



Law Enforcement License Plate Recognition Technology

A Constitutional Primer

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Introduction and Executive Summary

After three preceding decades of impressive declines in United States crime rates, the past decade witnessed an alarming resurgence.

Murder rates experienced their sharpest one-year increase in history in 2020, and the public understandably rates runaway crime as a primary concern.¹ Namely, a sobering three-fourths of surveyed Americans report that crime substantially impacts their lives.²

That reflects a failure of public policy, including more forgiving prosecutorial approaches, fewer police numbers and a deemphasis on incapacitating criminals through stricter incarceration. The public policy paths toward recovery are obvious.

Technology, however, can also play a role in addressing and correcting the problem of rising crime and public insecurity.

Specifically, the emerging technology of license plate recognition (LPR) devices, which are simply cameras connected to software allowing them to identify and “read” license plates on vehicles in open public, offers a potentially game-changing resource for law enforcement in preventing, interrupting and solving crimes.

Unlike streaming security cameras, randomized police patrols or surveillance of individuals, LPR technology captures still photographs only accessible when related to an active criminal investigation, and it only captures features relating to the subject vehicle, rather than the driver or passengers. That more targeted and discrete approach helps protect individuals’ privacy while simultaneously offering law enforcement a helpful tool to protect public safety.

Accordingly, the case for adding LPR technology to the arsenal of law enforcement tools is a compelling one. At the same time, privacy advocates understandably raise concern regarding individual freedom from excessive government surveillance and the Fourth Amendment’s protection against unreasonable searches and seizures.

"THAT MORE TARGETED AND DISCRETE APPROACH HELPS PROTECT INDIVIDUALS' PRIVACY WHILE SIMULTANEOUSLY OFFERING LAW ENFORCEMENT A HELPFUL TOOL TO PROTECT PUBLIC SAFETY."



¹ <https://www.fbi.gov/news/press-releases/press-releases/fbi-releases-2020-crime-statistics>

² https://irp.cdn-website.com/47fdcd9f/files/uploaded/CRIME_CHANNEL_NATIONWIDE_SURVEY_REPORT_2024.pdf

Public safety and individual freedom, however, aren't mutually exclusive. To the contrary, individual freedom in society affirmatively requires a sense of safety in public.

Fortunately, LPR technology easily clears the test of reasonability under Fourth Amendment privacy protections. That includes precedent on point from none other than the Massachusetts Supreme Court, the United States Court of Appeals for the Ninth Circuit, as well as United States Supreme Court. That also includes persuasive authority from no less a skeptic of the potential government overreach than the late Justice Antonin Scalia.

In that vein, the following review of relevant legal precedent illustrates how LPR technology clearly and convincingly protects Americans' privacy rights and personal liberties while offering a potent new tool to combat crime.

Leading Caselaw

Commonwealth of Massachusetts v. McCarthy

In a case directly on point because it specifically confronted the question of LPR technology, the liberal Massachusetts Supreme Judicial Court ruled that its use against a criminal defendant did not violate the Fourth Amendment.³

While investigating a defendant on suspicion of drug distribution, police used LPR cameras affixed to bridges to track his movements. Authorities used both real-time alerts from the cameras to notify them of his whereabouts, as well as historical data that revealed the number of times that he had crossed the same traffic routes over a three-month period. The LPRs used cameras combined with software allowing them to identify and "read" license plates of passing vehicles. That information was then fed into a database maintained by authorities. If an LPR camera later detected a license plate matching a number on authorities' suspect list, then the system alerted them with a message accordingly. Police eventually added the defendant's license plate number to its suspect list, and received alerts when his automobile was detected in areas where other suspects in the drug-distribution investigation were located.

Ultimately, using historical spreadsheets from the LPR system and real-time alerts of location, police effectuated an arrest. During trial, the defendant filed motions to suppress the LPR data, arguing that its warrantless collection constituted an unreasonable search in violation of the Fourth Amendment.

The Court, however, disagreed.

Applying textbook Fourth Amendment doctrine, the Court focused on the U.S. Supreme Court's decision in *United States v. Knotts* (1983), which held that "a person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another." The Court continued, "There is no real question that the government, without securing a warrant, may use electronic devices to monitor an individual's movements in public to the extent that the same result could be achieved through visual surveillance."

