



Office of the City Manager

ACTION CALENDAR

November 30, 2021

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Jennifer Louis, Interim Chief of Police  
LaTanya Bellow, Interim Deputy City Manager

Subject: Resolution Accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code

RECOMMENDATION

Adopt a Resolution accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code.

FISCAL IMPACTS OF RECOMMENDATION

There are no fiscal impacts associated with adopting the attached resolution.

CURRENT SITUATION AND ITS EFFECTS

On March 27, 2018, the City Council adopted Ordinance 7,592-N.S., adding Chapter 2.99 to the Berkeley Municipal Code, which is also known as the Surveillance Technology Use and Community Safety Ordinance (“Ordinance”). The purpose of the Ordinance is to provide transparency surrounding the use of surveillance technology, as defined by Section 2.99.020 in the Ordinance, and to ensure that decisions surrounding the acquisition and use of surveillance technology consider the impacts that such technology may have on civil rights and civil liberties. Further, the Ordinance requires that the City evaluate all costs associated with the acquisition of surveillance technology and regularly report on their use.

The Ordinance imposes various reporting requirements on the City Manager and staff. The purpose of this staff report and attached resolution is to satisfy the annual reporting requirement as outlined in Section 2.99.070.

One of the reporting categories of the surveillance technology use is whether complaints have been received by the community about the various technologies. To date Berkeley Police Department Internal Affairs Bureau (IAB) has not received any external personnel complaints surrounding the use of Automatic License Plate Readers, GPS Trackers, or Body Worn Cameras. External complaints from community members

can be made in writing, via email, in person or via telephone. Complaints can be received with direct communication to Internal Affairs from the complainant and/or be received by any member of the Department and then forwarded through the chain of command. If a community member initiates a complaint against a subject employee and during the investigation it is determined the subject employee violated policy regarding the misuse of technology, an additional complaint is initiated by the Chief of Police.

Community members also have the right to initiate complaints against employees of BPD by reporting directly to the Police Accountability Board (PAB). The Director of Police Accountability notifies the Chief of Police when an investigation into a complaint is initiated by the PAB, which would prompt a parallel IAB investigation.

Attached to this staff report are Surveillance Technology Reports for Automatic License Plater Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project.

#### BACKGROUND

On March 27, 2018, the City Council adopted Ordinance 7,592-N.S., adding Chapter 2.99 to the Berkeley Municipal Code, which is also known as the Surveillance Technology Use and Community Safety Ordinance. Section 2.99.070 of the Ordinance requires that the City Manager must submit to the City Council a Surveillance Technology Report as defined by Section 2.99.020(2) of the Ordinance at the first regular City Council meeting in November.

For each of the four technologies, the Surveillance Technology Reports were prepared to satisfy the specific, section-by-section requirements of the Ordinance, and are attached to this report.

The Surveillance Technology Use Policy for ALPR technology is still outstanding due Council questions about policy language, scheduling and directed focus during COVID-19. This item will be returned to the Council agenda in early 2022.

#### ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

There are no identifiable environmental effects or opportunities associated with the content of this report.

#### RATIONALE FOR RECOMMENDATION

City Council is being requested to adopt the attached resolution for the City to be in compliance with the Ordinance.

#### ALTERNATIVE ACTIONS CONSIDERED

City Council could decide not to adopt the resolution.

CONTACT PERSON

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ATTACHMENTS

1. Resolution
  
2. Body Worn Cameras
  - a) Surveillance Technology Report: Body Worn Cameras
  - b) Retention Schedule
  
3. Global Positioning System (GPS) Tracking Devices  
Surveillance Technology Report
  
4. Automated License Plate Readers  
Surveillance Technology Report: Automated License Plate Readers
  
5. Street Level Imagery Project  
Surveillance Technology Report: Street Level Imagery Project

RESOLUTION NO. ##,###-N.S.

