This product is not designed, intended, or recommended for children or hazardous environments.

The operator's manual for the Ryobi P705 Flashlight includes the following: "WARNING: Do not direct the light beam at persons or animals and do not stare into the beam yourself (not even from a distance) Staring into the light beam may result in serious injury or vision loss."

The parenthetical "(not even from a distance)" indicates that Ryobi is aware that LEDs emit dense directed energy that has little dispersion, even at long distances, and that LED visible radiation does not follow an inverse square law for dispersion.



# WARNING:

Do not direct the light beam at persons or animals and do not stare into the light beam yourself (not even from a distance). Staring into the light beam may result in serious injury or vision loss.

Figure 4 - Ryobi P705 LED Flashlight Warning

It is difficult to imagine that products that pulse high intensity directed energy beams of visible radiation directly into the eyes of citizens are not regulated, when companies such as Whelen Engineering, GearLight, and Ryobi put a warning label on their product explicitly stating

<sup>13</sup> https://www.whelen.com/wp-content/uploads/2020/08/14555.pdf

that LED light is dangerous and can cause serious injury or vision loss. This is a liability issue for government and private entities that operate LED flashing lights, knowing that they can cause eye injury.

### F. Website Flashing

The US Access Board and the World Wide Web Consortium have already developed guidelines to protect against seizures on websites due to flashing lights and images. <sup>14</sup> The fact that the Access Board has not published similar guidelines for flashing lights on vehicles is a failure of the Access Board but cannot be used as the basis for a claim that flashing lights do not discriminate.

As per the Web Accessibility Guidelines, web pages that may cause seizures or physical reactions should be avoided and using more than 3 flashes per second should be also avoided. LED flashing lights on emergency vehicles have been documented to trigger seizures, migraines, and panic attacks. Many of these device flash faster than 3 flashes per second and there are typically multiple emitters flashing asynchronously. As per the Access Board, *Multiple*, *unsynchronized visual signals within a single space may produce a composite flash rate that could trigger a photoconvulsive response in such persons.*"15

The Web Accessibility Guidelines are generally for computer displays, which have luminance values of around 300 candela per square meter. The intensity of LED flashing lights on vehicles may exceed 100,000 candela per square meter, and thus is hundreds of times more intense than a computer screen and thus far more dangerous. Given that government officials and standards bodies have already recognized the hazard of flashing lights for individuals with a neurological

15 https://www.access-board.gov/advisory-committee-reports/passenger-vessels/pvaac-report-ch04/

<sup>&</sup>lt;sup>14</sup> https://www.w3.org/TR/WCAG21/#seizures-and-physical-reactions

intolerance to flashing lights for websites, it should be prima facie evidence that LED flashing lights on emergency vehicles must be prohibited or regulated and restricted.

# G. Food and Drug Administration Regulation

In 1968, Congress passed the Radiation Control for Health and Safety Act, directing and authorizing the Food and Drug Administration to regulate electromagnetic radiation from electronic products. Electromagnetic radiation is categorized by frequency. While humans have managed to harness this radiation, the radiation can also be harmful to human health. In the US, the federal agency responsible for setting comfort, health, and safety standards for electromagnetic radiation is the FDA. As can be seen in Figure 5, this includes radiation on the human visible portion of the spectrum. Light Emitting Diode products are electronic products that emit visible radiation, and thus it is the duty and responsibility of the FDA to set protective standards.

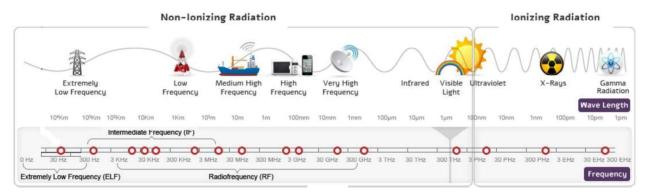


Figure 5 - Electromagnetic Spectrum<sup>16</sup>

The FDA has not yet published the necessary comfort, health, or safety standards for LED products. To rectify this situation, the Soft Lights Foundation has petitioned the FDA to

<sup>&</sup>lt;sup>16</sup> https://www.tnuda.org.il/en/physics-radiation/what-radiation/electromanetic-radiation-spectrum

regulate LED products and the visible radiation emitted by them. <sup>17</sup> As of this writing, the petition is under review by the FDA and accepting public comments.

The federal Administrative Procedures Act of 1946 defines the system for creating new regulatory rules. To our knowledge, no manufacturer of LED flashing light products has petitioned the FDA for authorization to manufacture, sell, or operate LED strobe lights products. The FDA made a grave error by not publishing comfort, health, and safety regulations for LED products decades ago, but that error did not alleviate the manufacturer's requirements to comply with the Administrative Procedures Act. The correct set of steps for the manufacturers is to petition the FDA for regulatory approval, at which point the FDA would either reject the petition or would develop the necessary regulations and restrictions to protect the public from the directed energy visible radiation emitted by LED devices.

In a letter to the Soft Lights Foundation on October 19, 2022<sup>18</sup>, the Federal Highway Administration Office of Civil Rights stated, "The allegations you have raised about the health impacts of RRFBs raise complex issues related to the regulation of all Light Emitting Diode (LED) lights, not just those used in RRFBs, that extend beyond FHWA's authority." The reference to regulation of LEDs is to the FDA. The FHWA thus acknowledges that it has no authority to regulate LED products and the letter implies that the FHWA understands that the FDA is a federal agency with authority to regulate LED strobe light products. The Soft Lights Foundation has received similar letters from the Consumer Product Safety Commission, National Highway Traffic Safety Administration, Environmental Protection Agency, Occupational Safety and Health Administration, Federal Aviation Administration, and Department of Energy, each confirming that they rely on the FDA for regulations for LED products.

<sup>&</sup>lt;sup>17</sup> https://www.regulations.gov/document/FDA-2022-P-1151-0001

<sup>18</sup> https://www.softlights.org/wp-content/uploads/2022/10/Baker-CL-2022-0375.pdf

On January 22, 2024, Mark Baker, President of the Soft Lights Foundation, filed a lawsuit in federal court to compel the FDA to publish performance standards for LED products, including LED flashing lights.<sup>19</sup>

#### H. Americans with Disabilities Act

LED flashing lights create discriminatory conditions that prevent a class of individuals from safely and comfortably accessing public services. LED flashing devices are unvetted, unregulated, unapproved, dangerous, and discriminatory. The paragraph below is just one of many paragraphs within the Americans with Disabilities Act Title II statutes that prohibits exclusion and discriminatory barriers created by public entities.<sup>20</sup>

§ 35.130 General prohibitions against discrimination - "(a) No qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any public entity." --- The use of LED flashing lights and loud sirens create discriminatory barriers for certain individuals, excluding them from the benefits of services, programs, and activities by public entities.

# I. Civil Rights Legal Actions

Discrimination is prohibited by the Americans with Disabilities Act. The lack of FDA regulations for dangerous and discriminatory LED flashing lights has already led to multiple claims of discrimination. The Minnesota Human Rights Commission issued a Finding of Probable

<sup>&</sup>lt;sup>19</sup> https://www.softlights.org/us-food-and-drug-administration-sued-for-failing-to-regulate-led-lights/

<sup>&</sup>lt;sup>20</sup> https://www.ada.gov/regs2010/titlell 2010/titlell 2010 regulations.htm#suppinfo

Cause of Discrimination against the city of Little Canada, Minnesota for their use of a high-luminance LED strobing light device.<sup>21</sup> A lawsuit has been filed against Fairfield, California for their failure to provide accommodation for their use of an RRFB LED flashing light.<sup>22</sup> An LED civil rights claim has been made to the New York State Human Rights Commission, Case 10212383. A news media story details an RRFB ADA lawsuit in Ashland, Oregon.<sup>23</sup>

LED flashing lights violate citizens' right to visual freedom. While the idea that LED flashing lights restrict visual freedom may be a new idea, and lacking legal case histories, it should not be difficult to realize that pulsing high intensity, strobing, directed energy visible radiation into the eyes of citizens is a violation of basic human and constitutional rights.

