



# Caution: We're Driving the Wrong Way on Automated Traffic Enforcement

Fines & Fees  
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# Caution: We're Driving the Wrong Way on Automated Traffic Enforcement

## About Us

The **Fines and Fees Justice Center (FFJC)** is catalyzing a movement to eliminate the fines and fees that distort justice. Our goal is to create a justice system that treats individuals fairly, ensures public safety and community prosperity, and is funded equitably. We work together with affected communities and justice system stakeholders to eliminate fees in the justice system, ensure that fines are equitably imposed and enforced, and end abusive collection practices. Visit [ffjc.us](https://ffjc.us) and follow [@FinesandFeesJC](https://twitter.com/FinesandFeesJC) on Twitter to get the latest updates on local, state and national fines and fees reforms.

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# Executive Summary

Traffic enforcement is the most common way Americans interact with the legal system and a major source of debt in the United States. Nearly 25 million motorists are cited for traffic violations every year, with 86% of people with court-related debt citing traffic tickets as at least part of the reason for their debt. One of the primary drivers of traffic citations is the rapid proliferation of automatic traffic enforcement (ATE) in response to increasing concerns over street and traffic safety and rising fatalities. Staying safe on the road—whether we are on foot, bike, or car—is a priority for us all. Yet, instead of addressing this issue with true preventative safety measures, governments have turned to ATE or revenue-based enforcement regimes that do little more than double-down on racial and economic disparities, often without any significant change in driving behaviors.

To be clear, this publication is not about the effectiveness of or need for traffic enforcement. Instead, the focus is on how *using money* as the means of enforcement always creates inequities, is not the most effective way for changing behavior, and creates new harms that should concern us all. Focusing on fixing the traffic safety problem, rather than profiting from it after the fact, should be the focus for policymakers.

ATE encompasses a wide array of technologies that include speed cameras, red light cameras, stop sign cameras, license plate readers, noise monitoring devices, and cameras for monitoring school bus stops, bus lanes, intersection blocking, and railroad crossings. While the use of all these technologies exists across the country, the most prevalent are red light and speed cameras.

The number of speed and red light cameras has risen quickly over the past decade and is anticipated to continue to increase as jurisdictions grapple with growing concerns over traffic safety and continued examination of the role of police officers in traffic enforcement. Some camera programs are supported by grants from the Department of Transportation and other entities that incentivize jurisdictions to increase their use of ATE. At the time of this report, nearly half of all states use either red light, speed cameras, or both, with many more considering legislation to allow for the use of cameras or other automated technologies.

Before implementing, expanding, or continuing existing ATE programs, proponents should answer two questions. First, does the assessment of *monetary* sanctions—as opposed to other interventions—contribute to increased traffic safety? Second, and equally as important, what are the harms and costs of using money as the means of enforcement?

In terms of traffic safety, the evidence around ATE is nuanced and specific to both the type of ATE tool (i.e., speed cameras vs. red light cameras) and factors relevant to how these tools are installed and maintained. Each tool must be examined independently against the evidence available to determine whether and how to use it. Although there is some research finding that speed cameras when used as part of a safer systems approach offer some reductions in traffic speeds, research and evidence does not yet exist to support the majority of other ATE tools available on the market.

On the other hand, the harms and inequities created by using monetary sanctions to enforce traffic regulations are clear. Those with financial resources are able to pay their way out of system involvement, while those unable to pay are kept in the legal system and subjected to additional penalties, collateral consequences, and sometimes long-term court involvement. And while enforcement technologies are often thought of as free from racial bias, the impacts of ATE often exacerbate existing racial disparities. Communities of color are often the prime targets of large-scale automated enforcement due to the historic and continued lack of investment in their safety and infrastructure. Pairing this lack of investment with policies that extract even more wealth from these communities results in ATE having a disproportionate and more severe impact on communities of color.

Regardless of why it is installed, most forms of ATE are extremely lucrative. Once these systems are put into place, attempts at reform must contend with the reality that stakeholders who have come to rely on that money may not want to see that revenue stream change.

In this report, the Fines and Fees Justice Center (FFJC) outlines the harms of revenue-generating ATE programs, examines the shortcomings of using monetary sanctions to create lasting behavioral and safety changes, and looks at alternatives for creating safer communities. It also provides recommendations for addressing inequities in ATE and creating more effective traffic safety systems.

## Recommendations:

- » If ATE is in use, prioritize non-financial sanctions.
- » In extreme cases, develop graduated responses based on the frequency and severity of the behavior.
- » If fines are assessed, ensure they are proportionate to the individual's ability to pay.
- » Do not use ATE with a goal of raising revenue. If fines are assessed, designate any revenue generated by ATE programs for discretionary, one-time expenses.
- » Do not impose sanctions for failure to pay fines.
- » End the practice of adding fees, surcharges, penalties or interest to fines.
- » Invest in street design, engineering, and infrastructure changes before adding or increasing enforcement.
- » If ATE is used at all, it must be temporary.
- » Develop clear and consistent policies for determining whether the ATE technology captured a true violation and how it should be sanctioned.

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# Introduction

Proponents of automated traffic enforcement (ATE) see it as a solution to improving traffic safety and limiting violent interactions between law enforcement and drivers during minor traffic stops. But there is little evidence that either safety goal is achieved when enforcement is predicated simply on the assessment of financial sanctions. Instead, the evidence shows that traffic injuries and deaths continue to rise and officers continue to use traffic enforcement as a pretext for other investigations, all while state and local governments earn millions of dollars in profits.

Fine-based ATE programs create lasting harms that, in light of the mixed evidence on the efficacy of these various technologies, require jurisdictions who have or are thinking of ATE to proceed with caution. These lasting harms also have a disproportionate impact on drivers in low-income communities and communities of color, who suffer the most from fines and fees generated from these ATE programs and the predatory collection practices aimed at raising revenue for state and local governments.

