



MASTER AGREEMENT

ADVANTAGE CONTRACT #: 18P 26072400000000000012	
COMMODITY/SERVICE DESCRIPTION: Radar & Lidar Master Agreement	
START DATE: 8/22/2026	END DATE: 7/31/2027

This Contract is between the following State of Maine Department and Provider:

STATE OF MAINE DEPARTMENT		
DEPARTMENT NAME: Office of State Procurement Services		
ADDRESS: 111 Sewall St., 4 th Floor Burton Cross Office Building, SHS# 9		
CITY: Augusta	STATE: ME	ZIP CODE: 04333-009
PROVIDER		
PROVIDER NAME: Applied Concepts, Inc.		
ADDRESS: 855 E. Collins Blvd		
CITY: Richardson	STATE: TX	ZIP CODE: 75081
PROVIDER'S VENDOR CUSTOMER #: VS0000025412		

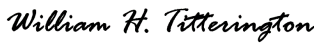
Each signatory below represents that the person has the requisite authority to enter into this Contract.

Department Representative:

Provider Representative:

Signed by:

 2D5B6E39F57E44A...
 William Allen, Senior Procurement Manager
 Date 31 August 2026

Signed by:

 89CFA48FD8E4433...
 William H. Titterington, Contract Manager
 Date 31 August 2026

The contract is fully executed when all parties have signed and the documents has been approved by the Office of State Procurement Services.

DEPARTMENT AND PROVIDER POINT OF CONTACT and PROCUREMENT METHOD

PROCUREMENT SERVICES MA MANAGER: The Procurement Services MA Manager manages the MA contract documents. All other communication is to be with the agency the services were provided to.

NAME: Sherri Brooker	
EMAIL: sherri.brooker@maine.gov	TELEPHONE: 207-624-7871

VENDOR CONTACT: The vendor contact person will help consumers place orders, inquire about orders that have not been delivered, all shipping issues, quality issues and any issues pertaining to the Master Agreement (MA) contract. All orders not submitted through a Delivery Order will be sent through the vendor contact person. The vendor contact person for this MA is:

NAME: William H. Titterington	
EMAIL: sales@stalkerradar.com	TELEPHONE: 972-398-3780

Any changes to the individuals identified above may be changed at any time through written notice by either party.

Master Agreement (MA) procurement method: RFQ 26061100-0312

TABLE OF RIDERS

The following riders are hereby incorporated into this Contract and made part of it by reference.	
☒	RIDER A – Specifications and User Information
☒	RIDER B – Terms and Conditions
☐	RIDER C – Exceptions
☒	RIDER D – Responsible Vendor Certification

RIDER A: SPECIFICATIONS AND USER INFORMATION**TABLE OF CONTENTS**

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I. CONTRACT PERIOD:

Following the initial term of the contract, the Department, at their discretion, may opt to extend / renew the contract for up to four (4) one (1) year extension periods.

- ☒ Initial Term
- ☐ First Renewal
- ☐ Second Renewal
- ☐ Third Renewal
- ☐ Fourth Renewal

II. COMMODITY: Radar & Lidar Master Agreement

The State reserves the right to add other similar items or commodities to the Master Agreement (MA) if it's in the State's best interest but does not obligate the State to purchase similar noncontracted items or commodities from the selected contractor.

III. SPECIFICATIONS**Specifications for DSR 2X Ka-Band Moving Radar**

The design of the radar unit shall use state-of-the-art technology including Ka-band operation with all signal processing performed by a Digital Signal Processing microprocessor. The specifications provide for a waterproof, two-antenna, direction-sensing Doppler radar that has two independently operating radar systems (one front radar system and one rear radar system) built into one radar unit:

- 1. The front radar system consists of:
 - a. One dedicated front antenna
 - b. One dedicated antenna cable

- c. A shared Counting Unit
 - d. A shared Display Unit
 - e. A shared Remote Control
2. The rear radar system consists of:
- a. One dedicated rear antenna
 - b. One dedicated antenna cable
 - c. A shared Counting Unit
 - d. A shared Display Unit
 - e. A shared Remote Control

In stationary mode, both the front radar system and rear radar system independently measure, compute, and display the speed and direction of movement of strongest/faster targets in any of the four target zones in front or to the rear of the patrol vehicle.

When the Front Opposite target zone is selected while moving, the front radar system will independently measure, compute, and display the speed of strongest/faster opposite-direction approaching targets.

When the Front Same target zone is selected while moving, the front radar system will independently measure, compute, and display the speed of front strongest/faster same-direction receding targets and front strongest/faster same-direction approaching targets.

When the Rear Opposite target zone is selected while moving, the rear radar system will independently measure, compute, and display the speed of strongest/faster opposite-direction receding targets.

When Rear Same target zone is selected while moving, the rear radar system will measure, compute, and display the speed of rear same-direction strongest/faster approaching targets and rear strongest/faster same-direction receding targets.

When operating in Dual Zone mode, up to 4 targets can be displayed from either the front or rear antenna.

The radar has a Rear Traffic Alert feature that is designed to warn the user of rapidly overtaking rear same-direction traffic. The rear radar system senses a rear approaching vehicle closing at a speed in excess of an adjustable closing speed and warns the user with a distinctive audio alarm and a flashing display.

In all radar modes, the radar unit uses Voice Enunciators to announce the description of the target that was just locked. Every strong or faster **LOCK** will be followed immediately by a 3-word voice enunciation that indicates *antenna/radar mode/direction*. The following table fully describes the voice enunciations.

VOICE ENUNCIATION	MEANING
FRONT/STATIONARY/CLOSING	The locked target is a stationary mode target approaching the front of the patrol vehicle

FRONT/STATIONARY/AWAY	The locked target is a stationary mode target moving away from the front of the patrol vehicle
REAR/STATIONARY/CLOSING	The locked target is a stationary mode target approaching the rear of the patrol vehicle
REAR/STATIONARY/AWAY	The locked target is a stationary mode target moving away from the rear of the patrol vehicle
FRONT/OPPOSITE/CLOSING	The locked target is an opposite moving mode target approaching the front of the patrol vehicle
REAR/OPPOSITE/AWAY	The locked target is an opposite moving mode target moving away from the rear of the patrol vehicle
FRONT/SAME/CLOSING	The locked target is a front slower same-direction target being overtaken by the patrol vehicle
FRONT/SAME/AWAY	The locked target is a front faster same-direction target moving away from the patrol vehicle
REAR/SAME/CLOSING	The locked target is a trailing faster same-direction target approaching the rear of the patrol vehicle
REAR/SAME/AWAY	The locked target is a trailing slower same-direction target traveling behind the patrol vehicle

Applicable Reference

The unit shall conform to the National Highway Traffic Safety Administration (NHTSA) "Model Minimum Performance Specifications for Police Traffic Radar Devices," shall be listed on the CPL (Consumer Products List) of the IACP, and shall operate on a frequency of 33.4 to 36.0 GHz, Ka band.

Radar Requirements

Production Model

The basic design of all equipment offered shall have been in full commercial production. No "brand new" or prototype models will be considered.

Certification

All radar units furnished under any resulting contract shall be factory certified as to their accuracy with test procedures in conformance with the National Bureau of Standards.

