



Surveillance Use Policy

Trip Verification Technology

BART Planning & Development

PD-TVT-SUP-01

21 Day BART Board Notice – 10/3/2019

15 Day Public Notice – 10/9/2019

BART Board Meeting – 10/24/2019



Anticipated Surveillance Impact Report –Trip Verification Device

A. Purpose

This section should include: The purpose(s) that the surveillance technology is intended to advance.

The proposed Trip Verification Software (TVS), will be used by BART staff and authorized service providers to provide the transit-riding public with new features and benefits. Handheld Trip Verification Devices (TVDs) will be used to scan Clipper cards and Quick Response Code (QR) codes from BART apps to grant access to unique BART or partner incentives aimed at increasing transit ridership.

The TVS will allow BART to gain greater flexibility to initiate and manage transit rider incentive programs with major partners.

The initial pilot deployment of this technology is planned to be used to incentivize travelers to take public transit to the San Francisco International Airport (SFO). Travelers who use Clipper or the BART Apps to ride public transit to SFO will be entitled to use a priority lane (queue jump) through Airport security for ticketed airline passengers at one or more terminals, saving time at the airport. The pilot will be coordinated with SFO, San Francisco County Transportation Authority (SFCTA), SAMTRANS, and potentially one or more airlines. Any data collected will be protected and managed in accordance with BART's existing privacy protection measures for passenger and fare data and will not be shared or available to any third party except for authorized BART employees and service providers unless lawfully required to disclose by law or pursuant to a subpoena or court order. Where appropriate BART will require in its service agreements that authorized third-party service providers adhere to the Surveillance Use Policy.

SFO-hired staff at security checkpoints would use the TVD to scan Clipper cards and BART App QR/barcode/NFC tag to confirm and verify that the customer used public transit to get to the airport. The device will use the NFC reader on an "off the shelf" dedicated phone and an already-developed a prototype beta software that will confirm and verify that the last BART tag made was at the SFO BART station. It will utilize a camera to read the QR and barcode. The TVS and TVDs will also collect and store Clipper Serial Number as a unique identifier to authenticate BART incentives. The Clipper Serial Number is routinely collected by BART for all Clipper transactions involving fare gates. The Trip Verification technology will be designed to display a simple message qualifying participation in an incentive program and include a reporting mechanism to measure adoption.

If the pilot of this technology is successful, SFO would consider expanding it to other security checkpoints and/or BART could consider offering the technology to other major partner venues, including the Oakland International Airport.

The unique part of the TVD is its ability to modernize and extend BART's fare verification technology to areas beyond the traditional limits of BART stations. This technology has the potential to enable partnerships that can drive additional ridership such as those between airports, stadiums, hotels and other business – that share common relationships with BART., This technology will be designed to maintain the integrity of the District's incentive programs and gather structured metrics on how these incentives increase transit ridership.

B. Authorized Use

This section should include: The uses that are authorized, the rules and processes required prior to such use, and the uses that are prohibited.

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The Trip Verification Devices shall not be used in an unauthorized manner as identified in Section A above. The Authorized Uses of the app are:

- Allow BART staff and authorized service providers to use BART issued mobile devices, hereafter referred to as, "Trip Verification Devices", or "TVDs", running the BART Trip Verification Software (TVS), to determine if a transit rider's Clipper card or BART App was used in a manner that qualifies the rider for a program incentive.
- To measure incentive program participation and its relationship to ridership.

All other uses not referenced above shall be prohibited, except as defined in the District's Surveillance Technology Ordinance.

C. Data Collection

This section should include: The information that can be collected by the surveillance technology.

The Trip Verification Devices shall only be used by BART staff and authorized service providers.

The following data may be obtained through the TVS:

- Limited Clipper Card information (e.g. Serial Number, Entry//Exit, Timestamps)
- Incentive Qualification (Yes/No)

Any data collected by the TVDs must be used and handled pursuant to this policy. BART's collection and management of this data shall be collected and handled, consistent with the Clipper Program Privacy Policy which can be found here: <https://www.clippercard.com/clipperdirect/privacy.do>.

Data from the TVDs shall not be used for any unauthorized purposes (i.e. personal purposes or to surveil any particular individual or group unless pursuant to a warrant or a court order). Data shall not be used to intentionally violate anyone's right to privacy; and shall not be used to harass, intimidate, or discriminate against any individual or group.

D. Data Access

This section should include: The individuals (as a category) who can access or use the collected information, and the rules and processes required prior to access or use of the information.

- Users of TVDs shall not have the ability to see any Clipper data or perform any Clipper queries.
- Access to raw TVD data is limited to authorized BART employees and service providers pursuant to this policy.
- Data may be downloaded and released to a third party as required by law. See section H below.