Once in place, these lucrative fine-based ATE systems become entrenched and hard to reform as jurisdictions become addicted to the money. When state and local governments prioritize revenue generation over safety and equity, it becomes highly unlikely that ATE will be removed, even if all the traffic and safety goals justifying its initial installation are achieved.

Any decision by government officials to focus on fine-based traffic enforcement must be done with a full understanding and acknowledgment of its limitations for improving safety, the incentive it creates for local governments to generate and become dependent on this revenue, and the harms that will stem from a fine-based system, particularly for lower-income residents and people of color.



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# I. ATE Landscape

The popularity of automatic traffic enforcement (ATE) has grown significantly across the country, with some jurisdictions doubling and tripling the number of red light and speed cameras in their jurisdictions. In 2022, at least 337 jurisdictions used red light cameras and at least 209 jurisdictions used speed camera programs, an increase of more than 40% from a decade before. As of December 2023, at least 29 states and the District of Columbia utilize either red light or speed cameras, or both. More and more states are introducing legislation to allow for all kinds of ATE, although a handful of states have prohibited the use of red light and speed cameras by state law.

The number of speed and red light cameras is anticipated to continue to increase as jurisdictions grapple with growing concerns over traffic safety and continued examination of the role of police officers in traffic enforcement. The Department of Transportation and other entities have even created grants and programs that incentivize or encourage jurisdictions to increase their use of ATE. For example, in 2022, federal guidance on the Infrastructure Investment and Jobs Act allowed states to utilize their highway safety funds on non-infrastructure programs such as automated traffic enforcement to address the uptick in traffic safety deaths and injuries. Previously, states were prohibited from using their apportionment to purchase, operate or maintain an automated traffic enforcement system.





## A. Understanding the Limitations of Automated Traffic Enforcement

Not all ATE is created equal. Many lawmakers, journalists, and advocates often talk of ATE as if it is a single thing. However, ATE encompasses a wide range of technologies, such as:

- » speed cameras
- » red light cameras
- » stop sign cameras
- » automatic license plate readers
- » noise monitoring devices
- » school bus stop cameras
- » bus lane monitoring cameras
- » intersection blocking cameras
- » railroad crossing monitors

By their inherent design, automated systems generate citations in astonishing numbers, nearly all of which, under our current system, are accompanied by a fine and a wide range of potential fees. But each of these technologies has its individual pros and cons.

The efficacy rates of some technologies are well-researched, while the effectiveness of others is unsupported by significant independent study. Studies examining the effectiveness of **red light camera systems** are mixed. A 2020 [meta-analysis of 37 studies](#) on red light camera programs found that although there is some evidence that red light cameras may reduce some crashes, “this effect was not significant.” In fact, several studies suggest that, although red-light cameras have sometimes been found to reduce t-bone crashes associated with red-light running, they have also been linked to increased rear-end collisions.<sup>1</sup> And although the National Highway Safety Transportation Administration (NHTSA) notes that **speed camera systems** have been shown to reduce roadway fatalities and injuries by

20% to 37%, depending on the study, it acknowledges they are never the full solution to safer streets and must be used “appropriately as part of a broader strategy” for road safety. Even within *speed camera* systems, NHTSA says “[c]are should be taken to avoid burdensome and excessive fines, late fees, license suspension, or vehicle immobilization (e.g., by booting or impounding a vehicle) as these raise significant equity concerns for underserved communities and may contribute to a cycle of poverty.”<sup>2</sup>

Beyond speed and red-light cameras, FFJC has uncovered little to no independent or reliable research<sup>3</sup> on the effectiveness of other forms of revenue-generating ATE used or marketed around the country. Yet, regardless of the technology or its effectiveness, the harms of enforcement-first or enforcement-only approaches to traffic safety that use money as the means of enforcement are multifold.

## B. Monetary Sanctions Do Not Create Safer Streets

Fines are criminal or civil financial penalties assessed as a punishment by a court or an administrative agency. Fees, on the other hand, are a tax imposed on top of a fine, largely for the purpose of raising or recouping money to fund government agencies or programs. In most instances, the stated justification for deploying ATE centers on reducing pedestrian, bike and traffic injuries and death, not raising revenue. Yet, despite their differences, all forms of ATE typically include standard fines as their primary enforcement mechanism.

An enforcement-first approach that promotes financial penalties as the primary solution for improving traffic safety does not work. Research has shown that traffic citations have little effect on future behavior,<sup>4</sup> and higher fine amounts do not impact the likelihood that someone will have a new driving offense,<sup>5</sup> suggesting that any change caused by an ATE program has little to do with whether or how much money is charged. Even where studies on the effectiveness of automated speed cameras show some gains in changed behavior, these studies do not show that fines alone—rather than notice or other awareness—is the cause of the change.

Several studies have shown that simply alerting people to their offending behavior, even if no punishment is contemplated, can significantly reduce speeding. For example, studies of driver feedback signs (a combination of radar and instant electronic notification systems that let drivers know how fast they are going) have been shown to decrease speeds by between 30% and 50% for those driving more than 10 miles over the posted speed limit, even without fines or ticketing attached.<sup>6</sup> Driver feedback signs without attached enforcement have also shown effectiveness in reducing collisions.<sup>7</sup> If communities are looking for technology-enhanced safety measures that avoid costly and inequitable fines, driver feedback signs may be a better investment than ATE.

**When payment of a fine or fee is the metric by which successful enforcement is measured, revenue generation, rather than safety, becomes the focus.**

Many places that have improved traffic safety have done so with design, infrastructure, and engineering-led street safety plans. In these plans, any enforcement is simply a check on these improvements and changes. When street design and safety programs require an extensive level of enforcement, government transportation planning has already failed. Therefore, any safety plan that incorporates ATE must ensure that the use of the technology is temporary. The focus should be on a long-term strategy that stops traffic dangers in the moment, not punishing them after the fact.

