BEFORE THE BOARD OF COUNTY COMMISSIONERS

FOR COLUMBIA COUNTY, OREGON

In the Matter of Adopting a Policy for the Use of Portable Changeable Message Signs	))	ORDER NO. 69-2011

WHEREAS, Portable Changeable Message Signs (hereinafter "PCM Signs"), which are also known as Variable Message Signs or Reader Boards, are traffic control devices that display a message that can be changed manually, electrically, mechanically, or electromagnetically to inform motorists of traffic safety issues; and

WHEREAS, the Columbia County Road Department has obtained PCM Signs through the Urban Areas Security Initiative (UASI) Program; and

WHEREAS, because the PCM Signs were purchased through UASI, the Road Department has allowed other area agencies to borrow, set up, and program the signs; and

WHEREAS, in lending the PCM Signs, the Road Department has found that the signs have been placed in locations that pose traffic hazards and that the signs have been used to convey messages that are unrelated to traffic safety. In addition, the Road Department has also noted damage to the signs resulting from inexperienced users; and

WHEREAS, to ensure that PCM Signs are used for traffic safety purposes and placed in a manner that meets traffic safety requirements, and to protect the public investment in the signs, a policy to guide the use of the signs is necessary; and

WHEREAS, in light of the Road Department's experience with traffic safety and traffic control devices in general, the Road Department should have the responsibility to ensure the signs are set up, displayed, and removed in a manner that protects the signs, addresses traffic safety concerns, and meets the public safety purpose of the signs; and

WHEREAS, to address the aforementioned concerns, the Road Department has proposed a PCM Sign Policy to guide the use and operation of the County's PCM Signs.

WHEREAS, the PCM Sign Policy requires the County's PCM Signs to be authorized and set up by the Road Department in accordance with traffic safety standards described the Oregon Department of Transportation's "Guidelines for the Operation of Variable Message Signs on State Highways," dated June 2008, and the "Oregon Temporary Traffic Control Handbook," dated May 2006.

NOW, THEREFORE, it is hereby ordered as follows:

1. Use of Columbia County's PCM Signs shall comply with the Portable Changeable

Message Sign Policy, attached hereto as Exhibit A and incorporated herein by this reference; and

2. The Oregon Department of Transportation's "Guidelines for the Operation of Variable Message Signs on State Highways," dated June 2008, and the "Oregon Temporary Traffic Control Handbook," dated May 2006, are attached hereto as Exhibits B and C, respectively, and incorporated herein by this reference.

Dated this 31st day of August, 2011.

BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON:

By: _____
Anthony Hyde, Chair

By: _____
Earl Fisher, Commissioner

By: Not present
Henry Heimuller, Commissioner

Approved as to form

By: _____
Office of County Counsel

Exhibit A

Columbia County Road Department
1054 Oregon Street, St. Helens, OR 97051

David Hill, Public Works Director

Ph: (503) 366-3964 Fax: 397-7215
e-mail: David.Hill@co.columbia.or.us

to: Road Department
from: David Hill, Public Works Director
date: August 31, 2011

Policy:
Portable Changeable Message Signs

In accordance with Board Order 69-2011, the use and operation of the County's Portable Changeable Message Signs (PCM signs) [also know as "Variable Message Signs" (VMS) or "Reader Boards"] shall comply with the following policy:

1. **General Standards.** PCM signs are traffic control devices, and as such, the use and operation of such signs shall be consistent with the "ODOT Guidelines for the Operation of Variable Message Signs on State Highways, June 2008" and placed in accordance with pages 30-31 and Diagram No. 001 of the "Oregon Temporary Traffic Control Handbook, May 2006."

2. **Authorization Required.** Prior to use of PCM signs, Columbia County Public Works staff shall obtain authorization from the Director, Assistant Director, District Supervisors, Crew Leadworker, Transportation Planner, Engineering Project Manager, or Sign Maintenance Worker.

3. **Placement.**

   a. Signs should be placed where they are visible long enough for the drivers to recognize them, read them at least twice and react appropriately and smoothly at the posted or prevailing speed.

   b. Avoid visual clutter as much as possible when locating the signs. Avoid locations where the information load on drivers is already high due to other signs. Avoid locations where drivers perform lane changes, or turning movements at intersections.

   c. Select a location safely accessible by maintenance vehicles.

   d. If the sign is located in a travel lane, on the shoulder, or in the clear zone normally available for run off the road recovery, it must be protected by cones, barrels, and / or barricades according to Diagram No. 001 of the Oregon Temporary Traffic Control Handbook.

