NYSDOT VMS CERTIFICATION REQUIREMENTS

Guidelines for Product Review and Approval.

NYSDOT maintains an APL (Approved Product List) of Variable Message Signs (VMS). These are temporary traffic control devices with the flexibility to display a variety of messages. In order for NYSDOT to evaluate a VMS for the APL, the following categories are considered:

A) For the VMS with the NTPEP completed, please provide satisfactory NTPEP results and all necessary documentation to evaluate the sign. Form a written request including all documentation as stated below.

B) For VMS without NTPEP completed, NYSDOT will accept qualified test results from other State Transportation Agencies and/or a nationally recognized testing facility that clearly demonstrates the VMS meets or exceeds NYSDOT specifications. Form a written request that includes the agency where the VMS was tested, a completed and signed Exhibit A-B respectively, and all documentation that clearly demonstrates the VMS meets or exceeds NYSDOT specifications.

C) All other VMS not falling under Category A or B will need to be tested and evaluated by NYSDOT. NYSDOT does not regularly test VMS. Vendors will be invited to bring their product(s) for a group test. To be considered, form a written request with the necessary documentation for an invitation, including all documentation as stated below.

After NYSDOT has reviewed the submittal, the VMS will be added to the list for the next group evaluation. The vendor will be notified 4 to 6 weeks prior to the group evaluation. At this group evaluation NYSDOT requests the delivery of a demo unit and a knowledgeable technician to be present on site. After completion of the group evaluation a summary of the results will be brought to the APL Committee and the vendor will be notified of the results by email within 30 business days.

- One (1) copy of a completed and signed Exhibit A for PVMS or Exhibit B TMVMS
- Two (2) copies of the Specification Data Sheet/Brochures
- Two (2) copies of the Operating and Maintenance manuals,
- List of limitations and precautions
- NTPEP or State Agency test results (If applicable)
Exhibit A PVMS: is a Checklist and Certification of Compliance that requires the manufacturer to certify that their product meets NYSDOT Specifications for the Portable Variable Message Signs.

Exhibit B TMVMS: is a Checklist and Certification of Compliance that requires the manufacturer to certify that their product meets NYSDOT Specifications for the Truck Mounted Variable Message Signs.

Send Submission Packet in a PDF Format to:

materials@dot.ny.gov

Or by Mail to:

Approved List Coordinator
New York State Department of Transportation
Materials Bureau POD 5-1
50 Wolf Road
Albany, NY 12232

NYSDOT Evaluation Process

1. Invitations are sent to manufacturers. The invitation includes all required submittal materials and testing procedures.

2. This information will be evaluated by the VMS Qualification Review Committee and a list of equipment to be tested will be compiled. Invitations may be issued to manufacturers to bring the VMS to the testing location by a specific date/time.

3. On-site Equipment and a Legibility and Visibility Evaluation will be performed to determine if the equipment meets the VMS NYSDOT Standard Specifications for Approved Products List (APL). The Evaluations will be performed by a team of NYSDOT engineers/technicians.

4. It is recommended, that a technician be available during the test to operate the equipment and answer questions. If a technician is not available, the manufacturer must provide someone to operate the equipment.

5. All test results will be compiled, reviewed, and submitted to the full APL Committee for the final review. The participating manufacturer will be notified of the results by email within 30 business days.

Testing Location:
New York State Thruway Authority
200 Southern Blvd
Albany NY 12209

Contact persons:
Emilia Seerup
518-457-5995
Emilia.seerup@dot.ny.gov
EXHIBIT A

Checklist and Certification of Compliance with NYSDOT’s Specification for Portable Variable Message Sign (PVMS)

This checklist is based on the Portable Variable Message Sign (PVMS) Specification that describes the minimum requirements for equipment to be included on the Approved Products List (APL). All PVMS used by NYDOT shall be listed on the APL. This checklist should be completed by the manufacturer, signed, and submitted with the all necessary documentation for Product Evaluation.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Model #</th>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
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<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>SPECIFICATION</th>
<th>NYSDOT USE</th>
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<td></td>
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<td>1. PVMS shall be tested by the AASHTO National Transportation Product Evaluation Program (NTPEP), demonstrating that the sign meets the requirements of this specification and the MUTCD.</td>
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<td>2. PVMS shall be trailer mounted and equipped for use on public highways in accordance with NYS Vehicle and Traffic Law.</td>
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<td>3. The trailer shall have 4 leveling jacks capable of leveling the trailer on slopes up to 1 on 6 and capable of stabilizing the trailer in winds up to 75 mph.</td>
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<td>4. The PVMS shall operate primarily from solar powered electrical system that consists of battery bank, solar array panels, and on board auxiliary charging system to enable the batteries to be recharged via a 110 AC connection. The solar array panels and battery bank shall supply power sufficient to operate the complete unit, including integrated accessories for a minimum of 21 days without auxiliary charge.</td>
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<td>5. PVMS shall not bear any advertising message or any other message that is not related to traffic control. A nonretroreflective logo or name and telephone number of the contractor or supplier may be located on the back of the PVMS or on the PVMS trailer. The logo shall not exceed 1 square foot. The name and telephone number shall not exceed 2 inches in height.</td>
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<td>6. All electrical systems in the TMVMS shall be FCC part 15 compliant sufficiently shielded to prevent interference with two-way radio system equipment used by the Department.</td>
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<td>7. The PVMS shall be equipped with a sign control console mounted in a lockable, weather resistant compartment.</td>
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<td>8. The sign controller shall have programmable memory capable of storing messages pertinent to planned construction activities, including emergency messages.</td>
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<td>9. The PVMS controller shall be equipped with 14 days calendar programming capability, providing the ability to start and stop the display of a minimum of 3 different messages on a repeating schedule without an operator present.</td>
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10. The controller shall be capable of producing an accurate log of all messages and the times they were displayed. The controller shall have programmable messages, display rate, and display interval setting. The controller shall blank the sign if the output voltage drops below the manufacturer's recommended output level.