#### J. Autonomous Vehicles

Autonomous Vehicles routinely crash into emergency vehicles that are using LED flashing lights. An August 24, 2023, news story from NBC describes a crash in San Francisco involving a Cruise autonomous vehicle.<sup>24</sup>

<sup>&</sup>lt;sup>21</sup> https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf

<sup>&</sup>lt;sup>22</sup> https://www.softlights.org/wp-content/uploads/2023/12/Baker-v.-Fairfield Filed.pdf

<sup>&</sup>lt;sup>23</sup> http://ashland.news/local-activist-sues-city-of-ashland-over-flashing-leds/

<sup>&</sup>lt;sup>24</sup> https://www.nbcbayarea.com/news/local/cruise-car-involved-san-francisco-crash/3303566/



In another San Francisco incident, a Cruise vehicle crashed into a fire truck on August 17, 2023.<sup>25</sup> In February 2023, a Tesla on autopilot crashed into a fire truck, killing the driver.<sup>26</sup> On February 27, 2021, a Tesla on autopilot crashed into a police vehicle.<sup>27</sup>



Figure 6 - Tesla Autopilot Crash<sup>28</sup>

<sup>&</sup>lt;sup>25</sup> https://techcrunch.com/2023/08/18/cruise-robotaxi-involved-in-a-crash-with-fire-truck-one-passenger-injured/

<sup>26</sup> https://abc7news.com/tesla-autopilot-crash-driver-assist-crashes-into-fire-truck-walnut-creek-fatal/13144903/

<sup>&</sup>lt;sup>27</sup> https://www.teslarati.com/tesla-crash-police-car-autopilot-150-warnings-report/

<sup>&</sup>lt;sup>28</sup> https://youtu.be/LTk7P6gFxQg

Autonomous vehicles use vision in much the same way as human drivers. The use of intense LED flashing lights decreases the ability of the Artificial Intelligence system to make sense of what it is viewing and to make safe decisions. The obvious solution to this problem is to eliminate the use of high intensity LED flashing lights on emergency vehicles.

# III. Statutory Authority

The following California statutes provide the statutory authority for the California Highway

Patrol to regulate the sirens and flashing lights on ambulances.

**CVC 2512** - (a) The commissioner, after consultation with, and pursuant to the recommendations of, the Emergency Medical Service Authority and the department, shall adopt and enforce reasonable regulations as the commissioner determines are necessary for the public health and safety regarding the operation, equipment, and certification of drivers of all ambulances used for emergency services.

CCR **1100** - This article shall apply to all publicly and privately owned ambulances used for emergency service except as specifically exempted by provisions of these regulations.

# IV. Conclusion

In this petition, we have shown the following:

 LED flashing light products are unvetted, unregulated, unapproved, dangerous, discriminatory and their use violates fundamental civil rights.

- LED flashing lights have been shown to cause serious harm and injury, including nausea,
   panic attacks, seizures, reduced cognitive functioning, and possible eye injury.
- LED flashing lights are discriminatory, violating ADA prohibitions against discrimination and ADA requirements of equal access.
- 4. The FDA has not vetted or approved LED flashing light products.
- 5. Flashing light is already restricted for websites.
- 6. LED flashing lights increase the risk of crashes involving autonomous vehicles.
- 7. LED flashing lights violate basic civil rights such as the right to visual freedom.
- 8. Research shows that there is a risk of seizure from flashing lights starting at 20 cd/m<sup>2</sup>. LED flashing lights greatly exceed 20 cd/m<sup>2</sup>, possibly exceeding 100,000 cd/m<sup>2</sup>.
- Loud, omni-directional sirens interfere with daily life for those who are not involved in the emergency.
- 10. Loud sirens can trigger migraines, panic attacks, anxiety, and fear in both humans and animals.
- 11. The use of flashing lights and sirens has been shown to increase the risk of injury and death to the patient, first responders, and the public.
- 12. There is no evidence to support that the use of flashing lights or sirens improves patient outcomes.

# C. PROPOSED REGULATIONS

For the reasons stated above, we request that the California Highway Patrol adopt and publish the following regulations to protect the comfort, health, safety, and civil rights of patients, first responders, and the public:

CCR, Title 13, Division 2, Chapter 5, Article 1, Section 1110 – Lights and Sirens

1110(a): Sirens

(1) The use of ambulance sirens shall be limited to a maximum of 80 decibels.

(2) Sirens shall be directed towards the front of the vehicle, restricting sound to the

sides and rear of the vehicle. Omni-directional sirens are prohibited.

(3) Siren use shall be limited to a specific need during travel; continuous operation

during travel or while stationary is prohibited.

1110(b): Emergency Lights

(1) Ambulance warning lights shall be static. Flashing lights are prohibited.

(2) Lights that trigger seizures, migraines, panic attacks or other adverse neurological

impacts, which impair vision or cognitive functioning, or which create a discriminatory

barrier, are prohibited.

Respectfully Submitted By:

/s/ Mark Baker

President Soft Lights Foundation 9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008 mbaker@softlights.org

# APPENDIX A - Bibliography

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- 4. Light Emitting Diodes, Chapter 16, Human Eye Sensitivity and Photometric Quantities <a href="https://ocw.snu.ac.kr/sites/default/files/NOTE/791.pdf">https://ocw.snu.ac.kr/sites/default/files/NOTE/791.pdf</a> States that point source brightness is measured with luminous intensity in candela, and surface source brightness is measured with luminance in nits (candela per square meter).
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# APPENDIX B – Incidents with Flashing Lights

**December 22, 2023** – <u>Patient Killed, Gretna Firefighters Injured in Ambulance Crash</u> – Lights and sirens involved in crash.

**December 7, 2023** – <u>Waltham Police Officer, National Grid Worker Killed After Hit-and-Run Driver Barrels Into Worksite</u> – Flashing lights were in use. The video shows intense, rapidly flashing LED lights.

**March 18, 2023** – <u>4 Scottsdale Police Cars Hit by DUI Driver</u> – Scottsdale police were using LED strobe lights.

**June 9, 2022 –** Death Investigation in Goulds – Many LED flashing lights and emergency vehicle flashing lights.

**May 2, 2022** – <u>Are Louisiana Police Emergency Lights Too Bright?</u> – A news story about people saying that LED flashing lights are too bright.

**April 11, 2022 –** Patrol Officer, 2 People Injured – Police siren and flashing lights were on, likely triggering the crash.

**March 25, 2022** – <u>Crash in Hartford Split Car in Two</u> – Police and tow trucks with LED flashing lights.

March 17, 2022 - LED Taillight Flicker - Video of flickering LED taillights.

**February 19, 2022** – <u>Houston Police Officer Hit by Driver While Blocking Traffic</u> – The video shows multiple rapidly flashing LED lights, which likely caused the driver to lose vision.

**February 1, 2022** – <u>Woman Killed by Tractor Trailer</u> – Incident occurred at 8pm. The video shows first responder vehicles with LED flashing lights.

**January 24, 2022** – <u>Lake Worth Police Run Over Man</u> – Lake Worth PD initiate an incident by assaulting a man with LED flashing lights. – <u>Letter to Lake Worth, TX Police Department</u>

**January 23, 2022** – <u>Austin, TX removed flashing lights in the 1950s</u> – Austin, Texas had improved safety by prohibiting flashing lights and sirens. Later, the Texas legislature mandated the flashing lights, and deaths went up.