³ <https://law.justia.com/cases/massachusetts/supreme-court/2020/sjc-12750.html>

"ACCORDINGLY, THE CONTENTION THAT LPR TECHNOLOGY INHERENTLY VIOLATES FOURTH AMENDMENT PRIVACY PROTECTIONS WAS REJECTED BY THE COURT."

That's because "what a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection."

Obviously, a license plate itself is a public object in the sense that it is issued by the state, and used for purposes of identification in public by its very nature. Accordingly, the contention that LPR technology inherently violates Fourth Amendment privacy protections was rejected by the Court.

United States v. Yang

In a similarly notable decision because it emerged from the notoriously liberal United States Court of Appeals for the Ninth Circuit, in *United States v. Yang*⁴ (2019) use of LPR technology was found compatible with Fourth Amendment expectations of privacy.

The defendant in *Yang* had been observed stealing mail from collection boxes, and law enforcement utilized LPR technology to track the rental vehicle he was using. In fact, as the Court noted, authorities accessed "the largest plate-location database in the country, operated by a private company." Accordingly, its ultimate ruling was in some ways more expansive than the Massachusetts Supreme Court's decision in *McCarthy*:

[T]here were approximately 5 billion license plate scans and associated data stored in the database. The database continues to grow as these camera-mounted vehicles go about their daily business capturing images and location data at thirty frames per second, and as the use of these cameras and technology becomes more ubiquitous. It was estimated that as of March 2019, the database contained over 6.5 billion license plate scans and affiliated location data.

The defendant contended that this method of LPR surveillance violated his Fourth Amendment privacy rights, but the Ninth Circuit disagreed. It held that individuals do not possess a reasonable expectation of privacy of historical location data in public, particularly in rental vehicles that criminals sometimes use.

Considering the sheer volume of data collected in that case, and the fact that it was possessed by a private company rather than law enforcement using more circumspect methods, the Ninth Circuit's ruling offers a robust endorsement of LPR technology as a lawful tool for law enforcement. It reinforces the notion that data collected from public roadways, where no reasonable expectation of privacy exists, does not violate the Fourth Amendment.

"THE DEFENDANT CONTENDED THAT THIS METHOD OF LPR SURVEILLANCE VIOLATED HIS FOURTH AMENDMENT PRIVACY RIGHTS, BUT THE NINTH CIRCUIT DISAGREED."

⁴ <https://cdn.ca9.uscourts.gov/datastore/opinions/2020/05/04/18-10341.pdf>

United States v. Jones

The U.S. Supreme Court decision in *United States v. Jones*⁵ (2012) does not involve LPR technology, and it ultimately ruled that the physical placement of a global positioning system (GPS) tracking device for an extended period did trigger Fourth Amendment warrant requirements. By obvious implication, however, Justice Antonin Scalia's opinion suggests a different result for other surveillance tools like LPRs that involve no physical intrusion and are of limited duration.

In *Jones*, Federal Bureau of Investigation (FBI) agents installed the GPS device on the undercarriage of the defendant's Jeep while it was parked in a public lot. Over the ensuing 28 days, agents used that device to track the vehicle's movements, and once even had to replace its battery when the vehicle was parked in a different lot in another part of the state. Partly based on evidence obtained through the device, prosecutors obtained an indictment on multiple counts of possession and distribution of narcotics.

Writing for the majority, Justice Scalia opined that the physical intrusion on private property for purposes of gathering data constituted a search under Fourth Amendment doctrine. That decision, however, was grounded significantly in the common law principles of physical trespass and placement of the tangible GPS device on a person's vehicle without consent. Accordingly, the opinion suggested that "relatively short-term monitoring of a person's movements on public streets" might be permissible without a warrant.

"THAT CARRIES SIGNIFICANT IMPLICATIONS FOR LPR TECHNIQUES, BECAUSE LPR DEVICES PASSIVELY COLLECT INFORMATION OPEN TO THE GENERAL PUBLIC FROM VEHICLES TRAVERSING OPEN ROADWAYS."

Consequently, LPRs likely don't constitute a "search" for Fourth Amendment purposes because they do not involve the sort of physical trespass that Justice Scalia identified as central to his opinion. Since authorities do not physically affix devices to suspects' tangible property, that traditional trespass-centric approach to Fourth Amendment searches and seizures is irrelevant.