4. **Message Display.** Because PCM signs are traffic control devices, sign messages shall be restricted to information related to traffic safety. Subject to approval by the Director or Assistant Director, special event messages may be displayed to inform drivers about access, parking locations, or other traffic considerations. Special public safety messages may be displayed as approved by the Director or Assistant Director.

5. **Use by Other Agencies.** Since these Portable Changeable Message Boards were purchased through the Urban Areas Security Initiative (UASI) program, the signs are available for use by other area agencies. All other users of these signs must comply with this policy. Upon request for use by another agency within the County, the Road Department will schedule, program, and set up the signs at appropriate times and locations as determined by the Columbia County Road Department.

EXHIBIT B

Oregon Department of Transportation

Guidelines for the Operation of Variable Message Signs on State Highways

June 2008

OREGON DEPARTMENT of TRANSPORTATION
HIGHWAY DIVISION
TRAFFIC MANAGEMENT SECTION
http://www.odot.state.or.us/traffic
503-986-3568

Under Oregon Revised Statute 810.200, **Uniform standards for traffic control devices; uniform system of marking and signing highways** and letters of authority from the Oregon Transportation Commission, the State Traffic Engineer is responsible for exercising authority with respect to the use of traffic control devices. Since variable message signs are traffic control devices, their operation is under the authority of the State Traffic Engineer.

The *Guidelines for the Operation of Variable Message Signs on State Highways* were developed by the Traffic Management Section and approved by the Oregon Traffic Control Devices Committee in 1995. The *Guidelines* were updated in January 2000, in 2002, 2005 and 2006. This 2008 revision returns the emphasis of the guidelines to operations. Major updates include new guidance for the use and composition of messages, changes to the Amber Alert System, and removes the design elements since these are now covered by standards and specifications. These *Guidelines* are consistent with the *Manual on Uniform Traffic Control Devices (MUTCD 2003).*

Approved by the State Traffic Engineer
In consultation with the Oregon Traffic Control Devices Committee

(original signed by)
Ed Fischer, State Traffic Engineer

Date:_____

(original signed by)
Robin Lewis, OTCDC Chair

Date:_____

Oregon Department of Transportation

Guidelines for the Operation of Variable Message Signs on State Highways

Table of Contents

I. Definition of VMS

A variable message sign (VMS) is a traffic control device whose message can be changed manually, electrically, mechanically, or electromechanically to provide motorists with information about traffic congestion, traffic crashes, maintenance operations, adverse weather conditions, roadway conditions, organized events, or other highway features (e.g., drawbridges, toll booths, weigh stations, etc.). A variable message sign may be referred to as a changeable message sign (CMS) or a dynamic message sign (DMS) in some publications. Speed radar boards are a special type of VMS and are not addressed in these *Guidelines*.

Permanent VMS are signs installed in the ground or on other highway superstructure such as bridges and tunnels.

Portable VMS (PVMS) are variable message signs that can be moved to a location as required. In moving operations, portable signs may be mounted on a truck.

II. Authority

Under Oregon Revised Statute 810.200, **Uniform standards for traffic control devices; uniform system of marking and signing highways** and letters of authority from the Oregon Transportation Commission, the State Traffic Engineer is responsible for exercising authority with respect to the use of traffic control devices, including VMS. These *Guidelines* clarify the use and operation of variable message signs on state highways in Oregon and are consistent with the *Manual on Uniform Traffic Control Devices (MUTCD 2003).*

Installation and location of VMS on state highways requires the approval of the State Traffic Engineer. The display of public service messages on VMS signs also requires the approval of the State Traffic Engineer. Each Region Traffic Engineer or Traffic Engineer approves non-standard messages other than public service messages in his or her region. The display of standard messages from the Standard Message List (*Supplement B*) does not require further approval.

The Intelligent Transportation Systems Unit of the Office of Operations & Maintenance has the authority to set the standards, specifications and design for VMS.

III. VMS Approval Process

A. Permanent VMS

The State Traffic Engineer must approve all permanent VMS installations prior to the project approval and inclusion in the *Statewide Transportation Improvement Program (STIP).*

The Region Traffic Engineer, working with Project Teams and the ITS Unit, should prepare a request for approval of a new VMS and submit it to the State Traffic Engineer. The request should include:

1) specific information regarding the purpose of sign (who for, type of messages, why needed at the desired location),
2) proposed type of sign and support,
3) desired location, and
4) operational responsibilities.

