

**NYC Department of Correction  
NYC Board of Correction Sexual Abuse and Sexual Harassment Minimum  
Standards 5-04 (g) Video Surveillance Cameras on Transport Vehicles Pilot Report – March 1, 2019**

**I. Overview**

Pursuant to §5-04(g) of the New York City Board of Correction’s Sexual Abuse and Sexual Harassment Minimum Standards, the New York City Department of Correction instituted a one-year pilot program to install video surveillance cameras in Department vehicles used to transport inmates. In June 2017, the Department installed five (5) body cameras in five (5) different buses. On September 1, 2018, the Department extended the initial pilot to compare the benefits and challenges of the body cameras against a full camera coverage solution (Genetec). During the comparative pilot period additional body cameras and Genetec were installed and evaluated on a total of fifteen (15) buses. The comparative pilot period lasted from September 1, 2018 – March 1, 2019.

The buses chosen for the pilot are the type most commonly used to transport inmates. This type of bus is divided into two seating areas. In the front compartment of the bus, there is seating for the driver and recorder, as well as two (2) single occupancy pens, and three (3) double occupancy pens. Pens are utilized to transport passengers with the highest propensity for violence, as well as those most vulnerable to victimization. A gated door separates the back and front portion of the bus. In the back portion of the bus, there is an open seating area with space for up to 20 passengers. This portion of the bus is most often utilized to transport passengers coming from General Population housing.

With the support of the camera management system, Genetec, and a third party vendor, one (1) bus was outfitted with a multi-camera solution. This solution offered full coverage both inside and outside of the bus. Another fourteen (14) buses were outfitted with a body camera<sup>1</sup> that focused on the back of the bus. Five (5) of these fourteen (14) buses were also outfitted with body cameras offering partial coverage of pens in the front of the bus.

Over the course of the comparative pilot period, the Department held monthly interagency working group meetings to assess the progress of the pilot on an ongoing basis. This working group was led by the First Deputy Commissioner and included the following posts or their designee: the Chief of Security, the Assistant Commissioner of PREA, the Assistant Commissioner of Strategic Planning, the Assistant Deputy Warden of the Transportation Division, the Executive Director of the IT Division, and representatives from the Project Management Office and the Policy Division. Over the course of the comparative pilot, officers from the Chief of Security’s staff conducted weekly audits of each camera in use. The officer’s observations were collected on a template created by the working group. The staff analyst from the Policy Division performed spot checks of the audit entries to independently corroborate their observations and analyzed the qualitative data derived from the audit. That analysis, in conjunction with an evaluation of camera usability, installation process, overall cost, and the observations of the working group were then compared.

Over the course of the entire pilot period, approximately 280<sup>2</sup> incidents of violence or uses of force were reported in and around transport buses. Over the course of the comparative pilot period the

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<sup>1</sup> A body camera is a small camera intended to be worn in the field fixed to the uniform of an officer.

<sup>2</sup> This number represents the sum total of fights, serious injuries that were not the result of accidents, slashing and stabbings, and uses of force that occurred over the course of the entire pilot period. It is not a unique count and some incidents may be represented more than once within this total.

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Department was able to identify 111 actual and alleged incidents of violence, use of force, and behavioral misconduct which occurred in and around transportation vehicles. The Investigation Division identified one (1) occasion during the comparative pilot period when footage from a body camera was utilized to support an investigation of a use of force. In this case, the body camera did not capture the actual incident but did capture relevant footage prior to the incident.

## **II. The Pilot**

### **A. Genetec Mobile Solution**

**Background:** In April 2017, representatives from the Department traveled to Boston, MA to observe the Genetec system which was being used by mass transit on city buses. Based on their observations, the Department decided to move forward with Genetec technology by piloting it on one (1) Department transport bus. Genetec was also considered a preferred option because the Department was already utilizing this video management system for all fixed cameras within facilities.

**Camera Description:** The system tested utilizes eleven (11) cameras installed on a single bus, which simultaneously record video footage from both inside and outside of the bus. Cameras are specifically designed for transportation vehicles and feature anti-vibration/video stabilization technology, 360-degree coverage on each internal camera and 180-degree coverage on all exterior cameras. Footage is automatically uploaded from the hardware on the bus to the Genetec video management system whenever the bus connected to Department Wifi.

**Cost:** The total cost of piloting the Genetec bus was \$38,000. This included the cost of cameras, along with installation and technical support.

The bus with the Genetec camera system encountered a number of technical issues during the pilot. As a result, the bus was taken off-line several times. Issues encountered by the Genetec bus included:

- The initial onboard server was not properly maintaining power for all cameras or connecting to Wifi at maximum throughput. A new part was ordered and the server eventually was replaced.
- Following the replacement of the new server, the bus continued to have Wifi connectivity issues. A replacement Wifi controller had to be installed.
- The Genetec system experienced errors in software and performed poorly when offloading video content. A senior engineer was eventually dispatched to resolve these issues.
- The bus experienced intermittent power outages/shut-downs of the equipment/cameras while in route. The system ignition/UPS was replaced and new power feeds from the bus batteries were needed to resolve the issues.
- The system was supposed to stay on for two (2) hours after the bus' ignition is turned off. This is to ensure cameras remain on if the bus is turned off with inmates still on the bus or when inmates are entering/exiting the bus. However, this did not happen consistently. At the time of this analysis, Genetec had not yet provided a resolution to this issue.

