



**CERTIFICATE CONCERNING DESIGN AND CONSTRUCTION OF ELECTRONIC
SPEED MEASURING DEVICES**

I, Katrina Sorich, do certify under penalty of the laws of the State of Washington that the following is true and correct:

I have been employed as a technician by Verra Mobility for 4 years. I became a speed validation technician on November 9, 2020 and have over 1200 hours performing speed validation tests. I am nationally certified as a Radar and LIDAR operator. The City of Lake Forest Park currently uses the AutoPatrol™ 3D radar fixed speed safety camera system, an electronic speed measuring device provided through a contract with Verra Mobility (formerly American Traffic Solutions, Inc. ["ATS"]). Part of my duties include monitoring regular testing of the AutoPatrol 3D radar fixed speed safety camera systems used by the City of Lake Forest Park.

Verra Mobility contracted with the City of Lake Forest Park to provide an Automated Speed Enforcement ("ASE") system designed to record the speed of a vehicle and obtain photographs or other recorded images of the vehicle and the vehicle's registration plate while the vehicle is traveling in excess of speed limits in certain safety zones within posted limits.

The ASE program includes the use of the AutoPatrol 3D radar fixed speed safety camera systems at the following locations within the City of Lake Forest Park:

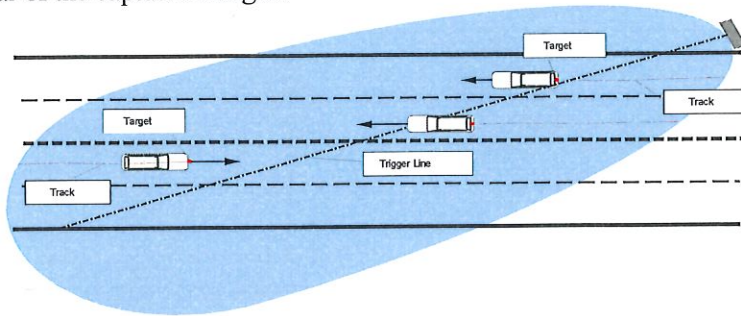
Location Code	Location Description	Lanes Monitored
LF01	WB NE 178TH ST @ 37TH AVE NE	1
LF02	EB NE 178TH ST @ 37TH AVE NE	1
LF03	NB 35TH AVE NE @ NE 187TH ST	1
LF04	SB 35TH AVE NE @ NE 187TH ST	1
LF07	NB 40TH PL NE @ 185TH ST	1
LF08	SB 40TH PL NE @ 185TH ST	1
LF11	NB 37TH AVE NE @ BROOKSIDE ELEMENTARY SCHOOL	1

The AutoPatrol 3D radar fixed speed safety camera system operates by measuring vehicle speed, as well as position relative to the radar to calculate and differentiate multiple vehicles in the radar beam. The speed of a moving vehicle is measured by Doppler radar. Doppler radar is a generally accepted technology used for measuring speed. The AutoPatrol 3D radar technology is used throughout the US and Europe as well as other countries and is approved by the Swiss national metrology institute- METAS.

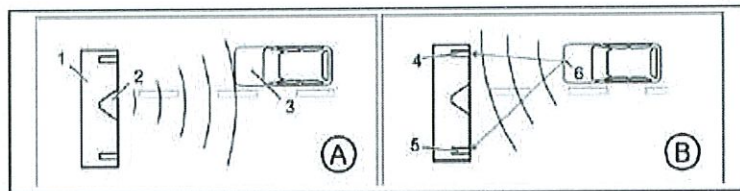
The AutoPatrol 3D radar fixed speed safety camera system uses a tracking radar sensor for measuring vehicle speeds and detecting speed violations. The AutoPatrol 3D radar is aligned at a fixed angle across the road. The AutoPatrol 3D radar emits a horizontal beam over the road surface as represented by the illustration below. The tracking radar can simultaneously detect multiple vehicles and measure their speed, distance, angle and movement within the radar beam. The radar tracks multiple vehicles by reconstructing vehicle movement from the measured object speed, angle and distance values. If a vehicle passes a defined trigger line, the radar outputs the vehicle's speed and lane information. The camera connected to the tracking radar uses this



information to determine if there is a speed violation and to capture photographs showing the measured speed and lane on the databar of the captured images.



The tracking radar utilizes the Doppler Effect for speed determination. If an electromagnetic wave is emitted at a moving object, then the wave is reflected back from the moving object. The frequency of the wave received back by the radar shifts based on the speed of the moving object and its direction of travel. The tracking radar continuously determines this frequency shift of each object to calculate the object's speed. The tracking radar consists of two receiving antennas integrated into a single radar sensor. This configuration allows the radar to measure the distance and angle of the vehicle relative to the position of the radar sensor. Illustration A and B show the measurement principle in simplified form. The radar sensor emits a radar beam (illustration A). The radar beam is reflected by the vehicle (illustration B). The two receivers receive the reflected radar beam. The radar sensor evaluates the return frequency, as well as the phase difference of the reflected radar beam from both of the receivers. With the aid of these values the radar sensor calculates the vehicle position.