Additionally, LPR data collection techniques align more closely with what the Court's opinion described as "relatively short-term monitoring." Unlike physical GPS trackers, which follow specific vehicles continuously for long periods of time, LPRs capture only brief snapshots of vehicle locations at specific points in time. That intermittent nature of data collection, more akin to observing cars passing through intersections like ubiquitous traffic cameras currently do, fits more within the scope of publicly available information, which as noted above has historically been deemed beyond Fourth Amendment privacy parameters.

Thus, while *Jones* identified Fourth Amendment protection against particularly invasive government surveillance for long periods of time, the Court's acknowledgement that short-term, non-physical monitoring remains permissible means that LPRs used in more limited capacities do not violate constitutional privacy protections.

⁵ <https://www.law.cornell.edu/supremecourt/text/10-1259>

"EVEN IF THE ATTACHMENT AND USE OF THE DEVICE WAS A SEARCH, IT WAS REASONABLE—AND THUS LAWFUL—UNDER THE FOURTH AMENDMENT."



ANTONIN SCALIA
ASSOCIATE JUSTICE OF
THE SUPREME COURT
OF THE UNITED STATES
1986 - 2016

Carpenter v. United States

In *Carpenter v. United States* ⁶ (2018), the underlying facts of the case once again did not involve LPR technology, and the narrow U.S. Supreme Court decision authored by Chief Justice John Roberts recognized certain privacy concerns relating to government acquisition of significant and ongoing amounts of cellular telephone tracking information. Specifically, the defendant had been implicated in a series of armed robberies and authorities consequently obtained 127 days of data from his wireless carriers without a warrant.

In the Court's 5-4 majority opinion, Chief Justice Roberts held that the government's acquisition of the defendant's cell phone data constituted a "search" under the Fourth Amendment by emphasizing the unique and comprehensive nature of that collection. "A cell phone," he wrote, "faithfully follows its owner beyond public thoroughfares and into private residences, doctor's offices, political headquarters, and other potentially revealing locales."

Significantly, Roberts's opinion specifically limited the scope of the decision, noting that it doesn't "call into question conventional surveillance techniques and tools, such as security cameras."

By explicitly confining his opinion, Roberts ensured that traditional law enforcement tools remained unaffected. With regard to LPR technology, such systems simply note public license plate numbers while vehicles travel along open roads, which is a voluntarily public activity.

The decision thus underscores the fundamental principle that while the Fourth Amendment protects reasonable expectations of individual privacy, it doesn't shield items or activities that people knowingly expose to the public. Consequently, more traditional and limited methods to monitor openly public behavior remain constitutionally sound.

"SIGNIFICANTLY, ROBERTS'S OPINION SPECIFICALLY LIMITED THE SCOPE OF THE DECISION, NOTING THAT IT DOESN'T 'CALL INTO QUESTION CONVENTIONAL SURVEILLANCE TECHNIQUES AND TOOLS, SUCH AS SECURITY CAMERAS.'"

Cardwell v. Lewis

Finally, the U.S. Supreme Court decision in *Cardwell v. Lewis* ⁷ (1974) offers particularly convincing reconfirmation that visible parts of automobiles – such as license plates – create no reasonable Fourth Amendment expectation of privacy, for the simple reason that the opinion was delivered by liberal Justice and privacy advocate Harry Blackmun.

In *Cardwell*, police interviewed the defendant in connection with a murder, while also viewing his vehicle because it was thought to have been used in commission of the crime. When the defendant appeared for questioning days later at investigators' offices, he parked his car at a nearby commercial lot. After arresting the defendant, police towed his car to a police impoundment lot and conducted a warrantless examination of its exterior. That examination revealed that a tire matched the cast of a tire impression made at the crime scene, and that paint samples taken from the car resembled foreign paint on the fender of the victim's car. The defendant was tried and convicted, after which he appealed and sought to exclude the evidence.