**January 21, 2022** – <u>2 NYPD Officers Shot</u> – Use of LED flashing lights by New York City police.

**January 21, 2022** – <u>Arnold Schwarzenegger Accident</u> – The former California Governor was involved in an accident. The response by the emergency crews and their LED flashing lights makes the incident even more dangerous.

**January 20, 2022** – Reporter Hit by Car – A reporter standing in front of LED flashing lights on a tow truck is struck by a car.

**January 19, 2022** – <u>Compilation of New York City Ambulances</u> – Intense LED flashing lights and noise.

**January 16, 2022** – <u>2022 Dodge Charger Pursuit Police Car</u> – LED flashing lights at 3:45 of the video clip.

**January 7, 2022** – Belt Parkway Mayhem – Police agitated by their own LED flashing lights.

**November 12, 2021** – <u>Police Chase in New Jersey</u> – The use of LED flashing lights by the police are violating civil rights.

**August 18, 2021** – <u>Semi Truck Road Rage</u> – This nearly one hour video captures the use of LED streetlights, LED headlights, LED taillights and LED flashing lights on an freeway in Oklahoma.

**December 3, 2021** – <u>Pedestrian Killed by Police Vehicle</u> – After the first police vehicle struck the pedestrian, more police vehicles appeared with dangerous and discriminatory LED flashing lights.

**September 20, 2021** – <u>Miami Shooting shows Police Strobe Lights</u> – A shooting shows that excessively bright LED lights did not prevent the crime, and that the police response is to use LED flashing lights.

**August, 2021** – <u>Tesla Autopilot Crashes into Police Vehicle</u> – "The trooper whose cruiser was hit shortly before 5 a.m. Saturday had activated his emergency lights"

**March, 2021** – <u>Tow Truck Driver Killed</u> – An already impaired driver's vision was further reduced by blinding LED strobe lights from a tow truck, and the motorist struck and killed the tow truck driver.

**March, 2021** – <u>Michigan State Trooper Vehicle Hit by Tesla</u> – A police vehicle with strobe lights on was struck by a Tesla on autopilot, most likely due to the glare from the LED strobe lights.

**February 13, 2021** - <u>Dallas Police Officer Killed by Driver</u> – Quote: "Officer Mitchell Penton was standing outside his squad car with his emergency lights on when another vehicle hit the squad car about 1:45 a.m. Saturday."

**February, 2021** - <u>Miami-Dade Shooting</u> – Police respond to shooting scene with high luminance strobe lights.

**February, 2021** - Winter Blast – Multiple strobe lights at 0:21 in the video shining into the eyes of everyone.

**August 26, 2020** – <u>Tesla on autopilot crashes into North Carolina Sheriff vehicle with LED flashing lights.</u>

**July, 2019** - Painesville Police – Police car flashing lights contributing to a vehicle crash.

**2017** – <u>1993 Ford Mustang Police Vehicle with Incandescent Flashing Lights</u> – These non-LED flashing lights are less intense and less likely to cause pain and seizures.

**2007** - Epileptic Complaint About Police Lights. The police pulled over a vehicle whose passenger had epilepsy. The police refused to accommodate her by turning off their strobe lights.

**December 27, 1955** – <u>Siren, Light Removal Makes Police Unhappy</u> – "Removal of the sirens and red lights has materially reduced accidents involving police cars rushing to other smashups or speeding to the scene of a crime."

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

P.O. Box 942898 Sacramento, CA 94298-0001 (916) 843-3001 (800) 735-2929 (TT/TDD) (800) 735-2922 (Voice)

February 29, 2024

File No.: 1.15584.21449.062 2024 02034

Mr. Mark Baker, President Soft Lights Foundation 9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008

Dear Mr. Baker,

This letter is in response to your January 30, 2024, Petition for Rulemaking to Regulate Sirens and Flashing Lights on Ambulances (Petition), submitted pursuant to Section 11340.6 of the California Government Code (GC), which requests the California Highway Patrol (Department) promulgate regulations to prohibit the use of flashing lights and limit the performance of sirens used on ambulances by adopting proposed California Code of Regulations (CCR), Title 13, Section 1110. Attachment A is a copy of the full Petition. The commissioner's authority to promulgate regulations as determined necessary for the public health and safety regarding the operation, equipment, and certification of drivers of all ambulances used for emergency services is per Section 2512 of the California Vehicle Code (CVC). Specifically, the Soft Lights Foundation is requesting the Department "to prohibit or restrict the use of high intensity flashing lights and loud sirens to ensure first responder, patient, and public comfort, health, safety, and civil rights."

### Per the Petition:

Soft Lights Foundation "request[s] that the California Highway Patrol adopt and publish the following regulations to protect the comfort, health, safety, and civil rights of patients, first responders, and the public:

CCR, Title 13, Division 2, Chapter 5, Article 1, Section 1110 – Lights and Sirens 1110(a): Sirens

- (1) The use of ambulance sirens shall be limited to a maximum of 80 decibels.
- (2) Sirens shall be directed towards the front of the vehicle, restricting sound to the sides and rear of the vehicle. Omni-directional sirens are prohibited.
- (3) Siren use shall be limited to a specific need during travel; continuous operation during travel or while stationary is prohibited.

1110(b): Emergency Lights

(1) Ambulance warning lights shall be static. Flashing lights are prohibited.



(2) Lights that trigger seizures, migraines, panic attacks or other adverse neurological impacts, which impair vision or cognitive functioning, or which create a discriminatory barrier, are prohibited."

The Department appreciates the sentiment of the petition; however, after thorough review and careful consideration, the Department is denying the request because the Department believes that existing regulations pertaining to safety equipment and the safe operation of ambulances by emergency medical service providers are necessary for the protection of public health and safety. The proposed regulations also lack sufficient clarity as required by CCR, Title 1, Section 16, and are inconsistent with the legislative intent of Section 11340 GC and Section 2512 CVC. The operation of an ambulance responding to an emergency call, or otherwise operating during an emergency, is an inherently dangerous endeavor, sometimes requiring an operator to drive in a manner which may conflict with traffic laws. Consequently, it is imperative to the safety of the public, as well as the occupants in the ambulance, that an ambulance operating in this manner be highly visible to other drivers and pedestrians. Section 21055 CVC exempts authorized emergency vehicles, including ambulances, from following specified traffic laws when responding during emergencies, provided the "driver of the vehicle sounds a siren as may be reasonably necessary and the vehicle displays a lighted red lamp visible from the front as a warning to other drivers and pedestrians." Additionally, the California Legislature authorizes the use of additional flashing and colored lights on authorized emergency vehicles, including ambulances, expressly for the purpose of making those vehicles more easily recognized and highly visible during emergency operations.

Notwithstanding the need for an ambulance to be highly visible, the Department believes that the use of lights and sirens on ambulances should not be indiscriminate. This sentiment is reflected in existing regulations, previously promulgated under CCR, Title 13, Section 1105, which place restrictions on the use of lights and sirens on ambulances. An ambulance driver is prohibited from using a siren and red warning light when traffic is congested to the point that "increased ambulance speed and right-of-way cannot be gained thereby." (See Cal. Code of Regs., Title 13, Section 1105.) Additionally, the use of sirens and red warning lights are limited only to those instances when "responding to an emergency call or when engaged in emergency services...and when speed in transporting the patient to an emergency medical care facility appears essential to prevent loss of life, undue suffering, or to reduce or prevent disability." (See Cal. Code of Regs., Title 13, Section 1105.)