E. Data Protection

This section should include: The safeguards that protect information from unauthorized access, including encryption and access control mechanisms.

The BART Office of the Chief Information Officer sets standards for BART data protection in an Information Security Procedure Manual that includes standards within ISO/IEC 27002, NIST, PCI-DSS and HIPAA.

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The Trip Verification Software will consist of databases and servers that interact through an Application Programming Interface (API) between systems in both BART secure on-premise datacenter(s) and secure cloud environments.

Access to the TVD Backend Enterprise Architecture is limited to the following:

- BART Database, Server & Application Administrators
- BART Cybersecurity Engineers
- BART Supervisor of Business Systems Applications
- BART Director of Technology over Web & Mobile
- BART Computer Systems Engineering

The TVD Backend Enterprise Architecture will be handled only by those that have been trained in its operation.

F. Data Retention

This section should include: The time period, if any, for which information collected by the surveillance technology will be routinely retained, the reason such retention is regularly deleted after that period lapses, and the specific conditions that must be met to retain information beyond that period.

Data generated from the TVD shall be stored in the BART Applications Backend Enterprise Architecture. Information may be retained for up to 4.5 years.

The data retention period aligns with the Metropolitan Transportation Commission's Clipper Policy for data retention. Data collected is to be used for historical analysis and transit use by BART personnel. Data is retained on a digital storage system with a set retention schedule which is automatically enforced by the same digital system.

G. Public Access

This section should include: How collected information can be requested by members of the public, including criminal defendants.

Requests for information under the California Public Records Act should be filed with the Office of the District Secretary. Email records@bart.gov. Phone (510) 464-6080, Fax (510) 464-6011. Mail Public Records Request c/o District Secretary BART 300 Lakeside Drive 23rd Floor Oakland, CA 94612.

H. Third Party Data Sharing

This section should include: If and how other BART District or non-BART District entities can access or use the information, including any required justification or legal standard necessary to do so and any obligations imposed on the recipient of the information.

Other than data subject to public release under the California Public Records Act, aggregated data may be shared with BART service providers pursuant to this policy. Summary data may be shared publicly.

Staff will adhere to the District's Safe Transit Policy.

I. Training

This section should include: A summary of the training required for any individual authorized to use the surveillance technology or to access information collected by the surveillance technology.

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Training for access and administration of the TVD Backend Enterprise Architecture will be provided by BART internal staff associated with custom application development, and where necessary related BART-authorized service providers. Training will be limited to staff assigned to the administration of the TVD.

J. Auditing and Oversight

This section should include: The mechanisms to ensure that the Surveillance Use Policy is followed, including internal personnel assigned to ensure compliance with the policy, internal recordkeeping of the use of the technology or access to information collected by the technology, technical measures to monitor for misuse, any independent person or entity with oversight authority.

Pursuant to the BART Chief Information Officer's Information Security Procedure Manual, the TVD Backend Enterprise Architecture will be subject to BART's cybersecurity controls, enterprise logging, administrator activity monitoring, and auditing as applicable.

As defined in the District's Surveillance Technology Ordinance, an annual accounting of this surveillance technology will be included in the District's "Surveillance Annual Report", in a public hearing on or before August 1, before the BART Board of Directors.

Surveillance Impact Report

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K. Information describing the proposed surveillance technology and how it generally works.

The proposed Trip Verification Software (TVS), will be used by BART staff and authorized service providers to provide the transit-riding public with new features and benefits. Handheld Trip Verification Devices (TVDs) will be used to scan Clipper cards and Quick Response (QR) codes from BART apps to grant access to unique BART or partner incentives aimed at increasing transit ridership.

The TVS will allow BART to gain greater flexibility to administer transit rider incentive programs with major partners.

The initial pilot deployment of this technology is planned to be used to incentivize travelers to take public transit to the San Francisco International Airport (SFO). Travelers who use Clipper or the BART to Airport App to ride public transit to SFO will be entitled to use a priority lane (queue jump) through security at one or more terminals, saving time at the airport. The pilot will be coordinated with SFO, San Francisco County Transportation Authority (SFCTA), SAMTRANS, and potentially one or more airlines. Any data collected will be protected and managed in accordance with BART's existing privacy protection measures for passenger and fare data and will not be shared or available to any third party except for authorized BART employees and service providers unless lawfully required to disclose by law or pursuant to a subpoena or court order. Where appropriate BART will require in its service agreements that authorized third-party service providers adhere to the Surveillance Use Policy.

