



**BY-LAW NO. 321 - 2012  
A BY-LAW RESPECTING  
SPEED DETECTION DEVICES  
(AI-013)**

**PREAMBLE**

- 1.1 WHEREAS subsection 31(1) of the *Police Services Act* provides that a Board is responsible for the provision of police services and for law enforcement and crime prevention in the municipality and shall:
- b. generally determine after consultation with the Chief of Police, objectives and priorities with respect to the police service in the municipality;
  - c. establish priorities for the effective management of the police service; and
  - e. direct the Chief of Police and monitor his or her performance;
- 1.2 AND whereas subsection 31(6) of the *Police Services Act* provides that the Board may, by by-law, make rules for the effective management of the police service;
- 1.3 AND whereas the Ministry of Community Safety and Correctional Services Policing Standards requires a police services board to have a policy with respect to speed detection devices for the purposes of workplace safety under the *Police Services Act*;
- 1.4 AND whereas section 8 of O. Reg. 3/99 requires the Chief of Police to establish procedures on traffic management, traffic law enforcement and road safety which includes procedures on the proper acquisition, use and maintenance of Speed Measuring Devices;
- 1.5 AND whereas section 29 of O. Reg. 3/99 requires a police services board to have a policy on traffic management, traffic law enforcement, and road safety, which includes a policy on the proper acquisition, use and maintenance of Speed Measuring Devices and related training;
- 1.6 AND whereas Part AI-013 of the Policing Standards Manual (2000), a copy of which is attached hereto as Appendix A, contains guidelines directing the Board, the Chief and members relative to speed detection devices;
- 1.7 AND whereas the *Occupational Health and Safety Act*, R.S.O. 1990, c.0.1, as amended, sets out the responsibilities of employers, supervisors and workers for workplace safety, the Board prescribes the Chief of Police shall establish procedures and processes with respect to speed detection devices.

NOW THEREFORE THE REGIONAL MUNICIPALITY OF NIAGARA POLICE SERVICES BOARD ENACTS AS FOLLOWS:

## **2 DEFINITIONS**

- 2.1 “Act” means *Police Services Act*, R.S.O. 1990, c.P.15, as amended;
- 2.2 “Board” means the Regional Municipality of Niagara Police Services Board;
- 2.3 “Chief” means the Chief of the Niagara Regional Police Service;
- 2.4 “Member” means a member of the Niagara Regional Police Service;
- 2.5 “Ministry” means the Ministry of Community Safety and Correctional Services;
- 2.6 “Service” means the Niagara Regional Police Service.

## **3 BOARD POLICY**

- 3.1 The Board recognizes that traffic enforcement and the safety of road users are important elements of public safety and are statutorily required and that positive outcomes depend on the proper and safe operation of speed measuring devices and the provision of standardized training in the safe, effective and consistent use of speed measuring devices. It is therefore the policy of the Board that speed measuring devices be governed and used only in accordance with the procedure set out by the Chief of Police as directed in this By-law.

## **4 DIRECTION TO THE CHIEF**

### **4.1 PROCEDURES**

- 4.1.1 The Chief shall develop and maintain written procedures that govern the use and function of speed detection devices that are in accordance with Appendix A.

### **4.2 MEMBERSHIP AND TRAINING**

- 4.2.1 The Chief shall ensure that the procedures developed and maintained in section 4.1 ensure that Members receive the appropriate training in relation to speed detection devices.
- 4.2.2 The Chief shall ensure that Members who operate speed detection devices have the requisite knowledge, skills and abilities and receive training on an ongoing basis.
- 4.2.3 The Chief shall establish a skills development and learning plan that is consistent with Appendix A for Members performing this function.

### **4.3 EQUIPMENT**

- 4.3.1 The Chief shall ensure that appropriate equipment, in accordance with the Ministry’s performance standard for speed detection devices, is used and available to Members who provide the service of traffic radar.
- 4.3.2 The procedures established above shall be in accordance with Appendix A.

**5 REPORT TO THE BOARD**

- 5.1 The Chief shall make a written report to the Board on or before August 30<sup>th</sup> of each year with respect to speed detection devices. The report shall include:
- a. a summary of the procedures as required by this By-law;
  - b. the status of Service compliance with the said procedures; and
  - c. a summary of the training given to Members with respect to speed detection devices and confirmation that Members have been trained in accordance with section 4.2.