The Department is committed to providing the highest level of Safety, Service, and Security, and has sought to achieve a balance between the essential duty of first responders to preserve life and the need to protect the public. Pursuant to these considerations, the Department has adopted regulations, as authorized by Section 2512 CVC, to promote public health and safety while enabling emergency medical responders to fulfill their duty to the people of California.

The legislature provides in Section 2512 CVC, "[i]t is the intent of the Legislature that regulations adopted by the commissioner pursuant to this section shall be the minimum necessary to protect public health and safety, and shall not be so restrictive as to preclude compliance by ambulances operated in sparsely populated areas." Consistent with the legislature's intent, the Department is also mindful about taking action that may have an effect of

limiting the availability of compliant emergency medical service providers who are essential to providing necessary life-saving measures for members of the public.

The proposed regulations lack clarity because the regulations use terms which do not have meanings generally familiar to those who are legally required to comply with the regulations and those terms are neither in the regulations nor in the governing statute and would not be readily understandable by the licensed ambulance industry who would be directly affected by the regulations proposed in the petition. The complexity and lack of clarity could place privately operated ambulance companies at a distinct disadvantage since it would require the expenditure of resources to hire technical experts to advise on subjective terms in the proposed regulations. Placing small businesses at a distinct disadvantage through the imposition of unclear or unnecessarily complex regulations is inconsistent with the intent of Section 11340 GC et. seq. Additionally, ambiguities in the proposed regulations would be subject to broad interpretation by industry consultants and would likely cause inconsistencies in industry light and siren practices. Inconsistent ambulance industry practices, which do not meet or achieve minimum light and siren standards, pose a public health and safety concern if the motoring public may be unable to recognize and respond appropriately to ambulances operating in an emergency.

I appreciate the opportunity to assist you with this matter. The Department will make a copy of your petition available to any interested party. Please contact our Commercial Vehicle Section with any questions regarding this letter, and any request to obtain a copy of the petition, at (916) 843-3400.

Sincerely,

K. M. DAVIS, Chief

Enforcement and Planning Division

**Enclosures** 

cc: Office of Administrative Law

# Exhibit I



9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008

June 19, 2024

### **BY EMAIL**

Sean Duryee, Commissioner California Highway Patrol SDuryee@chp.ca.gov

### Re: Notice of Dangerous Condition – LED Flashing Lights

Dear Sean Duryee,

This letter serves to provide Constructive Notice of a dangerous condition(s) created by the California Highway Patrol. LED flashing lights have been proven to impair vision and cognitive functioning and can cause non-epileptic and epileptic seizures. The US Food and Drug Administration has not vetted LED flashing lights for photobiological, neurological, or psychological safety. LED flashing lights are unregulated and create hazardous, dangerous, and discriminatory conditions.

California Government Code Section 835 states:

Except as provided by statute, a public entity is liable for injury caused by a dangerous condition of its property if the plaintiff establishes that the property was in a dangerous condition at the time of the injury, that the injury was proximately caused by the dangerous condition, that the dangerous condition created a reasonably forseeable risk of the kind of injury which was incurred, and that either:

- (a) A negligent or wrongful act or omission of an employee of the public entity within the scope of his employment created the dangerous condition; or
- (b) The public entity had actual or constructive notice of the dangerous condition under Section 835.2 a sufficient time prior to the injury to have taken measures to protect against the dangerous condition.

Here are a few reports of neurological, psychological, and physical injury caused by LED flashing light devices:

- Minnesota Department of Human Rights LED RRFB (<a href="https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf">https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf</a>)
- LED RRFB Seizure / Concussion (https://www.softlights.org/wp-content/uploads/2022/09/MA-Incident-Report.pdf).
- Emergency Vehicle Seizure Reaction / Panic Attack (https://www.softlights.org/wp-content/uploads/2021/09/Encounter-with-Emergency-Vehicle.pdf)

The CHP is now on notice that LED flashing light devices create dangerous conditions, and that the CHP has a Due Care obligation to eliminate those dangerous conditions.

Sincerely,
/s/ Mark Baker

President Soft Lights Foundation mbaker@softlights.org



Mark Baker < mbaker@softlights.org>

# **Enforcement of Prohibition of LED Flashing Lights**

Mark Baker <mbaker@softlights.org>

Fri, Aug 23, 2024 at 3:49 PM

To: KMDavis@chp.ca.gov

Cc: SDuryee@chp.ca.gov, Rebecca Penado rpenado@cityofslt.us, Joseph Irvin jirvin@cityofslt.us, Heather Stroud
chstroud@cityofslt.us, citycouncil@cityofslt.us

Dear Kevin Davis, Chief, Enforcement and Planning Division, California Highway Patrol,

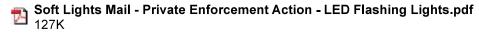
The city of South Lake Tahoe has explicitly refused to turn off or remove the unlawful and discriminatory LED flashing lights on city vehicles. (see attached). This refusal by city officials to comply with the California Vehicle Code, Americans with Disabilities Act, Rehabilitation Act, and 14th Amendment of the US Constitution is one of the reasons why the Soft Lights Foundation submitted the regulatory petition to the CHP, to make clear in the regulations that neither LED nor laser flashing lights have not been authorized by the California Legislature.

I am requesting a response from the CHP confirming that the petition has been received (see attached). I am also requesting an enforcement action by the CHP against South Lake Tahoe, which is blatantly flouting multiple state and federal laws.

Sincerely,

Mark Baker President Soft Lights Foundation www.softlights.org mbaker@softlights.org

#### 2 attachments



CHP Petition to Prohibit Supplemental LED Vehicle Flashing Lights.pdf

# Exhibit K

Soft Lights Foundation

9450 SW Gemini Drive PMB 44671 Beaverton, OR 97008

August 20, 2024

#### **BY EMAIL**

Sean Duryee, Commissioner California Highway Patrol SDuryee@chp.ca.gov

Re: Notice of Private Enforcement Action – LED Flashing Lights

Dear Sean Duryee,

California Vehicle Code ("CVC") Section 25250 states, "Flashing lights are prohibited on vehicles except as otherwise permitted." The California Legislature has not authorized flashing lights that impair vision, flashing lights that cause seizures, LED flashing lights, or laser flashing lights for use on vehicles. Since there is no California statute that authorizes the use of LED flashing lights on vehicles, all LED flashing lights on vehicles are prohibited by CVC Section 25250. The California Highway Patrol is using LED flashing lights on vehicles without legal authorization. Since government authorities have not enforced this code, this letter serves as a private enforcement action under the Americans with Disabilities Act.

The introduction of unregulated Light Emitting Diode ("LED") products has segregated the public into two groups: those individuals without disabilities who are not acutely impacted by LED lights, and those individuals with disabilities who suffer acute adverse reactions to LED lights, including non-epileptic and epileptic seizures, migraines, vomiting, anxiety, panic attacks, impaired vision, reduced cognitive abilities, and suicidal ideations. This segregation by government officials is a violation of the Equal Protection Clause of the 14<sup>th</sup> Amendment of the U.S. Constitution.

The US Department of Energy states that LEDs are a "radically new technology" that emit a "directional" light with "unique characteristics". It is the directional nature of LEDs and their unique spatial, spectral, and temporal characteristics which cause individuals with disabilities to suffer acute adverse neurological reactions when exposed to LED flashing lights such as on police cars and RRFBs. The US Food and Drug Administration is mandated by 21 U.S.C. 360ii(a) to maintain a radiation control program for LED products to minimize the exposure to, and emissions of, unnecessary LED light. However, the FDA has ignored this mandate, and thus all LED products are entirely unregulated, despite LEDs being a radically new technology with directional light and unique characteristics.