Radar Specifications

1. The manufacturer shall be ISO 9001 certified.
2. The radar shall consist of the following items.
 - a. Waterproof front antenna and antenna cable (8' antenna cable to have connectors at both ends unless specified otherwise)
 - b. Waterproof rear antenna and antenna cable (16-foot antenna cable to have connectors at both ends unless specified otherwise)
 - c. Separable Display/Counting unit (allowing Display unit and Counting unit to separately mount) with a removable cigarette power cord.
 - d. IR wireless hand controller
 - e. Two tuning forks
 - f. Required mounting hardware

3. Upon operator demand, the display shall have the ability to display installed software version and transmitter frequency in the LED windows.
4. Upon operator demand, the display shall indicate power input voltage and internal operating temperature in the LED windows.
5. For either stationary targets or opposite-direction moving targets, the radar shall provide a minimum range of 1 mile on a straight open 2-lane road with an average-sized car
6. The radar shall have independent range settings for opposite-direction moving operation and same-direction moving operation. The stationary range setting should match the opposite direction moving setting.
7. The radar shall operate within the Ka band at a frequency between 33.4 and 36.0 GHz.
8. The antenna type shall be a circular polarized conical horn.
9. To minimize noise and maximize reliability, the antenna mixer shall be of the double-balanced type using beamlead diodes. Waveguide cartridge diodes are not acceptable.
10. Each waterproof antenna shall be designed for direction sensing of both stationery and moving targets.
11. Each antenna shall have two sets of microwave circuits and two sets of amplification/digitizing circuits to provide direction sense capability.
12. Each antenna shall have two microwave circuits that are designed to provide two simultaneous Doppler signals with a 90° phase difference depending on direction.
13. The maximum antenna beam width shall not exceed 13° between the -3 dB power points of the main lobe of the microwave beam, relative to maximum power at the center of the beam. The minimum beam width shall be approximately 11°. The side lobes shall be approximately -25 dB below the main beam.
14. Maximum dimensions for the antenna are: 2.50" diameter x 4.60" length.
15. The antenna shall be designed to be waterproof by using O-ring seals at all external joints such as lens/housing, connector/housing, or cable/housing. Water "resistant" antennas are not acceptable.
16. The antenna shall be of modular construction to facilitate repair of the integrated circuits and transistors mounted on circuit boards.
17. For ease of installation and repair, the antenna cable shall have a removable "threaded" or "latched" connector at both ends.
18. The radar shall include two digital antennas – meaning the output of each antenna (connected to the counting unit) must be a digital signal. Antennas with analog outputs are not acceptable.
19. The digital antenna shall convert the received microwave Doppler signals to digital signals prior to sending them to the counting unit for processing for improved nose suppression.
20. Each antenna shall have two A/D converters to perform Doppler analog-to-digital-conversion on both microwave channels prior to sending the two digital Doppler signals to the counting unit.
21. The radar shall have the capability to transmit on both the front antenna and the rear antenna simultaneously.

- 22.The radar shall compare the radar ground return on the front antenna to the radar ground return on the rear antenna to determine patrol speed.
- 23.To reduce the common radar anomalies of “shadowing” and “batching”, the radar must constantly compare the ground return signal on the front antenna with the ground return signal on the rear antenna.
- 24.The radar must offer as standard, a VSS (Vehicle Speed Sensor) connection for “patrol speed steering” in moving mode. The radar shall have the option of connecting to the VSS signal of the patrol vehicle to provide “patrol speed steering” of the Doppler ground speed. This eliminates the common radar anomalies of “shadowing” and “batching.”
- 25.As standard, the radar unit shall come with a connector that provides power, ground and patrol speed (VSS) information when connected to the patrol vehicle’s OBD II diagnostic port found under the dash on the driver’s side.
- 26.The radar, when operated in VSS mode, shall have the capability to automatically calibrate to the various VSS signals that exist in a variety of patrol vehicle without operator intervention or assistance. Radar units that require manual synchronization of the VSS signal to the radar unit are not acceptable.
- 27.When operated in VSS mode, the radar shall automatically switch between stationary mode and moving mode by sensing the motion of the patrol vehicle by monitoring the VSS signal.
- 28.When operated in VSS mode, the radar shall track patrol speeds from 1 mph to 200 mph.
29. When a VSS signal is unavailable, the radar must have the capability to track patrol speed using both the front and rear antennas simultaneously.
The front antenna patrol speed and the rear antenna patrol speed must be compared by the Counting Unit to reduce patrol speed anomalies. This patrol speed comparison will minimize the common radar anomalies of “shadowing” and “batching” without using a VSS input.
- 30.The radar display unit must have a minimum of five speed windows – one patrol-speed window and a minimum of four target-speed windows.
- 31.The radar display unit shall contain LED digits with a minimum digit height of 8 mm or 0.31 inch.
32. The radar must have two target windows dedicated to the front antenna (one strongest target window and one faster target window) and two target windows dedicated to the rear antenna (one strongest target window and one faster target window).
33. The radar must be capable of tracking two targets (one strongest target and one faster target) on the front antenna while simultaneously tracking two targets (one strongest target and one faster target) on the rear antenna.
34. The radar must be capable of locking one strongest or faster target on the front antenna while simultaneously locking one strongest or faster target on the rear antenna and continue tracking of patrol speed after lock.
- 35.All radar speed windows must have a target direction indicator or arrow associated with them.
36. The radar must come standard with a Rear Traffic Alert feature that operates when the patrol vehicle is accelerating from a stopped position.

37. The Traffic Alert Feature must warn the user (with a distinctive audio alarm and a flashing display) anytime the rear radar system senses rapidly overtaking same-direction traffic while the patrol vehicle is pulling into traffic after a stop.
38. The rear radar system must allow the user to easily change the closing speed that triggers the Rear Traffic Alert feature.
39. The Rear Traffic Alert feature must always be operational when the rear radar system is transmitting – unless the feature is purposely disabled by the user.
40. The Rear Traffic Alert feature must be functional when the rear radar system is set to either the Rear Opposite target zone or the Rear Same target zone.
41. The display shall include a three-color digital readout system of the LED type. All strongest targets shall have orange speed windows, all faster (or lock) windows shall have red speed windows, and the patrol speed shall have a green speed window.
42. The display LED brightness control must have two types of adjustability: 1) Manual (the LED brightness must be adjustable manually by the operator) and 2) Automatic (the LED brightness must have an auto position that adjusts the LED display brightness automatically based on ambient light). Radar units that offer only one method of controlling display brightness are not acceptable.
43. The display unit shall be of modular construction to facilitate repair of the integrated circuits and transistors mounted on circuit boards.
44. Maximum dimensions for the display unit (when separated from the counting unit) are: 1.65" height x 1.05" depth x 5.50" width.
45. Maximum dimensions for the counting unit (when separated from the display unit) are: 1.65" height x 3.90" depth x 5.50" width.
46. For ease of installation and repair, the counting unit shall have removable locking connectors at all cable entry points.
47. For ease of installation and repair, the display unit shall have removable locking connectors at all cable entry points.
48. Operator validation of target Doppler audio versus noise shall be by square-wave audio whose pitch does not vary with patrol speed.
49. The Doppler audio loudness shall be directly proportional to the target size and the target range.
50. When both the front radar system and the rear radar system are simultaneously transmitting, the Doppler audio of both systems should be clearly heard from the radar speaker.
51. The radar shall have independent volume settings for the moving mode of operation and for the stationary mode of operation.
52. To verify all displays are in working order, the display unit shall momentarily light all LED segments upon power-up.
53. An operator initiated self-test will perform accuracy verification for all internal time bases used for speed computation for both the front radar system and the rear radar system. Each radar system will be independently tested in sequence. Any detected malfunction will result in a "FAIL" indication.
54. An operator initiated self-test will perform a diagnostic self-test of the digital signal processor (DSP), random access memory (RAM), and associated processor logic. Any detected malfunction will result in a "FAIL" indication.
55. Any operator initiated self-test will perform a comprehensive test on the front antenna followed by a comprehensive test on the rear antenna to ensure the integrity of the antenna cable and antenna electronics. Any detected malfunction will result in a "FAIL" indication on the display of the corresponding radar system.
56. During any operator-initiated self-test, a simulated low-level Doppler signal must be injected into

the Doppler input on the front antenna followed by the rear antenna to fully test all antenna and counting unit signal processing circuits for both radar systems.