**6 IMPLEMENTATION**

- 6.1 By-law No. 270-2005, and all other By-laws, and sections of By-laws inconsistent with the provisions of this By-law are hereby repealed.
- 6.2 This By-law shall come into force upon the date of its passage.
- 6.3 The Chief shall implement this By-law, where applicable, through general order.

ENACTED AND PASSED this 24th day of May, 2012.

THE REGIONAL MUNICIPALITY OF NIAGARA POLICE SERVICES BOARD

Signed Original on File  
Chairperson

Signed Original on File  
Executive Director

## Legislative/Regulatory Requirements

Section 29 of Ontario Regulation (O. Reg.) 3/99 ("Adequacy and Effectiveness of Police Services"), made under *the Police Services Act* (PSA), requires a police services board to have a policy on traffic management, traffic law enforcement and road safety which includes a policy on the proper acquisition, use and maintenance of Speed Measuring Devices and related training.

In addition, section 8 of O. Reg. 3/99 requires the Chief of Police to establish procedures on traffic management, traffic law enforcement and road safety which includes procedures on the proper acquisition, use and maintenance of Speed Measuring Devices and related training.

The *Occupational Health and Safety Act* (OHSA) outlines the responsibilities of employers, supervisors and workers for workplace safety.

The Ontario Ministry of Labour's Health and Safety Guideline on "*Radiofrequency and Microwave Radiation in the Workplace*" (or its successor) sets out Occupational Exposure Limits; and is enforced in Ontario workplaces by the Ministry of Labour (MOL). An electronic copy of this Guideline is available at MOL's website: <http://www.labour.gov.on.ca>.

The Occupational Exposure Limits in the above noted MOL Guideline are based on Health Canada's "Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz", *Safety Code 6, 2009* or its successors. To obtain an electronic copy of this Safety Code, please contact: [publications@hc-sc.gc.ca](mailto:publications@hc-sc.gc.ca).

The Ontario Police Health and Safety Committee (OPHSC) has prepared Guidance Note #8 which is entitled, "*High Visibility Garments*". This Guidance Note (or its successor) provides procedures for the wearing of high visibility garments when employees are exposed to traffic hazards. MOL inspectors refer to OPHSC Guidance Notes when they carry out their enforcement duties under the OHSA. This OPHSC Guidance Note is available from all Ontario police services, the Police Association of Ontario, the Ontario Provincial Police Association and the Ontario Association of Chiefs of Police (OACP).

The current "*Speed Measuring Device Performance Specifications: Down-The-Road Radar Module*" (DOT HS 809-812, June 2004, Technical Manual or successor versions) is a publication of the National Highway Traffic Safety Administration (NHTSA). This NHTSA Technical Manual has been adopted by the International Association of Chiefs of

Police (IACP); and, it is recognized as the performance standard for speed measuring radar<sup>1</sup> devices.

The current “*Speed Measuring Device Performance Specifications: Lidar Module*” (DOT HS 809 811, June 2004, Technical Manual or successor versions) is an NHTSA publication. This NHTSA Technical Manual has been adopted by the IACP; and, is recognized as the performance standard for speed measuring lidar<sup>2</sup> (laser) devices.

The above referenced NHTSA Technical Manuals on radar and lidar performance standards and a list of IACP approved radar and lidar devices (conforming products list) can be found on the website of the IACP at [www.theiacp.org](http://www.theiacp.org).

For the purposes of these requirements, an Operator is a person, assigned to/carrying out traffic enforcement duties, who has successfully completed the accredited/prescribed initial and refresher training by a qualified Instructor.

## Sample Board Policy

Board Policy # \_\_\_\_\_

### PREAMBLE:

Traffic enforcement and the safety of road users are important elements of public safety and are statutorily required. In this regard, positive outcomes depend on the proper and safe operation of speed measuring devices, and the provision of standardized training in the safe, effective and consistent use of speed measuring devices:

Therefore, it is the policy of the \_\_\_\_\_ Police Services Board with respect to speed measuring devices that:

The Chief of Police will:

- a) ensure the provision of speed measuring devices that:
  - i) comply with the current NHTSA performance standards adopted by the International Association of Chiefs of Police (IACP) and entitled, “*Speed Measuring Device Performance Specifications: Down-The-Road Radar Module*” (DOT HS 809-812, June 2004, Technical Manual or its successor versions); and, “*Speed Measuring Device Performance Specifications: Lidar*

<sup>1</sup> Radar is the short form for “radio detection and ranging”.