<sup>&</sup>lt;sup>1</sup> https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/ssl lessons-learned 2014.pdf

Here is a sampling of reports of neurological, psychological, and physical injury caused by LEDs:

- Minnesota Department of Human Rights LED RRFB –
   (<a href="https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf">https://www.softlights.org/wp-content/uploads/2023/06/74059-6-15-2023-ECP-Memorandum-.pdf</a>)
- LED RRFB Seizure / Concussion (<a href="https://www.softlights.org/wp-content/uploads/2022/09/MA-Incident-Report.pdf">https://www.softlights.org/wp-content/uploads/2022/09/MA-Incident-Report.pdf</a>).
- Emergency Vehicle Seizure Reaction / Panic Attack -(<a href="https://www.softlights.org/wp-content/uploads/2021/09/Encounter-with-Emergency-Vehicle.pdf">https://www.softlights.org/wp-content/uploads/2021/09/Encounter-with-Emergency-Vehicle.pdf</a>)
- LED Incident Reports (<a href="https://www.softlights.org/led-incident-reports/">https://www.softlights.org/led-incident-reports/</a>)
- NYSPSC LED Streetlight Case 21-02623 Public Comments: (https://tinyurl.com/3b9farmy)

Pulsed LED light is particularly dangerous. Below are several examples of LED flashing light videos and their titles:

- 1. My LED Lights (epilepsy/seizure warning): (https://www.youtube.com/shorts/qvtmhHbPeMU)
- 2. LED Strobe Lights Blue \*\*Warning May Cause Seizure\*\*: (https://youtu.be/K\_oIWfOMKel)
- 3. How to Have a Seizure 101 (Warning Flashing Lights)

(https://www.youtube.com/shorts/1fGBrt2D9s4)

- 4. Edmonds, WA RRFB installation: (https://youtu.be/bdabrTTnf3w)
- 5. 2015 Dodge Charger Police Car LED Police Lights outfitted by HG2 Emergency Lighting: (<a href="https://youtu.be/KJ\_1CiNVtTo">https://youtu.be/KJ\_1CiNVtTo</a>)
  - 6. LVT Manual Strobe and Flood Light: (https://youtu.be/FVoqCqBi5wY)

Seizure reactions are primarily a function of radiance, flash rate, and cycle depth. The higher the radiance, the more risk. The faster the rate, the more risk. The closer to digital pulsing, the more risk. All three factors play a role. A very high radiance LED can cause a seizure with zero flashing. A low radiance light can cause a seizure if the rate is high. A digital on/off has a higher risk of seizure than sine wave. As can be seen in the videos, the first three videos are marked with seizure warnings, whereas the other LED flashing lights are in public places, are unavoidable, are triggering seizures, but are not marked with seizure warnings.

Many municipalities believe that the Americans with Disabilities Act allows for a municipality to provide a reasonable accommodation when notified of a discriminatory barrier. However, this understanding is not correct when the issue involves alterations to municipality infrastructure. 28 C.F.R. § 35.151(b)(1) states:

Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.

Since LED flashing lights were installed by the CHP after 1992, there is an absolute requirement that this alteration not create a new discriminatory barrier where none existed previously. There is no allowance for reasonable accommodation in this situation. The switch to LED light was a major alteration that required extensive analysis to ensure that the radically new LED technology did not create a path-of-travel barrier for individuals with disabilities and to ensure that the altered area was still readily accessible and usable by individuals with disabilities. Due to the failure of the FDA to comply with 21 U.S.C. 360ii(a), and the decision by the CHP to implement LED technology without ensuring its safety, the LED products that have been installed now need to be removed.

On August 14, 2024, in the case Baker v. Petrovich involving LEDs creating a discriminatory barrier, the Court ruled that the case can continue, stating, "Petrovich's demurrer to the first cause of action [The Americans with Disabilities Act] in plaintiff's complaint is OVERRULED. (Code Civ. Proc., § 430.010, subd. (e).) **The Court finds that plaintiff has alleged facts sufficient to state this cause of action**. (42 USC 12181, subd. (7)(E); 28 CFR 36.101, 36.402; Martinez v. San Diego County Credit Union (2020) 50 Cal.App.5th 1048, 1060; see Serrano v. Priest (1971) 5 Cal.3d 584, 591; Compl.,  $\P P 2$ , 12, 15, 16, 30 – 33, 35 – 37.)"<sup>2</sup> (emphasis added). While this ruling is not the result of a trial and is not an appellate level ruling, this ruling nonetheless shows that company and government officials may not install unregulated, dangerous technology and simply let individuals with disabilities suffer the consequences.

The Equal Protection Clause of the 14<sup>th</sup> Amendment of the U.S. Constitution states:

All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the state wherein they reside. No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.<sup>3</sup>

LED products divide the public into two groups: those individuals with disabilities who need regulatory protection from the CHP, and those individuals without disabilities who do not need regulatory protection. If the CHP is to allow the use of LED products, then the CHP is Constitutionally required to adopt policies and procedures for those LED products which ensure the equal protection of individuals with disabilities.

California Government Code Section 835 states:

Except as provided by statute, a public entity is liable for injury caused by a dangerous condition of its property if the plaintiff establishes that the property was in a dangerous condition at the time of the injury, that the injury was proximately caused by the

<sup>&</sup>lt;sup>2</sup> https://www.yolo.courts.ca.gov/sites/default/files/yolo/default/2024-08/ATO-TEN-240815.pdf

<sup>&</sup>lt;sup>3</sup> https://www.law.cornell.edu/wex/equal protection

dangerous condition, that the dangerous condition created a reasonably forseeable risk of the kind of injury which was incurred, and that either:

- (a) A negligent or wrongful act or omission of an employee of the public entity within the scope of his employment created the dangerous condition; or
- (b) The public entity had actual or constructive notice of the dangerous condition under Section 835.2 a sufficient time prior to the injury to have taken measures to protect against the dangerous condition.

Since LED products can create dangerous conditions for individuals with disabilities, the CHP is required to eliminate those dangerous conditions, or it can be held liable for any injuries caused by the use of the LED products.

LED flashing lights are prohibited by CVC 25250 and 28 CFR 35.151(b)(1) because LED flashing lights on vehicles have not been authorized by the California Legislature, because LED flashing lights create a barrier to path-of-travel for individuals with disabilities, and because LED flashing lights cause acute adverse neurological reactions for individuals with disabilities. This letter is a good-faith effort to allow the California Highway Patrol to correct the LED flashing light violations by turning off and/or removing LED flashing lights on CHP vehicles without being subjected to litigation. However, failure to turn off and/or remove LED flashing lights from CHP vehicles may result in a discrimination lawsuit.

Sincerely,
/s/ Mark Baker
President
Soft Lights Foundation
mbaker@softlights.org

From: Mark Baker <mbaker@softlights.org>

Date: Tue, Oct 10, 2023 at 7:46 PM

Subject: Fwd: ADA Access Request Received To: Mark Baker <mbaker@softlights.org>

# Exhibit L

On October 10, 2023 I was severely emotionally harmed by two CalTrans vehicles on Highway 395 Southbound about 5-10 miles south of Bridgeport which were flashing exceedingly intense LED lights into my eyes. The LED flashing lights so severely impaired my vision that I yelled out to my partner, "I can't see!". I involuntarily closed my eyes. I tried to open them again, but my vision was reduced by about 95%. My cognitive functioning was also severely impaired by the flashing lights. I began suffering a panic attack and started screaming in fear and anger. I contemplated driving off the cliff to commit suicide, but chose not to because of my concern for my partner. I request an accommodation. The accommodation that I request is the Caltrans only use warning lights that are safe for individuals with disabilities such as those with autism, PTSD, migraines, and epilepsy and/or to stop using LED flashing lights. My request is readily achievable because the CalTrans Director can send a letter to CalTrans employees directing them to stop using LED flashing lights and instead use only the OEM flashing lights that come with the OEM vehicle. My request is reasonable because acting to protect CalTrans workers and the public is a reasonable thing to do and because the FDA has not issued performance regulations for LED lights. My request is not an undue cost burden because the cost to implement my request is negligible in comparison to CalTrans annual budget. If CalTrans denies my request, then I request that the denial letter state, "CalTrans offers no recourse for you when being subjected to LED flashing lights on CalTrans vehicles."

