



MEMORANDUM

Date: July 18, 2023
To: Honorable Mayor Arreguin and Members of the City Council
From: Police Accountability Board
Re: Updated Objection to the Berkeley Police Department Surveillance Acquisition Report – Fixed Automated License Plate Readers (ALPR) and Proposed Policies 422 and 1305

The purpose of this memorandum is to document our deep appreciation for the attention and consideration given to the important and complex issue of acquiring Automated License Plate Reader (ALPR) technology. We believe that this matter deserves thorough thought and attention, and we acknowledge that the most recent drafts of the policies have made some efforts to address our concerns.

As noted in the corresponding report analyzing this proposed acquisition of surveillance technology, the PAB considered the following two questions: should the City of Berkeley adopt Fixed Automated License Plate Reader (ALPR) technology? Should the City Council accept the draft policies as currently presented? The PAB has responded “no” to both questions, citing insufficient evidence to support the effectiveness of ALPRs and other flaws with the proposed policies.

Should the Council decide to proceed with the approval of this surveillance technology, there are several specific points that we would like to highlight for further consideration:

Equitable Placement: It is crucial to carefully consider the placement of ALPRs throughout the city. While it makes sense to prioritize high-crime areas and city borders, it is essential to avoid leaving the placement solely up to the vendor. To this end, the Berkeley Police Department should present a preliminary installation plan based on its analysis. Thought should be given to more equitable distribution, considering community input and the potential impact on different neighborhoods.

Evaluation Period and Criteria: The current draft states a 2-year evaluation period, but we propose considering a one-year evaluation instead. The most critical aspect is to clearly define the evaluation criteria. We suggest including effectiveness in terms of changes in crime rates and the number of crimes solved using the ALPR data. Additionally, the evaluation should address placement effectiveness, error rates, costs, and other relevant

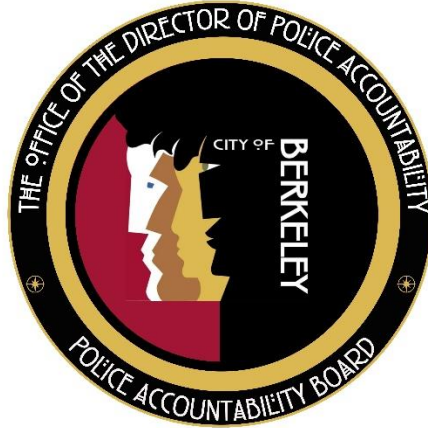
factors. The evaluation report should be made public and presented to the City Council and the PAB for consideration and response.

Drafting Improvements: We have identified some issues with the current drafts that need to be addressed. Firstly, it is crucial to consistently state that the use of ALPR data is limited to California law enforcement agencies. Furthermore, explicit statements should be included to confirm that the data will not be shared with ICE or states that have enacted restrictions on abortion or gender-affirming care.

Use of "Shall" and Drafting Errors: The use of "shall" (as opposed to "may") needs to be consistently added in sections relating to impermissible use of the system or data. Additionally, there are several drafting errors and typos throughout the documents that should be corrected to ensure clarity and professionalism.

We emphasize that the hasty drafting and the presence of significant omissions underscore the need to defer a vote on the drafts. It is crucial to address our concerns, as well as those expressed by the public, and to ensure that the policies align with our community's values and expectations.

Given the aforementioned concerns and the significant omissions present in the current drafts, we strongly recommend deferring a vote on the proposed ALPR acquisition report and policies. It is essential to take the time to address these concerns, as well as those expressed by the public during the community input session. By deferring the vote, we can ensure that the policies are thoroughly reviewed, revised, and aligned with our community's values and expectations. Our goal is to develop policies that are clear, comprehensive, and in line with legal requirements and community aspirations. By addressing the identified issues, we can strengthen the documents and ensure that they effectively govern the use of ALPR technology within our jurisdiction.



**SURVEILLANCE TECHNOLOGY ACQUISITION AND
PROPOSED POLICES REVIEW REPORT**

ACQUISITION REPORT FOR FIXED AUTOMATED
LICENSE PLATE READERS

&

BPD DRAFT POLICIES 422 & 1305

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Executive Summary

This report summarizes the PAB's position regarding both the City of Berkeley's adoption of ALPR technology and the draft implementing policies submitted by the BPD in support of that adoption. The report specifically addresses two questions:

1. Should the City of Berkeley adopt Fixed Automated License Plate Reader (ALPR) technology?
2. Should the City Council accept the draft policies as currently presented?

To both questions, the PAB has answered no¹.

With respect to the first question, this report explores the effectiveness of fixed ALPR systems based on studies and surveys conducted by the International Association of Chiefs of Police (IACP) and a case study conducted by the Vallejo Police Department. While ALPR technology has shown potential in detecting stolen vehicles and making arrests, concerns regarding false positives and limited research on its overall impact on crime reduction need to be considered.

With respect to the second question, this report highlights the shortcomings in the alternatives section of the acquisition report, as the Berkeley Police Department failed to thoroughly explore alternative methods beyond technology acquisition. The PAB recommends considering evidence-based crime interventions, such as those provided by the George Mason University Center for Evidence-Based Crime Policy Matrix, as well as leveraging community engagement initiatives, such as the BPD's traffic safety initiative.

Based on the findings and recommendations, the PAB proposes that the City Council reject the acquisition of fixed ALPRs in Berkeley. Alternatively, if the City Council decides to proceed, the report suggests specific measures to address concerns regarding the evidence-based case for ALPRs, the clarity and consistency of the proposed policies, and the need to explore alternative methods and community engagement approaches.

The report also provides an overview of the public safety context, legislative history of the ALPR effort. The recommendations put forth by the PAB aim to ensure that any

¹ On July 12th, 2023, at their regularly scheduled meeting, the PAB voted (3 yes, 1 no, 1 absence) to officially take a stance against the implementation of ALPRs in Berkeley. They also unanimously voted to reject the proposed policies.

decisions made regarding ALPR acquisition align with the principles of transparency, privacy protection, and community-oriented policing.