<sup>2</sup> Lidar is the short form for “light detection and ranging”.

*Module*” (DOT HS 809 811, June 2004, Technical Manual or its successor versions);

- b) do not exceed the current  $50\text{W}/\text{m}^2$  occupational exposure limits (formerly expressed as  $5\text{mW}/\text{cm}^2$ ) in compliance with the Occupational Exposure Limits established by Health Canada’s *Safety Code 6, 2009* and adopted by Ontario Ministry of Labour’s Health and Safety Guidance Note *“Radiofrequency and Microwave Radiation in the Workplace”*<sup>3</sup> and their successors; and
  - i) are tested and certified initially by the manufacturer to be in accordance with the above NHTSA performance standards and similarly tested and certified following any major repair.
- c) ensure that each operator uses and maintains and cares for the speed measuring devices provided to them in accordance with the manufacturer’s manual for the specific device; and
- d) ensure that operators:
  - i) use speed measuring devices only after successfully completing the accredited/prescribed training by a qualified Instructor;
  - ii) do not permit devices to transmit when not in use; and
  - iii) always direct speed measuring devices away from their body, specifically the head and groin areas;
- e) ensure that, at least every thirty-six months, every operator who may be required to use speed measuring devices successfully completes an accredited or prescribed training course by a qualified Instructor that reviews the topics covered in the initial accredited/prescribed training course, including updates on changes in case law, new technological developments and/or operating procedures; and
- f) ensure that operators receive information on the current NHTSA performance standards adopted by IACP and entitled, *“Speed Measuring Device Performance Specifications: Down-The-Road Radar Module”* (DOT HS 809-812, June 2004,

<sup>3</sup> The current limit is expressed as  $50\text{W}/\text{m}^2$ ; whereas, the former limit had been expressed as a  $5\text{mW}/\text{cm}^2$ . Nonetheless, since a power density of  $10\text{W}/\text{m}^2$  is equivalent to  $1\text{mW}/\text{cm}^2$ ; the value of the current exposure limit of  $50\text{W}/\text{m}^2$  (Safety Code 6 1999 and 2009) and former  $5\text{mW}/\text{cm}^2$  exposure limit (Safety Code 6 1991) remain identical. In other words, the value has not changed only its expression has changed.

Technical Manual); and, “*Speed Measuring Device Performance Specifications: Lidar Module*” (DOT HS 809 811, June 2004, Technical Manual); on Health Canada’s *Safety Code 6, 2009*; on the *Occupational Health and Safety Act* (OHS Act) including the Ontario Ministry of Labour’s Health and Safety Guideline entitled, “*Radiofrequency and Microwave Radiation in the Workplace*”; and on the Ontario Police Health and Safety Committee (OPHSC) Guidance Note #8 entitled, “*High Visibility Garments*” (or, successor versions of any of these).

## Police Service Guidelines

### Radar Devices

1. Every Chief of Police should ensure that a radar device provided for use has:
  - a) operating frequencies that conform to the following:
    - i) X-BAND radar = 10.525 GHz (10,525,000,000 Hz);
    - ii) K-BAND radar = 24.150 GHz (24,150,000,000 Hz); and
    - iii) Ka-BAND radar = 33.400 GHz through to 36.000 GHz (33,400,000,000 Hz - 36,000,000,000 Hz); and
  - b) occupational exposure limits not exceeding the current  $50\text{W}/\text{m}^2$  (formerly expressed as  $5\text{mW}/\text{cm}^2$ ) in compliance with the Occupational Exposure Limits established by Health Canada’s *Safety Code 6, 2009* and adopted by the MOL Health and Safety Guideline on “*Radiofrequency and Microwave Radiation in the Workplace*” or their successors.
2. Every Chief of Police should ensure that:
  - a) radar devices acquired for use are tested and certified initially by the manufacturer to be in accordance with the current NHTSA radar device performance standards adopted by the IACP, which is entitled, “*Speed Measuring Device Performance Specifications: Down-The-Road Radar Module*” (DOT HS 809-812, June 2004, Technical Manual or its successor versions); and that, this certification is provided on the delivery of any new device;

- b) radar devices are tested and certified in accordance with the NHTSA performance standard after any major repair;
- c) the power density test results for radar devices does not exceed the current occupational exposure limits of  $50\text{W}/\text{m}^2$  (formerly expressed as  $5\text{mW}/\text{cm}^2$ ) adopted by the MOL and as set out in Health Canada's *Safety Code 6, 2009*; (or its successor)
- d) radar devices are tested on set-up for accuracy in accordance with the manufacturer's manual; and
- e) radar devices are used in accordance with the manufacturer's instructions.