If an area-wide transportation management study has been completed that includes the proposed VMS, a copy should be included with the request.

B. Portable VMS

Use of portable variable message signs on state highways shall follow the provisions in these Guidelines. All PVMSs shall be operated under the authority of the Region Traffic Manager, the District Manager, or the Construction Project Manager.

IV. General Requirements of VMS Use

A. Permanent VMS

The operation of permanent variable message signs shall be in response to the purpose outlined in Section VII, Message Purpose and Priority.

B. Portable VMS (including truck-mounted signs)

The operation of portable variable message signs (PVMSs) will be according to the manufacturer's instructions and these guidelines. Use of a PVMS to display public service messages is not permitted. Use of a PVMS to display travel time information is discouraged.

C. Coordination with Highway Advisory Radio

Permanent and portable variable message sign messages shall not conflict with the broadcast messages of Highway Advisory Radio (HAR) operating in the area.

V. VMS Design

A. Permanent VMS

Permanent VMS vary in size and display capabilities depending on their intended use. They may be ground mounted on posts or sign bridges, mounted on structures, tunnels or other, special devices. The sign size and display must meet the MUTCD requirements for character size at the posted speed. Sign size varies from very large, typically capable of three lines of 18 characters each, to small signs which may display only two lines and 7 characters.

Signs with 8 characters per line or less use the standard message list in *Supplement B.* For messages on larger signs, refer to the additional guidance in *Supplement C.*

Each use and site for a permanent variable message sign requires a different sign and installation design. The ITS Unit of the Office of Maintenance maintains the VMS design standards, and oversees the site selection and design of all permanent VMS. For a specific application or for additional information on types of signs, design specifications and mounting considerations, contact the ITS Unit.

B. Portable VMS (PVMS)

PVMS typically are smaller signs with three lines of seven or eight characters each. Some truck mounted signs may have two lines per panel. Portable signs should not be installed for a permanent use.

All PVMS used on the state highway system shall be listed on ODOT's *Qualified Products List* (QPL). For equipment specifications, refer to Oregon Department of Transportation, *Standard Specifications for Highway Construction,* Section 00225.16 (b).)

For guidance on placement and layout of a PVMS in work zones refer to the *Oregon Standard Drawings* TM700 series for use lasting longer than three days or to the *Oregon Temporary Traffic Control Handbook* for use lasting three days or less.

VI. VMS Site Considerations

A. Permanent VMS: Permanent VMS sites are selected according to the intended need and available suitable locations. Coordinate with the ITS Unit and the Region Traffic office when new signs are being considered. The following factors should be considered when installing permanent changeable message signs:

1. Locate upstream of known bottlenecks and high crash locations;
2. Locate upstream of major diversion decision points, such as interchanges;
3. Avoid locating within an interchange except for toll plazas and managed lanes;
4. Avoid locations where the information load on drivers is already high due to guide signs and other types of information;
5. Avoid locations where drivers frequently perform lane-changing maneuvers in response to static guide sign information, or because of merging or weaving conditions.

B. Portable VMS: Portable VMS sites are selected by the required minimum distance from the condition the sign information is for, adjusting for road conditions and suitable placement location. Consider the following factors when siting a PVMS.

1. Signs should be placed where they are visible long enough for drivers to recognize them, read them at least twice and react appropriately and smoothly at the posted or prevailing speed. At 55 MPH, the sign should be visible from ½ mile

away under day and night conditions and should be legible for a minimum of 650 feet.

2. On multi-lane roads with sufficient median width, signs may be placed in the median for additional visibility. The signs must be protected by cones and barrier in each direction except in a direction not exposed to traffic, such as behind guardrail.

3. The sign must be mounted so that the bottom of the message sign panel is a minimum of 7 feet above the roadway when in place to display a message. When no message will be displayed, the sign may be pulled off the shoulder and closed down.

4. Choose a site prior to major route decision points (e.g., ramps and freeway-to-freeway interchanges) so that drivers may take an alternate route. The driver must have time to read the message, understand it, and take whatever action is required in a safe, comfortable manner before reaching the decision point. This is typically 1½ to 3 miles in advance of a freeway-to-freeway interchange, though will frequently be less in urban areas where interchanges are closely spaced. It may be much closer on other highways, but should take into account possible alternate routes.