From: ADA Compliance Office@DOT <ada.compliance.office@dot.ca.gov>

Date: Wed, Oct 18, 2023 at 8:24 AM Subject: #11270-ADA Access Request

To: mbaker@softlights.org <mbaker@softlights.org>

## Dear Mark Baker:

2/4/25. 11:31 PM

Caltrans ADA Infrastructure Office has completed its investigation of your ADA access request for an accommodation regarding the flashing warning lights on Caltrans vehicles. We have determined that your request does not fall within the purview of ADA infrastructure matters. This office primarily handles complaints related to accessibility barriers such as non-compliant pedestrian facilities which are missing curb ramps, sidewalks that are too narrow for wheelchairs to pass, a lack of detectable warning surface for vision impaired individuals, and inaccessible pedestrian push buttons at traffic signals located on the State Highway System. Therefore, we have forwarded your request to the Caltrans District 9 Public Information Office for further attention to address your concerns. They will be better equipped to assist you with this matter. Should you have further questions on regarding to this matter, we have included contact information of Caltrans District 9 Public Information Office.

Caltrans District 9 Public Information Office 500 S. Main Street Bishop, Ca. 93514 760-872-5206

Sincerely,

MICHELE BONK ADA Infrastructure Program Analyst Caltrans ADA Infrastructure Program

# Exhibit N

# **CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS**

LD-0274 (REV 05/2017)

### PERSONAL INFORMATION NOTICE

Pursuant to the Federal Privacy Act (Section 552 et seq.) and the Information Practices Act of 1977 (IPA) (Civil Code Sections 1798 et seq.), notice is hereby given for the request of personal information by this form. The requested personal information is voluntary. The principal purpose of the voluntary information is to facilitate the processing of this form. The failure to provide all or any part of the requested information may delay processing of this form. No disclosure of personal information will be made unless permissible under Article 6, Section 1798.24 of the IPA of 1977. Each individual has the right upon request and proper identification, to inspect all personal information in any record maintained on the individual by an identifying particular.

Use this form to file a claim of \$10,000 or less against the California Department of Transportation for death or personal injury, or for injury to personal property or growing crops. (Government Code sections 911.2, 935.7)

WARNING: GOVERNMENT CODE & 911.2

PLEASE: Complete electronically or print or use a typewriter when filling out this form.

Sign and date claim form.

WARNING: GOVERNMENT CODE § 911.2
PROVIDES SIX MONTHS FROM THE DATE OF
INCIDENT TO FILE A CLAIM FOR PERSONAL
IN ILLRY OR PROPERTY DAMAGE

(UNSIGNED AND UNDATED FORMS WILL NOT BE ACCEPTED)						INJURY OR PROPERTY DAMAGE.						
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# CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

		FOR STATE USI	E ONLY (BELOW)					
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		rsonal knowledge that the the period and purpose of the	ACCOUNTING OFFICER SIGNATURE					DATE

### FOR CLAIMS TEN THOUSAND DOLLARS (\$10,000) OR LESS

Select District

Address CLAIMS OFFICER

DI . . . . . .

District 9 California Department of Transportation

### FOR CLAIMS OVER TEN THOUSAND DOLLARS (\$10,000)

You must file a claim with the Government Claims Program in West Sacramento, California. If you have any questions about claims of more than ten thousand dollars (\$10,000), contact:

Government Claims Program
Office of Risk and Insurance Management
Department of General Services
P.O. Box 989052, MS 414
West Sacramento, CA 95798-9052

Phone: 1-800-955-0045 E-mail: gcinfo@dgs.ca.gov

Website: <a href="http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx">http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx</a>

# CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

#### **INSTRUCTIONS FOR FORM LD-0274**

Please note that failure to complete all sections of the claim form may delay the processing of your claim or result in the return of your claim.

- 1. Claimant's Name and Contact Information: State the full name, mailing address, e-mail address, and contact telephone number(s) of the person or entity claiming property damage, personal injury, or other loss.
- 2. **Date and Time When the Injury/Damage First Occurred**: State the exact month, day, year, and time of the incident giving rise to the claim.
- 3. **Location of Incident**: Specify the county, highway number, direction of travel, post mile, nearest exit(s), cross-streets, and any additional information indicating where the incident giving rise to the claim occurred. Providing a map is optional, but advised. The more information you provide, the easier it is for us to assist you. You should also attach a copy of the police report (if one exists) of the incident.
- 4. **How Your Injury/Damage Occurred**: Provide complete details about what happened to cause your injury/damages. If you need more space, you may attach additional pages.
- 5. What Do You Claim Caltrans or Its Contractor Did to Cause Your Injury or Damage? State in detail all facts in support of your claim. Identify all persons or entities involved and why you believe Caltrans or its contractor is liable. If applicable, provide the name of the Caltrans employee or contractor, and the State of California vehicle license plate/ID number. If you need more space, you may attach additional pages.
- 6. What Injury or Damage Are You Claiming Happened? Specify the exact injury or damage for which you are claiming, including all alleged injuries, property damage, and/or loss. If you need more space, you may attach additional pages. You can attach photographs and any additional supporting documents. If you do, be sure the photographs show the damage and its size relative to the vehicle. More than one photograph provides more information to assist the evaluation of your claim.
- 7. What Is the Dollar Amount of Your Claim? State the total dollar amount for which you are claiming. Leaving the dollar amount blank will result in your claim being deemed incomplete, and your claim will be returned without further action. Please submit two (2) written estimates and/or one (1) paid receipt for all damages claimed. If you are submitting proof of payment, copies of credit card statements or copies of the front and back of cancelled checks are required. Invoices will not be accepted as actual proof of payment. All invoices must list the claimant's name and vehicle license plate number, vendor's letterhead, and an itemized list of repairs. Caltrans will not accept quotes retrieved from the internet.
- 8. **Insurance Information**: State the name of your insurer and policy number. If you have been reimbursed by your insurance company, you may not be eligible for compensation.
- 9. **Are You the Registered Owner of the Vehicle/Damaged Property?** Only the registered owner may file a claim for damage to a vehicle or property. Be sure to provide all vehicle information, including a copy of the vehicle's registration.
- 10. **Signature of Claimant**: Please sign and date the claim form. Caltrans does not accept claim forms without an original signature. Faxed or photocopied claim forms will not be accepted.

Mailing Completed Form: The completed form must be mailed to the District Claims Office assigned to the county in which your injury/ damages occurred. To determine the proper District Claims Office to which you should mail your completed form, you can use the map on the website and click on the county. The website map will show the District Claims Office responsible for that county, including its address and telephone number. You can then use the drop down menu on page 2 of this form to automatically fill in the address for the appropriate District Claims Office. If you have any questions about the location where your injury/damages occurred, you can contact any District Claims Office.