57. An automatic self-test must be performed every 10 minutes on both radar systems with either a visual or audible indication of successful completion of the test. However, it is not acceptable for a visual self-test operation to replace or to interfere with a target speed on the readout.
58. The counting unit shall be of modular construction to facilitate repair of the integrated circuits and transistors mounted on circuit boards.
59. For each independent radar system, the counting unit shall perform a complex Fast Fourier Transform computation simultaneously on both antenna channels to obtain relative direction for each target.
60. For each independent radar system, the counting unit uses complex Fast Fourier Transforms to process both digital Doppler signals to determine direction, speed, and acceptable signal-to-noise ratio before digitally displaying the target speed and/or patrol speed and/or lock speed on the LEDs of the display unit for the corresponding radar system.
61. The radar unit should come standard with a digitized voice to audibly announce, to the operator, the target conditions at Speed Lock for each radar system. Every Speed Lock will be followed immediately by a 3-word voice enunciation that indicates *antenna/radar mode/direction*. Examples: *FRONT/STATIONARY/CLOSING*, *REAR/OPPOSITE/AWAY*, or *FRONT/SAME/CLOSING*.
62. Each radar system shall be accurate through its range within ± 1 mph in stationary mode and ± 2 mph in moving mode. Each radar system shall truncate or round down the target speed to the nearest whole number.
63. Each radar system must have sufficient processing ability to track and display speeds to at least 200 mph.
64. In stationary mode, each radar system display will track both strongest and faster targets from 12 mph to 200 mph. A stationary mode display from 2 mph to 200 mph is optional and field selectable.
65. In opposite-direction moving mode, each radar system display shall have the capability of acquiring patrol speed from 5 mph to 90 mph. For 5 mph patrol speed, strongest/faster target speeds may be displayed from 20 mph to 195 mph. For 70 mph patrol speed, strongest/faster target speeds may be displayed from 35 mph to 130 mph.
66. In same-direction moving mode, each radar system display shall have the capability of acquiring patrol speed from 5 mph to 90 mph. Strongest/faster same-direction target speed is $\pm 70\%$ of patrol speed to within 5 mph of patrol speed. i.e. for a patrol speed 50 mph, a target between 15 mph to 45 mph and 55 mph to 85 mph can be measured.
67. Once the patrol speed is acquired, the radar shall have the ability to track patrol speed up to 200 mph. When VSS is connected, the unit must track patrol speed from 1 to 200 mph.
68. Each radar system shall come standard with the ability to display a faster target in addition to the conventional strongest target. All modes of operation, including stationary mode, opposite-direction mode, and same-direction mode, must be capable of simultaneous display of both a strongest target and a faster target.
Operation where the faster display replaces the strongest display is not acceptable. Both the strongest and the faster targets must be displayed simultaneously for each radar system. The faster feature can be enabled/disabled in an operator menu.
69. Both the front radar system and the rear radar system shall be capable of locking either the displayed strongest target or the displayed faster target. Units that do not allow the operator to select which target (strongest or faster) are not acceptable.
70. The radar unit shall have the ability to operate in Dual Zone mode and allow the operator to select both strongest and faster (highest speed vehicle) for approaching and strongest and

faster (highest speed vehicle) for receding targets from one (1) antenna. The operator can select which display windows will be used for approaching and receding targets. The unused antenna will not function during this mode.

71. When using the Dual Zone mode, the operator can select this operation from either the front or rear antenna.
72. The radar shall come standard with the ability to display speeds in either English or Metric units. This feature can be easily changed in the field.
73. The wireless remote control shall be provided. It shall also be capable of being connected to the counting unit with a standard 5-wire telephone cable.
74. The remote control must have all keys backlit for night use.
75. The remote-control backlight must remain on constantly.
76. The remote control and the counting unit must both have connectors designed to accept the interconnect cable to allow easy installation if wireless operation is not desired.
77. The remote control must provide two target lock/release keys:
1) a strongest target lock/release key and 2) a faster target lock/release key.
78. The radar shall come standard with an electronic Stopwatch Mode for visual timing of target speeds.
79. The remote control should allow operator selection of either Radar Mode or Stopwatch Mode.
80. The remote control should allow programming the Stopwatch Mode timing zone distance up to 999 yards.
81. The remote control should have a Start/Stop control for timing the target entering and exiting the timing zone.
82. A remote control must be provided that controls both independently operating radar systems: 1) the front radar system and 2) the rear radar system.
83. For ease of operation, all operational controls shall be located in the cordless remote control. These controls should include the following functions:

moving/stationary key	start/stop key	front opposite zone select
front same zone select	front hold key	rear opposite zone select
rear same zone select	rear hold key	front strong lock key
front faster lock key	rear strong lock key	front faster lock key
menu key	speaker volume adjust	stopwatch mode select
test key	P.S. Blank key	light key

84. The remote control shall incorporate a dual-purpose P.S. Blank key. The P.S. Blank key can be used: 1) to blank a locked patrol speed or 2) blank the patrol speed window to acquire a new patrol speed (active when not using VSS).
85. All radar components shall be designed to operate and maintain calibration when operated in ambient temperatures from -30° C to +70° C and in conditions of 0 to 90% relative humidity.
86. The power cord shall be flexible neoprene and shall not be over 1/4" in diameter. It shall be terminated in a suitable plug whereby the power input is made by means of plugging into the conventional cigarette lighter receptacle of a vehicle. The end of the cord terminating at the counting

unit shall be a removable locking connector.

87.All electrical connections shall be completely enclosed to prevent shocks and reduce shock hazard.

88.Each radar unit shall be provided with two tuning forks that are permanently marked with a serial number, the radar transmitter frequency, the associated radar speed in mph, and the corresponding radar speed in kph. Tuning forks shall have factory certification as to accuracy and be accurate to within ± 1 mph of the calibrated frequency.

89.Each radar unit provided shall respond to the signal from the tuning fork within ± 1 mph.

90.Each radar unit must be capable of interfacing with all major brands of in-car video systems. Interfacing to the video system will not affect or void radar warranty. Radar manufacturer must be willing to provide all required data to the purchasing agency and/or video manufacturer to accomplish proper interfacing.

Operating Instructions and Specifications Manual

A full and complete set of operating instructions with case law history in the use of traffic radar shall be furnished by the contractor with each unit.

Warranty and Repair Service

The manufacturer agrees to repair or replace each unit that fails due to defective materials or workmanship for a period of three years from the date of purchase. Contract shall include routine maintenance and repair services for each unit provided for 36 months. Contract shall indicate the name address of the nearest repair facility for the radar unit being offered and the average number of days required to perform repairs.

Specification for LIDAR XLR

Scope

The design of the radar unit shall use state-of-the-art technology including Ka-band operation with all signal processing performed by a Digital Signal Processing microprocessor. The specifications provide for a waterproof, two-antenna, direction-sensing Doppler radar that has two independently operating radar systems (one front radar system and one rear radar system) built into one radar unit:

1. The front radar system consists of:
 - a. One dedicated front antenna
 - b. One dedicated antenna cable
 - c. A shared Counting Unit
 - d. A shared Display Unit
 - e. A shared Remote Control
2. The rear radar system consists of:
 - a. One dedicated rear antenna
 - b. One dedicated antenna cable
 - c. A shared Counting Unit
 - d. A shared Display Unit
 - e. A shared Remote Control

In stationary mode, both the front radar system and rear radar system independently measure, compute, and display the speed and direction of movement of strongest/faster targets in any of the four target zones in front or to the rear of the patrol vehicle.

When the Front Opposite target zone is selected while moving, the front radar system will independently measure, compute, and display the speed of strongest/faster opposite-direction approaching targets.

When the Front Same target zone is selected while moving, the front radar system will independently measure, compute, and display the speed of front strongest/faster same-direction receding targets and front strongest/faster same-direction approaching targets.

When the Rear Opposite target zone is selected while moving, the rear radar system will independently measure, compute, and display the speed of strongest/faster opposite-direction receding targets.

When Rear Same target zone is selected while moving, the rear radar system will measure, compute, and display the speed of rear same-direction strongest/faster approaching targets and rear strongest/faster same-direction receding targets.

When operating in Dual Zone mode, up to 4 targets can be displayed from either the front or rear antenna.

The radar has a Rear Traffic Alert feature that is designed to warn the user of rapidly overtaking rear same-direction traffic. The rear radar system senses a rear approaching vehicle closing at a speed in excess of an adjustable closing speed and warns the user with a distinctive audio alarm and a flashing display.