Background

City Council Referral

In the November 30, 2021, budget referral to the Council, Councilmember Taplin and co-sponsors, former Vice Mayor Droste and Councilmember Wengraf, cite various public safety concerns that they hoped to address through the acquisition of ALPRs. The referral references several concerns over the reported crime trends as noted in the 2019-2020 Annual Crime Report as presented by the Berkeley Police Department. In the referral, they specifically note the following concerning the current situation and its effects:

“According to the Berkeley Police Department’s 2019/2020 Crime Report, Berkeley has seen marked increases in aggravated assault, homicides, auto theft, and larceny over the past two years². While the overall crime rate remained relatively flat, specific categories of property crimes increased sharply—especially vehicle thefts, which increased by 66% in 2020. Homicides decreased to zero in 2021, but reports of gunfire and auto theft increased.”

The budget referral justified the recommendation for ALPRs by emphasizing the need for substantial improvements in public safety outcomes as part of the effort to reimagine public safety. This included practical measures to enhance traffic safety and combat property crimes.³

Approximately two years later, in their 2022 Annual Crime Report⁴, the Berkeley Police Department reported a 15.4% overall increase in Part One⁵ crime compared to

² https://www.cityofberkeley.info/Clerk/City_Council/2020/10_Oct/Documents/2020-10-13_Presentations_Item_19__Pres_Police_pdf.aspx

³ Insert link to the referral

⁴ [2023-03-14 Special Agenda Packet - Council.pdf \(berkeleyca.gov\)](#)

⁵ Part One crimes, also known as index crimes, are serious offenses tracked by law enforcement agencies. These crimes include murder, rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson.

2021. Part One violent crimes on average increased by 25.2% while Part One property crimes increased by an average of 14.5%. The largest increases were in cases of sexual assault (56.1%), aggravated assault (34.3%), and burglary (29%). There were significant decreases in Auto Theft (-23.9%) and Arson (-27.8%). Over the last ten years, crimes have steadily increased in the City of Berkeley. However, it must be noted that during a similar time period, the population of Berkeley has also increased by approximately 1.33% from 117,373 in 2013 to an estimated population of 118,950 for 2022⁶. Considering this demographic change, there were 6,053.8 part one crimes per 100,000 people in 2022 compared to 5,073.5 part one crimes per 100,000 in 2013.

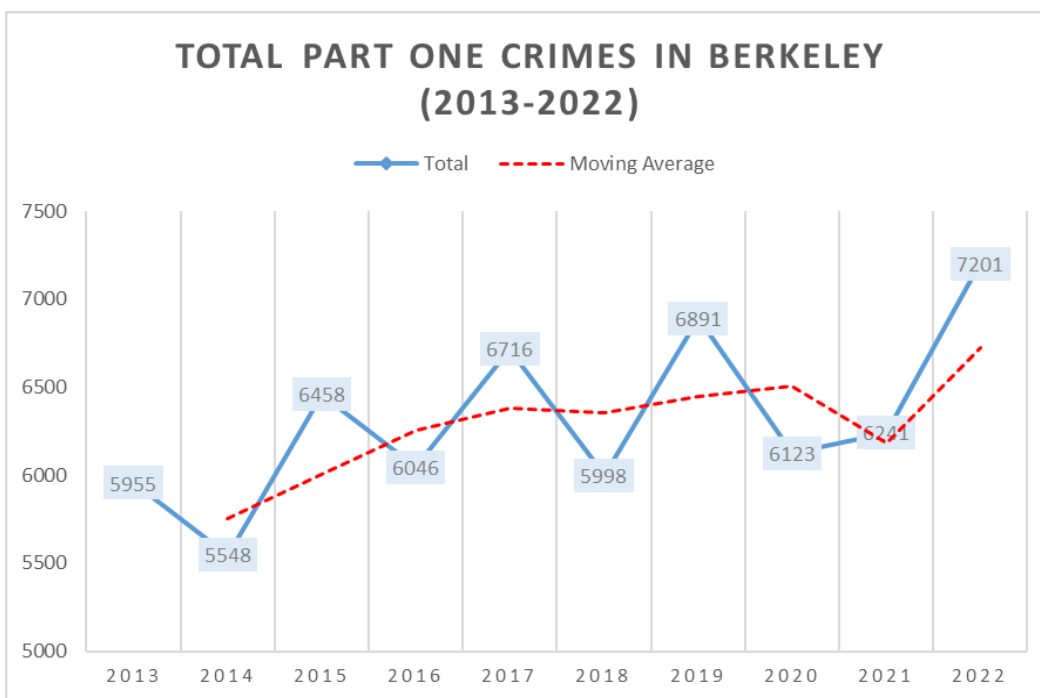


Figure 1. Total Part One Crimes in Berkeley. Source: BPD Annual Crime Report

Legislative History

Berkeley Municipal Code Section 2.99 serves as a comprehensive framework that carefully balances the city's interest in public safety with the protection of privacy and civil rights of its community members. With a focus on transparency, the code emphasizes the need for a thoughtful process when considering the procurement and use of surveillance

They serve as important indicators of public safety and are widely used in crime statistics and analysis. See: <https://ucr.fbi.gov/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/offense-definitions>

⁶ <https://www.census.gov/quickfacts/berkeleycitycalifornia>

technology, recognizing its potential risks to privacy and civil liberties. Decisions regarding surveillance technology are to be made with strong consideration of their impact on civil rights and liberties, as guaranteed by the California and United States Constitutions. The code also emphasizes evaluating the financial costs associated with such technology and assigns the City Council as the governing body responsible for funding, acquisition, and usage decisions. Furthermore, legally enforceable safeguards, including transparency, oversight, and accountability measures, are deemed crucial in protecting civil rights and liberties, supported by data reporting measures to ensure compliance. Ultimately, Berkeley Municipal Code Section 2.99 establishes a comprehensive framework that strives to strike a balance between public safety and the preservation of privacy and civil rights within the community.