## **B. Body Camera Solution**

**Background:** The Reveal RS2-X2 is a body camera intended to be worn in the field by uniformed staff. These body cameras and its video management system are being used by DOC uniform staff in the facilities and by the Investigation Division when recording inmate interviews. In June 2017 five (5) buses were outfitted with this interim solution while the Genetec solution was procured. The pilot was later expanded to include these cameras on a total of fourteen (14) buses.

**Camera Description:** The Reveal RS2-X2 is advertised as being designed to capture footage even in low lighting, and has an adjustable head, which makes the camera capable of being mounted and angled. The camera also features a front-facing screen, which allows subjects to see what is being recorded. While charging, the docking station will upload the footage captured by the camera and will archive it for ninety (90) days or indefinitely if the video has captured evidence of an incident.

**Cost:** The approximate cost of a body camera is \$525. The total cost of the equipment utilized for this pilot was \$27,600. This includes the thirty-eight (38) body cameras deployed for the pilot, two (2) charging docks, and twenty-four (24) camera mounts.

**Pilot Overview:** By the close of September 2018, a total of fourteen (14) buses were outfitted with mounts for body cameras. These mounts are located on the gated door separating the two compartments of the bus. After passengers are seated, the camera is mounted facing the back compartment of the bus. Plexiglass and the door provides a barrier between passengers and the camera. By the end of October 2018, all fourteen (14) cameras assigned to these buses were in use and collecting footage.

In December 2018, the scope of the pilot was expanded to include camera coverage of pens in the front portion of the bus. This change was made in order to capture footage of vulnerable populations, including transgender inmates, who are transported in the pens located at the front of the bus. Furthermore, in January 2019 fourteen (14) additional body cameras were provided to the Transportation Division. These cameras were intended to be used as backup cameras in event that the original cameras were not operational or were not fully charged.

## **III. Analyses of the Two Solutions**

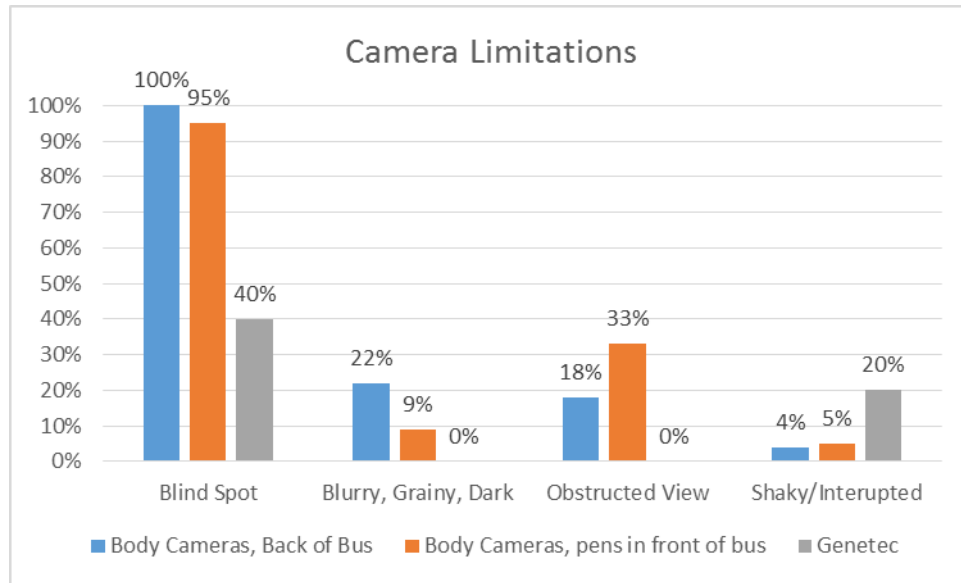
### **Audit Results:**

A weekly audit was conducted of all bus cameras in use throughout the comparative pilot period.<sup>3</sup> The following graph gives a snapshot of how the cameras performed according to the weekly audit entries. Due to the technical challenges faced by the Genetec system, a more limited quantity of data was collected for this camera solution.

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<sup>3</sup> For the purposes of this analysis, the data is current as of February 2, 2019. The Department will continue evaluating the final six weeks of footage.

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**Chart Summary and Quantitative Data:**

**Body cameras covering the back of the bus:** Of the audit entries for body cameras covering the back seating area, 100% indicated that a blind spot was left by the camera (typically the passengers in the front row). 22% of entries indicated that the footage produced was blurry, grainy, or dark. This was often due to the bus pulling into a poorly lit area or bright lighting on the bus creating a glare. 18% of entries indicated that an obstruction was observed. 4% of entries indicated a shaky or interrupted shot typically due to camera instability due to improper mounting.