In all radar modes, the radar unit uses Voice Enunciators to announce the description of the target that was just locked. Every strong or faster **LOCK** will be followed immediately by a 3-word voice enunciation that indicates *antenna/radar mode/direction*. The following table fully describes the voice enunciations.

VOICE ENUNCIATION	MEANING
FRONT/STATIONARY/CLOSING	The locked target is a stationary mode target approaching the front of the patrol vehicle
FRONT/STATIONARY/AWAY	The locked target is a stationary mode target moving away from the front of the patrol vehicle
REAR/STATIONARY/CLOSING	The locked target is a stationary mode target approaching the rear of the patrol vehicle
REAR/STATIONARY/AWAY	The locked target is a stationary mode target moving away from the rear of the patrol vehicle
FRONT/OPPOSITE/CLOSING	The locked target is an opposite moving mode target approaching the front of the patrol vehicle
REAR/OPPOSITE/AWAY	The locked target is an opposite moving mode target moving away from the rear of the patrol vehicle
FRONT/SAME/CLOSING	The locked target is a front slower same-direction target being overtaken by the patrol vehicle

FRONT/SAME/AWAY	The locked target is a front faster same-direction target moving away from the patrol vehicle
REAR/SAME/CLOSING	The locked target is a trailing faster same-direction target approaching the rear of the patrol vehicle
REAR/SAME/AWAY	The locked target is a trailing slower same-direction target traveling behind the patrol vehicle

Applicable Reference

The unit shall conform to the National Highway Traffic Safety Administration (NHTSA) "Model Minimum Performance Specifications for Police Traffic Radar Devices," shall be listed on the CPL (Consumer Products List) of the IACP, and shall operate on a frequency of 33.4 to 36.0 GHz, Ka band.

Radar Contract Requirements

Production Model

The basic design of all equipment offered shall have been in full commercial production. No "brand new" or prototype models will be considered.

Certification

All radar units furnished under any resulting contract shall be factory certified as to their accuracy with test procedures in conformance with the National Bureau of Standards.

Radar Specifications

1. The manufacturer shall be ISO 9001 certified.
2. The radar shall consist of the following items.
 - a. Waterproof front antenna and antenna cable (8' antenna cable to have connectors at both ends unless specified otherwise)
 - b. Waterproof rear antenna and antenna cable (16-foot antenna cable to have connectors at both ends unless specified otherwise)
 - c. Separable Display/Counting unit (allowing Display unit and Counting unit to separately mount) with a removable cigarette power cord.
 - d. IR wireless hand controller
 - e. Two tuning forks
 - f. Required mounting hardware
3. Upon operator demand, the display shall have the ability to display installed software version and transmitter frequency in the LED windows.
4. Upon operator demand, the display shall indicate power input voltage and internal operating temperature in the LED windows.
5. For either stationary targets or opposite-direction moving targets, the radar shall provide a minimum range of 1 mile on a straight open 2-lane road with an average-sized car
6. The radar shall have independent range settings for opposite-direction moving operation and same-direction moving operation. The stationary range setting should match the opposite-direction moving setting.
7. The radar shall operate within the Ka band at a frequency between 33.4 and 36.0 GHz.
8. The antenna type shall be a circular polarized conical horn.
9. To minimize noise and maximize reliability, the antenna mixer shall be of the double-

- balanced type using beamlead diodes. Waveguide cartridge diodes are not acceptable.
10. Each waterproof antenna shall be designed for direction sensing of both stationery and moving targets.
 11. Each antenna shall have two sets of microwave circuits and two sets of amplification/digitizing circuits to provide direction sense capability.
 12. Each antenna shall have two microwave circuits that are designed to provide two simultaneous Doppler signals with a 90° phase difference depending on direction.
 13. The maximum antenna beam width shall not exceed 13° between the -3 dB power points of the main lobe of the microwave beam, relative to maximum power at the center of the beam. The minimum beam width shall be approximately 11°. The side lobes shall be approximately -25 dB below the main beam.
 14. Maximum dimensions for the antenna are: 2.50" diameter x 4.60" length.
 15. The antenna shall be designed to be waterproof by using O-ring seals at all external joints such as lens/housing, connector/housing, or cable/housing. Water "resistant" antennas are not acceptable.
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 19. The digital antenna shall convert the received microwave Doppler signals to digital signals prior to sending them to the counting unit for processing for improved noise suppression.
 20. Each antenna shall have two A/D converters to perform Doppler analog-to-digital-conversion on both microwave channels prior to sending the two digital Doppler signals to the counting unit.
 21. The radar shall have the capability to transmit on both the front antenna and the rear antenna simultaneously.
 22. The radar shall compare the radar ground return on the front antenna to the radar ground return on the rear antenna to determine patrol speed.
 23. To reduce the common radar anomalies of "shadowing" and "batching", the radar must constantly compare the ground return signal on the front antenna with the ground return signal on the rear antenna.
 24. The radar must offer as standard, a VSS (Vehicle Speed Sensor) connection for "patrol speed steering" in moving mode. The radar shall have the option of connecting to the VSS signal of the patrol vehicle to provide "patrol speed steering" of the Doppler ground speed. This eliminates the common radar anomalies of "shadowing" and "batching."
 25. As standard, the radar unit shall come with a connector that provides power, ground and patrol speed (VSS) information when connected to the patrol vehicle's OBD II diagnostic port found under the dash on the driver's side.
 26. The radar, when operated in VSS mode, shall have the capability to automatically calibrate to the various VSS signals that exist in a variety of patrol vehicle without operator intervention or assistance. Radar units that require manual synchronization of the VSS signal to the radar unit are not acceptable.
 27. When operated in VSS mode, the radar shall automatically switch between stationary mode and moving mode by sensing the motion of the patrol vehicle by monitoring the VSS signal.
 28. When operated in VSS mode, the radar shall track patrol speeds from 1 mph to 200 mph.
 29. When a VSS signal is unavailable, the radar must have the capability to track patrol speed using both the front and rear antennas simultaneously.

The front antenna patrol speed and the rear antenna patrol speed must be compared by the Counting Unit to reduce patrol speed anomalies. This patrol speed comparison will minimize the common radar anomalies of “shadowing” and “batching” without using a VSS input.

30. The radar display unit must have a minimum of five speed windows – one patrol-speed window and a minimum of four target-speed windows.
31. The radar display unit shall contain LED digits with a minimum digit height of 8 mm or 0.31 inch.
32. The radar must have two target windows dedicated to the front antenna (one strongest target window and one faster target window) and two target windows dedicated to the rear antenna (one strongest target window and one faster target window)
33. The radar must be capable of tracking two targets (one strongest target and one faster target) on the front antenna while simultaneously tracking two targets (one strongest target and one faster target) on the rear antenna.
34. The radar must be capable of locking one strongest or faster target on the front antenna while simultaneously locking one strongest or faster target on the rear antenna and continue tracking of patrol speed after lock.
35. All radar speed windows must have a target direction indicator or arrow associated with them.
36. The radar must come standard with a Rear Traffic Alert feature that operates when the patrol vehicle is accelerating from a stopped position.
37. The Traffic Alert Feature must warn the user (with a distinctive audio alarm and a flashing display) anytime the rear radar system senses rapidly overtaking same-direction traffic while the patrol vehicle is pulling into traffic after a stop.
38. The rear radar system must allow the user to easily change the closing speed that triggers the Rear Traffic Alert feature.
39. The Rear Traffic Alert feature must always be operational when the rear radar system is transmitting – unless the feature is purposely disabled by the user.
40. The Rear Traffic Alert feature must be functional when the rear radar system is set to either the Rear Opposite target zone or the Rear Same target zone.
41. The display shall include a three-color digital readout system of the LED type. All strongest targets shall have orange speed windows, all faster (or lock) windows shall have red speed windows, and the patrol speed shall have a green speed window.
42. The display LED brightness control must have two types of adjustability: 1) Manual (the LED brightness must be adjustable manually by the operator) and 2) Automatic (the LED brightness must have an auto position that adjusts the LED display brightness automatically based on ambient light). Radar units that offer only one method of controlling display brightness are not acceptable.
43. The display unit shall be of modular construction to facilitate repair of the integrated circuits and transistors mounted on circuit boards.
44. Maximum dimensions for the display unit (when separated from the counting unit) are: 1.65” height x 1.05” depth x 5.50” width.
45. Maximum dimensions for the counting unit (when separated from the display unit) are: 1.65” height x 3.90” depth x 5.50” width.
46. For ease of installation and repair, the counting unit shall have removable locking connectors at all cable entry points.
47. For ease of installation and repair, the display unit shall have removable locking connectors at all cable entry points.
48. Operator validation of target Doppler audio versus noise shall be by square-wave audio

whose pitch does not vary with patrol speed.