⁶ https://www.supremecourt.gov/opinions/17pdf/16-402_h315.pdf

⁷ <https://casetext.com/case/cardwell-v-lewis#p2469>

Justice Blackmun's opinion rejected the defendant's appeal, emphasizing that a vehicle's exterior is necessarily open to public view and, therefore, outside the scope of Fourth Amendment privacy protections:

"JUSTICE BLACKMUN'S OPINION REJECTED THE DEFENDANT'S APPEAL, EMPHASIZING THAT A VEHICLE'S EXTERIOR IS NECESSARILY OPEN TO PUBLIC VIEW AND, THEREFORE, OUTSIDE THE SCOPE OF FOURTH AMENDMENT PRIVACY PROTECTIONS."

A car has little capacity for escaping public scrutiny. It travels public thoroughfares where both its occupants and its contents are in plain view. What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. This is not to say that no part of the interior of an automobile has Fourth Amendment protection; the exercise of a desire to be mobile does not, of course, waive one's right to be free of unreasonable government intrusion. But insofar as Fourth Amendment protection extends to a motor vehicle, it is the right to privacy that is the touchstone of our inquiry.

In the present case, nothing from the interior of the car and no personal effects, which the Fourth Amendment traditionally has been deemed to protect, were searched or seized and introduced in evidence. With the "search" limited to the examination of the tire on the wheel and the taking of paint scrapings from the exterior of the vehicle left in the public parking lot, we fail to comprehend what expectation of privacy was infringed.

If scraping of paint doesn't implicate Fourth Amendment privacy concerns, then the far less intrusive momentary capture of a license plate image by LPR devices lies even further outside the realm of privacy expectations.

After all, LPR technology does nothing more than what any police officer could do visually – observe and document license plate numbers in plain view. If society were to adopt the logic that scanning publicly visible license plates somehow constitutes a search in violation of the Fourth Amendment, then by extension any observation of a vehicle's exterior by law enforcement could be deemed unconstitutional.

Such an interpretation would not only be legally unsound, but also detrimental to public safety.

Cardwell thus remains a cornerstone of jurisprudence and logic, in its articulation of the principle that what someone knowingly exposes to public view cannot somehow be characterized as private within the meaning of the Fourth Amendment. This case offers clear rationale for LPR technology, which merely captures what is already in plain, public sight.

LPR Efficacy

With the constitutionality of LPR technology beyond reasonable dispute, let's examine its real-world efficacy.

Simply put, LPR technology offers a potential game-changer for law enforcement and enhanced public safety. That's not abstract opinion or hypothesis, it reflects on-the-ground opinion of law enforcement personnel themselves.

"SIMPLY PUT, LPR TECHNOLOGY OFFERS A POTENTIAL GAME-CHANGER FOR LAW ENFORCEMENT AND ENHANCED PUBLIC SAFETY."

A comprehensive U.S. Department of Justice study, for example, reveals that at least two-thirds of larger police departments now utilize LPR technology.⁸

⁸ <https://www.ojp.gov/ncjrs/virtual-library/abstracts/rapid-diffusion-license-plate-readers-us-law-enforcement-agencies>

That constitutes a threefold increase over the past decade alone, demonstrating that police value its effectiveness. And listen to the direct testimonials of law enforcement officials themselves.

- *“In my 25 years, the LPR system is the single most important technology tool in policing that has come out.”* - Eric Rush, Chief of Police with the Trussville, Alabama, Police Department.
- *“We want people to know that we don’t get alerts for things like immigration enforcement, civil violations or parking tickets. We only get alerts for serious crimes like a stolen vehicle, a stolen license plate or a missing person.”* - Hudson Bull, Captain of the Fairfax County, Virginia, Police Department.
- *“I’ve got 24 examples of crimes that we have solved recently or led to significant investigative updates because of those Flock cameras in just the past probably six weeks.”* - Paul Neudigate, Chief of the Virginia Beach Police Department.⁹

Those testimonials underscore the responsible and narrowly-targeted use of LPR technology for major crime prevention and investigation, countering concerns about allegedly unwarranted surveillance or privacy infringement.

"ACCORDING TO THE STUDY, EVERY \$1.00 SPENT ON POLICING GENERATES APPROXIMATELY \$1.63 IN SOCIETAL BENEFITS."