Under the requirements set forth by Berkeley Municipal Code Section 2.99, the Police Accountability Board has been presented with a surveillance technology acquisition report and the respective policies, specifically regarding the proposed implementation of fixed automated license plate readers. The discussion surrounding Automated License Plate Readers (ALPR) within the Police Accountability Board (PAB) originated from a budget referral made on November 1, 2021. This referral, which received majority approval upon its presentation to the City Council on November 30, 2021, encompassed several key aspects. These included the proposal for ALPR installation at strategic locations, the allocation of funds in the FY 23-24 budget specifically for ALPRs, and the development of a policy governing the usage of ALPRs by the Berkeley Police Department in compliance with relevant city ordinances, particularly Berkeley Municipal Code (BMC) 2.99.

The subsequent timeline reveals significant events and interactions surrounding the ALPR policies. On May 11, 2023, Police Chief Louis presented Policy 422 and Policy 1305, which outlined the proposed ALPR policies, to the PAB. Following this, on June 15, 2023, the Office of the Director of Police Accountability (ODPA) submitted a comprehensive report titled "Automatic License Plate Readers (ALPR) in the City of Berkeley: A Preliminary Review of Proposed BPR Policies" to the PAB.

A special meeting of the PAB was convened on June 16, 2023, during which the board members voted to object to the acquisition report and the proposed policies in their current form. This objection led the PAB to issue a formal objection letter addressed to both the Berkeley Police Department (BPD) and the City Council. In response, the Public Safety Policy Committee held a special meeting on June 20, 2023, specifically dedicated to addressing the ALPR policies. The committee members, while providing a qualified positive response to the City Council, emphasized the need to address the concerns raised by the PAB and the BPD.

Further progress was made through a meeting on June 27, 2023, attended by PAB Chair Moore, Board Member Wilson, Sgt. Ledoux, and ODPa Staff. The purpose of this meeting was to engage in constructive discussions aimed at addressing the concerns articulated in the PAB's objection letter. Consequently, on July 7, 2023, the BPD submitted updated policies to the PAB, accompanied by proposed redline versions. Additionally, a memo was prepared, in response to the Public Safety Policy Committee's request, offering specific responses to the concerns raised by the DPA/PAB. It is noteworthy that no changes were made to the previously submitted Acquisition Report during this process.

On July 6, 2023, the ODPa held a virtual community input session to gather community feedback and perspectives on the topic of ALPRs. During the session, ODPa staff provided an informative overview of various topics, including BMC 2.99 - Acquisition and Use of Surveillance Technology, BPD's Acquisition Report for ALPRs, BPD's proposed Surveillance Use Policy, BPD's proposed Training and Operational Policy, Council Legislative History on ALPR, and official position of the PAB regarding these policies. Approximately 50 questions or comments were submitted to the ODPa and an additional 20 were shared via the live commenting session. The session facilitated diverse perspectives and inclusive dialogue, allowing participants to seek clarification, voice concerns, and express support for the proposed ALPR technology and related policies. The information gathered was then provided to the PAB as part of their July 12th regular meeting agenda packet.

During their regularly scheduled meeting on July 12th, the Police Accountability Board conducted further deliberations on the topic. Ultimately, the Board unanimously voted to object to the proposed policies as presented, and a majority expressed objection to the acquisition of the technology altogether.

Should the City of Berkeley adopt Fixed Automated License Plate Reader (ALPR) technology?

No, the City of Berkeley should not adopt fixed ALPR technology at this time. There is an insufficient evidence base for the overall effectiveness of these systems. This fact, when considered in the context of significant privacy and information sharing concerns implicated by ALPR technology suggest that the City of Berkeley should not move forward with the implementation of this technology.

Effectiveness of ALPRs⁷

While the Council referral and BPD reporting has referenced concerns about increasing crime rates overall as a justification for ALPR adoption, with the exception of auto theft, it is unclear which specific crimes the technology is intended to address. Due to this lack of clarity, the presented analysis focuses on the effectiveness of ALPR technology in preventing and solving auto theft crimes.

Automated license plate readers (ALPRs) have garnered significant attention as a technology with potential implications for law enforcement activities and public safety. Several studies have examined the effectiveness of fixed ALPR systems in various contexts. According to a 2022 survey conducted by the International Association of Chiefs of Police (IACP), approximately 40% of participating law enforcement agencies reported using ALPR systems, while 52% had never utilized such technology. Among the agencies employing ALPR systems, the majority (86%) had fewer than 10 units available for deployment. Vehicle-mounted and stationary/fixed units were found to be the most

⁷Charts included in this section are sourced from the California Department of Justice Open Justice Portal. "Crimes and Clearances. Summary-CSV". Accessed on 7/2/23.

commonly utilized, while portable units mounted on non-vehicular objects were less prevalent. The duration of ALPR system implementation varied, with 74% of agencies using the technology for one to 10 years.

For agencies not currently utilizing ALPR systems, the primary reason cited was the cost of acquisition, particularly among smaller agencies. While the survey did not provide specific examples of ALPR system usage, a focus group identified investigations, crime prevention, and traffic/parking enforcement as the main purposes. The United States Department of Transportation's report titled "State of Knowledge and Practice for Using Automatic License Plate Readers for Traffic Safety Purposes" highlighted the predominant use of ALPR systems in reactive scenarios, such as responding to incidents involving stolen vehicles, hit-and-run accidents, specific criminal activities, and various alert notifications.

A case study conducted by the Vallejo Police Department assessed the effectiveness of ALPR technology. Randomly selected patrol cars equipped with ALPR systems, some with alerts activated and others deactivated, found that cars with ALPR technology had a 140% higher ability to detect stolen vehicles. However, the analysis also revealed a larger number of false positives, including lost or stolen license plates and duplicates, which may have led officers to overlook legitimate hits.