Safety plans that are not transparent, research- and evidence-driven, or accountable—and that rely heavily on fines—simply provide cover for governments to generate revenue without addressing legitimate safety and policy goals. Effective traffic enforcement should be about creating safer streets, changing unsafe driving behavior, and in extreme circumstances, removing serious offenders from the road. When payment of a fine or fee is the metric by which successful enforcement is measured, revenue generation, rather than safety, becomes the focus. The American Association of Motor Vehicle Administrators

(AAVMA) reports that 35% of people who had their licenses suspended for unsafe driving committed another moving violation while under suspension; but for those who had suspensions based on non-safety issues—such as unpaid court debt—only 7% committed another moving violation.<sup>8</sup> Anyone who is wealthy enough to pay fines and fees is free to continue to drive as they please, so long as they pay up every time they are caught.

Yet, for those who struggle to pay their fines and fees, there are a host of sanctions that tie people to prolonged system contact and supervision, even if their violation was minor. [In 16 states, minor traffic offenses are criminal offenses](#), making failure to pay subject to further criminal sanctions. Even in states where traffic offenses are fine-only civil offenses, failure to pay or failure to pay quickly enough, can result in anything from additional fees, driver's license suspension, and court supervision to bench warrants and incarceration.<sup>9</sup>

Once payment becomes the focus, longer-term and more severe punishments are meted out based on wealth, not the severity of the underlying behavior or violation. In fact, when non-payment, rather than the severity of the offense, is the factor that determines whether one's driver's license is suspended, dangerous drivers remain on our streets as long as they have enough money to buy their way out. Traffic enforcement in any form should seek to address and punish dangerous driving, not the inability to pay a fine.

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### C. ATE Is an After-the-Fact Punishment, Rather than Something that Deters Poor Behavior

Proponents of ATE programs often claim that ATE is intended to have a deterrent effect on drivers. Deterrence rests on the theory that whether or not someone violates the law depends on the threat of certain, severe, and swift punishment.<sup>10</sup> When it comes to using ATE to enforce traffic offenses, this is simply not the case.

The first flaw in the deterrence justification is the assumption that people are aware of their offending behavior and making conscious choices to flout the law.<sup>11</sup> Many offenses targeted by ATE are unintentional or not the product of a specific choice. This can be true even of speeding, particularly when roads are designed to facilitate the swift movement of traffic. Legal scholars, advocates, and even law enforcement officials acknowledge that given the vast array of potential traffic infractions, it is nearly impossible for any person to drive within the limits of the law for any significant period of time.<sup>12</sup> Therefore, when traffic violations are not the product of conscious deliberation, deterrence cannot be a factor.

Secondly, any punishment from ATE that policymakers hope will deter behavior is too far removed to make any significant difference. Tickets from a violation captured by ATE cameras come weeks, if not months, after the fact. In the meantime, drivers may continue to behave in the same way without any knowledge that they have done anything wrong or encouragement to change their behavior. Even after a person eventually receives an ATE-initiated ticket, the punishment associated with it is so far removed from the violating behavior that its deterrent effect is likely minimal.<sup>13</sup>

### D. ATE Does Not Address Needed Infrastructure Change

After years of using fine-based enforcement as the primary tool to address road safety, jurisdictions are no closer to the goal of reaching zero fatalities or creating safer streets. In fact, many jurisdictions are currently operating more automated traffic enforcement tools than ever before, but [traffic fatalities continue to increase](#). This is because fine-based enforcement does not fix bad design, lack of infrastructure, or poor engineering. The reality is that most streets are designed to accommodate cars and move them quickly at the expense of pedestrians and bikers. In 2022, [7,508 pedestrians were struck and killed](#) in the United States, which was the highest number of pedestrian deaths since 1981. The programs that use fine-based enforcement policies are not solving the safety problem. It is the initiatives that are focused primarily on safe systems—design, infrastructure, and engineering—that are beginning to see meaningful improvements in their street safety efforts.<sup>14</sup>

For a more detailed discussion on infrastructure, design and engineering, see section III starting on page 16.

## II. The Harms Caused by ATE and Monetary Sanctions

When technology and revenue collection combine, ATE systems create significant and undeniable harms on residents. Even if an ATE program may have some impact on safety, that impact must be weighed against the harm to those who are unable to pay the ever-increasing financial sanctions.

### A. ATE Draws Millions of More People into the Justice System

Traffic citations (which include both the fine for the offense and potentially added fees or costs) are the most common entry point into the justice system. Fines and fees from traffic citations create a net-widening effect that keeps people in the justice system longer, threatens long-term career and economic advancement, and ultimately costs the individual, their community, and the government more money through driver's license suspensions, collections actions, civil judgements, arrests, and jail time for those who can't pay. The existence of these severe punishments also requires governments to spend more time, money, and resources on collecting debt and punishing people who can't pay, rather than prioritizing public safety. The impact of these cruel policies are most acutely felt in low-income communities of color. Because ATE sweeps exponentially more people into the legal system, it compounds these disparate racial and economic outcomes, but does so with ever-greater efficiency.

The use of automated traffic enforcement tools greatly increases a jurisdiction's ability to ticket a larger number of drivers in a shorter span of time, with much less effort than traditional officer-involved traffic enforcement. In the six-month period between October 2020 and March 2021, the District of Columbia, [issued a total of 666,686 ATE tickets](#)—almost as many tickets as there are residents—from 140 camera locations, totalling \$81.4 million in fines. Just one stop sign camera location

brought in more than [\\$1 million in tickets over 2 years](#). These numbers can be even more astonishing in jurisdictions that have set particularly low thresholds for triggering violations, paired with high corresponding fines. In Chicago, when officials decreased the threshold from 10 mph to 6 mph, the city [issued more than 2 million speed camera tickets](#)—more tickets than there [are residents](#)—in just the first year, disproportionately impacting low-income, minority Chicagoans. In New York City, in just the first nine months of 2023, speed cameras issued [over 4.4 million violations for a total of nearly \\$223 million in fines](#). That's an average of over 16,500 camera citations per day. In states where minor traffic offenses are classified as misdemeanors, this ever-growing dragnet is creating ever more criminal records and exponentially expanding their crippling consequences.