5. Locate the PVMS along as much of a straight flat section as possible. Be sure there is at least the minimum legibility distance specified above.

6. Locate the PVMS at least 1000 ft from advance guide or other critical warning signs on any road where the speed is 45 MPH or higher. This distance should be greater if there are more than two travel lanes in the direction of the sign. On lower speed multi-lane roads or arterials, locate the PVMS at least 350 feet from other critical warning signs. On urban roads with a posted speed of 25 MPH or less, the signs may be located up to 100 feet from other critical signs.

7. Avoid visual clutter as much as possible when locating the PVMS.

8. The site should be safely accessible by maintenance vehicles.

9. If the sign is located in a travel lane, on the shoulder, or anywhere in the clear zone normally available for run off road recovery, it must be protected by guardrail or cones and safety barrier. See ODOT Standard Drawing No. TM700 for required layout.

VII. Message Purpose and Priority

Message Purpose

The primary purpose of any VMS is to provide information that supports quick and appropriate decisions by motorists in response to roadway, traffic, or adverse weather conditions. VMS use should enhance ODOT's first priority, public safety. VMS messages should only be displayed when some response or decision by motorists is required.

Message Priority

Daily and seasonal occurrences or site specific operations objectives may alter the priority for displaying messages. The standard priority of displayed messages is the following:

1. Drawbridge operations, road or ramp closures, and emergency situations;
2. Incident or crash;
3. Adverse weather or environmental conditions and related regulations such as chain restriction information;
4. Construction or maintenance operations;
5. Amber Alert message (see *Supplement D*);
6. Traffic operations information associated with special events such as car shows or sports events;
7. Travel time information;
8. Special public safety messages approved by the State Traffic Engineer;
9. Travel-related information directed at individual vehicles such as commercial trucks, as approved by the State Traffic Engineer,; or
10. Public Service Announcements approved by the State Traffic Engineer.

VIII. Message Selection

Messages inform all road users what to expect, where and when to expect it and what if anything they can do about it – in the simplest way possible. *Supplement A* should be used for routine messages. If a situation requires a message not on the list of standard messages, the Region Traffic Engineers or their designee have the responsibility to approve messages to be displayed on all variable message signs in their region. Traffic Engineering Services Unit staff is available to assist the regions with message development.

Use the simplest and fewest words possible to clearly convey the message.

Drivers traveling at the posted speed should be able to read the entire message at least twice in time to react and take the right action. At 55 MPH, the minimum time for a full 3 line message on a panel is 3 seconds to be sure a driver can read it twice before they are too close. One or two words on a single panel may be displayed for a minimum of 1.5 seconds.

A. Routine Messages – Message familiarity results in faster understanding and response, so the standard messages should be used whenever possible.

Select routine messages to be displayed on a VMS from *Supplement B Standard Message List.* On permanent VMS, the message should be modified to have no or minimum abbreviations as demonstrated in *Supplement C Message Instructions for Permanent VMS.*

B. Unique Messages – Keep It Short and Simple

If unusual circumstances require composing unique messages, the following factors should be considered:

1. All messages must relate to the reasons listed in Section VI, Message Purpose, and Priority.

2. A message should consist of only the following items. The list is generally in order of importance. Choose the most important information to display given the circumstances, message size limit and desired driver response:
   a) the problem statement (e.g., wreck, road work, left lane closed)
   b) the location statement (e.g., ahead 1 mile, exit 214, Brucker St)
   c) an action statement (e.g., exit, prepare to stop) if needed,
   d) a time period if needed (e.g., Tu – Fri, 8 PM – 6 AM),
   e) an attention statement if the message is being directed at a segment of drivers (e.g., through traffic, all trucks).

   For instance, if the road is closed to all over-width trucks but not to other vehicles, an attention statement (item e) is needed plus the road closure announcement and where to detour.

   If the road ahead is now closed to all vehicles, the first three items of information (road closed ahead 1 mile, exit at Brucker St.), would be enough information.

3. Unnecessary words (e.g., 'a', 'an', 'the') should be eliminated unless the intent of the message becomes unclear without them.