SFO-hired staff at security checkpoints would use the TVD to scan Clipper cards and BART App QR/barcode/NFC tag to confirm and verify that the customer used public transit to get to the airport. The device will use the NFC reader on an "off the shelf" dedicated phone and an already-developed prototype beta software that will confirm and verify that the last BART tag made was at the SFO BART station. It will utilize a camera to read the QR and barcode. The TVS and TVDs will also collect and store Clipper Serial Numbers as a unique identifier to authenticate BART incentives. The Clipper Serial Number is routinely collected by BART for all Clipper transactions involving fare gates. The Trip Verification technology will be designed to display a simple message qualifying participation in an incentive program and include a reporting mechanism to measure adoption.

If the pilot is successful, SFO could consider expanding it to other security checkpoints and/or BART could consider offering the technology to other major partner venues, including the Oakland International Airport.

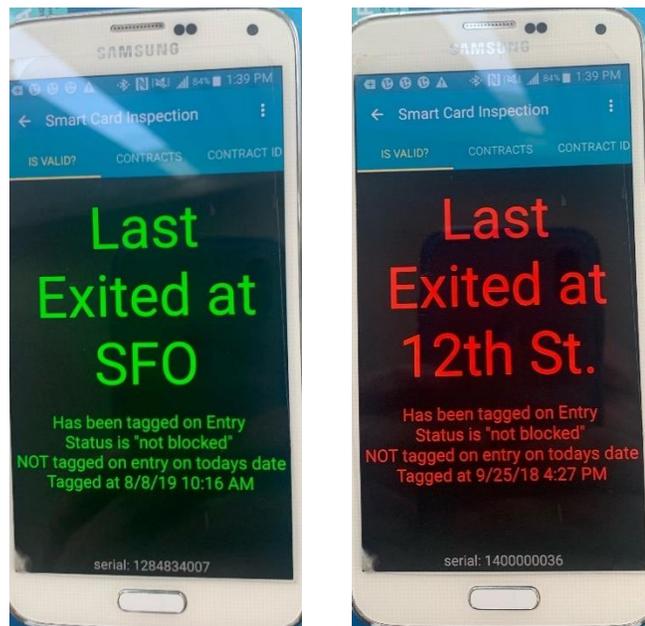
The unique part of the TVD is its ability to modernize and extend BART's fare verification technology to areas beyond the traditional limits of BART stations. This technology has the potential to enable partnerships that can drive additional ridership such as those between airports, stadium entrances, shopping centers, entertainment venues, hotels and other business – that share common relationships with BART. This technology will be designed to maintain the integrity of the District's incentive programs and gather structured metrics on how these incentives increase transit ridership.

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The Trip Verification Devices are intended to:

- Allow BART staff and authorized service providers to use BART issued mobile devices, hereafter referred to as, "Trip Verification Devices", or "TVDs", running the BART Trip Verification Software (TVS), to determine if a transit rider's Clipper card or Official BART to Airport App was used in a manner that qualifies the rider for a program incentive.
- To measure incentive program participation and its relationship to ridership.

Sample Images of Trip Verification Device:



All data use is subject to the "Surveillance Use Policy" for the Trip Verification Device, submitted with this "Surveillance Impact Report".

L. Information on the proposed purpose(s) for the surveillance technology.

The proposed Trip Verification Devices will be used for the following purposes:

- **Trip Verification**
 - Allow BART staff and authorized service providers to determine if a transit rider's Clipper card or BART to Airport App was used to exit a specific station within a certain period.
- To grant access to transit use incentives

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- Grant access to unique BART or partner incentives aimed at increasing transit ridership, such as the San Francisco International Airport (SFO) airport pilot program entitling transit riders to use a priority lane (queue jump).
- Allow BART to gain greater flexibility to initiate and manage transit rider incentive programs with major partners.
- **Measure incentive program participation**
 - To measure incentive program participation and its relationship to ridership.

M. If applicable, the general location(s), it may be deployed.

Initially, the TVDs would be deployed at the SFO Airport for an initial pilot with SFO, San Francisco County Transportation Authority (SFCTA), SAMTRANS, and potentially one or more airlines. If the pilot is successful, SFO would consider expanding it to other security checkpoints and/or BART could consider using the technology at other venues, including the Oakland International Airport, if they have an interest in partnering with the District.

N. Crime statistics for any location(s), if the equipment is used to deter or detect crime.

As approved in the Official BART APP OCIO-BMAARMTB-SUP-01 Approved by the BART Board on October 25, 2018, the BART Applications may be used to provide BART Operations employees and the BART Police Department with the ability to verify payment, troubleshoot rider payment issues, and conduct payment enforcement.

O. An assessment identifying any potential impact on privacy rights and discussing any plans to safeguard the rights of the public.