Comparing fixed ALPR systems (stationary units) to mobile systems, the study found that fixed systems were more efficient in making arrests. Officers using fixed systems positioned themselves downstream of fixed locations for hits, resulting in more arrests. The study also identified misreads in both mobile and fixed readers, accounting for 35% and 37% of hits, respectively. Notably, the use of fixed ALPR systems significantly increased the odds of identifying a stolen vehicle and the likelihood of arrests.

While research on the effectiveness of ALPR technology in specific scenarios remains limited, the IACP (2022) acknowledges that there is some evidence suggesting its effectiveness in preventing crime. In 2011, a Police Executive Research Forum (PERF)

paper⁸ analyzed an auto theft investigation unit in Mesa, Arizona, and showed that there was no reduction in motor theft. Lum and colleagues (2010) found⁹ that the use of LPRs in auto theft hot spots did not result in a reduction of crime generally or auto theft specifically, during the period measured. Further research and evaluation are necessary to fully understand the benefits and limitations of ALPR technologies in diverse law enforcement contexts.

Additionally, a review of the local landscape of ALPR outcomes does not provide automatic support for its effectiveness in crime reduction. In Bakersfield, CA, the use of ALPRs has been around since at least 2019. However, in 2021, the city had the highest rate of motor vehicle theft in the United States, according to the National Crime Information Center.

In Fremont, CA, the City installed ALPRs in 2017 and the vehicle theft rate fell the following year and the clearance rate rose. But by 2019, the theft rate began to rise again and the clearance rate fell. By 2022, five years after ALPRs had been adopted the theft rate hit an all-time high.

Similarly, in Vallejo, ALPRs were installed in 2015 and the rate has

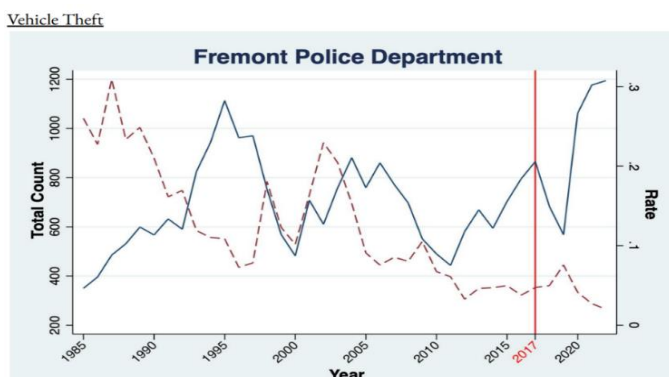


Figure 2. Fremont, CA Vehicle Thefts vs. Clearance Rate.

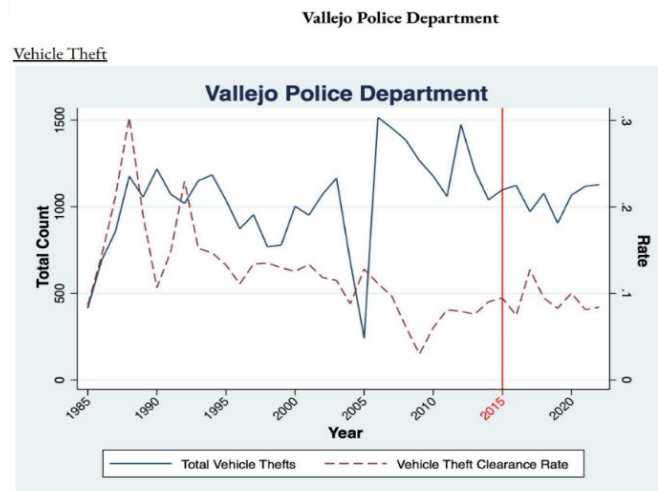


Figure 3. Vallejo, CA Vehicle Theft vs. Clearance Rate.

⁸ Wexler, Chuck. "How Are Innovations in Technology Transforming Policing?" Police Executive Research Forum, 2012. Critical Issues in Policing, https://www.policeforum.org/assets/docs/Critical_Issues_Series/how%20are%20innovations%20in%20technology%20transforming%20policing%202012.pdf.

⁹ Lum, C. Linda Merola, Julie Willis and Breanne Cave. (2010). License Plate Recognition Technologies for Law Enforcement: An Outcome and Legitimacy Evaluation. SPAWAR and National Institute of Justice. http://gemini.gmu.edu/cebcp/LPR_FINAL.pdf.

fluctuated ever since, but by 2022 auto theft was higher than when ALPRs were installed.

According to FBI statistics, Vacaville had a rate of 160 stolen vehicles per 100,000 population in 2019. This was a big drop from 2018, but this was before fixed ALPRs were installed (Vacaville City Council did approve 4 mobile ALPRs on patrol cars in May 2019¹⁰). 60 fixed ALPRs were approved and installed in late 2020. By 2022, the rate had climbed to 179 per 100,000. The number cited

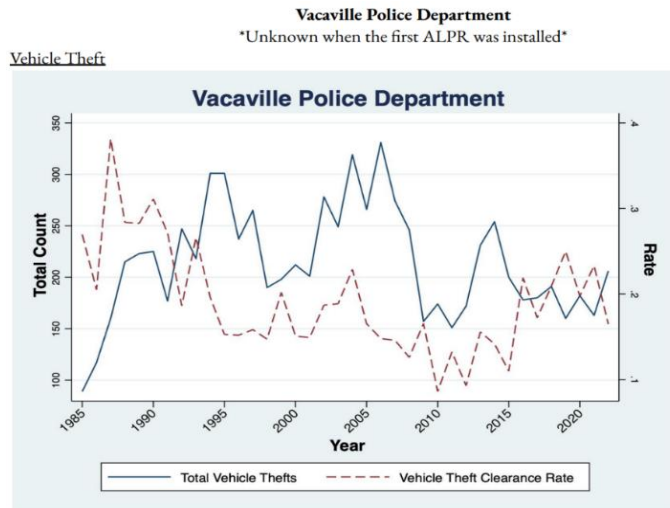


Figure 4. Vacaville, CA Vehicle Theft vs. Clearance Rate.

by FLOCK¹¹ systems of a 33% decrease in reported auto thefts is based on the rate from 2018 to 2022, but that drop occurred before the 60 ALPRs were installed.