The efficacy of LPR technology isn’t merely testimonial, however. Empirical research also demonstrates that improved law enforcement tools, including cameras and automated data systems, contribute to crime reduction. A pivotal Massachusetts Institute of Technology (MIT) study, for example highlights the broader benefits of investing in law enforcement technology and infrastructure.¹⁰ According to the study, every \$1.00 spent on policing generates approximately \$1.63 in societal benefits. Moreover, those benefits disproportionately benefit more impoverished and vulnerable communities, ensuring more effective law enforcement for those who need it most.

In addition to helping prevent and solve crime, LPR technology can also help interrupt crimes in progress. In the realm of human trafficking, for instance, LPR devices can help locate criminals and assist officers intercepting them, thereby rescuing the victims more immediately and effectively than without LPR systems. It has also offered such non-criminal law benefits as reuniting families with missing seniors suffering from conditions like Alzheimer’s, who may wander away or become lost.

Accordingly, real-world data and testimonials prove that LPR technology is increasingly a necessity for modern law enforcement and public safety. With continuing expansion of its use, communities across America can anticipate enhanced safety, reduced crime and greater peace of mind among the law-abiding populace.

"REAL-WORLD DATA AND TESTIMONIALS PROVE THAT LPR TECHNOLOGY IS INCREASINGLY A NECESSITY FOR MODERN LAW ENFORCEMENT AND PUBLIC SAFETY."

⁹ <https://www.wtkr.com/news/in-the-community/virginia-beach/virginia-beach-adds-license-plate-reading-cameras-some-call-for-restrictions>

¹⁰ <https://direct.mit.edu/rest/article-abstract/100/1/167/58429/Are-U-S-Cities-Underpoliced-Theory-and-Evidence?redirectedFrom=fulltext>

Balancing LPR Technological Benefits with Individual Privacy Protections

Whatever LPR technology's operational benefits, we can simultaneously establish and enforce strict protections to prevent abuse, ensure transparency and limit data retention.

Such perils as indefinite retention of LPR data, for instance, could open the door to retroactive surveillance and scrutiny of individuals' previous movements long after the fact. Transparency and accountability,

therefore, remain non-negotiable pillars of LPR use. Public policy can require public disclosure of LPR policies on data collection, retention and access, giving citizens the ability to understand how the information is used, who can access it and under what circumstances it can be disseminated. Additionally, independent oversight mechanisms can be established to help ensure compliance with constitutional principles and abuse prevention.

Furthermore, judicial branch safeguards can help oversee the use of LPR technology. Just as warrants are generally required to undertake searches of suspects' homes or digital communications, access to stored LPR data can be made generally subject to judicial approval when used outside of

short-term, time-sensitive law enforcement activity. The number of days remains a parameter that states can reasonably regulate. Although 127 days in *Carpenter* was excessive, a few minutes would be far too short. Establishing reasonable standards can reinforce the principle that individual privacy won't be sacrificed.

The path forward thus requires a balanced approach. We can advance and deploy LPR technology in law enforcement and public safety while implementing fair data governance standards that prevent abuse. That can include data retention limits for narrowly defined periods unless necessary for ongoing investigations, independent oversight through external audits and public accountability, judicial safeguards and limitations on any private use or data sharing.

As with any other tool of law enforcement, careful oversight can harness the benefits of LPR technology without compromising constitutional privacy protections. We can ensure a free society that offers security while simultaneously protecting privacy.

"TRANSPARENCY AND ACCOUNTABILITY, THEREFORE, REMAIN NON-NEGOTIABLE PILLARS OF LPR USE."

"ESTABLISHING REASONABLE STANDARDS CAN REINFORCE THE PRINCIPLE THAT INDIVIDUAL PRIVACY WON'T BE SACRIFICED."

"AS WITH ANY OTHER TOOL OF LAW ENFORCEMENT, CAREFUL OVERSIGHT CAN HARNESS THE BENEFITS OF LPR TECHNOLOGY WITHOUT COMPROMISING CONSTITUTIONAL PRIVACY."

Conclusion

LPR technology thus offers a promising technology to work alongside public policy reform to reduce crime and increase public safety in America. It accords with longstanding principles of individual privacy protection under our Constitution and judicial precedent, and the real-world data and police testimonials make its value obvious. With appropriate protections on its use, LPR technology offers a helpful solution that we cannot afford to forego due to misconceptions and baseless alarmism.