4. Use abbreviations only when necessary to fit the message properly on the display type.
   a) Only abbreviations listed in *Supplement A* should be used.
   b) For abbreviations not listed, use the most common abbreviation.
   c) All abbreviations are displayed without a period,.

5. Messages should be displayed in meaningful pieces of information that are clear on their own within one panel.

a) Split message components to make the most sense. Examples - (each example message is 2 panels):

Example 1	Example 2
Good	**Avoid**
LEFT LANE CLOSED	LEFT LANE
AT EXIT 214	CLOSED AHEAD
TRUCKS	AT EXIT 214
RIGHT LANE ONLY	TRKS RT LANE ONLY

b) A single panel display is preferred.
c) Two panels are the maximum number of panels for anything other than a pre-authorized message.
d) Reduce a message size for heavy traffic volumes, bad weather or other highly demanding driving environments.
e) For portable signs, use two signs for complex or long messages. Avoid adding more words and/or panels on a single sign than can be clearly seen and read by drivers twice in time to take appropriate action.

6. Leave out expected, unessential or implied actions or information to keep the message short and simple.
Examples:
- drivers expect to have to merge right when they see LEFT LANE CLOSED;
- WRECK AHEAD implies the need for caution;
- FOLLOW DETOUR rather than FOLLOW DETOUR ROUTE displays the essential information with fewer words;
- LEFT LANE CLOSED AHEAD is more essential information than ROAD WORK AHEAD if you have only one sign in use.

See Section IX. Displaying, Altering, and Removing Messages.

IX. Display of Speed, Location, and Time Within a Message

A. Speed

Speeds displayed on a VMS are advisory or warning rather than regulatory unless there is a speed zone order from the State Traffic Engineer that specifically states the speed will be posted by variable message sign.
1. Messages like "SLOW," "REDUCE SPEED," etc., are preferred to numeric speeds because they tell the driver what action they should take.
2. Avoid using numeric speeds in the message unless the use is specifically approved by the Region Traffic Engineer or their designee.
3. The posted speed may be displayed to reinforce the ground signs.

B. Location

a) Display the distance to a location such as a road work area, detour start or lane closure in miles. Distances may incorporate the fractions ¼, ½, or ¾ mile. Distances less than ¼ mile should be shown in feet (rounded to the nearest 100 feet).

b) If the exit numbers or place names are shown on guide signs before or just after the VMS, the exit number or established place name such as Ashland or Santiam Pass may be used.
(1) Exit numbers are preferred on interstate highways since they are prominently posted both before and at the exits.
(2) When place names are used, they should be the same as those shown on guide signs in the vicinity of the VMS.
(3) Local names or landmarks should be avoided unless the name is shown on the permanent guide signs on the highway..
(4) Reference to "NEXT EXIT," "2ND EXIT," etc. may be preferable to actual distances or exit numbers when there are multiple exits.

C. Time

a) Time displayed in the VMS message shall relate to the standard 12-hour format using "AM" and "PM" designation, and express local time. The abbreviations "MIN" and "HR" should be used.
b) For an entire day or number days, the time period shall be displayed in days of the week. Include dates only if the advisory is for an event in a future week. For instance:

A message about a road impact next Tuesday would read

ETHAN AVE CLOSED
TUESDAY – THURSDAY

but if the closure is two weeks away the message would read
ETHAN AVE CLOSED
JULY 12-14
TUES – THURS.

c) Travel time displays should include a destination. E.g.:
TRAVEL TIME
TO FRONT AVE
20 MIN

X. Displaying, Altering, and Removing Messages

A. A message should only be displayed when a response is desired. At a minimum, drivers need to know what they should do and the reason for doing it. (See Section X.A. regarding Public Service Announcements.)

B. All messages displayed on a permanent VMS shall conform to the priority listing given in Section VI, Message Purpose, and Priority.

C. Messages should be centered line by line if message layout has more than one option.

D. Techniques of message display such as fading, exploding, dissolving, or scrolling shall not be used. The text of messages shall not flash. Arrows can be flashed.

E. Single panel messages should be continuously displayed. Alternatively displaying a single panel message and a blank panel implies to the observer that new information may be displayed. It also gives the drivers less time to read the message.

F. Each message, including all panels, should be displayed so that it can be read at least twice by drivers traveling at the posted speed.

G. Messages that could adversely impact a facility operated or maintained by another jurisdiction should be avoided. Contact the road authority of the affected jurisdiction prior to displaying such a message. When an emergency plan or other interagency agreement exists about rerouting traffic, follow the procedures in that plan or agreement.