It is important to recognize, however, that of the top 10 law enforcement agencies reporting¹² vehicle theft recoveries, all are using ALPR technology as a tool:

¹⁰ <https://www.ci.vacaville.ca.us/Home/Components/News/News/5824/?locale=en>

¹¹ https://www.contracosta.ca.gov/AgendaCenter/ViewFile/Agenda/_04122023-5173

¹² As reported in the California Highway Patrol 2021 California Vehicle Theft Facts sheet:

<https://www.chp.ca.gov/FieldSupportSectionSite/Documents/2021%20Vehicle%20Theft%20Fact%20Sheet%20.pdf>

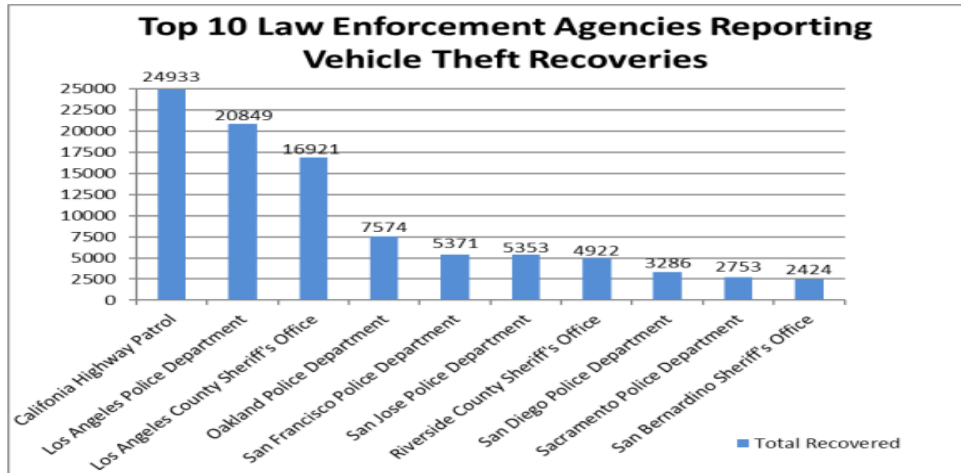


Figure 5. Top 10 Law Enforcement Agencies Reporting Vehicle Theft Recoveries. Source: CHP 2021 California Vehicle Theft Facts

Notwithstanding, these jurisdictions have their unique approaches to public safety that reflect their own geographical realities, politics, demographics, and values (among other factors) that must all be considered when considering what tools to adopt.

Lastly, it is important to emphasize that these tools are not infallible. According to the Northern California Regional Intelligence Center (NCRIC), the error rate for ALPRs is 10%, and in one randomized study in Vallejo in 2018, the misread rate of ALPRs was 37%. This can translate into traumatic experiences¹³ for community members who are exposed to unnecessary or misguided non-consensual police interactions (at times with guns drawn at them).

Privacy and Information Sharing Concerns

Automated License Plate Readers (ALPRs) have gained widespread use in law enforcement and surveillance efforts, raising significant concerns over privacy, data security, data sharing, and the potential erosion of constitutional freedoms. While ALPRs claim to aid in crime prevention and vehicle identification, the evidence indicates that only an extremely small percentage of scanned vehicles are linked to criminal activity—generally far below 1 percent¹⁴. The majority of the data collected is stored indefinitely,

¹³ See The Pitfalls of Law Enforcement License Plate Readers in California and Safeguards to Protect the Public <https://www.independent.org/publications/article.asp?id=14254>

¹⁴ <https://www.brennancenter.org/our-work/research-reports/automatic-license-plate-readers-legal-status-and-policy-recommendations>

forming detailed records of individuals' movements and private lives, far beyond the legitimate need for law enforcement purposes.

One of the most alarming aspects is the sensitive information that can be added to ALPR databases, including personal details and criminal justice information. The lack of adequate data security measures makes this data vulnerable to breaches and hacking, exposing individuals to serious privacy risks. In its 2020 report titled "Automated License Plate Readers," the California State Auditor emphasized that some local law enforcement agencies did not consistently implement practices that fully considered individuals' privacy when handling and retaining ALPR images and associated data¹⁵. The report identified two audited agencies that stored sensitive information, including names, addresses, dates of birth, and criminal charges, within their ALPR systems. These systems were hosted on a cloud storage platform, run by vendors that "lack[ed] contract guarantees that the vendor will appropriately protect the data."¹⁶

Data sharing practices among law enforcement agencies and with external entities present further challenges. The sharing of ALPR data is often not publicly disclosed or properly tracked, potentially leading to impermissible and unaccountable data sharing¹⁷. Instances of data sharing with immigration authorities, in violation of local privacy laws or sanctuary policies, demonstrate the potential for misuse and disregard for individual rights. Such is the case of the recent allegations against various

Considering the multitude of privacy and civil liberties concerns, it is evident that the current use of ALPRs requires significant reform. Stricter regulations and transparent policies should be established to limit data retention periods, ensure data security, and control data sharing practices. Additionally, it is crucial to prevent the integration of ALPR data with other surveillance technologies that undermine citizens' rights and liberties. As we navigate the evolving landscape of law enforcement and technology, striking a balance between safety and individual privacy must remain a top priority, ensuring that

¹⁵ <https://www.auditor.ca.gov/pdfs/reports/2019-118.pdf>

¹⁶ <https://www.auditor.ca.gov/reports/2019-118/summary.html>

¹⁷ <https://www.brennancenter.org/our-work/research-reports/automatic-license-plate-readers-legal-status-and-policy-recommendations>

the benefits of ALPRs do not come at the expense of personal freedoms and constitutional protections.

If the City of Berkeley Choose to Implement ALPR Technology, Should the City Council accept the draft policies as currently presented?