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|--------------------|--------------------|
| 1 Radar sensor | 4 Receiver A |
| 2 Transmitter | 5 Receiver B |
| 3 Detected vehicle | 6 Reflected signal |

Prior to operation each day, the system performs a system self-test. This self-test performs an electronic tuning fork test to produce a specific frequency and returns an associated speed value. Only if the return value meets the acceptance criteria to show that the system is operating correctly will the system enter measure mode. Unless a self-test is successful, the system will not enter measure mode and no violations will be captured. Additional information stored as metadata within each image includes coordinates of the vehicle position at the time of capture. This information is extracted and utilized through a secondary speed verification process to provide yet another means to validate offender speed and position based on the two images obtained and image analytics. In addition to the internal system checks and the manufacturer calibration certification, the 3D radar system is subject to routine and independent calibration check of the speeds produced by the system at least annually by a qualified technician.

Each day the computer which controls the fixed speed safety camera system is rebooted. The reboot is initiated each day and each time the computer is rebooted an internal check is performed on all operations of



each fixed speed safety camera system, including the clocks, sensors, camera and speed calculating hardware and software, in order to verify that all operations are functioning correctly. When the internal check detects a problem with one of the operations on a given fixed speed safety camera system, then that particular fixed speed safety camera system is inactivated and a request for service is relayed to Verra Mobility support personnel. This means that violations cannot be issued until any internal problem is fixed.

Speed validation tests are regularly performed on each installed and operable AutoPatrol 3D radar fixed speed safety camera system. The test is conducted by having a LIDAR Operator obtain true measurements of a minimum of 5 vehicles per location and detection system in the ascending and/or descending direction. The speed of the vehicle is captured by the LIDAR Operator and then relayed via cellular to an Verra Mobility Technician. The Verra Mobility Technician then compares the vehicle speed measured by the AutoPatrol 3D radar fixed speed safety camera system to the speed measured by the LIDAR Operator to ensure the accuracy of the AutoPatrol 3D radar fixed speed safety camera system. Verra Mobility maintains the results of each test in a Validation Report. The speed validation for each system was performed on the following date and the systems at each location were found to be in proper working order:

Location Code	Location Description	Date of Test
LF01	WB NE 178TH ST @ 37TH AVE NE	10/30/2025
LF02	EB NE 178TH ST @ 37TH AVE NE	10/30/2025
LF03	NB 35TH AVE NE @ NE 187TH ST	10/30/2025
LF04	SB 35TH AVE NE @ NE 187TH ST	10/30/2025
LF07	NB 40TH PL NE @ 185TH ST	10/30/2025
LF08	SB 40TH PL NE @ 185TH ST	10/30/2025
LF11	NB 37TH AVE NE @ BROOKSIDE ELEMENTARY SCHOOL	10/30/2025

Preventative maintenance, including visual inspections, is regularly performed on the AutoPatrol 3D radar fixed speed safety camera systems. Preventative maintenance activities include: cleaning of the cameras and housing, general site inspection of environment and road conditions, inspection of poles, bases and enclosures, and inspection of system cables and connections. The location and date that preventative maintenance is performed is recorded in the Preventative Maintenance Log, which along with the Validation Report(s) referenced above, is attached hereto.

I am a custodian, or otherwise qualified witness, as to the attached records. I make this declaration based on personal knowledge, and if called and sworn as a witness, I could and would testify as set forth in the following paragraph.

Attached as Exhibits are: Exhibit A - Speed Validation Reports, Exhibit B - Preventative Maintenance Logs, and Exhibit C - Annual System Verification Certificate for all AutoPatrol 3D radar fixed speed safety camera systems installed and used by the City of Lake Forest Park. All documents and materials included as Exhibit A, Exhibit B and Exhibit C are authentic and are what they purport to be, and accurately describe the matters set forth therein. All such records are business records in that they are: (1) records kept in the ordinary course of business; (2) created at or near the time of the transactions or events reflected therein by, or based on information from, a person with knowledge of the transaction or events; and (3) kept as part of a regular business activity.



Based upon my education, training, experience, and knowledge of the AutoPatrol 3D radar fixed speed safety camera system, it is my opinion that the system is so designed and constructed as to accurately employ measurement techniques based on a division of distance over time in such a manner that it will give accurate measurements of the speed of motor vehicles.

I, Katrina Sorich, certify (or declare) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Dated this 19th day of November 2025 in Mesa, AZ

Katrina Sorich, Speed Validation Technician