

# Board Rule

<b>Subject</b>	<b><i>BC Taxi Camera Programs, Standards &amp; Requirements</i></b>
<b>Legislation</b>	Passenger Transportation Act section 28(2):  <i>If the Board approves in whole or in part, an application forwarded to it under section 26(1), the board may establish the terms and conditions that are to apply to the licence if issued.</i>
<b>Purpose</b>	To enable taxicab licensees in British Columbia to use taxi cameras for driver and passenger safety, and to establish standards and requirements that must be adhered to when taxi cameras are used.
<b>Rule</b>	<ol style="list-style-type: none"><li>1. Licensed taxi companies may only operate a taxi camera in their taxicab when:<ol style="list-style-type: none"><li>a. (i) participation in taxi camera program is required by a Board rule or (ii) the companies have received written authorization from the Board to implement a program, and</li><li>b. taxi cameras are operated in compliance with applicable equipment standards and operating requirements established by the Board.</li></ol></li><li>2. The Board publishes the names of designated taxi camera installers and inspectors at the Board website at <a href="http://www.ptboard.bc.ca">www.ptboard.bc.ca</a>. Licensees:<ol style="list-style-type: none"><li>a. may only have a taxi camera installed, serviced or removed by a camera installer whose name has been published by the Board as a designated installer, and</li><li>b. may only have a taxi camera inspected by (i) a designated inspector whose name has been published by the Board as a designated inspector, (ii) a taxicab inspector who works for a municipality, or (iii) a Passenger Transportation Branch Inspector.</li></ol></li><li>3. After a taxi camera program begins and a licensee starts using taxi cameras in its fleet, taxi cameras may only be removed when and as permitted by the Board.</li><li>4. Licensees using taxi cameras must comply with the requirements and standards set out in the following documents:<ol style="list-style-type: none"><li>a. Appendix A: Equipment standards</li><li>b. Appendix B: Operating requirements</li><li>c. Appendix C: Requirements for starting, joining and quitting a voluntary taxi camera program</li><li>d. Appendix D: Declaration of Compliance</li><li>e. Taxi camera rules established for a particular geographic location</li></ol></li></ol>

5. The following Board rules are rescinded:
  - a. Board rule of November 19, 2004 (“Taxi Cameras in Lower Mainland Taxicabs”)
  - b. Board rule of February 28, 2005 (Amendment of November 19, 2004 Rule: Taxi Cameras in Lower Mainland Taxicabs”)
  - c. Board rule of February 14, 2007 (“Taxi Cameras Outside the Lower Mainland”)

**Applicable Licensees**

Subject to PT Board taxi camera requirements, a taxi camera program can be implemented by licensed taxi operators in British Columbia that have:

- a) metered rates and Board authorization to use a taxi meter, or
- b) non-metered rates and a licence that contains express authorization to use a top light or pick up hails and flags from the street, and operates one or more vehicles that carry no more than 7 passengers.

**Variance Requests**

Taxi companies may ask the Board for a written variance of a particular taxi camera standard or procedure when warranted by local circumstances or product-specific constraints. An alternative standard must be proposed, and a rationale must be included. The request should also include supporting information and a technical explanation from the equipment manufacturer.

Any Board-approved variance supersedes the corresponding requirement under this rule and constitutes part of the applicable taxi camera equipment standards for affected licensees.

Any Board approval of a particular model of taxi camera is an acceptance that a camera (that has not been modified since it was originally shipped by the vendor or manufacturer) satisfies the requirements of this Board rule.

**Cost Responsibility**

Licensees are responsible for costs arising from the taxi camera program. This includes the costs of purchase, installation, inspection, maintenance, and the replacement or upgrade of taxi camera parts or systems.

**Effective date:**

**November 4, 2008**

## Appendix A: Taxi Camera Equipment Standards

The equipment standards in this Appendix represent current standards for taxi cameras. The Board may amend or vary them from time to time. The Board may introduce new standards such as those of relevance to digital video images. The Board will seek an indication from police that such new standards would meet the needs of police.