The Police Accountability Board has thoroughly examined the proposed policies and acquisition report and, based on the following reasons, does not endorse the work product being presented. That being said, the PAB notes that the latest version of the policies and acquisition report was presented to it for review on July 6th, 2023, just six days prior to its last regular meeting. As such, the observations below are preliminary. Should the City choose to go forward with ALPR technology the PAB would need additional time to thoroughly review all implementing documents. Further, as described below the 2020 State Audit report references both state and federal provisions that should govern the development of these policies (such as California Senate Bill 34¹⁸ and Criminal Justice Information Services (CJIS) Security Policy¹⁹); the report also recommend that the state DOJ develop templates for local jurisdictions to use. With all of these consideration in mind, while the PAB welcomes the opportunity to take an appropriate amount of time to review the implementing documents, it also requests that the City secure an expert consultant to work with BPD on their next iteration to ensure compliance with state and federal guidance.

The Berkeley Police Department's Proposed Acquisition Report for Fixed Automated License Plate Readers

As per Section 2.99.020(3) of the Berkeley Municipal Code, a "Surveillance Acquisition Report" is a written report that must be made publicly available before obtaining or considering the permanent use of specific surveillance technology, excluding cases of urgent circumstances. This report contains several elements, including a detailed description and functioning of the technology, its intended purposes, selection criteria for deployment locations, an evaluation of its potential impact on civil liberties and

¹⁸ http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0001-0050/sb_34_cfa_20150706_104259_asm_comm.html

¹⁹ https://www.fbi.gov/file-repository/cjis_security_policy_v5-9-1_20221001.pdf/view

rights (including any disproportionate effects on specific communities or groups), proposed measures to mitigate identified impacts, a comprehensive list of the data types and sources to be collected, analyzed, or processed, steps taken to ensure data security, an estimation of the financial costs associated with the technology (including initial purchase, ongoing expenses, and compliance with reporting and oversight requirements), an assessment of third-party reliance and data access, a summary and evaluation of alternative methods considered, and information about comparable government entities' experiences with the proposed technology, including any unanticipated costs or benefits encountered by those entities. Upon careful examination of the acquisition report presented by the BPD, the PAB has determined that the report does not meet the standards outlined in BMC 2.99. The concerns expressed by the PAB are as follows:

1. The surveillance report does not provide a list of potential installation locations.

Figure 6: 1305 APPENDIX A

C. LOCATION

BPD proposes to install 52 fixed ALPRs in the City of Berkeley. While the cameras are permanent installations, if found ineffective in the installed location, the Department can elect to move the camera to another location at nominal cost. It's preferred to leave cameras installed in locations for periods of minimally a year. Locations will be determined using crime data, known locations of ingress or egress into the City of Berkeley, and commonly known direction of travel after criminal acts based on information provided from investigators. The Department will balance the need to deploy the camera systems equitably across the City of Berkeley with the need to deploy the cameras in an effective manner. BPD will solicit input from the vendor for an effective deployment.

The PAB recognizes that the BPD is interested in soliciting input from the vendor for effective deployment and that it will balance "the need to deploy the camera systems equitably across the City of Berkeley," however, it is difficult to ascertain the impact that the placements of ALPRs around the city will have without seeing a preliminary location installation plan. The BPD only noted that they propose to install 52 fixed ALPRs and stated, "Locations will be determined using crime data, known locations of ingress or egress into the city, and commonly known direction of travel after criminal acts based on information provided from investigators." Because this data is already available, the PAB

believes that a list of potential placements could be reasonably produced to justify the need for 52 cameras.

If the acquisition is approved, and the specifications of the acquired systems can influence their placement location, the PAB believes that a list of potential placements needs to be reviewed and approved by the Council before implementation to be consistent with this provision of the surveillance technology ordinance.

According to BMC 2.99.020(3)(c), a surveillance acquisition report should include "the general location(s) it may be deployed and reasons for deployment." The current description is too vague and fails to meet the transparency requirements outlined in the statute. However, to provide a more specific and transparent description, the PAB believes that the BPD should, at the very least, specify the districts where the ALPRs would be deployed and provide justification based on preliminary evidence. Without this information, the PAB is concerned about the process used to determine the need for 52 cameras and whether the evidence-based policing framework was followed in developing this recommendation.

2. Concerns regarding the estimated cost.

Berkeley Municipal Code 2.99.020(3)(h) requires the inclusion of fiscal costs related to surveillance technology. This includes expenses such as initial purchase, ongoing personnel costs, and other associated costs, including those related to compliance with reporting and oversight requirements. The report should also mention any existing or potential sources of funding for the surveillance technology.

As per the BPD, since the City of Berkeley has not acquired the specific cameras yet, the costs can only be estimated. The BPD foresees that each camera's cost will range between \$2,500 and \$5,000, with installation expenses varying as well. For the proposed deployment of 52 cameras, the total cost of purchasing and installing them is expected to remain under \$250,000 initially. The yearly subscription cost may fluctuate, but it is projected to be in the range of \$125,000 to \$175,000²⁰.

²⁰ BPD Acquisition Report

It's worth noting that the expenses associated with implementing ALPR systems have shown considerable variation among different cities, even when dealing with the same vendor. By examining the reported or estimated expenditures of various cities, the average cost of installing such systems was found to be around \$465,786.65. On average, these installations involved 45 cameras, resulting in a per camera cost of over \$10,000, an amount that exceeds BPD's estimate. The cities of Berkeley, Piedmont, El Cerrito, Benicia, Alameda, and Concord were included in this analysis²¹.

BMC 2.99.020(3)(k) mandates a summary of experiences from comparable entities regarding the proposed technology, subject to availability. This summary should encompass any unforeseen financial or community-related costs and benefits encountered during the technology's implementation²². The acquisition report's general statement mentions positive experiences of similar entities with their programs, where no significant issues or unexpected expenses were reported.

However, the PAB expresses concern over the vague nature of the information provided and suggests the inclusion of more specific details. For instance, they request insights into anticipated expenditures beyond the initial quote, factors considered by these agencies while selecting vendors, and the specific challenges they faced during program implementation. Such comprehensive information would be highly valuable for other agencies contemplating similar technology projects.