### Stationary Radar Devices

3. Every Chief of Police should ensure that:
  - a) all stationary radar devices consist of one or more components that have the capabilities of a radar device as defined in the NHTSA's current radar performance standard adopted by the IACP and entitled, "*Speed Measuring Device Performance Specifications: Down-The-Road Radar Module*"; (DOT HS 809-812, June 2004, Technical Manual or its successor versions);
  - b) all stationary radar devices only transmit when the trigger is depressed;
  - c) every police service's procedures on stationary radar devices should ensure that operators do not use traffic radar devices unless:
    - (i) the device to be used has been certified to operate in accordance with NHTSA performance standard at the time of purchase; and
    - (ii) the radar device is tested and certified for accuracy in accordance with the NHTSA performance standard following any major repair;
  - d) radar devices are tested on set-up for accuracy in accordance with the manufacturer's manual; and
  - e) radar devices are used in accordance with the manufacturer's instructions.



4. Every Chief of Police should ensure that every operator who may be required to use a stationary radar device is made aware of the safety considerations for the use of a stationary radar device, including that:
  - a) during operation, the radar device should not be directed towards any part of the body (and especially not towards the head and the groin areas);
  - b) the radar device should be transmitting only during speed acquisition; and
  - c) the radar device should be securely positioned when not in use.

### **Moving Radar Devices**

5. Every Chief of Police should ensure that all moving radar devices:
  - a) consist of components that include the patrol and target speed displays; and
  - b) can be used in both the moving mode and stationary mode of operation.
6. Every police service's operating procedures on moving radar devices should specify that:
  - a) operators do not use moving radar devices unless the device is so securely fastened that the device cannot move;
  - b) operators do not use moving radar devices unless the antenna of the device is located in a way that ensures adequate ground reflection;
  - c) at the time of purchase, the moving radar device is tested and certified by the manufacturer in accordance with the NHTSA performance standards;
  - d) the moving radar device is tested and certified in accordance with the NHTSA performance standard following any major repair;
  - e) the moving radar device is tested on set-up for accuracy in accordance with the manufacturer's manual; and
  - f) radar devices are used in accordance with the manufacturer's instructions.

7. Every Chief of Police should ensure that every operator who may be required to use a moving radar device is made aware of the safety considerations for the use of a moving radar device, including that:
  - a) when not in use to actively measure a speed, a moving radar device is not to be left in the transmitting mode;
  - b) the antenna of a moving radar device should be located more than 15 cm from the occupants of the vehicle; and
  - c) the antenna of a moving radar device should be positioned so that the operator is not intercepting the transmitting beam.

### Lidar Devices

8. Every Chief of Police should ensure that all lidar devices are tested and certified by the manufacturer to be in accordance with the current NHTSA lidar device performance standard adopted by the IACP, which is entitled, "*Speed Measuring Device Performance Specifications: Lidar Module*" (DOT HS 809 811, June 2004, Technical Manual, or its successor versions); and that this certification is provided on the delivery of a new device.
9. Every police service's procedures on lidar devices should specify that:
  - a) devices are to be tested and certified by the manufacturer to be in accordance with the current NHTSA lidar device performance standard, adopted by the IACP, and entitled, "*Speed Measuring Device Performance Specifications: Lidar Module*" (DOT HS 809 811, June 2004, Technical Manual, or its successor versions); and that this certification is to be provided on the delivery of any new device;
  - b) devices are tested and certified in accordance with the NHTSA performance standard following any major repair; and
  - c) an operator should not use a lidar device unless that device is:
    - i) tested on set-up for accuracy in accordance with the manufacturer's instructions (manual); and
    - ii) used in accordance with the manufacturer's instructions.