If your claim is <u>over</u> ten thousand dollars (\$10,000.00), you must file a different form with the Government Claims Program **WITHIN 6 MONTHS OF THE DATE OF INCIDENT**. A claim form may be obtained by contacting the Government Claims Program at:

Government Claims Program
Office of Risk and Insurance Management
Department of General Services
P.O. Box 989052, MS 414
West Sacramento, CA 95798-9052

Phone: 1-800-955-0045 E-mail: gcinfo@dgs.ca.gov

The claim form may also be downloaded from the Government Claims Program website at:

http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx

2/4/25, 11:25 PM Exhibit O RE: ADA Access Request #11270, #11354, and #11393 - mbaker@softlights.org - Soft Lights Mail

From: ADA Compliance Office@DOT <ada.compliance.office@dot.ca.gov>

Date: Mon, Sep 30, 2024 at 2:35 PM

Subject: RE: ADA Access Request #11270, #11354, and #11393

To: Mark Baker <mbaker@softlights.org>

Dear Mr. Mark Baker:

Thank you for contacting the ADA Infrastructure Program. This letter is in response to your email dated September 5, 2024, regarding Caltrans' letter denying your request for reasonable accommodation/modification related to Caltrans' use of LED flashing lights.

Caltrans' determination was based on the U.S. Department of Transportation ("USDOT") regulation, 49 CFR Part 27, section 27.7 (e) as amended, on reasonable modifications or accommodations to policies and practices applicable to public entities, which states:

"A recipient shall make reasonable accommodations in policies, practices, or procedures when such accommodations are necessary to avoid discrimination on the basis of disability <u>unless the recipient can demonstrate that making the accommodations would fundamentally alter the nature of the service, program, or activity or result in an undue financial and administrative burden. For the purposes of this section, the term reasonable accommodation shall be interpreted in a manner consistent with the term 'reasonable modifications' as set forth in the Americans with Disabilities Act title II regulations at 28 CFR 35.130(b)(7), and not as it is defined or interpreted for the purposes of employment discrimination under title I of the ADA (42 U.S.C.12111–12112) and its implementing regulations at 29 CFR part 1630."</u>

A public entity must assess whether it can provide the reasonable accommodation/modification requested without jeopardizing the safe operations of its program or service, as only reasonable "accommodations/modifications" are required. Any accommodation/modification that would result in a fundamental alteration to the essential nature of the public entity's programs or services is not required. For the reasons specified in our September 4, 2024, letter, we determined that your requested accommodation/modification would result in a fundamental alteration and jeopardize the safe operations of our program and service.

Sincerely,

VINH NGUYEN
ADA Coordinator
Caltrans ADA Infrastructure Program

# Exhibit P

# STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION LATITUTE I CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

### PERSONAL INFORMATION NOTICE

Pursuant to the Federal Privacy Act (Section 552 et seq.) and the Information Practices Act of 1977 (IPA) (Civil Code Sections 1798 et seq.), notice is hereby given for the request of personal information by this form. The requested personal information is voluntary. The principal purpose of the voluntary information is to facilitate the processing of this form. The failure to provide all or any part of the requested information may delay processing of this form. No disclosure of personal information will be made unless permissible under Article 6, Section 1798.24 of the IPA of 1977. Each individual has the right upon request and proper identification, to inspect all personal information in any record maintained on the individual by an identifying particular.

Use this form to file a claim of \$10,000 or less against the California Department of Transportation for death or personal injury, or for injury to personal property or growing crops. (Government Code sections 911.2, 935.7)

WARNING: GOVERNMENT CODE 8 911.2

PLEASE: Complete electronically or print or use a typewriter when filling out this form.

Sign and date claim form.

WARNING: GOVERNMENT CODE § 911.2
PROVIDES SIX MONTHS FROM THE DATE OF
INCIDENT TO FILE A CLAIM FOR PERSONAL
INJURY OR PROPERTY DAMAGE

(1	UNSIGNED AND UN	DATED FORMS WILL NOT	BE ACCEPTED	D)		INJURTOR	PROPERTY			
								ATE USE ON	LY	
1. NAME:	LAST	FIRST			MIDDL	E	FILE NUMBER			
Baker		Mark			D.					
HOME ADDR	RESS				CONT	ACT PHONE NUMBE	R E-MAIL AI	DDRESS		
							mbaker@:	softlights.org		
CITY					STATE		ZIP CODE	Ξ		
					CA					
2. IDENTIFY	THE SPECIFIC TI	ME AND DATE FOR TH	F INCIDENT		TIMF (	OF INCIDENT AM	DATE OF	INCIDENT		
	YOUR DAMAGE	/ /		11:55		·				
2 STATE TH		THE INCIDENT (COUNT		/ NEADES			•			
COUNTY		OUTE	DIRECTION			POSTMILE				
			DIRECTION			POSTIVILE		CROSS STREET		
Yolo		ghway 16						County Road 98		
		CATION (FOR EXAMPL	E: "JUST NOF	RTH OF 1	ST STF	REET, IN THE NUMBE	R 1 LANE")			
Intersection of	of Highway 16 and	County Road 98								
		OR DAMAGE OCCURF								
		ng intense, digitally flash							flashing	
iights on the t	Jai i rans venicies (	overwhelmed my senses,	, causing me u	o nave to	lurn my	car around and take	another route	<b>∂.</b>		
5 WHAT DO	YOU CLAIM CAL	TRANS OR ITS CONTRA	ACTOR DID T	O CAUSE	YOUR	INJURY OR DAMAG	F?			
		ng lights on vehicles has						awful. CVC 2	25250	
prohibits unau	uthorized flashing li	ights. CalTrans has alter	red its vehicles	<u>s to use LE</u>	ED flasl	ning lights and this alte	eration interfe	eres with path	ı-of-travel	
		violation of 28 CFR 35.								
		E ARE YOU CLAIMING H								
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cognitive fund	stioning because of	the digital pulsing. I was	<u>s discriminated</u>	u agamst i	by Carr	rans because of my d	isability of at	JUSIII.		
7. WHAT IS	THE DOLLAR AMO	OUNT OF YOUR CLAIM?	? (SUBMIT TW	VO ESTIM	ATES (	OR ONE PAID RECEI	PT)	\$	9,999	
		NAME OF INSURER				POLICY NUMBER				
8. INSURAN	CE INFORMATION	N TO THE OF THE OTHER				T OLIOT HOMBER				
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	JRE OF CLAIMAN	Т				]	DATE			
Mar	EDavid Boker					1	1-6-2024			

## CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

			FOR STATE USE	ONLY (BELOW)					
DATE CLAIM RE	AMOUNT APPROV								
STATE RESPONSIBILITY		_	TORT FUND/ CONTRACT CONTINGENCY  CONTRACTOR RESPONSIBILT		0.0.1	DENIED DENIAL DATE			
			LOCATIO	N CODING					
DISTRICT		COUNT	Y	ROUTE	POSTMILE				
		'	COST	CODING					
DEPARTMENT FUND			UNIT	OBJECT	PROJECT NUMBER			PHASE	
ITEM CHAPTER			STATUTES FISCAL YE			CAL YEAR	SCHE	DULE NUMBER	
	ACCOUNTING OFFICER SIGNATURE				DATE				

### FOR CLAIMS TEN THOUSAND DOLLARS (\$10,000) OR LESS

Select District Address District 9

### FOR CLAIMS OVER TEN THOUSAND DOLLARS (\$10,000)

You must file a claim with the Government Claims Program in West Sacramento, California. If you have any questions about claims of more than ten thousand dollars (\$10,000), contact:

Government Claims Program
Office of Risk and Insurance Management
Department of General Services
P.O. Box 989052, MS 414
West Sacramento, CA 95798-9052

Phone: 1-800-955-0045 E-mail: gcinfo@dgs.ca.gov

Website: <a href="http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx">http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx</a>

# CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

#### **INSTRUCTIONS FOR FORM LD-0274**

Please note that failure to complete all sections of the claim form may delay the processing of your claim or result in the return of your claim.