More than half of states still [suspend, revoke or refuse to renew driver's licenses or vehicle registration](#) for unpaid traffic, toll, misdemeanor and felony fines and fees. This is a devastating consequence for the [85 percent of people](#) in the United States who rely on a driver's license to get to work, let alone those who use a car to access school, healthcare, or other critical needs. Given the immense need, [approximately 75 percent of people continue to drive](#) after their licenses are suspended for nonpayment. The increasing popularity of automated license plate readers will only make it more likely that those who have lost their licenses for the nonpayment of fines will be cited for driving on a suspended license, criminalizing the inability to pay even further.

## B. Fine-Based ATE Exacerbates Poverty

As of March 2022, the share of American consumers [earning less than \\$50,000 and who said they lived paycheck-to-paycheck](#) rose to 82 percent, resulting in an estimated 62 million adults struggling to pay their bills. The United States Federal Reserve Board reported that, in October 2022, one-third of adults in the United States had a family income [less than \\$25,000 a year](#). Nearly one in five adults across all income levels were unable to pay their bills in full that month, even without any unexpected expenses. [If faced with a hypothetical unexpected \\$400 expense](#), 37% of all adults (more than one out of every three) would be unable to pay it with their current cash or savings, meaning they would need to borrow money, sell something, or simply default on the payment. In other words, in jurisdictions where traffic fines and fees can quickly reach hundreds of dollars, nearly tens of millions of people are just one or two tickets away from severe financial hardship.

The U.S. Department of Transportation calls flat-fee traffic fines a “regressive scheme” and acknowledges “even low fines may create a disproportionate burden on low income communities.”<sup>15</sup> The reality for many Americans is that even one ticket can be life-altering and an impossible financial hurdle to overcome. In Kentucky, a speeding ticket will include [\\$150 worth of fees and surcharges](#), on top of the original fine. Utah imposes a [\\$60 surcharge](#), which is 35% of the base fine amount on speeding tickets. [In California, a \\$25 traffic fine can quickly balloon to \\$200 after all fees are imposed](#)—an increase of 700% in fees alone. While these kinds of costs may only be a slight inconvenience for those with financial means, for many people who live paycheck-to-paycheck the same ticket is often insurmountable. During any time of financial crisis, these harmful disparities are likely to be exacerbated.

## C. Financial Sanctions in ATE Programs Create Perverse Incentives that Prioritize Revenue Over Safety

The justice system’s reliance on fines and fees contributes to an increase in [policing for profit](#), a phenomenon in which policing strategies and resources focus on raising government revenue

through increased citations and the assessment of exorbitant fines and fees.<sup>16</sup> Although ATE programs may lessen direct police-citizen contacts, they engender distrust in government as the incentive to rely on revenue from fines and fees remains. The efficiency of producing revenue may make it an even more attractive approach for government officials seeking to balance budgets.

Some police reform advocates are pushing to move ATE operations out of law enforcement agencies and into civil enforcement through transportation departments as a way of addressing concerns about policing for profit. Switching the enforcement authority, however, does not change the fact that ATE revenue remains a part of fiscal planning and budgeting. For example, in Washington, DC the administration of the ATE program recently moved from the Metropolitan Police Department to the [Department of Transportation](#). Enforcement revenue from traffic cameras is now supposed to go to the District’s general fund up to a specific limit, with [excess revenue earmarked for street improvements and investments](#). In 2023, however, DC’s Mayor dropped all pretense that revenue generated by ATE was going to be used to address street safety. Her proposed budget, instead, [added 342 new traffic cameras, which were projected to pull in \\$578 million over four years](#), with an express intent to use all the ATE revenue to balance the city’s budget.

Whenever ATE generates revenue, how governments pursue and use that revenue matters. Even if the revenue is intended for worthy public projects, government reliance on it entrenches profit over safety. According to [Illinois law](#), for example, revenue from automated speed enforcement systems may be used for public safety initiatives around schools and parks, programs to improve pedestrian and traffic safety, construction and maintenance of city infrastructure projects, and after-school programs. Funding such programs on ATE profits cements this revenue stream into government budgets, making it something many politicians and city budget offices will not give up easily. Even when the revenue is directed to traffic-related improvements, that dependence creates a Catch-22 where funding for street maintenance, upgrades, engineering and

infrastructure improvements to increase safety are only sustainable if new or ongoing ways of issuing fine-based traffic violations can be found. To guard against this perverse incentive, government leaders should treat any revenue generated as a byproduct of traffic safety initiatives as the windfall it is. This revenue should be directed to one-time, discrete projects not accounted for in current budgeting. Revenue from ATE should be an unintended benefit, rather than a relied-upon goal.

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Ultimately, if the goal of ATE is to improve overall traffic safety by changing individual behavior, two things should result from ATE programs. First, the number of tickets issued should decrease over time, once drivers become aware of the enforcement system and tailor their driving behavior. Secondly, the number of overall crashes should fall if automatic enforcement is actually changing behaviors. In essence, revenue should be declining as safety improves. This, however, is often not the case. For example, in the District of Columbia—despite the presence of roughly 337 cameras—the number of crashes has trended up across the city, reaching a 16-year high of 52 traffic deaths in 2023. Red light or speed cameras that generate a high number of violations over a sustained period of time or ATE cameras that fail to decrease crashes, injuries, and fatalities should trigger an evaluation of the effectiveness of the camera itself and the community's overall ATE strategy. Even if some individual cameras are effective in reducing speeds at their location or increasing stops at specific lights, that success should never be a substitute for design, infrastructure, and engineering investments that

would support permanent change at that location without the harms of financial sanctions.