A RESOLUTION ACCEPTING THE SURVEILLANCE TECHNOLOGY REPORT FOR AUTOMATIC LICENSE PLATE READERS, GPS TRACKERS, BODY WORN CAMERAS, AND THE STREET LEVEL IMAGERY PROJECT

WHEREAS, on March 27, 2018, the City Council adopted Ordinance 7,592-N.S., which is known as the Surveillance Technology Use and Community Safety Ordinance (“Ordinance”); and

WHEREAS, Section 2.99.070 of the Ordinance requires that the City Manager must submit to the City Council a Surveillance Technology Report as defined by Section 2.99.020(2) of the Ordinance at the first regular City Council meeting in November; and

WHEREAS, the Surveillance Technology Reports satisfy the requirements of the Ordinance.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Council hereby accepts the Surveillance Technology Reports for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project.

**Surveillance Technology Report: Body Worn Cameras**

**October 1, 2020 – Sept. 30, 2021**

<p>Description</p>	<p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Body Worn Cameras are used to capture video recordings of contacts between department personnel and the public, to provide an objective record of these events. These recording are used in support of criminal prosecutions, to limit civil liability, increase transparency and enhance professionalism and accountability in the delivery of police services to the community. Body Worn Camera (BWC) files are shared with the Alameda County District Attorney’s office in support of prosecution for crime, and may be shared with other law enforcement agencies to support criminal investigations.</p> <p><b>Policy regarding activation of the Body Worn Camera BPD Policy 425.7</b></p> <p>Members shall activate the BWC as required by this policy in (a)-(f) below, and may activate the BWC at any time the member believes it would be appropriate or valuable to record an incident within the limits of privacy described herein.</p> <p>The BWC shall be activated in any of the following situations:</p> <ul style="list-style-type: none"> <li>(a) All in-person enforcement and investigative contacts including pedestrian stops and field interview (FI) situations.</li> <li>(b) Traffic stops including, but not limited to, traffic violations, stranded motorist assistance and all crime interdiction stops.</li> <li>(c) Self-initiated field contacts in which a member would normally notify the Communications Center.</li> <li>(d) Any search activity, including the service of search or arrest warrants; probation, parole, or consent searches where the member is seeking evidence of an offense, or conducting a safety sweep or community caretaking sweep of the premises. Once a location has been secured and the member is not interacting with detainees or arrestees, the member may mute their BWC when conducting a search for evidence.</li> <li>(e) Any other contact that the member determines has become adversarial after the initial contact in a situation where the member would not otherwise activate BWC recording.</li> <li>(f) Transporting any detained or arrested person and where a member facilitates entry into or out of a vehicle, or any time the member expects to have physical contact with that person.</li> </ul> <p><b>What data is captured by this technology:</b></p> <p>BWC use is limited to enforcement and investigative activities involving members of the public. The BWC recordings will capture video and audio evidence for use in criminal investigations, administrative reviews, training, civil litigation, and other proceedings protected by confidentiality laws and department policy. Improper use or release of BWC</p>
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recordings may compromise ongoing criminal and administrative investigations or violate the privacy rights of those recorded and is prohibited.

**How the data is stored:**

BWC videos are stored on a secure server. All BWC data will be uploaded and stored on Axon Cloud Services, Evidence.com. Axon complies with the EU-U.S. Privacy Shield Framework and the Swiss-U.S. Privacy Shield Framework as set forth by the U.S. Department of Commerce regarding the collection, use, and retention of personal information transferred from the European Union and Switzerland to the United States (collectively, "Privacy Shield"). Axon has certified to the U.S. Department of Commerce that it adheres to the Privacy Shield Principles.

**Retention period of data:**

See attached retention schedule.

Summary of Body Worn Camera Videos Uploaded Oct. 1, 2020 to Sept. 30, 2021:

Total Number of Videos	62,283
Total Hours of Videos	16,310
Total GB of BWC Videos	29,017

Summary of Digital Evidence Uploaded, Oct. 1, 2020 to Sept. 30, 2021:

Type	File Count	Size (GBs)
Audio	1,150	11.72
Document	737	2.38
Image	67,672	331.36
Other	1,292	157.71
Video*	67,865	30,086.75
<b>Total</b>	<b>138,716</b>	<b>30,589.92</b>

\* Includes all uploaded BWC videos and all other videos booked into the evidence management system. Other videos include iPhone videos uploaded, security camera video, copies of BWC videos (for redaction, etc.), and any other videos.