**Body cameras covering the front pens:** Of the audit entries for body cameras covering the pens in the front of the bus, 95% indicated that a blind spot was left by the camera (typically a view of the passengers from the shoulders down). 9% of entries indicated that the footage produced was blurry, grainy, or dark. This was often a result of glare caused by light coming from outside the bus. 5% of entries indicated a shaky or interrupted shot.

**Genetec Solution:** The audit entries covering the Genetec solution were a generalized assessment of footage from all eleven (11) cameras, which captured synchronized footage during a select timeframe. 40% of these entries indicated that a blind spot was left by the Genetec solution. In these cases, a blind spot was noted due to the fact that not all cameras were operating throughout the audit period. 0% of entries indicated that the footage produced, across the majority of cameras, was blurry, grainy, or dark. It was, however, noted that on more than one occasion, the exterior rear camera produced blurry footage. 0% of entries indicated that the cameras were obstructed. 20% of entries indicated a shaky or interrupted shot. In these cases, the interrupted shot was due to the camera cutting out, which is the result of an ongoing technical error.

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**Incidents and Allegations Related to Inmate Transport Vehicles**

**Incidents on inmate transport buses:**

Over the course of the entire pilot period (June 2017-March 2019), 1.3% of total incidents that occurred across the Department occurred in or around transportation vehicles (280 of 22287). Of those incidents, 111<sup>4</sup> occurred during the comparative pilot period.

- Eight (8) inmate fights
- Two (2) serious injuries to inmates from a violent inmate on inmate exchange or fight
- Three (4) slashings/stabbings
- Ninety-seven (97) uses of force.

The Investigation Division identified one (1) occasion during the reporting period when footage from a Body Camera was utilized to support an investigation of a use of force. In this case, the body camera did not capture the actual incident but did capture relevant footage prior to the incident.

**Sexual Misconduct in and around Transport Buses:**

As part of the comparative pilot, the Department reviewed allegations of sexual harassment and sexual abuse in and around inmate transport buses. This was done in order to determine the prevalence of these allegations, the security risk transportation vehicles pose, and whether or not any relevant commonalities could be gleaned from their review.

Of all the allegations reported to the Investigation Division that alleged sexual harassment and or sexual abuse during the comparative pilot period, 0.7% alleged to have occurred on or around transport buses (6 of 810). Nothing about the allegations, however, provided information sufficient to conclude that there was a specific area of the bus where camera coverage would be most needed in order to capture these types of events.

**IV. Evaluation of Results**

The information collected throughout the comparative pilot period has demonstrated benefits and challenges for both camera solutions. For example, body cameras can be quickly installed and easily replaced in the event of a malfunction, but also showed that body cameras can be too easily dislodged and their lens can be too easily obstructed. In addition, body cameras also require significant manual effort by staff, who must ensure each camera is charged at the end of the day and that the footage is downloaded. By contrast, the Genetec camera solution is a multi-camera system that functions largely automatically. When one of the Genetec solution cameras are blocked, other cameras still pick up footage, making fully blocking this camera coverage significantly more difficult. In addition, Genetec features enhanced safety mechanisms, including a driver panic button and live access to the camera footage via cellular connectivity, which outpaces the security measures offered by mounting a body

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camera. However, as experienced during the pilot, the Genetec camera solution required substantially more technical support and the bus had to be taken off-line for a period of time in order to resolve the issues. Listed in the chart below are the pros and cons of each camera solution.

<b>Body Cameras</b>	
<b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"> <li>• Relatively low cost per camera               <ul style="list-style-type: none"> <li>• Quick installation</li> </ul> </li> <li>• Additional cameras can be easily added if and when additional coverage is desired</li> <li>• Cameras can be quickly dismantled and utilized by officers in the case of an emergency</li> <li>• There is a forward facing screen which allows the passenger to see what footage is being captured</li> </ul>	<ul style="list-style-type: none"> <li>• Camera has a limited scope, which results in significant blind spots</li> <li>• Significant interaction is required from uniformed officers which limits the viability of this solution were additional buses to be outfitted with these cameras</li> <li>• Cameras are easily obstructed by passengers and the driver</li> <li>• Plexiglass used to separate the camera and passengers is easily scratch or smeared               <ul style="list-style-type: none"> <li>• Camera housing is at times unstable</li> </ul> </li> </ul>

<b>Genetec Solution</b>	
<b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"> <li>• Superior camera coverage inside and outside of the bus</li> <li>• Superior quality of footage captured</li> <li>• Safety features such as GPS, driver panic button, cellular connectivity for live access</li> <li>• Manufacturer commitment to continuous improvement of system features, function, and capabilities</li> <li>• Very little interaction from uniformed officers is necessary for activation of cameras</li> </ul>	<ul style="list-style-type: none"> <li>• Complications with installation and inconsistent camera coverage are ongoing               <ul style="list-style-type: none"> <li>• High cost</li> </ul> </li> <li>• Substantial technical support needed from vendor and Department IT staff for the installation, maintenance, and monitoring of the system</li> <li>• Cameras can be obstructed by passengers and the driver</li> </ul>