Advocates and policymakers need to ensure that jurisdictions are not using ATE as a mechanism for revenue generation, particularly in times of financial crisis when the default to increased fines and fees may seem most appealing from a budgeting perspective. A focus on revenue runs counter to the stated policy goals of improving traffic safety and will further harm the very people these reforms are intended to protect. This is even more critical when inflation, as in the aftermath of the COVID pandemic, forces people to spend a greater percentage of their income on food, gas, and other necessities, leaving even less money to pay fines and fees. Building or expanding an ATE system that relies on revenue from fines and fees from people, many of whom can't afford to pay them, is unsustainable and counterproductive.

#### **D. ATE Perpetuates and Exacerbates Racial Disparities**

The current use of ATE is financially devastating communities of color. These communities disproportionately lack the infrastructure and design investments needed to reduce pedestrian injuries and fatalities, are historically over-policed, and are facing fines and fees at disproportionately higher rates.

While often touted as “race neutral”, data suggests that ATE tools are anything but. Black residents of D.C. shoulder much of the impact of ATE. Researchers found that a driver in one of the city's predominantly Black areas is over 17 times more likely to receive violations at a cost of 16 times more per resident. Additionally, in 2019 research shows that about 28 percent of traffic and parking fines owed from tickets issued in predominantly Black neighborhoods stemmed from late penalties, causing the original fines of \$116.9 million to grow to \$163.9 million in costs owed. An analysis of Chicago cameras found the highest share of camera tickets issued between 2015 and 2019, or about 38% of tickets during that period, went to motorists from majority-Black zip codes. Further, households in the city's majority Black zip codes received about four

citations per household—more than twice the rate for households in majority-white zip codes, which received fewer than two tickets.

The disproportionate ticketing that results from ATE is often attributed to the placement of cameras. In Chicago, studies show that from 2015 to 2019, [six of the ten most prolific ticket-producing speed cameras were in majority-Black census tracts](#). Some ATE advocates argue that camera placement is based on crash and safety data, which they claim is race-neutral. However, the historical disinvestment in communities of color and racially-driven infrastructure and design policies cannot be overlooked.

The historical lack of investment in street safety has resulted in people of color, particularly [Native and Black Americans, being more likely to die while walking than any other race of ethnic group](#). According to SmartGrowth USA's [Dangerous by Design](#) report, low-income communities are less likely to have access to safe places to walk such as parks, sidewalks, and marked crosswalks, while being more likely to live in neighborhoods designed to accommodate a high volume of high speed vehicles. This combination of lack of investment and design choices that prioritized moving vehicles over protecting people, is a significant contributor to the traffic-related deaths and injuries being experienced in cities across America and must be corrected.

By simply prioritizing enforcement over design improvement and subjecting residents in predominantly minority neighborhoods to the disproportionate negative financial consequences associated with close proximity to ATE cameras, leaders are effectively harming communities of color in the name of trying to help them. Moreover, when infrastructure improvements are funded through ATE revenue, rather than through other government appropriation, that cost of correcting historically inequitable design choices falls disproportionately on the same people of color who have been the object of that historical inequity.

In this way, when cities use crash data to drive camera placement and ATE as the primary safer streets plan, rather than a plan that prioritizes

infrastructure improvement more holistically, they miss the opportunity to address the systemic issues that impact both safety and inequity. Instead, city and local leaders simply compound the danger and inequity people of color face, and the image of ATE as a race-neutral tool evaporates.

## E. Automated Cameras Can Wrongly Ticket Drivers

Red light and speed cameras are far from error free. In Baltimore, traffic cameras were found to have an [error rate of more than 10 percent](#), leading to [as many as 70,000 unjustified tickets](#) in that city alone. In Chicago, thousands of drivers were [incorrectly ticketed for red light camera fines caused by faulty equipment and/or human tinkering](#). In 2022, the city of Alexandria, VA was forced to [issue refunds for red light camera programming errors](#). These examples illustrate the danger of unchecked reliance on technology that is designed to cast the widest net possible and the success of which is often measured in the number of tickets issued and the revenue generated from those tickets.

To guard against such errors, jurisdictions will have to create systems of oversight to monitor and inspect the technology as well as ensure there is a fair, accessible system for appeals. In practice, some jurisdictions require sworn police officers to review camera citations to verify that a violation has occurred. However, places with a shortage of police officers or limited resources to respond to emergencies, are known to delegate these responsibilities to another agency or administrative staff, which could result in a due process violation and potentially more erroneous tickets given their potential lack of training or experience and neutrality. Buffalo, New York ended its school speed zone program after it was uncovered that the city's system had [no human operator to verify the accuracy of the cameras or logs to record verification testing](#), raising significant due process concerns.

The legal processes for challenging ATE violations varies by jurisdiction, and individuals who are ticketed often lack an understanding of how to contest these citations or are without the means or resources to do so. The lack of notice from some

local governments about how to challenge tickets appears as an attempt to intentionally dissuade challenges. Such was the case in the Department of Justice's [investigation into Ferguson's Police Department](#), where it was found that the municipal court rules and procedures often created burdens, were deficient, and responded to challenges with retaliatory conduct. This problem, however, is not limited to a single jurisdiction. In 2023, in response to the broader national problem of using citations to extract money from residents, the [Department of Justice wrote an open letter to state and local courts](#) advising that any citation or notice imposing fines and fees should provide clarity on court procedures for challenging the allegations, something far too many jurisdictions still fail to do.

## F. ATE and the Impact on Police Encounters

The over-policing of Black and Brown communities has led to policing for profit and financial enforcement policies that disproportionately harm these communities. When state and local policymakers use police to raise revenue, low-income communities of color can face potentially violent, even deadly, encounters with law enforcement. The tragic killings of Daunte Wright, Philando Castile, Tyre Nichols, and many others by police during traffic stops illustrate how stops for minor traffic violations can quickly escalate into deadly encounters for Black and Brown people. [It is estimated that nearly 600 people have been killed during traffic stops since 2017](#), and research finds Black and Brown drivers are more likely to be [stopped](#), [searched](#) and [subjected to force](#).