<p><b>Geographic Deployment</b></p>	<p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>Body Worn Cameras are worn by all BPD uniformed officers city-wide at all times; BWCs are not deployed based on geographic considerations.</p>
<p><b>Complaints</b></p>	<p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p> <p>There have been no complaints about the deployment and use of Body Worn Cameras.</p>
<p><b>Audits and Violations</b></p>	<p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p>

	<p>File meta-data are routinely reviewed by our BWC manager, to ensure required metadata fields are completed. There have been no complaints with regards to violations of the Surveillance Use Policy.</p>
Data Breaches	<p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There have been no known data breaches or other unauthorized access to BWC data.</p>
Effectiveness	<p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>Body Worn Cameras have proven effective in supporting criminal prosecutions, as video footage is available for all criminal prosecutions. Body Worn Cameras have been effective for training purposes, as footage can be reviewed in incident de-briefs. Body Worn Cameras have been extremely effective in support of Internal Affairs investigations and Use of Force Review.</p>
Costs	<p>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</p> <p>The annual cost for the Body Worn Cameras, including cameras, replacement cameras, software, and Axon's secure digital evidence management system is approximately \$204,000 per year over a five-year, \$1,218,000 contract. There is one full-time employee assigned to the BWC program, an Applications Programmer Analyst II, at a cost of \$168,940 per year, including benefits.</p>

NAME	RETENTION DURATION
Uncategorized	Until manually deleted
187 / Felony Sex Assault	Until manually deleted
Civil / City / Non-Evidence	1 year
Collision	2 years
Consent / Aid	108 weeks
Detention / Warrant Only	108 weeks
Felony Evidence	5 years
Litigation	Until manually deleted
Misdemeanor Evidence	2 years
Officer Injury	Until manually deleted
OIS / Critical Incident	Until manually deleted
Pending Review	Until manually deleted
Personnel / VSA	3 years
Personnel Complaint	Until manually deleted
Traffic Stop	108 weeks
Training	60 days
Use of Force	108 weeks
z_Saved	Until manually deleted