### *Board Approvals of Specified Taxi Camera Models*

- a. The Board approves taxi camera models that may be used by a particular group of licensees in a specific geographic area.
- b. Licensees may only use a taxi camera model that has been given written approval by the Board. Board approval may specify a minimum size of memory card or hard drive, and it may be subject to periodic reviews and cancellation.
- c. For a new model of taxi camera to receive written Board approval within a specific geographic area, a licensee or group of licensees must send a written recommendation to the Board. If a camera has not already been approved for use in another geographic area, the new taxi camera model should first be field tested under the supervision of a forensic video police official, and a written recommendation based on police analysis of field test results should be received from a forensic video police official. A field test may only start after written notice of the field testing plan has received written acceptance by PT Board staff, and after police availability is confirmed. Before field testing begins, the vendor must already have mobile camera products in use in a comparable commercial setting.
- d. The standards and requirements that follow in this Appendix are deemed to be met when the Board provides written approval for the use of a specified taxi camera model. Licensees must maintain taxi camera equipment so each camera continually meets the requirements and standards set out in this Appendix.

### *Secure and Sturdy Taxi Camera System*

- e. The camera head, digital recording unit and other system components and connections must be sturdy and secured with tamper-proof hardware to prevent:
  - unauthorized access to images and flashcards or hard drives, and
  - tampering with the system power source, wiring, wire connections, components and camera position.

### *Cameras and Camera Heads*

- f. Two cameras must face passengers seated inside each taxicab.
- g. A taxi camera head must only be mounted inside a taxicab for the purpose of recording images of occupants seated inside the taxicab.

### *Image Recordings & Recording Media*

- h. Images may only be recorded in a digital format.

- i. Images must be recorded onto a flash memory card or other digital recording medium (e.g. hard drive) that has been accepted by the Board.
- j. All digital images must be stored in sequence until automatically overwritten in one continuous loop.
- k. If an optional panic button or g-force sensor is used, the memory card or hard drive must be partitioned so those images are stored separately.
- l. If still images are recorded or stored in a proprietary format, they must be convertible without further compression to JPEG or a superior format (e.g. bitmap) that is acceptable to local police.
- m. If still images are not recorded or stored in a proprietary format, they must be stored in JPEG or a superior format (e.g. bitmap) that is acceptable to local police.

*Audio Recordings are Prohibited*

- n. The system must not be configured or used to make any audio or voice recording.

*Physical Security of the Digital Recording Unit & Recording Medium*

- o. The digital recording unit must be fastened securely under the dashboard or in the trunk.
- p. If the digital recording unit is installed in the trunk, the unit must be located inside a sealed box to protect against moisture and other environmental damage and shock.
- q. Physical access to the flash memory card or other digital image recording medium must be protected by a:
  - special hardware key,
  - non-standard hardware tool, and/or
  - another security access device or code.

Only local police and designated installers may possess the tools, keys, devices or codes to gain physical access to the digital image recording medium.

*Image Download Options*

- r. An image download port may only be installed in one or both of the following locations in a way that is inconspicuous to passengers and accessible to police:
  - in the glove box, or
  - in the trunk.
- s. An image download port may only be installed when downloaded images can only be accessed and viewed by persons with proprietary image viewing software that is protected by

password protection or other security protocols acceptable to the Board.

- t. Recorded images must not be accessible by wireless means.

#### *Timing Standards*

- u. Minimum refresh rate for the taxi camera system: 1 image per second.
- v. Minimum time that images must be accessible before being overwritten by newer images: 96 hours (i.e. 4 days).

**Note:** *taxi companies should look at what size of memory card or hard drive will be needed to meet this standard in light of the following:*

- *average number taxicab trips and average trip duration per 24 hour period for the vehicles that are operated the longest periods of time each day,*
- *the timing and frequency of the captured images*
- *if "panic button" or "g-force" images are being saved to the memory card or hard drive, indicate the volume of space designated for those images*
- *number of cameras in each taxicab*

#### *Image Clarity & Quality*

- w. **General Clarity & Quality Standard.** Taxi camera images must be of sufficient quality and clarity to identify a particular vehicle occupant whether the image is taken at night or during the day. Images must show "specific individual features on a person, such as the detailed shape of the eyes, ears, nose, mouth and chin."<sup>1</sup>
- x. **Infrared light power.** Sufficient LED light output is needed for images of sufficient quality and clarity at night.
- y. **Digital Camera Design** A camera must have a lens, sensor and configuration that can capture a sizeable facial image that is clear and well-focused. The following standards are designed to achieve these results.
  - i. **Aperture** The aperture should be f2.0.
  - ii. **Compression** Compression should not exceed 10:1.
  - iii. **Field of View** Full facial images of passengers seated normally in the back and front seats must be within the normal field of view without obstruction by objects or shields. A full facial image of the driver is recommended but not required. "Fishbowl" distortion is excessive when the field of view exceeds 115 degrees.
  - iv. **Lens** The lens should be 2.9 mm or greater.