49. The Doppler audio loudness shall be directly proportional to the target size and the target range.
50. When both the front radar system and the rear radar system are simultaneously transmitting, the Doppler audio of both systems should be clearly heard from the radar speaker.
51. The radar shall have independent volume settings for the moving mode of operation and for the stationary mode of operation.
52. To verify all displays are in working order, the display unit shall momentarily light all LED segments upon power-up.
53. An operator initiated self-test will perform accuracy verification for all internal time bases used for speed computation for both the front radar system and the rear radar system. Each radar system will be independently tested in sequence. Any detected malfunction will result in a "FAIL" indication.
54. An operator initiated self-test will perform a diagnostic self-test of the digital signal processor (DSP), random access memory (RAM), and associated processor logic. Any detected malfunction will result in a "FAIL" indication.
55. Any operator initiated self-test will perform a comprehensive test on the front antenna followed by a comprehensive test on the rear antenna to ensure the integrity of the antenna cable and antenna electronics. Any detected malfunction will result in a "FAIL" indication on the display of the corresponding radar system.
56. During any operator-initiated self-test, a simulated low-level Doppler signal must be injected into the Doppler input on the front antenna followed by the rear antenna to fully test all antenna and counting unit signal processing circuits for both radar systems.
57. An automatic self-test must be performed every 10 minutes on both radar systems with either a visual or audible indication of successful completion of the test. However, it is not acceptable for a visual self-test operation to replace or to interfere with a target speed on the readout.
58. The counting unit shall be of modular construction to facilitate repair of the integrated circuits and transistors mounted on circuit boards.
59. For each independent radar system, the counting unit shall perform a complex Fast Fourier Transform computation simultaneously on both antenna channels to obtain relative direction for each target.
60. For each independent radar system, the counting unit uses complex Fast Fourier Transforms to process both digital Doppler signals to determine direction, speed, and acceptable signal-to-noise ratio before digitally displaying the target speed and/or patrol speed and/or lock speed on the LEDs of the display unit for the corresponding radar system.
61. The radar unit should come standard with a digitized voice to audibly announce, to the operator, the target conditions at Speed Lock for each radar system. Every Speed Lock will be followed immediately by a 3-word voice enunciation that indicates *antenna/radar mode/direction*.
Examples: *FRONT/STATIONARY/CLOSING, REAR/OPPOSITE/AWAY, or FRONT/SAME/CLOSING*
62. Each radar system shall be accurate through its range within ± 1 mph in stationary mode and ± 2 mph in moving mode. Each radar system shall truncate or round down the target speed to the nearest whole number.
63. Each radar system must have sufficient processing ability to track and display speeds to at

least 200 mph.

64. In stationary mode, each radar system display will track both strongest and faster targets from 12 mph to 200 mph. A stationary mode display from 2 mph to 200 mph is optional and field selectable.
65. In opposite-direction moving mode, each radar system display shall have the capability of acquiring patrol speed from 5 mph to 90 mph. For 5 mph patrol speed, strongest/faster target speeds may be displayed from 20 mph to 195 mph. For 70 mph patrol speed, strongest/faster target speeds may be displayed from 35 mph to 130 mph.
66. In same-direction moving mode, each radar system display shall have the capability of acquiring patrol speed from 5 mph to 90 mph. Strongest/faster same-direction target speed is $\pm 70\%$ of patrol speed to within 5 mph of patrol speed. i.e. for a patrol speed 50 mph, a target between 15 mph to 45 mph and 55 mph to 85 mph can be measured.
67. Once the patrol speed is acquired, the radar shall have the ability to track patrol speed up to 200 mph. When VSS is connected, the unit must track patrol speed from 1 to 200 mph.
68. Each radar system shall come standard with the ability to display a faster target in addition to the conventional strongest target. All modes of operation, including stationary mode, opposite-direction mode, and same-direction mode, must be capable of simultaneous display of both a strongest target and a faster target.
Operation where the faster display replaces the strongest display is not acceptable. Both the strongest and the faster targets must be displayed simultaneously for each radar system. The faster feature can be enabled/disabled in an operator menu.
69. Both the front radar system and the rear radar system shall be capable of locking either the displayed strongest target or the displayed faster target. Units that do not allow the operator to select which target (strongest or faster) are not acceptable.
70. The radar unit shall have the ability to operate in Dual Zone mode and allow the operator to select both strongest and faster (highest speed vehicle) for approaching and strongest and faster (highest speed vehicle) for receding targets from one (1) antenna. The operator can select which display windows will be used for approaching and receding targets. The unused antenna will not function during this mode.
71. When using the Dual Zone mode, the operator can select this operation from either the front or rear antenna.
72. The radar shall come standard with the ability to display speeds in either English or Metric units. This feature can be easily changed in the field.
73. The wireless remote control shall be provided. It shall also be capable of being connected to the counting unit with a standard 5-wire telephone cable.
74. The remote control must have all keys backlit for night use.
75. The remote-control backlight must remain on constantly.
76. The remote control and the counting unit must both have connectors designed to accept the interconnect cable to allow easy installation if wireless operation is not desired.
77. The remote control must provide two target lock/release keys:
 - 1) a strongest target lock/release key and 2) a faster target lock/release key.
78. The radar shall come standard with an electronic Stopwatch Mode for visual timing of target speeds.
79. The remote control should allow operator selection of either Radar Mode or Stopwatch Mode.
80. The remote control should allow programming the Stopwatch Mode timing zone distance up to 999 yards.
81. The remote control should have a Start/Stop control for timing the target entering and exiting the timing zone.
82. A remote control must be provided that controls both independently operating radar

systems: 1) the front radar system and 2) the rear radar system.

83. For ease of operation, all operational controls shall be located in the cordless remote control. These controls should include the following functions:

moving/stationary key	start/stop key	front opposite zone select
front same zone select	front hold key	rear opposite zone select
rear same zone select	rear hold key	front strong lock key
front faster lock key	rear strong lock key	front faster lock key
menu key	speaker volume adjust	stopwatch mode select
test key	P.S. Blank key	light key

84. The remote control shall incorporate a dual-purpose P.S. Blank key. The P.S. Blank key can be used: 1) to blank a locked patrol speed or 2) blank the patrol speed window to acquire a new patrol speed (active when not using VSS).
85. All radar components shall be designed to operate and maintain calibration when operated in ambient temperatures from -30° C to +70° C and in conditions of 0 to 90% relative humidity.
86. The power cord shall be flexible neoprene and shall not be over 1/4" in diameter. It shall be terminated in a suitable plug whereby the power input is made by means of plugging into the conventional cigarette lighter receptacle of a vehicle. The end of the cord terminating at the counting unit shall be a removable locking connector.
87. All electrical connections shall be completely enclosed to prevent shocks and reduce shock hazard.
88. Each radar unit shall be provided with two tuning forks that are permanently marked with a serial number, the radar transmitter frequency, the associated radar speed in mph, and the corresponding radar speed in kph. Tuning forks shall have factory certification as to accuracy and be accurate to within ± 1 mph of the calibrated frequency.
89. Each radar unit provided shall respond to the signal from the tuning fork within ± 1 mph.
90. Each radar unit must be capable of interfacing with all major brands of in-car video systems. Interfacing to the video system will not affect or void radar warranty. Radar manufacturer must be willing to provide all required data to the purchasing agency and/or video manufacturer to accomplish proper interfacing.