For some proponents of ATE, the technology is a viable solution to the growing concern and apprehension around the role of police in traffic stops. While ATE can reduce police contact in routine traffic enforcement and limit the myriad of safety concerns that result from those interactions, it typically does not eliminate them. Because the U.S. Supreme Court has held that pretextual traffic stops are constitutional, even if the true purpose of the officer is to engage in other types of investigation,<sup>17</sup> ATE does not stop officers from profiling Black or Brown drivers and targeting them for traffic-based stops. Instead, the expansion of ATE simply creates

a new and more effective way to fine exponentially more people, creating “an economy that entrenches racially disproportionate policing, driving lawmakers and law enforcement to behave in ways contrary to public safety and community well-being.”<sup>18</sup>

A true solution to the problem of violent police-driver interactions requires a more thoughtful and broader consideration of the role of police in traffic enforcement. One solution is to end the practice of stopping motorists for violations that don't present a clear danger and focus on safety risks. For example, in Fayetteville, the Police Department [re-prioritized safety stops over investigatory and economic stops](#) (i.e. regulatory and equipment stops). During that time, the number of Black drivers searched declined by nearly 50% compared with the previous four years, and traffic fatalities, uses of force, injuries to citizens and officers, and complaints against officers all went down.

Simply relying on technology to enforce traffic violations does not remove police from traffic stops but it does exponentially increase the number of people who will experience the negative impacts of fine-based traffic enforcement. Police continue to have power to engage in pretextual traffic stops and continue to have a financial incentive to do so, particularly given that federal programs allow local police departments to profit from forfeitures—of vehicles, money, or other valuables—derived from traffic stops.<sup>19</sup>



# III. Alternatives to a Fine-Based System of Traffic Safety

Traffic safety remains a priority for any community. However, financial sanctions for low-level traffic offenses is not the only way to achieve it. Communities should instead be prioritizing infrastructure change and non-financial enforcement options for achieving safer roads.

## A. Infrastructure Change Instead of ATE Regimes

Among ATE technologies studies, only speed cameras have consistently been shown to have any significant impact on traffic behavior. Even so, such technology can often be less effective and a more expensive way of reducing actual speeds than key infrastructure changes. The Federal Highway Administration's meta-analysis of the effectiveness of a variety of traffic calming measures found that speed humps, raised sidewalks, chicanes,<sup>20</sup> and traffic circles are all effective mechanisms for reducing speeds. Specifically, researchers found that speed humps had a dramatic effect on maximum speeds, observing that the number of vehicles moving at more than 10 mph over the speed limit dropped from 14% to just 1% after speed humps were installed.<sup>21</sup> Ultimately, studies show speed humps "have a Crash Reduction Factor (CRF) of 50, indicating that there is a 50% expected decrease in pedestrian involved collisions resulting from their installation."<sup>22</sup> These driver behavioral changes occur in the moment; they do not rely on citations issued weeks later that may or may not change subsequent behavior.

Research also suggests that roundabouts are a better alternative to red light cameras for reducing crashes. An in-depth study by the Insurance Institute of Highway Safety found injury crashes in Carmel, Indiana were reduced by almost half after roundabouts were installed, and where crashes did occur, they were less severe. The findings suggest

that modern roundabouts eliminate deadly left turn crashes without the increase in rear-end collisions that can result from red light camera enforcement. Once again, they are also changing behaviors in the moment, rather than at some later date.

Jurisdictions that have been most successful in improving traffic safety have implemented these road infrastructure improvements and prioritized traffic calming measures over enforcement. As a part of Vision Zero's European approach, Oslo, Norway and Helsinki, Finland were able to reduce traffic fatalities to zero by redesigning their roads to slow drivers, banning cars in certain downtown zones, and lowering speed limits, beyond simply enforcing speeding violations.

When United States Secretary of Transportation Pete Buttigieg was the Mayor of South Bend, Indiana, the city developed a demonstration project to address a speeding problem on neighborhood streets. Instead of using enforcement measures, the project relied on traffic calming tools—traffic circles, chicanes, and bump outs—that resulted in significant decreases in driving speeds. Prior to the project, in areas designated as 25 miles per hour, only about one in five drivers was actually at or under that speed. After a traffic circle was installed at a particular intersection, one out of every three drivers was meeting the posted 25 miles per hour or less goal in that area. These changes allowed the city to make permanent and meaningful decisions about street safety, with buy-in from the community.

Hoboken, New Jersey, the 4th most densely populated city in the United States, has managed to have zero traffic fatalities in the past 6 years as a result of the intentional street planning and design efforts by the mayor and the local transportation department. The city has an ambitious goal of not only zero fatalities, but zero injuries, and is moving towards achieving this target in a state that currently bans automated traffic enforcement tools.

South Bend, Hoboken, and the original Vision Zero work in Europe, focused on the systems and not individual behavior. The results of which are not only impressive, but reflect the importance of prioritizing safer systems over individual enforcement to address street safety issues.

ATE proponents sometimes argue that these improvements are more costly than implementing ATE programs, but [this is not often the case](#). The Federal Highway Administration estimates that the installation of [a single speed hump can run from as little as \\$2000 to as much as \\$8000](#), depending on the conditions of the existing road. Conversely, Fairfax, Virginia reports that its [2022 pilot](#) speed camera program cost \$3,000 per camera, per month, plus the costs of personnel. Given that speed humps are designed to slow all traffic in the moment, as opposed to cameras which hope to affect change at some future date, it is hard to argue that safety, rather than future revenue generation, is the motivating factor behind some of these choices.