## Surveillance Technology Report: Global Positioning System Tracking Devices

October 1, 2019 – Sept. 30, 2020

Description	<p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Global Positioning System Trackers are used to track the movements of vehicles, bicycles, other items, and/or individuals.</p> <p><b>What data is captured by this technology:</b> A GPS Tracker data record consists of date, time, latitude, longitude, map address, and tracker identification label. The data does not contain any images, names of subjects, vehicle information or other identifying information on individuals.</p> <p><b>How the data is stored:</b> The data from the GPS tracker is encrypted by the vendor. The data is only accessible through a secure website to BPD personnel who have been granted security access.</p> <p><b>Retention period of data:</b> Tracker data received from the vendor shall be kept in accordance with applicable laws, BPD policies that do not conflict with applicable law or court order, and/or as specified in a search warrant.</p> <p>For the date range of 10-01-19 through 09-30-20 the Global Positioning System (GPS) “Electronic Stake Out” (ESO) devices were deployed on “bait” bicycles 52 times, resulting in 34 arrests, 4 eluded capture, 1 person was detained and not arrested, and in 13 deployments the bicycle was not stolen. This program was suspended in mid-March due to the COVID-19 pandemic.</p> <p>GPS “Slap-N-Track” (SNT) devices were used in three separate investigations during this reporting period:</p> <ol style="list-style-type: none"> <li>(1) An investigation of an individual for Sexual Exploitation, Child Pornography, and Distribution of Child Pornography. This suspect currently has a Federal warrant.</li> <li>(2) An investigation of a serial kidnap rape suspect. The suspect was arrested and charged.</li> <li>(3) An investigation into multiple suspects involved in a “Rolex” robbery series that involved the cities of Berkeley, Piedmont, and Orinda. Two devices were used on two different suspect vehicles during this investigation. Four suspects from the above cases were arrested and charged for their involvement in these robberies.</li> </ol>
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	Data may be shared with the District Attorney's Office for use as evidence to aid in prosecution, in accordance with laws governing evidence; other law enforcement personnel as a part of an active criminal investigation; and other third parties, pursuant to a court order.
Geographic Deployment	<p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>GPS ESO-equipped bikes were deployed primarily in commercial districts across the city where bikes are frequently stolen.</p> <p>GPS SNT devices are deployed with judicial pre-approval, based on suspect location, rather than geographical consideration.</p>
Complaints	<p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p> <p>There were no complaints made regarding GPS Trackers.</p>
Audits and Violations	<p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p> <p>There were no audits and no known violations relating to GPS Trackers.</p>
Data Breaches	<p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There were no known data breaches relating to GPS Trackers.</p>
Effectiveness	<p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>GPS Trackers continue to be very effective in apprehending bicycle thieves, many of whom are repeat offenders who've committed not only bike thefts, but other crimes as well, such as burglaries, auto burglaries, and vehicle thefts. SNT trackers are effective in that they provide invaluable information on suspect vehicle location during the investigation of complex cases where suspects may be moving around the Bay Area and beyond.</p> <p>GPS Trackers greatly reduce costs associated with surveillance operations. A bike may be left for days. Surveillance operations generally involve four or more officers for the entire duration of an operation. A moving surveillance is extremely resource-intensive, requiring multiple officers in multiple vehicles for extended periods of time. Using both types of GPS trackers eliminates the need for officers' immediate presence until officers are ready to apprehend the suspect(s).</p> <p>The program was suspended in mid-March due to the COVID-19 pandemic. This program will likely resume once the pre-COVID bail schedule is re-established.</p>
Costs	Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.

The annual cost for the GPS Trackers' data service is \$1,920. Further information regarding costs is contained in Policy 1301a, the Surveillance Acquisition Report.

There are staff time costs associated with preparing and placing SNT trackers. The investigator must prepare a search warrant and obtain a judge's approval, and a small number of officers must place the tracker on the suspect's car. The total number of hours is a fraction of the time it would take to do a full surveillance operation involving numerous officers.

There are staff time costs associated with preparing ESO trackers and placing ESO tracker-equipped bikes for bait bike operations. These are on the order of two-four hours per operation. The total number of hours is extremely small, given the large number of operations, and resulting arrests.