11. The PVMS shall be equipped with control software compatible with the Department's current Microsoft Windows operating system.

12. LEDs are amber in color

13. PVMS shall have light-emitting diodes arranged in arrays and the arrays shall be arranged in a matrix for each character to be 7 pixels high by 5 pixels wide with a minimum of 3 LEDs per pixel.

14. PVMS shall be capable of displaying 3 lines of alphanumeric characters and 3 separate messages in a cyclical sequence. On/Off time for each message in a sequence shall be user adjustable within a range of 0 to 5 seconds, in a minimum of 0.5-second increments.

15. PVMS shall be visible at a distance of 1/2 mile during the day and at night. For highways with a posted pre-construction speed limit of 55 MPH or greater, PVMS messages shall be legible from a minimum distance of 800 feet during the day and 600 feet at night. For highways with a posted pre-construction speed limit of 50 MPH or less, PVMS messages shall be legible from a minimum distance of 650 feet during the day.

16. The viewing angle for the sign shall be at least 30 degree total.

17. **SIZES** shall be capable of displaying

   - **Small Size.** Full matrix
     - Eight characters per line
     - At least 12" high characters per line

   - **Standard size.** Character /Line or Full matrix,
     - Eight characters per line
     - Up to 18" high characters per line

   - **Large size.** Full matrix,
     - A minimum of 10 characters per line
     - At least 18" high characters per line

18. **The PVMS Optional Equipment:**

   - **Radar.** Shall have the ability to determine the speed of an approaching vehicle and interrupt the programmed sequence with a customized default message displaying the vehicle's speed.

   - **CCTV Camera.** Shall be able to monitor traffic and/or weather conditions by recording live streaming video and capable of taking still images of the vicinity. The camera shall be able to transmit data to a modem on the PVMS via cellular connection. The camera shall have pan tilt zoom functions as well as a parapet mounting bracket to allow the highest possible mounting height.

19. The PVMS shall have provisions for mounting of communication equipment, including cellular antennas and external line cables in accordance with the industry standards.

20. The PVMS shall be equipped with communication and control systems that are National Transportation Communication for ITS Protocol (NTCIP) compliant.

**YES.** This product (name________________________ model_____________________) meets NYSDOT Specifications for Portable Variable Message Signs.

Name________________________ Signature_____________ Date____________________

**NO.** This product (name________________________ model_____________________) does not meet NYSDOT Specification for Portable Visible Message Signs.

Name________________________ Signature_____________ Date____________________
NO. This product (name__________________model__________________) does not meet NYSDOT Specification for Portable Visible Message Sign. HOWEVER, I would still like to consider this product for inclusion on the APL. Following is an explanation of the differences between this product and NYSDOT specifications.

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Name____________________________Signature________________________Date________________________

EXHIBIT B

Checklist and Certification of Compliance with NYSDOT’s Specification for Truck Mounted Variable Message Sign (TMVMS)

This checklist is based on the Truck Mounted Variable Message Sign (TMVMS) Specification that describes the minimum requirements for equipment to be included on the Approved Products List (APL). All TMVMS used by NYDST shall be listed on the APL. This checklist should be completed by the manufacturer, signed, and submitted with the all necessary documentation for Product Evaluation.

Manufacturer__________________Product__________________Model #__________________

Name__________________________Title________________________Phone____________________

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>SPECIFICATION</th>
<th>NYSDOT USE</th>
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<td></td>
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<td>1. TMVMS shall meet the requirements of the MUTCD and the NYSDOT Standard Specification.</td>
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<td>2. All electrical systems in the TMVMS shall be FCC part 15 compliant sufficiently shielded to prevent interference with two-way radio system equipment used by the Department.</td>
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<td>3. Power System - TMVMS shall be powered by a power source in or on the host vehicle.</td>
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<td>4. Interior Controller - The TMVMS controller shall be mounted inside the cab of the vehicle/truck</td>
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<td>5. The color of light emitted shall be amber.</td>
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<td>6. The message display area shall be a minimum of 60 inches wide and 36 inches high</td>
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<td>7. TMVMS shall be capable of displaying a minimum of two lines of alphanumeric characters.</td>
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<td>8. The TMVMS shall be capable of displaying</td>
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<td>• 8 characters per line</td>
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<td>• At least 10” high characters per line, when displaying two lines</td>
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<td>9. The TMVMS shall be capable of displaying 2 separate panel messages in a cyclical sequence.</td>
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<td>10. The display shall be capable of showing a full screen view of standard highway symbols, arrows, chevrons, and 4 corner warning lights.</td>
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<td>11. The TMVMS display of a flashing arrow shall conform to the legibility requirement for Type B Arrow Panels.</td>
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</table>
YES. This product (name________________________model______________________) meets NYSDOT Specifications for Truck Mounted Variable Message Signs. Name________________________Signature_______________________Date____________________

NO. This product (name________________________model______________________) does not meet NYSDOT Specification for Truck Mounted Variable Message Signs. Name________________________Signature_______________________Date____________________

NO. This product (name________________________model______________________) does not meet NYSDOT Specification for Truck Mounted Variable Message Signs. HOWEVER, I would still like to consider this product for inclusion on the APL. Following is an explanation of the differences between this product and NYSDOT specifications.

__________________________________________________________________________________

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Name________________________Signature_______________________Date____________________