3. Impact & Mitigation Metrics

In their presentation on June 20th, the BPD mentioned that the ALPRs, if approved by the Council, would undergo a two-year trial period. However, they did not offer any further details on how the performance of the ALPRs would be assessed. The PAB believes that it is of utmost importance to have a transparent implementation plan that includes clearly defined evaluation metrics. In the context of law enforcement and crime, several metrics can be used to determine the effectiveness of ALPR systems.

²¹ ODPAs Memo to the PAB titled "ALPR-Supplementary Summary Analysis"

²² BMC 2.99.020(3)(k)

These metrics help evaluate the effectiveness of ALPR technology in assisting law enforcement agencies in their efforts to prevent and solve crimes. Here are some common metrics associated with ALPR use in law enforcement that should be considered by the BPD:

1. **Number of Hits:** This metric measures the total number of matches or "hits" generated by the ALPR system against a database of wanted or flagged vehicles. It indicates the system's ability to identify vehicles of interest.
2. **Hit Rate:** The hit rate represents the percentage of scanned license plates that match against a database of wanted or flagged vehicles. It demonstrates the effectiveness of the ALPR system in identifying potentially relevant vehicles.
3. **Hit Quality:** Hit quality refers to the accuracy and reliability of the matches generated by the ALPR system. It assesses whether the matches provided by the system are indeed vehicles of interest or if there are false positives or incorrect identifications.
4. **Arrests or Apprehensions:** This metric measures the number of arrests or apprehensions made as a result of ALPR-generated hits. It indicates the direct impact of ALPR technology in assisting law enforcement in apprehending individuals associated with criminal activities.
5. **Recovery of Stolen Vehicles:** ALPR systems can be highly effective in identifying stolen vehicles. This metric measures the number of stolen vehicles recovered as a result of ALPR hits, demonstrating the system's contribution to recovering stolen property and reducing vehicle theft.
6. **Time to Locate:** Time to locate measures how quickly law enforcement officers can locate a vehicle of interest based on ALPR-generated hits. It assesses the efficiency of ALPR systems in providing real-time or near real-time information to aid in operational decision-making.
7. **Case Clearance Rates:** Case clearance rates measure the percentage of criminal cases that are solved or cleared with the assistance of ALPR technology. It reflects the impact of ALPR systems in enhancing investigative capabilities and improving the overall clearance rates of criminal cases.

It is crucial to recognize that the success of ALPR systems in law enforcement hinges on several factors, such as data quality, database accuracy, system integration, and operational procedures. These aspects play a vital role in assessing the effectiveness and results of ALPR implementation, facilitating the ongoing enhancement and streamlining of law enforcement approaches. Gathering this information will also fulfill the criteria of the Annual Surveillance Technology Report mandated for the BPD, particularly under BMC Sections 2.99.020(2)(d) and 2.99.020(2)(f).

The Berkeley Police Department's Proposed Policies for Fixed Automated License Plate Readers

In reviewing these policies, the PAB has considered the definition of “surveillance use policy” and “surveillance acquisition report” as defined by BMC 2.99.020(3)-(4). Additionally, the PAB has taken into consideration Section 1798.90.51 of the California Civil Code, which outlines the responsibilities of ALPR operators. This section establishes the essential requirements that operators must adhere to protect information and uphold privacy rights. These requirements encompass the implementation of robust security procedures and safeguards to prevent unauthorized access, destruction, use, modification, or disclosure of information. Additionally, operators must develop and enforce a comprehensive usage and privacy policy that respects the privacy and civil liberties of individuals. The following are the minimum provisions that must be included in this policy per state law:

- “The authorized purposes for using the ALPR system and collecting ALPR information” (California Civil Code §1798.90.51(b)(2)(A)).
- “A description of the job title or other designation of the employees and independent contractors who are authorized to use or access the ALPR system, or to collect ALPR information. The policy shall identify the training requirements necessary for those authorized employees and independent contractors” (California Civil Code §1798.90.51(b)(2)(B)).
- “A description of how the ALPR system will be monitored to ensure the security of the information and compliance with applicable privacy laws” (California Civil Code §1798.90.51(b)(2)(C))

- “The purposes of, process for, and restrictions on, the sale, sharing, or transfer of ALPR information to other persons” (California Civil Code §1798.90.51(b)(2)(D)).
- “The title of the official custodian, or owner, of the ALPR system responsible for implementing this section” (California Civil Code §1798.90.51(b)(2)(E)).
- “A description of the reasonable measures that will be used to ensure the accuracy of ALPR information and correct data errors” (California Civil Code §1798.90.51(b)(2)(F)).
- “The length of time ALPR information will be retained, and the process the ALPR operator will utilize to determine if and when to destroy retained ALPR information” (California Civil Code §1798.90.51(b)(2)(G))

This section was added to the law in 2015 and became effective on January 1, 2016.

Per local code and state law, the Police Advisory Board (PAB) has thoroughly examined the presented acquisition report and policies. The following section highlights the concerns raised by the PAB regarding each policy and explains the reasons for the board's objection to these policies. The PAB's review aims to ensure that the implementation of surveillance technology aligns with community interests, civil liberties, and legal requirements. By scrutinizing the policies, the PAB seeks to address potential issues and advocate for necessary revisions that uphold transparency, privacy, and accountability in surveillance practices should the City Council decide to proceed with the acquisition.

BPD Policy 422 “Fixed Automated License Plate Readers (ALPRs)” and BPD 1305 “Surveillance Use Policy – Fixed ALPRs”

Drafting Improvements:

We have identified several areas in the current drafts of the ALPR acquisition report and policies that require improvements. These issues need to be addressed to ensure clarity, accuracy, and alignment with relevant regulations and community expectations.