The Trip Verification Devices will be used by BART staff and authorized service providers only. The devices will collect limited Clipper Card information (e.g. Serial Number, Entry, Exit, Timestamps) and Incentive Qualification (Yes/No) for the sole purposes described above. This technology will not collect any new data that BART does not already collect through the use of Clipper fare media which is managed by the Metropolitan Transportation Commission (MTC). BART's collection and management of this data is handled, and will continue to be handled, consistent with the Clipper Program Privacy Policy which can be found here:

<https://www.clippercard.com/clipperdirect/privacy.do>.

Users of TVDs do not have the ability to see or query any data collected from TVDs.

The TVDs are subject to BART's Surveillance Technology Ordinance and Surveillance Use Policy PD-TVT-SUP-01 that has been publicly noticed and presented to the BART Board for approval.

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P. The fiscal costs for the surveillance technology, including initial purchase, personnel and other ongoing costs, and any current or potential sources of funding.

The Trip Verification Software (TVS) can be developed by simplifying and streamlining available software tools that are managed by BART’s Computer Systems Engineering group that is responsible for Fare Collection Engineering, and the existing handheld devices currently used by BART Station Agents. The following costs include development and operations and for the SFO pilot program.

Trip Verification Device Component	Budget	Fund	Ongoing Cost
Trip Verification Software Development	\$20,000	BART Funds	
Hardware (Android phones)	\$5,000	BART Funds	
Device management/maintenance	\$10,000	BART Funds	\$10,000
Office of the Chief Information Officer	\$5,000	BART Funds	
Total	\$40,000		\$10,000

The estimate does not include marketing costs, and that the District may seek grant funding and/or marketing partnerships to successfully promote incentive programs.

If the TVDs were to be used beyond the SFO pilot, BART would need to invest around \$40,000 in a server for BART Fare Collections Engineering to deploy interface with the smart phones to collect the data.

Q. Whether use or maintenance of the technology will require data gathered by the technology to be handled or stored by a third-party vendor on an ongoing basis.

No. Although the TVDs and use of the software will be shared with authorized service providers, the data collected will not be handled or stored by a third-party on an ongoing basis. Data generated from the TVD shall be stored in the BART Applications Backend Enterprise Architecture. Non-Personally Identifiable Information may be retained for up to 4.5 years.

Access to the Trip Verification Devices data is limited to BART staff and authorized service providers pursuant to the “Surveillance Use Policy” for the Trip Verification Devices.

R. A summary of alternative methods (whether involving the use of a new technology or not) considered before deciding to use the proposed surveillance technology, including the costs and

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benefits associated with each alternative and an explanation of the reasons why each alternative is inadequate or undesirable.

In developing the concept for the use of Trip Verification Devices for the SFO pilot program, BART staff looked at the following alternatives:

Cubic Hand-Held Fare Card Reader (HCR 4)

BART staff considered using the Cubic Hand-Held Fare Card Readers (HCR 4) that BART station agents and the BART Police Department currently use to verify fare payment of the people using the system today. While HCR 4 already have the capabilities to read Clipper cards, their use for the SFO pilot program and future incentive programs would have posed several problems, including:

- The cost of each device is around \$1600 compared to around \$200-\$300 for the NFC reader on an “off the shelf” dedicated phone (Android)
- There is a limited amount of HCR 4 readers currently available and they are currently being phased out by Cubic
- The detailed information displayed on HCR 4 would present PII concerns
- The information presented could not be altered
- The HCR 4 could not read QR codes from the Official BART to Airport App
- The HCR 4 could not provide the automated reporting necessary to determine program success

Issuing paper tickets

BART considered mirroring a similar priority line (queue jump) incentive program at Boston Logan Airport. There, riders who take the Boston Logan Airport Express bus from Back Bay to the Airport are given a paper ticket that they then present to the airport-hired staff at the security checkpoint. The option would have had lower upfront costs to develop; however, it poses multiple problems, including:

- BART is already in the process of phasing out paper media for payment. It would be counterintuitive to introduce a new paper verification.
- Station agents would have additional tasks to hand out paper tickets to those exiting the SFO BART station who would want to take advantage of the incentive program.
- Paper tickets would not enable an automated reporting mechanism to track usage and success of the program.
- There would be limited application for the pilot program to expand to develop other incentive programs

S. A summary of the experience, if any is known, other law enforcement entities have had with the proposed technology, including information about the effectiveness, any known adverse information about the technology such as unanticipated costs, failures, civil rights or civil liberties issues.

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BART is not aware of any known adverse information about the anticipated technology such as unanticipated costs, failures, civil rights or civil liberties issues associated with the use outlined in the Trip Verification Devices Surveillance Use Policy and this Surveillance Impact Report.