Stakeholders should compare infrastructure costs to the true costs of ATE, including the costs associated with added full-time staff necessary for processing and verifying infractions and litigating appeals. These ancillary costs, along with ongoing technology rental and maintenance bills, often increase expenditures well beyond what is originally touted as the “cost” of an ATE program.

## B. Non-financial Enforcement Options

Given the harms and the mixed efficacy of fine-based ATE programs, communities should consider alternative enforcement solutions for traffic safety that focus on non-monetary sanctions, rather than fines and fees. This shift will demonstrate a commitment to curbing dangerous driving behavior, rather than raising revenue. Driver’s education courses, adding points to a driver’s license, or suspending licenses for multiple instances of dangerous driving are examples of non-monetary enforcement options.

It should be noted, however, that many of these proposed solutions can also create economic harms and inequity. Any required driving classes should be provided free of charge, so as to not disproportionately affect low-income people and communities of color. And although driver points or license suspensions for repeat or severe violators more directly address safety issues, they can also have economic implications, particularly for low-income people. [License suspension](#), in particular, is a severe punishment that should only be used in the more egregious situations, and never as a means for punishing nonpayment of a fine or fee.

Instead, non-monetary interventions, like driver feedback signs, are more likely to result in immediate behavioral change that impacts safety, without these inequity concerns. Data from Australia in 2023 showed that [feedback signs alerting drivers to their speeds](#) before they entered a camera enforcement zone resulted in a reduction of ticketing by more than 80%. Most drivers who were put on notice of their offending behavior before enforcement was used, saw significant and immediate self-regulating behaviors.

Separately, public education, in the form of both community-wide campaigns and individualized warning notices to those who trigger ATE cameras, may also go a long way toward improving safety without burdensome fines and fees.

# Recommendations

Whether ATE is already in use or simply being contemplated, it is critical for policymakers and communities to understand the real harms inherent with a traffic safety plan that focuses on fines and fees as sanctions. How—or even whether—a state can create an equitable ATE system remains to be seen and will require state-specific policies, prohibitions, and guardrails. FFJC makes the following recommendations for addressing income inequities in automatic traffic enforcement and designing an equitable and effective traffic safety approach that will lessen reliance on financial enforcement.

## Address Income Inequities in Traffic Enforcement:

### 1 **If ATE is in use, prioritize non-financial sanctions.**

Providing information, education, training or other accessible alternatives will more effectively result in improved driving behavior.

### 2 **In extreme cases, develop graduated responses based on the frequency and severity of the behavior.** Less severe offenses, offenses unrelated to actual safety concerns, or one-time offenses, do not need the same level of punishment.

### 3 **If fines are assessed, ensure they are proportionate to the individual's ability to pay.** Meaningful ability-to-pay assessments are critical to establishing equity in sanctions.

### 4 **Do not use ATE with a goal of raising revenue. If fines are assessed, designate any revenue generated by ATE programs for discretionary, one-time expenses.** Even if the money is directed toward worthy projects, governments that create an ongoing revenue dependency on ATE are placing profit-making over safety. If ATE is truly about improving safety, the revenue generated by any enforcement should be an ancillary benefit rather than a relied-upon, ongoing line item in the budget.

### 5 **Do not impose sanctions for failure to pay fines.** If a person is unable to pay the amount imposed, systems should not punish people for that poverty. Instead, systems should institute fine waivers, reasonable payment plans, or other supportive services.

### 6 **End the practice of adding fees, surcharges, penalties or interest to fines.** Fees are hidden taxes designed to generate revenue, not improve safety. They are abusive practices that engender distrust in government.

## Design and implement an equitable and effective traffic safety approach that will lessen reliance on enforcement and the use of financial penalties:

### 7 **Invest in street design, engineering, and infrastructure before adding or increasing enforcement.** As part of any such plan, consult with a diverse group of stakeholders to prevent the perpetuation of racially inequitable planning, investment, and punishment paradigms.

### 8 **If ATE is used at all, it must be temporary.** ATE must only be used as part of a comprehensive street design and infrastructure improvement plan. After a reasonable period of time, if safety goals

have not been achieved in a specific location, the camera should be removed to minimize financial harms associated with automated enforcement. If the infrastructure improvements lead to increased safety, there may no longer be a continuing need for automated enforcement at that location. Leaving the cameras in place at that point signals that they are about revenue, not safety.

**9 Develop clear and consistent policies for determining whether the ATE technology captured a true violation and how it should be sanctioned.** Any ATE program should have clear and transparent procedures for reviewing alleged violations before tickets are issued and appellate procedures that allow drivers to contest the validity of the citations they receive.



# Conclusion

Addressing street safety issues and limiting unnecessary police-driver interactions is critical to creating a more safe and equitable society. However, the implementation and expansion of fine-based enforcement regimes like ATE has limited effectiveness for changing driving behavior and does not resolve the racial and economic disparities inherent in our criminal and traffic systems. In fact, it can create new harms, disproportionately affecting lower-income communities and communities of color, punishing those with the least means the most. Although there is no dispute that traffic safety is an important priority across the country, the use of fine-based ATE is neither the most effective, nor the most equitable way to achieve it.