Operating Instructions and Specifications Manual

A full and complete set of operating instructions with case law history in the use of traffic radar shall be furnished by the contractor with each unit.

Warranty and Repair Service

The manufacturer agrees to repair or replace each unit that fails due to defective materials or workmanship for a period of three years from the date of purchase. Contract shall include routine maintenance and repair services for each unit provided for 36 months. Contract shall indicate the name address of the nearest repair facility for the radar unit being offered and the average number of days required to perform repairs.

Specification for LIDAR XLR**Scope**

The design of the Lidar unit shall use state-of-the-art technology including signal processing performed by a microprocessor allowing future software upgrades. The Lidar will, from a stationary position, measure, compute, and display the speed and/or distance of either an approaching or receding target vehicle.

Applicable Reference

The Lidar unit shall conform to the National Highway Traffic Safety Administration (NHTSA) "Model Minimum Performance Specifications for (LIDAR) Laser Speed Measuring Devices" and be listed on the Conforming Products List (CPL). In addition, the Lidar should meet the FDA/CDRH CLASS 1M Device specifications for eye safety.

Lidar Contract Requirements**1. Production Model**

The basic design of all equipment offered must be in full commercial production.

2. Certification

All Lidar units furnished under any resulting contract shall be factory certified as to their accuracy with test procedures in conformance with the National Bureau of Standards.

Lidar Specifications

YES **NO**

- ☒ 1. The Lidar manufacture must be ISO 9001 certified.
- ☒ 2. The Lidar shall receive the time-of-flight input signal and use least squares curve fitting to process a series of time of flight input signals to determine distance and acceptable signal quality before digitally displaying the target speed and target distance.
- ☒ 3. The rear panel of the Lidar shall include a digital readout system of the LCD type. The digital readout shall have the capability to simultaneously display target speed and target distance

- ☒ 4. The Lidar rear panel LCD and all operator switches shall have a keyboard activated backlight.
- ☒ 5. The Lidar shall have Head Up Display (HUD) for both targeting and simultaneous speed/distance display.
- ☒ 6. The HUD shall have an aiming circle and shall display target speed and target distance simultaneously using LEDs which are projected upon a transparent screen through which the HUD is used for targeting.
- ☒ 7. The HUD shall have an adjustable brightness control with a visual indication of the selected brightness on the rear panel display, using a single switch or button.
- ☒ 8. The Lidar shall have the ability to continuously transmit allowing tracking of a target for establishing speed tracking history.
- ☒ 9. The Lidar shall have the ability to lock the speed of any displayed target by releasing the trigger.
- ☒ 10. The Lidar unit shall have an adjustable audio control with a visual indication of the selected audio level by using a single switch or button.
- ☒ 11. The Lidar shall output a variable pitch, audio tone that is directly proportional to target speed.
- ☒ 12. Upon operator demand, the display shall have the ability to display installed software version in the LCD display of the unit.
- ☒ 3. The Lidar shall provide a minimum range of 2,500 feet on a straight open 2 lane road with average sized, approaching vehicle when used handheld. It shall be capable of providing distance readings on reflective targets over 8,000'.
- ☒ 14. In addition to the speed/distance mode, the Lidar shall have a time/distance (stopwatch) mode for visually timing a target passing through a measured speed zone.
- ☒ 15. The Lidar shall include a built-in electronic calibration standard capable of maintaining specified accuracy of the equipment through the entire specified temperature range.
- ☒ 16. The Lidar shall have a light-test function for checking the readout display to verify that all displays are in working order.
- ☒ 17. An operator initiated self-test will perform accuracy verification of all internal time bases used for distance computation. Any detected malfunction will result in a "FAIL" indication.
- ☒ 18. An operator initiated self-test will perform a diagnostic self-test of the time-measurement circuitry, signal processor, random access memory (RAM), and associated processor logic. Any detected malfunction will result in a "FAIL" indication.
- ☐ ☒ 19. An automatic self-test should be performed every 10 minutes with either a visual or audible indication of successful completion of the test.
- ☒ 20. The Lidar shall operate within the spectral bandwidth of 905 ± 10 nm.
- ☒ 21. To prevent obsolescence, the Lidar must allow future model improvements to be incorporated into existing units using an RS-232 port.

- ☒ 22. The Lidar shall be of modular construction to facilitate repair of the integrated circuits and other components mounted on the plug-in circuit boards.
- ☒ 23. The lens system shall be of the dual horizontal aperture type.
- ☒ 24. The beam divergence shall be less than 3 mrad ± 0.5 mrad FWHM.
- ☒ 25. The Lidar shall come standard with one removable, rechargeable battery handle and one, battery charger.
- ☒ 26. The Lidar battery handle shall slope forward, not to the rear, when mounted on the Lidar unit. This will help eliminate wrist and hand fatigue when holding the Lidar for long periods of time. The Lidar shall have input power protection provided by a solid state automatically resettable fuse. Replaceable fuses are not acceptable
- ☒ 27. The LCD display of the unit will read speed from ± 1 mph to ± 299 mph and distance from 5 ft to 9,999 ft.
- ☒ 28. The Lidar shall be accurate through its distance range within ± 6 inches.
- ☒ 29. The Lidar shall be accurate through its speed range within ± 1 MPH. The system shall truncate (i.e. round down) the target display MPH number to the nearest whole number.
- ☒ 30. All operator controls shall be located on the rear of the Lidar unit near the LCD display. All key switches must be of the backlit momentary key switch type. No protruding switches or switches on the side of the Lidar are allowed.
- ☒ 31. The Lidar transmitter can be programmed to activate: 1) with constant trigger depression, or 2) separate trigger depressions for start/stop.
- ☒ 32. The Lidar transmitter can be activated through optional I/O port.
- ☒ 33. The Lidar shall not have a user accuracy adjustment. The unit must be properly checked out by the manufacturer and not vary in its speed readout.
- ☒ 34. The Lidar shall have the ability to activate an internal switch that will provide the internal crystal frequency to the I/O port so it can be tested by a metrology or standards laboratory for accuracy. No speed or distance readings can be taken when the unit is in this mode of operation.
- ☒ 35. All electrical connections shall be completely enclosed to prevent shocks and reduce hazard.
- ☒ 36. The Lidar unit shall be designed to operate satisfactorily and maintain its calibration when operated in ambient temperatures from -30°C to $+60^{\circ}\text{C}$ and in conditions of from 0% to 99% relative humidity.
- ☒ 37. Weight of the Lidar unit shall not exceed 2.35 pounds, including battery.
- ☒ 38. The Lidar unit shall not exceed 8.9" Height, 4.7" Length, 4.7" Width (22.6 cm Height, 11.3 cm Length, 11.3 cm Width)
- ☒ 39. All lenses shall be recessed to prevent abrasion or breakage.
- ☒ 40. The Lidar shall be constructed to withstand a shock of 18G.
- ☒ 41. The Lidar shall be housed in a high impact PVC housing. It shall be waterproof. Units which are water resistant or weather resistant will not be accepted.