## Training

### General

10. An Operator is a person, assigned to/carrying out traffic enforcement duties, who has successfully completed the accredited/prescribed initial and refresher training by a qualified Instructor.
11. An Instructor is qualified if he/she is a person who has successfully completed Operator and Instructor training accredited by the Ontario Police College (OPC)<sup>4</sup> or the equivalent training prescribed by the IACP; and, who has used speed measuring devices in accordance with this guideline for a minimum of thirty-six months.
12. A Master Trainer (Instructor Trainer) is a qualified Instructor:
  - a) who has been actively instructing for no less than sixty months;
  - b) who has training in instructional techniques or an equivalent;
  - c) who has conducted at least one Instructor course;
  - d) who has successfully completed the training for a Master Trainer accredited by the OPC or, its IACP equivalent;
13. Every Chief of Police should establish a development and learning plan for operators using speed measuring devices that is consistent with and reflects this guideline; and, ensures that every such operator using speed measuring devices has the knowledge, skills and abilities required to perform the function safely and competently.

### Training for Stationary Radar Devices

14. Every Chief of Police should ensure that operators do not use stationary radar devices unless the operator has successfully completed the accredited/prescribed initial training session, offered by an instructor on radar devices, including the following topics:
  - a) Basic Theory of Radar;
  - b) Speed Management;
  - c) The Doppler Principle;
  - d) Cosine Angle Effect;

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<sup>4</sup> OPC means the police college known as the Ontario Police College pursuant to section 3(3) of PSA.

- e) Sources of Interference;
- f) Speed Measuring Warning Devices;
- g) Operator Health and Safety;
- h) Operational Procedures;
- i) Equipment Maintenance;
- j) Direction Sensing/“Fastest Target Feature”;
- k) Case Law; and
- l) Testimony and Presenting Radar Evidence in Court;

as well as, practical exercises including:

- m) Sources of Interference;
- n) Speed Observation;
- o) Target Identification Exercises; and
- p) Set-up and Test Procedures;

### **Training for Moving Radar Devices**

15. Every Chief of Police should ensure that operators do not use moving radar devices unless they have successfully completed initial accredited/prescribed training by an Instructor on stationary radar. In addition, operators must successfully complete the accredited/prescribed training on the use of moving radar including:

- a) Operational Procedures for Moving Radar Devices;
- b) Moving Cosine Angle Effect; and
- c) Limitations of Equipment;

as well as, practical exercises including:

- d) Sources of Interference;
- e) Speed Observation;
- f) Target Identification Exercises; and
- g) Set-up and Test Procedures.

16. Every Chief of Police should ensure that an operator:

- a) does not use moving radar for same direction mode unless the operator has successfully completed the accredited/prescribed training by an Instructor on stationary radar and has successfully completed the accredited/prescribed training on moving radar; and

- b) has successfully completed the accredited/prescribed same direction mode training by an Instructor, including:
  - i) training on same direction mode theory; and
  - ii) practical exercises on same direction mode.

### Training for Lidar Devices

17. Every Chief of Police should ensure that an operator has successfully completed the accredited/prescribed lidar device training by an Instructor, including:
- a) Basics of Lidar;
  - b) Speed Management;
  - c) Cosine Angle Effect;
  - d) Speed Measuring Warning Devices;
  - e) Operator Health and Safety;
  - f) Operational Procedures;
  - g) Equipment Maintenance;
  - h) Case Law; and
  - i) Testimony and Presenting Lidar Evidence in Court;

as well as practical exercises including:

- j) Speed Observation;
- k) Target Identification Exercises; and
- l) Set-up and Test Procedures.

### Refresher Training on Speed Measuring Devices

18. Every Chief of Police should ensure that, at least every thirty-six months, an operator who may be required to use speed measuring devices receives and successfully completes refresher training approved by an Instructor. This refresher training is to be accredited by the OPC or the equivalent training as prescribed by the IACP. Training should include a review of the topics covered in the Operator's initial training course, including updates on case law, technological developments and operating procedures.
19. Every Chief of Police should ensure that, at least every sixty months, every Instructor receives and successfully completes refresher instructor training by a Master Trainer (Instructor Trainer). This refresher training is to be accredited by the OPC or the equivalent training prescribed by the IACP. This training should include topics covered in the Instructor's initial training, including updates on case law,

technological developments and operating procedures. There must also be a practical component to this training.

20. Every Chief of Police should ensure that, at least every sixty months, every Master Trainer (Instructor Trainer) receives and successfully completes refresher training. This refresher training is to be accredited by the OPC or the equivalent training prescribed by the IACP. This training should include initial topics covered in the Master Trainer's initial training, including updates on case law, technological developments and operating procedures. There must also be a practical component to this training.