## Surveillance Technology Report: Automated License Plate Readers

October 1, 2019 – Sept. 30, 2020

Description	<p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Automated License Plate Readers (ALPRs) are used by Parking Enforcement Bureau vehicles for time zone parking and scofflaw enforcement. The City's Transportation Division uses anonymized information for purposes of supporting the City's Go Berkeley parking management program. ALPR use replaced the practice of physically "chalking" tires, which is no longer allowed by the courts.</p> <p><b>What data is captured by this technology:</b> ALPR technology functions by automatically capturing an image of a vehicle's license plate, transforming that image into alphanumeric characters using optical character recognition software, and storing that information, along with relevant metadata (e.g. geo-location and temporal information, as well as data about the ALPR).</p> <p><b>How the data is stored:</b> The data is stored on a secure server by the vendor.</p> <p><b>Retention period of data:</b> Collected images and metadata of hits are stored no more than 365 days. Metadata of reads are not stored more than 30 days.</p> <p style="text-align: center;"><b>Summary of ALPR Time Zone Enforcement Data</b></p> <p style="text-align: center;">Read Data There was an average of 12,059 "Reads" per working day (Based on one month's data: 9/1/20/-9/30/20)</p> <p style="text-align: center;">Hit Data There were 44,068 "Hits" 14,945 "Enforced Hits" resulted in citation issuance. 2,569 "Not Enforced" valid, enforceable hits resulted in no citation issued, based on PEO discretion.</p> <p>26,554 Hits were not acted upon for a variety to reasons including but not limited to:</p> <ol style="list-style-type: none"> <li>1) Customer comes out to move a vehicle. PEO's are directed not to issue that citation.</li> <li>2) Officer gets to the dashboard and sees a permit not visible from a previous location.</li> <li>3) Officer does a vehicle evaluation and confirms that the vehicle moved from the hit location (e.g. across the street within GPS range).</li> <li>4) Stolen car.</li> <li>5) Similar Plates.</li> <li>6) 600-700 GIG cars- 100 revel scooters.</li> </ol>
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	<p>7) Officers leave their LPR “on” collecting time zone enforcement data, but leave the area being enforced to drive to another location on another assignment, such as a traffic post at a collision scene. These hits are not enforced.</p> <p>Genetec is the vendor for the ALPR Time Zone enforcement system. A “read” indicates the ALPR system successfully read a license plate. The information that is generated when a plate is viewed by the ALPR camera is the license plate number, state and geographical (GPS) location it was viewed. A “hit” indicates the ALPR system detected a possible violation, which prompts the Parking Enforcement Officer to further assess the vehicle. At “hit” is when the “read” information is recognized as a license plate that matches, or does not match an entry in a list such as permit list or the stolen vehicle “hot list”. In many cases, hits are “rejected” or “not enforced”, meaning no enforcement action is taken, because the Parking Enforcement Officer determines the vehicle has an appropriate placard or permit, or there is other information or assignment which precludes citation.</p> <p style="text-align: center;"><b>Summary of ALPR Booting Scofflaw Enforcement Data</b></p> <p style="text-align: center;">0 vehicles booted from 10/1/19-9/23/20.</p> <p>The Berkeley Police Department no longer maintains the ALPR Booting Scofflaw Enforcement Program. The contract to provide this service became cost prohibitive and the city opted not to renew the contract with the vendor. The city returned to having each PEO working a beat again become responsible for recognizing when a license plate has accumulated five or more unpaid parking tickets.</p> <p>All BPD ALPR data may only be shared with other law enforcement or prosecutorial agencies for official law enforcement purposes, or as otherwise permitted by law. All ALPR data is subject to the provisions of BPD Policy 415 - Immigration Law, and therefore may not be shared with federal immigration enforcement officials.</p>
<p><b>Geographic Deployment</b></p>	<p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>Only Parking Enforcement Vehicles are equipped with ALPRs. ALPRs are deployed based on areas where there are parking time restrictions. ALPRs are not deployed based on geographic considerations not related to parking and scofflaw enforcement.</p>
<p><b>Complaints</b></p>	<p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p> <p>There have been no complaints about to the deployment and use of Automated License Plate Readers.</p>
<p><b>Audits and Violations</b></p>	<p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p> <p>There have been no complaints of violations of the ALPR Surveillance Use Policy.</p>

<p>Data Breaches</p>	<p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There have been no known data breaches or other unauthorized access to Automated License Plate Reader data.</p>
<p>Effectiveness</p>	<p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>ALPRs have proven effective in parking enforcement for time zone enforcement; the prior utilization of manually chalking car tires for time zone enforcement has been disallowed by court decision.</p> <p>ALPRs have proven effective in supporting enforcement upon vehicles which have five or more unpaid citations. The ALPR's ability to read and check license plates while being driven greatly increases efficiency, allowing an operator to cover larger areas more quickly without having to stop except to confirm a hit.</p>
<p>Costs</p>	<p>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</p> <p>The annual system maintenance cost for Genetec is \$47,000. This cost is borne by the Transportation Division, which also purchased the ALPR units used in Time Zone Enforcement.</p> <p>Two new Genetec ALPR units were purchased during the period covered by this report. The two new units were purchased in order to equip the final two parking vehicles that did not have ALPR units attached to them.</p> <p>Genetec ALPR units are installed on 23 Parking Enforcement vehicles. Parking Enforcement personnel perform a variety of parking enforcement activities, and are not limited solely to time zone enforcement. Therefore, personnel costs specifically attributable to time zone enforcement are not tracked.</p>