## Endnotes

- 1 See, for example, Gallagher, Justin, and Paul J. Fisher. 2020. "Criminal Deterrence When There Are Offsetting Risks: Traffic Cameras, Vehicular Accidents, and Public Safety." *American Economic Journal: Economic Policy*, 12 (3): 202-37, DOI: 10.1257/pol.20170674; Nicholas J. Garber et al., *The Impact of Red Light Cameras (Photo-Red Enforcement) on Crashes in Virginia*, Virginia Department of Transportation and Federal Highway Administration (2007) <https://www2.motorists.org/issues/red-light-cameras/virginia-dot-study>; Ontario Ministry of Transportation, *Final Report: Evaluation of the Red Light Camera Enforcement Pilot Project* (2003) <https://www2.motorists.org/issues/red-light-cameras/ontario-pilot-project/>.
- 2 National Highway Safety Transportation Administration, *Speed Safety Camera Program Planning and Operations Guide*, U.S. Department of Transportation, 53 (January 2023), <https://highways.dot.gov/sites/fhwa.dot.gov/files/Speed%20Safety%20Camera%20Program%20Planning%20and%20Operations%20Guide%202023.pdf>. [Hereinafter, NHTSA Speed Camera Guidance]
- 3 Many of the studies on lesser-tested ATE technology are conducted or funded by technology vendors themselves, making their independence questionable.
- 4 Saranath Lawpoolsri, Jingyi Li & Elisa R. Braver, "Do Speeding Tickets Reduce the Likelihood of Receiving Subsequent Speeding Tickets? A Longitudinal Study of Speeding Violations in Maryland," *Traffic Injury Prevention*, 8:1, 26-34 (2007), DOI: 10.1080/15389580601009764
- 5 Steve Moffatt and Suzanne Poynton, "The deterrent effect of higher fines on recidivism: Driving offenses," *Contemporary Issues in Crime and Justice*, No. 106 (2007).
- 6 Shauna Hallmark & Neal Hawkins, *Dynamic Speed Feedback Signs*, Iowa Department of Transportation Federal Highway Administration (October 2014), [https://intrans.iastate.edu/app/uploads/2018/03/DSFS\\_tech\\_brief1.pdf](https://intrans.iastate.edu/app/uploads/2018/03/DSFS_tech_brief1.pdf) (conducting a meta-analysis of several studies aimed at reducing speed related crashes in Iowa); see also Donald Fisher et al., *Effectiveness of Dynamic Speed feedback signs, Volume I: Literature review and meta-analysis*, National Highway Traffic Safety Administration, 23-24 (August 2021), <https://rosap.nhtsa.gov/viewdot/57513> (finding that 61 of 65 studies looking at the effectiveness of feedback sign on speeders, as opposed to all drivers, "showed a significant reduction" in the percentage of people speeding when the the signs were used).
- 7 Mingjian Wu et al., "Lessons learned from the large-scale application of Driver Feedback Signs in an urban city," *Journal of Transportation Safety & Security*, Vol. 13, Issue 12 (November 2021), <https://doi.org/10.1080/19439962.2020.1726546> (finding that feedback signs both with and without enforcement mechanisms were effective at reducing speeds and that the additions of an enforcement element only showed a slightly better outcome).
- 8 American Association of Motor Vehicles Administrators, *Reducing Suspended Drivers and Alternative Reinstatement: Best Practices*, Ed. 3, 8 (May 2021), <https://www.aamva.org/getmedia/b92cc79d-560f-4def-879c-6d6e430e4f4d/Reducing-Suspended-Drivers-and-Alternative-Reinstatement-Best-Practices-Edition-3.pdf>.
- 9 Joni Hirsch & Priya S. Jones, "Driver's License Suspension for Unpaid Fines and Fees: The Movement for Reform," 54 U. MICH. J. L. REFORM 875, 881 (2021); Alicia Bannon et al., *Criminal Justice Debt: A Barrier to Reentry*, Brennan Center for Justice, New York University School of Law, 22-23 (2010).
- 10 Aaron Chalfin and Justin McCrary, "Criminal Deterrence: A Review of the Literature," *Journal of Economic Literature*, 55(1), 5-48 (2017), <https://www.aeaweb.org/articles?id=10.1257/jel.20141147>.
- 11 Id.
- 12 Beth A. Colgan, "Revenue, Race, and the Potential Unintended Consequences of Traffic Enforcement Reform," 902 North Carolina Law Review 101, no. 4 (2023) (As one South Carolina county sheriff explained to officers during a traffic enforcement training program, "[n]early everyone does something illegal if you follow them long enough.") <https://scholarship.law.unc.edu/cgi/viewcontent.cgi?article=6925&context=nclr>.
- 13 See Chalfin and McCrary, *supra* note 10 (noting that certainty and swiftness of punishment are two of the key components of deterrence); Lawpoolsri et al., *supra* note 4 (finding that overall legal consequences had no significant effect on the risk of receiving a repeat speeding citation relative to ticketed drivers who escaped those consequences).
- 14 See National Association of City Transportation Officials' Urban Street Design Guide for examples of how cities have redesigned and reinvested in streets to make them safer. <https://nacto.org/publication/urban-street-design-guide/>
- 15 NHTSA Speed Camera Guidance, *supra* note 2 at 52.
- 16 See Michael D. Makowsky et al., "To Serve and Collect: The Fiscal and Racial Determinants of Law Enforcement" *The Journal of Legal Studies* 48(1):189-216 (January 2019), DOI:10.1086/700589.
- 17 *Whren v. United States*, 517 US 806 (1996).
- 18 Colgan at *supra* note 12.
- 19 Id. at 946 (describing how local police departments can use federal drug enforcement policies to retain significant revenue from forfeitures of property they can tie to drug offenses, among other revenue-raising activities.)
- 20 A chicane is a curb extension or island that narrows the roadway and requires vehicles to follow a curving, S-shaped path, discouraging speeding.
- 21 Federal Highway Administration, "Traffic Calming ePrimer Module 4," U.S. Department of Transportation, (February 2017), [https://safety.fhwa.dot.gov/speedmgmt/ePrimer\\_modules/module4.cfm#note18](https://safety.fhwa.dot.gov/speedmgmt/ePrimer_modules/module4.cfm#note18).
- 22 Helen Arbogast et al., "The effectiveness of installing a speed hump in reducing motor vehicle accidents involving pedestrians under the age of 21," *Journal of Transport & Health*, Vo. 8, (March 2018) (citing David Ragland et al., "Ten Years Later: Examining the Long-Term Impact of the California Safe Routes to School Program," University of California, Berkeley (January 2014)), <https://www.sciencedirect.com/science/article/abs/pii/S2214140516303760>.