---

<sup>1</sup> See page 2 of "Section 4: Recommendations and Guidelines for Using Closed-Circuit (Analog) Television Security Systems in Commercial Institutions" as established by the International Association for Identification's (IAI) Scientific Working group of Imaging Technology (SWGIT).

- v **Minimum Resolution** 640 pixels (horizontal) by 480 pixels (vertical).
- vi **Object Size** The head of a typical passenger (from top of head to bottom of chin) should occupy at least 25% of the vertical height of an image.
- vii **Sensor** The sensor should be at least 1/3" (CMOS or CCD).

*Software & Configuration*

z. **Information Associated with Images.** The following information must be associated with each image:

- Time
- Date
- Type of trigger
- Serial number of the recording unit
- Motor vehicle registration number (i.e. a 7-digit number).

aa. **Image Triggers.** The automatic capture of images must be triggered by each of the following:

- The opening of any side door (whether the ignition is on or off)
- Meter "on" and Meter "off"
- Background images are taken while the vehicle ignition is on.

bb. **Image Recordings.** For each of the required triggers, or trigger sequences, the taxi camera must be programmed to record the following minimum number of images at the minimum rate for the minimum sequence duration:

Sequence	Trigger	Minimum Rate	Minimum Duration
Door Opening	Door Opening	1 image every second	10 seconds before the door opens and 10 seconds after the door opens. No interruptions by another trigger.
Meter	Meter "on" or "off"	1 image every 2 seconds	20 seconds unless a door opens.
Background	Starts automatically after the end of a "door opening" or "meter" sequence.	1 image every 2 minutes	As long as the vehicle ignition is "on" (unless there is another trigger event)

## Appendix B: Taxi Camera Operating Requirements

- a. **Designated Program Roles and Board Notification.** The licensee must provide the Board with the name and current contact information (and subsequent notice of any changes) for each person, business and organizations with the following roles and responsibilities respecting their use of taxi cameras, :
  - a. **“company taxi camera representative”** who is the main contact for public enquiries relating to taxi cameras.
  - b. **“designated installer”** who has been designated by the manufacturer as being qualified to perform taxi camera system installations, maintenance and removals in accordance with manufacturer specifications.
  - c. **“designated inspector”** who is qualified by the manufacturer to inspect the operability of the taxi camera system inspections.
- b. **Images are Restricted.** No person has authorization to view, print, reproduce, distribute or use any image recorded by a taxi camera recording unit installed in a British Columbia taxicab except police when the image is obtained for police investigative purposes or in accordance with a search warrant. The taxi camera manufacturer may, in the process of diagnosing or repairing a taxi camera system, view an image previously recorded in a BC taxicab and may do so on the condition that full confidentiality of the images will be maintained.

No person other than local police may be provided with viewing software and any security device or code that would be required to view or access a taxi camera images.

- c. **Access is Restricted for Memory Cards and Hard Drives.** No person has authorization to remove a flash memory card or hard drive from a taxi camera recording unit except:
  - a. police when the memory card or hard drive is obtained for police investigative purposes
  - b. a person authorized by a search warrant, Court order or law
  - c. a designated installer when acting on the express direction of a police officer in accordance with police-established protocols
  - d. a designated installer or the manufacturer of the taxi camera system who removes a memory card or hard drive only for system maintenance or system diagnosis purposes

Any person who does not have authorization to access a flash memory card or hard drive may not be provided with any security device or code that would enable their access to or removal of the memory card or hard drive.

Any flash memory card or hard drive that will not be used any further in a taxi camera system must be destroyed.

d. **Software is Restricted.**

- a. Only local police may receive image viewing software from the taxi camera manufacturer.
- b. Only a designated installer may obtain and use the system installation software that is supplied by the taxi camera manufacturer.
- c. Only a designated inspector may receive and use the system inspection software this is supplied by the taxi camera manufacturer.

e. **Taxi Camera Equipment Services.** Taxi camera installation, repair, programming, clock calibration, replacement, transfer, and removal is permitted only when done in accordance with Board taxi camera standards and requirements and when the work is performed by a designated installer.

f. **Making Repairs.** Malfunctioning taxi camera equipment must be repaired or replaced within 5 business days of when the malfunction was identified unless repairs are impossible before that time for reasons beyond the control of the licensee.

g. **System Inspections.** Licensees must have their taxi camera system, including the flash memory card or hard drive, inspected by a designated inspector:

- a. within 5 days of a serious accident (i.e. the threshold set out in section 67 of the Motor Vehicle Act)
- b. as required by the Passenger Transportation Board or Registrar, Passenger Transportation Branch, and
- c. a minimum of once each calendar year.