- 1. Claimant's Name and Contact Information: State the full name, mailing address, e-mail address, and contact telephone number(s) of the person or entity claiming property damage, personal injury, or other loss.
- 2. **Date and Time When the Injury/Damage First Occurred**: State the exact month, day, year, and time of the incident giving rise to the claim.
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- 4. **How Your Injury/Damage Occurred**: Provide complete details about what happened to cause your injury/damages. If you need more space, you may attach additional pages.
- 5. What Do You Claim Caltrans or Its Contractor Did to Cause Your Injury or Damage? State in detail all facts in support of your claim. Identify all persons or entities involved and why you believe Caltrans or its contractor is liable. If applicable, provide the name of the Caltrans employee or contractor, and the State of California vehicle license plate/ID number. If you need more space, you may attach additional pages.
- 6. What Injury or Damage Are You Claiming Happened? Specify the exact injury or damage for which you are claiming, including all alleged injuries, property damage, and/or loss. If you need more space, you may attach additional pages. You can attach photographs and any additional supporting documents. If you do, be sure the photographs show the damage and its size relative to the vehicle. More than one photograph provides more information to assist the evaluation of your claim.
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Government Claims Program
Office of Risk and Insurance Management
Department of General Services
P.O. Box 989052, MS 414
West Sacramento, CA 95798-9052

Phone: 1-800-955-0045 E-mail: gcinfo@dgs.ca.gov

The claim form may also be downloaded from the Government Claims Program website at:

http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx

# Exhibit Q

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

# California Department of Transportation

LEGAL DIVISION – DISTRICT 3 CLAIMS 703 B Street Marysville, CA 95901 (530) 741-4262 | FAX (530) 741-4076 TTY 711 www.dot.ca.gov





November 20, 2024

Location: 03-Yol-16 Date of Loss: 11/05/2024 District Claim #: 240590

Mr. Mark Baker

Dear Mr. Baker:

The California Department of Transportation has received and reviewed your claim of \$10,000.00 or less. Due to the amount sought, the Department of Transportation is authorized to accept, accept in part, or reject the claim. See Government Code Section 935.7. The Department of Transportation respectfully denies your claim.

Notice is hereby given that the claim that you presented to the California Department of Transportation on November 13, 2024, was rejected on November 20, 2024.

Warning

Subject to certain exceptions, you have only six (6) months from the date this notice was personally delivered or deposited in the mail to file a court action on this claim. See Government Code Section 945.6.

You may seek the advice of an attorney of your choice in connection with this matter. If you desire to consult an attorney, you should do so immediately.

Sincerely,

Daryl Quintanilla

District 3 Legal Claims Officer

Legal Division HQ

# Exhibit R

## STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

**ADA Notice** 

### PERSONAL INFORMATION NOTICE

Pursuant to the Federal Privacy Act (Section 552 et seq.) and the Information Practices Act of 1977 (IPA) (Civil Code Sections 1798 et seq.), notice is hereby given for the request of personal information by this form. The requested personal information is voluntary. The principal purpose of the voluntary information is to facilitate the processing of this form. The failure to provide all or any part of the requested information may delay processing of this form. No disclosure of personal information will be made unless permissible under Article 6, Section 1798.24 of the IPA of 1977. Each individual has the right upon request and proper identification, to inspect all personal information in any record maintained on the individual by an identifying particular.

Use this form to file a claim of \$10,000 or less against the California Department of Transportation for death or personal injury, or for injury to personal property or growing crops. (Government Code sections 911.2, 935.7)

PLEASE: Complete electronically or print or use a typewriter when filling out this form.

Sign and date claim form.

(UNSIGNED AND UNDATED FORMS WILL NOT BE ACCEPTED)

WARNING: GOVERNMENT CODE § 911.2 PROVIDES SIX MONTHS FROM THE DATE OF INCIDENT TO FILE A CLAIM FOR PERSONAL INJURY OR PROPERTY DAMAGE.

STATE USE ONLY 1. NAME: LAST **FIRST MIDDLE FILE NUMBER** Baker Mark **HOME ADDRESS** CONTACT PHONE NUMBER E-MAIL ADDRESS mbaker@softlights.org CITY STATE ZIP CODE CA 2. IDENTIFY THE SPECIFIC TIME AND DATE FOR THE INCIDENT TIME OF INCIDENT DATE OF INCIDENT AM CAUSING YOUR DAMAGE 1:30pm PM2-3-2025 3. STATE THE LOCATION OF THE INCIDENT (COUNTY, HIGHWAY, NEAREST OFF-RAMP, CROSS STREET, OR POSTMILE). CROSS STREET **DIRECTION** COUNTY **ROUTE POSTMILE** 16 Yolo West County Road 21A DESCRIBE THE INCIDENT LOCATION (FOR EXAMPLE: "JUST NORTH OF 1ST STREET, IN THE NUMBER 1 LANE") On Hwy 16 on the north side, just east of the T-Intersection of County Road 21A 4. EXPLAIN HOW THE INJURY OR DAMAGE OCCURRED A CalTrans vehicle was using unlawful supplemental LED flashing lights. 5. WHAT DO YOU CLAIM CALTRANS OR ITS CONTRACTOR DID TO CAUSE YOUR INJURY OR DAMAGE? California Vehicle Code 25250 prohibits supplemental vehicles lights that have not been authorized. The California Highway Patrol has not vetted or authorized the use of LED or laser flashing lights on vehicles. LED flashing lights impair vision and cause acute adverse neurological reactions. 6. WHAT INJURY OR DAMAGE ARE YOU CLAIMING HAPPENED? I was struck by the amber LED flashing lights used by the CalTrans vehicle which caused me to suffer anxiety and panic. I am physically unable to look at such intense, digitially pulsing LED lights and thus I was forced to slow my car down and put a hand over my eyes, which greatly reudces my vision, putting my life and the lives of others at risk. 7. WHAT IS THE DOLLAR AMOUNT OF YOUR CLAIM? (SUBMIT TWO ESTIMATES OR ONE PAID RECEIPT) 49,000 NAME OF INSURER POLICY NUMBER 8. INSURANCE INFORMATION YES NO ☐ YES □ио HOW MUCH DID INSURANCE PAY? YES MAKE OF VEHICLE MODEL COLOR YEAR VEHICLE LICENSE NO. 10. SIGNATURE OF CLAIMANT DATE 2-4-2025

### CLAIM AGAINST DEPARTMENT OF TRANSPORTATION FOR AMOUNTS \$10,000 OR LESS

LD-0274 (REV 05/2017)

		FOR S	TATE USE ON	NLY (BELOW)					
DATE CLAIM REC	MS OFFICER		AMOUNT APPROVED \$						
STATE RESPONSIBILITY		TORT FUND/ CONTRACT CONTINGE			DENIED DENIAL DATE				
			LOCATION CO	DDING					
DISTRICT		COUNTY		POSTMILE					
			COST COD	ING					
DEPARTMENT FUND		UNIT		OBJECT PF		ROJECT NUMBER		PHASE	
ITEM		CHAPTER	ST	ATUTES		FISC	CAL YEAR	SCHE	DULE NUMBER
	AC	ACCOUNTING OFFICER S			SIGNATURE		DATE		

### FOR CLAIMS TEN THOUSAND DOLLARS (\$10,000) OR LESS

Select District Address District 3

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LD-0274 (REV 05/2017)

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