## Surveillance Technology Report: Street Level Imagery Project

<p><b>Description</b></p>	<p><b>A description of all non-privileged and non-confidential information about the use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report will include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</b></p> <p>Street level imagery will be utilized exclusively by authorized City staff for infrastructure asset management and planning activities. The street level imagery of City infrastructure assets in the Public Right of Way that is provided to the City will not consist of information that is capable of being associated with any individual or group.</p>
<p><b>Geographic Deployment</b></p>	<p><b>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</b></p> <p>Street level imagery was collected by driving through the entire community over a three week period. It is accessible to the City through a proprietary third-party application, Street SmartTM.</p>
<p><b>Complaints</b></p>	<p><b>A summary of each complaint, if any, received by the City about the Surveillance Technology.</b></p> <p>There have been no complaints about the deployment and use of Street SmartTM.</p>
<p><b>Audits and Violations</b></p>	<p><b>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</b></p> <p>There have been no complaints with regards to violations of the Surveillance Use Policy.</p>
<p><b>Data Breaches</b></p>	<p><b>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</b></p> <p>There have been no known data breaches or other unauthorized access to Cyclomedia Street Level Imagery data.</p>





<p><b>Effectiveness</b></p>	<p><b>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</b></p> <p>Staff considered hiring contractors to use GPS in the field to create and update the infrastructure asset GIS data. This method is costly and time consuming. Cyclomedia’s unique and patented processing techniques allow positionally-accurate GIS data to be collected in a cost-effective way and over a shorter period of time than a “boots on the ground” GPS field survey.</p> <p>The Imagery is being used to extract the following Citywide Infrastructure assets to create accurate and current Geographic Information Systems (GIS) data inventories:</p> <ul style="list-style-type: none"> <li>• Bus pads / stops</li> <li>• Maintenance Access Holes</li> <li>• Pavement Striping</li> <li>• Curb paint color</li> <li>• Parking meters</li> <li>• Pedestrian Signal</li> <li>• Pavement marking</li> <li>• Storm drains</li> <li>• Signs</li> <li>• Street trees</li> <li>• Traffic lights</li> </ul> <p>The street level imagery captured is also being used to:</p> <p>Create a street sign GIS layer with condition assessment to support compliance with the Manual on Uniform Traffic Control Devices Code and provide an accurate inventory of City signs. The existing sign inventory is contained in a spreadsheet that does not have accurate location data.</p> <p>Create a curb color layer with condition assessment to indicate where there are red, yellow, blue, white and green colors. This is critical to support Public Safety.</p> <p>Create pavement striping and paint symbol layers to support Transportation Planning and Vision Zero.</p> <p><b><u>Benefits Projected:</u></b></p> <p>The data from the street level imagery is being integrated into the City’s work order and asset management system for planning activities and to document repair and maintenance.</p> <p>Planners can use the street level imagery provided to the City to take measurements remotely, such as sidewalk width and public right of way impacts at proposed development locations.</p> <p>City staff can use the street level imagery to plan the location of road markings for pedestrian crossings, bike lanes or other striping.</p>
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	<p>City staff can remotely take accurate measurements of infrastructure assets to adequately plan for repair and replacement.</p> <p>City staff can use the street level imagery to enhance community engagement. The street level imagery can be used to identify and depict the impact of development such as an intersection restriping plan in order to article before and after conditions.</p>			
<b>Costs</b>	<p><b>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</b></p>			
	<p>The total cost of the system is \$232,401 and is itemized below.</p>			
	<b>Year No.</b>	<b>Description</b>	<b>Cost</b>	<b>Notes</b>
	1	Licenses	\$48,000	Resolution No: 69,482-N.S. 30JUN20
	1	Professional Services for asset extraction	\$139,401	Resolution No: 69,482-N.S. 30JUN20
	2	Licenses and Support – One-Time	\$45,000	Pending Council approval after imagery and data extraction work is completed Licensing Costs included in IT Cost allocation
3	License and Support – Ongoing Annual Costs	\$3,000	Pending Council approval after imagery and data extraction work is completed Licensing Costs included in IT Cost allocation	
<b>Total Year 1-3</b>		<b>\$235,401</b>		