- ☒ 42. The Lidar shall come standard with the ability to display speeds in either English or Metric units. This feature can be easily changed in the field.
- ☒ 43. The Lidar shall have three (3) operating modes to aid the operator. It shall have a weather/obstruction mode, Zone mode and Auto-Obstruction mode.
- ☒ 44. The weather/obstruction mode will allow the Lidar to work in rain, snow, fog or when there are obstructions like trees, bushes, grass within the first 250'.
- ☒ 45. The Zone mode allows the operator to only obtain speeds when the target is in a selected "zone" like a school zone or construction reduced speed zone.
- ☒ 46. The Auto-Obstruction mode allows the operator to use the Lidar where there are obstructions such as trees, bushes, grasses, poles, guy wires, etc. at distances greater than 250' away. The unit will automatically learn and map each obstruction it sees, then ignore these obstructions and only obtain speeds of vehicles.
- ☒ 47. The Lidar shall have an anti-jamming mode that allows the unit to operate properly and obtain speeds of targeted vehicles even when those vehicles are operating a laser jammer. Units without this feature will not be acceptable.
- ☒ 48. The Lidar shall have the ability to allow the operator to select what information he wishes to place on the Heads-Up-Display. Units that have fixed information format to the HUD or use a scope for targeting vehicles will not be acceptable.
- ☒ 49. The Lidar unit shall have wireless communication that allows it to download stored data, operate a wireless printer or connect to a PC.
- ☒ 50. The Lidar unit shall have the ability to store internally speed, date and time information for statistical work or for use when operating call-down or wolf-pack operations. This data can be recalled to the rear panel for use in the field or downloaded alter into a PC.

Operating Instructions and Specifications Manual

A full and complete set of operating instructions shall be furnished by the contractor with each unit.

Warranty and Repair Service

The manufacturer agrees to repair or replace each unit that fails due to defective materials or workmanship for a period of one year from the date of purchase. Contract shall include routine maintenance and repair services for each unit provided for 12 months. Contract shall indicate the name address of the nearest repair facility for the Lidar unit being offered and the average number of days required to perform repairs.

IV. AMENDMENTS TO SPECIFICATIONS

N/A

V. CONTRACTED PRICING/RATES

Prices: Prices are with shipping terms of “Free on Board (FOB) – Destination”. The State intends for this to mean that all goods shall be priced to include shipping charges, if any, to the State’s desired location. The “FOB – Destination” shipping term is also intended to mean that the State shall not bear any responsibility for the goods in question until the State takes possession of them at the destination point of delivery.

Price and Rate Guarantee Period: All quoted prices and rates must be guaranteed for and must remain firm for minimally one year of the initial contract period. Any approved price or rate adjustments must be held firm for minimally one year or the remainder of the contract period. Price adjustment requests must be made by the vendor at least sixty (60) days prior to the effective date. Requests for price adjustments must include sufficient documentation from the manufacture supporting the request. The price adjustment will not go into effect until the contract amendment has been fully approved by the State of Maine.

VI. AUTHORIZED USERS:

State of Maine Departments authorized to utilize this MA contract:

All State of Maine Departments, Agencies

Municipalities, political subdivisions, and school districts in Maine:

- ☐ Are NOT permitted to utilize this MA.
- ☒ Are permitted to utilize this MA as written.
- ☐ Are permitted to utilize this MA with the following conditions:

VII. ORDERING PROCEDURES/DELIVERY INFORMATION:

Delivery Orders (DO) will be created in AdvantageME for all orders over \$5000.00. DO’s will be emailed as a .pdf file to the vendor’s email address submitted in AdvantageME by the vendor.

Municipalities, political subdivisions, and school districts in Maine will handle their own orders and will be responsible for all payments.

Quantities: It is understood and agreed that the MA will cover the actual quantities required by the State over the length of the contract.

Delivery Locations: The vendor must deliver to any State of Maine facility including Maine State Police facility 36 Hospital Street, Augusta, Maine 04330. The exact addresses will be provided to the vendor at the time the order is placed.

Delivery and Inspection: The vendor is responsible for the delivery of material in first class condition at the point of delivery, and in accordance with good commercial practice. The sign blanks ordered from the resulting MA will be inspected after delivery. If shipments are deemed unacceptable the delivery will be refused and will be returned at the risk and expense of the selling vendor.

RIDER B: TERMS and CONDITIONS**1. DEFINITIONS.** The following definitions are applicable to these standard terms and conditions:

- a. The term “Buyer” or “State” shall refer to the Government of the State of Maine or a person representing the Government of the State of Maine.
- b. The term “Department” or “DAFS” shall refer to the State of Maine Department of Administrative and Financial Services.
- c. The term “Bureau” or “BGS” shall refer to the State of Maine Bureau of General Services.
- d. The term “OSPS” shall refer to the State of Maine Office of State Procurement Services.
- e. The term “Provider” shall refer to the organization that is providing goods and/or services through the contract to which these standard terms and conditions have been attached and incorporated.
- f. The term “Contract” shall refer to the contract document to which these standard terms and conditions apply, taking the format of a Buyer Purchase Order (BPO) or Master Agreement (MA) or other contractual document that is mutually agreed upon between the State and the Provider.

2. WARRANTY. The Provider warrants the following:

- a. That all goods and services to be supplied by it under this Contract are fit and sufficient for the purpose intended, and
- b. That all goods and services covered by this Contract will conform to the specifications, drawing samples, symbols or other description specified by OSPS, and
- c. That such articles are merchantable, good quality, and free from defects whether patent or latent in material and workmanship, and
- d. That all workmanship, materials, and articles to be provided are of the best grade and quality, and
- e. That it has good and clear title to all articles to be supplied by it and the same are free and clear from all liens, encumbrances and security interest.

Neither the final certificate of payment nor any provision herein, nor partial nor entire use of the articles provided shall constitute an acceptance of work not done in accordance with this agreement or relieve the Provider liability in respect of any warranties or responsibility for faulty material or workmanship. The Provider shall remedy any defects in the work and pay any damage to other work resulting therefrom, which shall appear within one year from the date of final acceptance of the work provided hereunder. OSPS shall give written notice of observed defects with reasonable promptness.

3. TAXES. Provider agrees that, unless otherwise indicated in the order, the prices herein do not include federal, state, or local sales or use tax from which an exemption is available for purposes of this order. Provider agrees to accept and use tax exemption certificates when supplied by OSPS as applicable. In case it shall ever be determined that any tax included in the prices herein was not required to be paid by Provider, Provider agrees to notify OSPS and to make prompt application for the refund thereof, to take all proper steps to procure the same and when received to pay the same to OSPS.

4. **PACKING AND SHIPMENT.** Deliveries shall be made as specified without charge for boxing, carting, or storage, unless otherwise specified. Articles shall be suitably packed to secure lowest transportation cost and to conform to the requirements of common carriers and any applicable specifications. Order numbers and symbols must be plainly marked on all invoices, packages, bills of lading, and shipping orders. Bill of lading should accompany each invoice. Count or weight shall be final and conclusive on shipments not accompanied by packing lists.
5. **DELIVERY.** Delivery should be strictly in accordance with delivery schedule. If Provider's deliveries fail to meet such schedule, OSPS, without limiting its other remedies, may direct expedited routing and the difference between the expedited routing and the order routing costs shall be paid by the Provider. Articles fabricated beyond OSPS's releases are at Provider's risk. Provider shall not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet delivery schedule, and, unless otherwise specified herein, no deliveries shall be made in advance of OSPSO's delivery schedule. Neither party shall be liable for excess costs of deliveries or defaults due to the causes beyond its control and without its fault or negligence, provided, however, that when the Provider has reason to believe that the deliveries will not be made as scheduled, written notice setting forth the cause of the anticipated delay will be given immediately to OSPS. If the Provider's delay or default is caused by the delay or default of a subcontractor, such delay or default shall be excusable only if it arose out of causes beyond the control of both Provider and subcontractor and without fault of negligence or either of them and the articles or services to be furnished were not obtainable from other sources in sufficient time to permit Provider to meet the required delivery schedule.
6. **FORCE MAJEURE.** The performance of an obligation by either party shall be excused in the event that performance of that obligation is prevented by an act of God, act of war, riot, fire, explosion, flood or other catastrophe, sabotage, severe shortage of fuel, power or raw materials, change in law, court order, national defense requirement, or strike or labor dispute, provided that any such event and the delay caused thereby is beyond the control of, and could not reasonably be avoided by, that party.
7. **INSPECTION.** All articles and work will be subject to final inspection and approval after delivery, notwithstanding prior payment, it being expressly agreed that payment will not constitute final acceptance. OSPS, at its option, may either reject any article or work not in conformity with the requirements and terms of this order, or re-work the same at Provider's expense. OSPS may reject the entire shipment where it consists of a quantity of similar articles and sample inspection discloses that ten (10%) percent of the articles inspected are defective, unless Provider agrees to reimburse OSPS for the cost of a complete inspection of the articles included in such shipment. Rejected material may be returned at Provider's risk and expense at the full invoice price plus applicable incoming transportation charges, if any. No replacement of defective articles or work shall be made unless specified by OSPS.
8. **INVOICE.** The original and duplicate invoices covering each and every shipment made against this order showing Contract number, Vendor number, and other essential particulars, must be forwarded promptly to the ordering agency concerned by the Vendor to whom the order is issued. Delays in receiving invoice, and any errors or omissions on statements, will be considered just cause for withholding settlement without losing discount privileges. All accounts are to be carried in the name of the agency or institution receiving the goods, and not in the name of OSPS.