Limiting Use to California Law Enforcement Agencies:

It is essential to consistently state throughout the documents that the use of ALPR data is strictly limited to California law enforcement agencies. This clarification is

necessary to avoid any ambiguity or potential misinterpretation regarding the scope of data access and sharing.

Addressing Data Sharing with Specific Entities:

To address concerns raised by the community, explicit statements should be included to confirm that the ALPR data will not be shared with certain entities. Specifically, it should be clearly stated that the data will not be shared with Immigration and Customs Enforcement (ICE) or with states that have enacted restrictions on abortion or gender-affirming care. By including these statements, we can provide reassurance to the public and demonstrate our commitment to protecting individual privacy and upholding our community's values.

Use of "Shall" and Drafting Errors:

In reviewing the drafts, we have observed inconsistencies in the use of "shall" and various drafting errors that should be rectified. To enhance the clarity and enforceability of the policies, it is important to consistently use "shall" (as opposed to "may") in sections related to the impermissible use of the ALPR system or data. This change will create a stronger and more definitive language that leaves no room for ambiguity.

Additionally, we have identified several drafting errors and typographical mistakes throughout the documents. These errors may result in confusion or misinterpretation by readers, and therefore, it is crucial to correct them. By addressing these issues, we can ensure that the drafts are of the highest quality, maintain a professional appearance, and uphold the integrity of our policy-making process.

Exploring Alternatives to Automated License Plate Readers

The alternatives section of the surveillance acquisition report for ALPRs presented by the BPD lacks a comprehensive exploration of alternative methods to achieve their policing outcomes. According to the guidance from the City of Berkeley Surveillance Technology ordinance, it is crucial to consider viable alternatives, whether they involve the use of new technology or not, before proposing the acquisition of surveillance technology.

The report merely mentions the deployment of additional police resources as an alternative but fails to provide a thorough assessment of this option. It states that hiring

and training additional police officers would be difficult and costly compared to adding technology. However, this superficial analysis overlooks the potential benefits and effectiveness of alternative approaches. In light of the documentation made in the Remaining Public Safety report²³, alternatives to surveillance should not be overlooked. A central theme in the listening sessions was that “Public Safety” should be conceptualized as “Having Resources and Support to Meet Basic Human Needs.” In the report, one of the community-based service providers indicated that ways to make Berkeley safer should not be, “rooted in police surveillance but rather rooted in resources and access to them.” (pg. 219)

To address this shortcoming, the Berkeley Police Department should consider alternative methods that go beyond the scope of technology. One recommendation for the department is to explore evidence-based crime interventions, as promoted by the George Mason University Center for Evidence-Based Crime Policy Matrix²⁴. This resource provides examples of interventions that have been proven effective in reducing crime rates and enhancing community safety.

Locally, one alternative to consider is Vallejo's 2019²⁵ problem-oriented and evidence-based policing strategy. In that project, the VPD used data analysis and targeted non-ALPR surveillance methods to combat motor vehicle theft. As outlined in their report, the strategies used by Vallejo included the presence of crime awareness flyers & electronic billboards used to communicate crime awareness to the public, unoccupied police cars, surveillance, social/local media postings, and increased holiday patrol. There are of course limitations to any crime prevention strategy as crime has both temporal and spatial elements (among many others) to consider, but the idea is that crime prevention/deterrence can be achieved through other alternatives (beyond surveillance technologies) through the application of data analyses.

Furthermore, the Berkeley Police Department has demonstrated a commitment to evidence-based policing through its traffic safety initiative, which can serve as a clear

²³ Remaining Public Safety in Berkeley: Final Report and Implementation Plan

https://berkeleyca.gov/sites/default/files/documents/BerkeleyReport_030722.pdf

²⁴ <https://cebcp.org/evidence-based-policing/the-matrix/>

²⁵ Potts, L. J. (2019). A Problem Oriented and Evidence-Based Policing Project to Combat Motor Vehicle Theft-The Evidence of Intervention in Vallejo, California.

example of employing alternative methods. The BPD Transparency Hub's Traffic Safety page allows community members to submit traffic safety concerns to the Traffic Bureau, which indicates a willingness to engage with the public and address specific issues. This approach aligns with research by Factor (2019)²⁶ that emphasizes the positive impact of public participation processes in addressing crime-related problems in the community. ArcGIS has extensive data analysis tools that the department can and should continue to explore to produce better crime prevention/reduction outcomes.

Considering these factors, the alternatives section should have highlighted the importance of exploring alternative methods beyond technology acquisition. By incorporating evidence-based policing strategies and engaging with the community, the BPD could identify tailored solutions to address specific concerns and potentially reduce the need for surveillance technology such as ALPRs. This approach would not only align with the City of Berkeley's commitment to accountability and transparency but also promote a more holistic and community-oriented approach to policing.

PAB Recommendations

The Police Accountability Board presents the following recommendations:

1. City Council should reject the acquisition of fixed ALPRs in the City of Berkeley.
2. If the City Council decides to proceed, the following should be considered:
 - i. The Acquisition Report does not adequately make an evidence-based case for addressing the specific crime problems it has noted in the City of Berkeley.
 - ii. Deferment of Vote will allow additional time to address concerns:
 - i. Given the aforementioned concerns and the significant omissions present in the current drafts, we strongly recommend deferring a vote on the proposed ALPR acquisition report and policies. It is essential to take the time to address these concerns, as well as those expressed by the public during the community input session. By deferring the vote, we can ensure that the policies are thoroughly

²⁶ Factor, R. (2019). A quasi-experiment testing a public participation process for designing and implementing an enforcement program among minorities. *Journal of Experimental Criminology*, 15, 77-86.

reviewed, revised, and aligned with our community's values and expectations.

- ii. The hasty drafting and the presence of significant omissions underscore the need for careful consideration and further refinement of the drafts. Our goal is to develop policies that are clear, comprehensive, and in line with legal requirements and community aspirations. By addressing the identified issues, we can strengthen the documents and ensure that they effectively govern the use of ALPR technology within our jurisdiction.
- iii. Securing a consultant to ensure compliance with state and federal guidance.