h. **Windshield Replacements.** Within five days of when a taxicab windshield is replaced, the licensee must arrange for a designated installer or a designated inspector to check and make needed adjustments or repairs to ensure that windshield-mounted cameras are properly mounted and aimed, and that all wiring adjacent to the windshield is in proper condition and properly connected to windshield-mounted camera heads.

i. **Licensee Documentation.** Licensees are responsible for operation of the taxi camera program regardless of the contractual arrangements existing between a licensee and a driver. Licensees must obtain from the designated installer or designated inspector and keep, for the life of the taxi camera system, a record of each taxi camera system installation, repair, transfer, and inspection. Records must indicate the motor vehicle registration number of the vehicle that a particular taxi camera is installed in.

The taxi camera records identified here must be made available to the Registrar upon request.

j. **Decals.** For public notice and deterrence purposes, four decals must be affixed to the rear side windows of the taxicab when a taxi camera is installed. Two decals must be visible from each exterior side of the taxicab, and two must be visible on each side of the taxicab interior. The decals must indicate, using a readable sans serif font: "You are on camera for driver and

passenger safety” or “You are on camera for safety purposes.”

Taxi camera decals must not be affixed to any vehicle that does not have a taxi camera in the vehicle.

- k. **Visual System Checks.** Licensees must require their drivers:
  - a. As part of each pre-trip inspection, to conduct a visual check of the taxi camera system to ensure that it is working properly, and
  - b. to report any taxi camera problems or malfunctions to dispatch or management before the end of the shift.
  
- l. **Company Training and Duties.** The licensee must ensure that company managers, dispatchers and drivers are kept aware of the following:
  - a. Board taxi camera equipment standards and procedural requirements
  - b. How to conduct a visual inspection of the taxi camera system (i.e. including the status light, camera head mount and position, infrared light bulbs, wire placement and connections).
  - c. Taxi company procedures and protocols that include, among other things, visual inspections by drivers, inspections by a designated taxi camera inspector, reporting of malfunctions, repairs to taxi camera equipment, reporting incidents to police, providing police access to taxi camera flash memory cards, hard drives and images, and providing passengers with information about the taxi camera programs including the name and phone number of the company taxi camera representative who can answer more detailed questions.
  
- m. **Removal of a vehicle from a Program** When a vehicle with an installed taxi camera is no longer being used in the local taxi camera program, the licensee must remove all taxi camera equipment and taxi camera decals from the vehicle. An exception may occur when a vehicle is to be used elsewhere in British Columbia where the same taxi camera may be used.

## Appendix C: Requirements for Starting, Joining and Quitting a Voluntary Taxi Camera Program

The following requirements apply only to taxicab licensees that voluntarily seek to start or join a taxi camera program.

1. **Declaration of Compliance.** A Declaration of Compliance (see Appendix D) must be completed and signed by each licensee who will participate in a taxi camera program. This declaration is provided to confirm that a licensee has read the Board taxi camera standards and requirements and agrees to comply with those requirements. A Declaration of Compliance and required attachments must be received and acknowledged by the Passenger Transportation Board before a licensee may install a taxi camera in any taxicab.

Licensees who wish to confirm that the taxi camera system they purchase will meet Board equipment standards may ask the manufacturer to provide them with written confirmation that the equipment meets the standards, and identify any standards that would require Board variance if the equipment were to be used.

2. **Advance Consultation and Notification.** The licensee or licensees (when working together as a group) must consult with police and provide notice to the public and affected local governments. To demonstrate that these requirements have been met, following documents must be attached to the Declaration of Compliance:
  - a. A copy of the letter sent to the Administrator of each affected local government. This letter must indicate that the company will operate the taxi camera program in compliance with PT Board taxi camera equipment standards and procedural requirements. Local governments must be informed that PT Board documents are posted on the taxi camera page of the Board website ([www.ptboard.bc.ca](http://www.ptboard.bc.ca)).
  - b. A copy of a newspaper notice (minimum size: 4" wide by 2" high) that was published in the local newspaper with the largest circulation within the company's originating area. Newspaper notices must include the following information:

<p style="text-align: center;"><b>Public Notice</b></p> <p style="text-align: center;"><b>Name of Licensee &amp; Trade Name</b></p> <p>Taxi cameras are being installed in taxicabs to prevent crime against taxi drivers and enhance the safety of travel in taxicabs. When a crime against a taxi driver occurs, taxi camera images can help police with their investigation. To protect the privacy of passengers and drivers, only police officers have authorization and the tools that are required to obtain and view images recorded by a taxi camera. Taxi cameras must be installed and operated in compliance with the equipment standards and procedural requirements established by the Passenger Transportation Board ("PT Board"). These requirements can be viewed at the PT Board website at <a href="http://www.th.gov.bc.ca/ptb/cameras.htm">www.th.gov.bc.ca/ptb/cameras.htm</a>.</p>
---

3. **Confirmation of Police Role** A letter from the head of the local police agency to confirm that police will be the sole agency to view images recorded by a taxi camera and the sole agency for obtaining recorded flash memory cards or hard drives, and that the agency is satisfied that the equipment and procedures that are being established will be satisfactory for police investigative

requirements. It is suggested that the letter also confirm that the taxi company and police agency agree on the procedures and cost responsibilities relating to police retrieval of flash memory cards or hard drives.

4. **Designated Program Contacts** Contact information is required for taxi camera program participants (i.e. “company taxi camera representative,” “designated installer,” and “designated inspector”). See Appendix C(2). Provide this information by attaching a separate sheet or letter to the Declaration of Compliance.
5. **Equipment** The manufacturer and model of the taxi camera system to be used must be identified. The Declaration of Compliance (see appendix D) includes a place to provide this information.
6. **Local Taxi Camera Programs That Include More Than One Licensee** If a group of licensees start a common taxi camera program within an area (i.e. using the same equipment, same network of installers, same network of inspectors, and so on), the group may coordinate their start up by submitting required documents and any variance requests at the same time. Each licensee must submit a Declaration of Compliance, and a single copy of all other required documents may be submitted on behalf of the group.
7. **Termination of Participation in a Taxi Camera Program** When a licensee ceases to participate in a voluntary taxi camera program, each licensee must provide written notice to the Passenger Transportation Board.
8. **Submitting Materials to the Board** Notices, declarations and other materials that must be completed, signed or submitted to the Passenger Transportation Board in regard to starting, changing, or ending a taxi camera program must be sent to:

Passenger Transportation Board  
2nd Floor, 940 Blanshard Street  
PO Box 9850 STN PROV GOVT  
Victoria, BC V8W 9T5

Fax: 250-953-3788  
Email: [ptboard@gov.bc.ca](mailto:ptboard@gov.bc.ca)  
Phone: 250-953-3777

The Registrar, Passenger Transportation Branch, will be provided with copies of materials respecting taxi cameras that licensees submit to the Board, along with related correspondence that the Board sends to licensees.

## Appendix D: Declaration of Compliance

This declaration must be completed and signed by an individual with signing authority for the licensee that seeks to use taxi cameras in the taxicab. It must be submitted to the Passenger Transportation Board. Business information in this document and attachments may be made available to the public or other agencies.

### 1. Licensee:

Legal Name of Licensee: \_\_\_\_\_  
All trade names (i.e. "doing business as"): \_\_\_\_\_  
Passenger Transportation Licence No: \_\_\_\_\_  
Name of Contact for Taxi Camera Enquiries<sup>2</sup>: \_\_\_\_\_  
Phone: (     ) \_\_\_\_\_ Cell Phone: (     ) \_\_\_\_\_  
Fax: (     ) \_\_\_\_\_ Email: \_\_\_\_\_

### 2. Attachments:

- Copy of notice to the Administrator of each local government within your operating area.
- Copy of notice published in your local newspaper.
- Letter from the head of each local police agency.
- Contact information for other taxi camera program participants: designated taxi camera installer(s) and system inspector(s). (Attach a separate sheet or letter with this information.)

### 3. Taxi Camera Equipment:

Manufacturer: \_\_\_\_\_  
Manufacturer's Web Site: \_\_\_\_\_  
Taxi Camera Model No.: \_\_\_\_\_

### 4. Declaration:

I declare that I:

1. have current signing authority to bind the licensee identified above with respect to its passenger transportation licence and operations under its special authorization to operate passenger directed vehicles,
2. have read the rule of the Passenger Transportation Board respecting the usage of taxi cameras in British Columbia,
3. understand that the licensee is required to comply with applicable taxi camera equipment standards and procedural requirements and that failure to do so is subject to compliance and enforcement initiatives of the Registrar, Passenger Transportation Branch, and
4. understand that a copy of this declaration of compliance will be shared with the Registrar, Passenger Transportation Branch, who is responsible for enforcement under the Passenger Transportation Act.

Full Name (*print*): \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

<sup>2</sup> The company taxi camera representative may be an individual other than the person who signs the declaration.