9. **MODIFICATIONS.** OSPS reserves the right to increase or decrease all or any portion of the work and the articles required by the bidding documents or this agreements, or to eliminate all or any portion of such work or articles or to change delivery date hereon without invalidating this Contract. All such modification shall be in writing. If any such modification are made, the Contract amount or amounts shall be adjusted accordingly. In no event shall Provider fail or refuse to continue the performance of the work in providing of articles under this Agreement because of the inability of the parties to agree on an adjustment or adjustments.

10. **TERMINATION.** OSPS may terminate the whole or any part of this Agreement in any one of the following circumstances:

- a. The Provider fails to make delivery of articles, or to perform services within the time or times specified herein, or
- b. If Provider fails to deliver specified materials or services, or
- c. If Provider fails to perform any of the provisions of this Agreement, or
- d. If Provider so fails to make progress as to endanger the performance of this Agreement in accordance with its terms, or
- e. If Provider is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors or if a receiver is appointed on account of its insolvency, or
- f. Whenever for any reason the State shall determine that such termination is in the best interest of the State to do so.

In the event that OSPS terminates this Agreement in whole or in part, pursuant to this paragraph with the exception of (f), OSPS may procure (articles and services similar to those so terminated) upon such terms and in such manner as OSPS deems appropriate, and Provider shall be liable to OSPS for any excess cost of such similar articles or services.

11. **NON-APPROPRIATION.** Notwithstanding any other provision of this Contract, if the State does not receive sufficient State, Federal, or other sources of funds to fund this Contract and other obligations of the State, if funds are de-appropriated, or if the State does not receive legal authority to expend funds from State or Federal legislative, executive or judicial bodies, then the State is not obligated to make payment under this Contract.

12. **GOVERNMENTAL REQUIREMENTS.** The Provider warrants and represents that it will comply with all applicable governmental ordinances, laws and regulations.

13. **GOVERNING LAW.** This Contract shall be governed in all respects by the laws, statutes, and regulations of the United States of America and of the State of Maine. Any legal proceeding against the State regarding this Contract shall be brought in the State of Maine administrative or judicial forums. The Provider consents to personal jurisdiction in the State of Maine.

14. **DISPUTES.** OSPS will decide any and all questions which may arise as to the quality and acceptability of articles provided and installation of such articles, and as to the manner of performance and rate of progress under this Contract. OSPS will decide all questions, which may arise as to the interpretation of the terms of this Agreement and the fulfillment of this Agreement on the part of the Provider.

15. **SUBLETTING, ASSIGNMENT OR TRANSFER.** The Provider shall not sublet, sell, transfer, assign or otherwise dispose of this Contract or any portion thereof, or of its right, title or interest therein, without the written request and written approval from the Department. Such approval shall not in

any case relieve the Provider of its responsibility for performance of work or liability under this Contract.

16. STATE HELD HARMLESS. The Provider shall indemnify and hold harmless the Department and its officers, agents, and employees from and against any and all third party claims, liabilities, and costs, including reasonable attorney fees, for any or all injuries to persons or property or claims for money damages, including claims for violation of intellectual property rights, arising from the negligent acts or omissions of the Provider, its employees or agents, officers or Subcontractors in the performance of work under this Agreement; provided, however, the Provider shall not be liable for claims arising out of the negligent acts or omissions of the Department, or for actions taken in reasonable reliance on written instructions of the Department.

17. NON-COLLUSION. The Provider warrants that it has not employed or contracted with any company or person, other than for assistance with the normal study and preparation of a proposal, to solicit or secure this Contract, and that it has not paid, or agreed to pay, any company or person, other than a bona fide employee working solely for the Provider, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon, or resulting from, the award of this Contract.

And, the Provider has not entered into a prior understanding, agreement, or connection with any corporation, firm, or person submitting a response for the same materials, supplies, equipment, or services, and this proposal is in all respects fair and without collusion or fraud. The above-mentioned entities understand and agree that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.

For breach or violation of this provision, the Department shall have the right to terminate this Contract without liability or, at its discretion, to otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

18. MATERIAL SAFETY: All manufacturers, importers, suppliers, or distributors of hazardous chemicals doing business in this State must provide a copy of the current Material Safety Data Sheet (MSDS) for any hazardous chemical to their direct purchasers of that chemical.

19. ORDER OF PRECEDENCE. In the event of a conflict between the documents comprising this Agreement, the Order of Precedence shall be:

- a. Exceptions - If applicable
- b. General Terms & Conditions for Goods and/or Services under Buyer Purchase Orders and Master Agreements
- c. Scope of Work - If applicable
- d. Vendor Agreement - Included at Department's Discretion
- e. Other - Included at Department's Discretion

20. CYBERSECURITY AND PROHIBITED TECHNOLOGIES. The Provider certifies to the best of Provider's knowledge and belief that the aforementioned organization, its principals and any subcontractors named in this Contract:

- a. is not a foreign adversary business entity, <https://www.maine.gov/oit/prohibited-technologies>, [Title 5 MRSA §2021 \(3\)](#); and
- b. is not on the list of prohibited companies or does not obtain or purchase any information or communications technology or services included on the list of prohibited information and

communications technology and services <https://www.maine.gov/oit/prohibited-technologies>, [Title 5 MRSA §2030-B](#).

Contracts entered into by a state agency in violation of [Title 5 M.R.S. §2030-B](#) are void. A person who knowingly signs this contract, in violation of this section, commits a civil violation for which a fine may be adjudged in an amount that is twice the amount of this contract or \$250,000, whichever is greater, [Title 5 MRSA §2030-A](#).

- 21. TARIFFS.** Any price increases implemented by the provider due to the imposition of tariffs shall remain in effect only for the duration that such tariffs are in place. In the event of the repeal or reduction of any applicable tariff(s), the provider shall immediately return to the original price list or make a proportional reduction in the price to reflect the decrease in tariff(s). Price adjustments under this clause shall be made in good faith and without undue delay upon confirmation via documents reflecting tariff changes.

RIDER C: EXCEPTIONS TO RIDER B

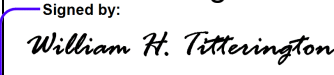
N/A

RIDER D: RESPONSIBLE VENDOR CERTIFICATION

By signing this document, I certify to the best of my knowledge and belief that the aforementioned organization, its principals, and any subcontractors named in this contract:

- a. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from bidding or working on contracts issued by any governmental agency.*
- b. Have not within three years been convicted of or had a civil judgment rendered against them for:*
 - i. fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government transaction or contract.*
 - ii. violating Federal or State antitrust statutes or committing embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;*
 - iii. are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and*
 - iv. have not within a three (3) year period preceding this contract had one or more federal, state or local government transactions terminated for cause or default.*
- c. Have not entered into a prior understanding, agreement, or connection with any corporation, firm, or person also contracting for the same materials, supplies, equipment, or services and this contract is in all respects fair and without collusion or fraud. The above-mentioned entities understand and agree that collusive contracting is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.*

To the best of my knowledge all information provided, both programmatic and financial, is complete and accurate at the time of signature.

Name: William H. Titterington	Title: Contracts Manager
Authorized Signature: Signed by:  89CFA4BFD0E4433...	Date: 31 August 2026