H. Messages that could impact traffic at another permanent ODOT VMS location should not be displayed or removed without first contacting the VMS operator at the affected location.

I. When a message display is ended, restore the earlier message if it is still relevant.

J. Prior to display, message spelling, layout and intent should be verified by the TOC Supervisor, Region Traffic Engineer or their designee.

K. Messages displayed on a permanent VMS should be verified either by direct observation by field personnel, through the use of CCTV or by other means.

XI. Restrictions on VMS Usage

A. Public Service Announcements

A Public Service Announcement (PSA), as it pertains to display on a VMS on the public roadway, is a brief message that does not require an immediate response but encourages the driver to change a future behavior. PSAs related to air quality alerts and transportation safety are permitted on permanent signs as outlined below. PSAs shall not be displayed on a PVMS. When displaying a PSA on a permanent VMS, the following factors shall be considered:

1. The State Traffic Engineer shall pre-approve the text of all PSAs.

2. A PSA shall have the lowest message priority and shall be displayed only at the discretion of the State Traffic Engineer.

3. A PSA shall be limited to a single panel containing no more than eight words (about four to eight characters per word), excluding prepositions.

4. Strobe or flashing lights shall not be used in conjunction with a PSA.

5. A PSA should not be displayed for 15 minutes following the termination of any other message.

6. PSAs related to transportation safety issues shall be displayed only as supplementary to local or statewide transportation safety media campaigns on the same topic. The display of a PSA during peak traffic periods should be avoided. The total duration of the display should not exceed five hours per day or more than five days per month at any permanent VMS location.

7. Messages related to air quality or alternative transportation options may be displayed during the 24-hour period preceding an air quality alert day as determined by the State Traffic Engineer or designated representative in cooperation with the Department of Environmental Quality (DEQ). The duration of the message display is not subject to the restriction of paragraph 5 above.

B. Advertising Messages

Advertising messages, including tourist information, shall not be displayed on any permanent or portable VMS. An advertising message is any wording that promotes an event, place or product by name and for promotional purposes. For example:

Advertising Message: (NOT ALLOWED)

Oregon State Fair
Today through Sunday
Salem

Allowed Message:

Oregon State Fair
Use Next 3 Exits

C. Special Events Messages

If a special event is likely to impact traffic operations, a message may be displayed on a permanent or portable VMS to inform drivers about exit and parking information. Messages should be approved by the Region Traffic Engineer and should follow the examples given in *Supplement B*. If an attraction qualifies as a "destination", a message may be appropriate but should avoid direct mention of a specific private establishment or event.

The ODOT Region Traffic Engineer or District Manager may request the event organizer to submit a traffic control plan for managing additional traffic volumes likely to occur before and after the scheduled event. (Note: Division 56 of the Oregon

Administrative Rules addresses special event permits on state highway rights-of-way. OAR 734-056-0030(3)(d) requires an applicant to submit a traffic control plan as part of the permit process.)

D. Messages Relating to Travel Time Information

Messages relating to travel time information may be displayed at the discretion of the Region Traffic Engineer. Use of a PVMS to display travel time information is discouraged. When displaying travel time information the following shall be considered:

8. There shall be an established program for disseminating travel time information on the corridor or route on which the sign is situated.

9. There shall be a means for determining travel time to ensure that the information is accurate and real time.

10. The travel time message shall be pre-emptible by a message of a higher priority.

11. Strobe or flashing lights shall not be used in conjunction with travel time information.

12. Travel time information displayed should not be for more than two highway sections/corridors. Normally the highways should be alternate route choices to each other and should be routes that are in close proximity to the sign.

See *Supplement B* for the format to be used to display travel time information.

E. Messages Directed at an Individual Vehicle

Special added communication applications such as feedback on speed when approaching a curve or steep downgrade may be added to permanent or portable VMS. The use of this type of application requires State Traffic Engineer approval. With approval of the State Traffic Engineer, a VMS may be used to communicate directly with an individual vehicle about travel related matters. This use will only be permitted if such messages can immediately be overridden with higher priority messages.

F. Test Messages

Test messages on a portable VMS should not be displayed to traffic. Test messages on a permanent VMS should be clearly identified and, if possible, displayed only during non-peak traffic periods. (See *Supplement B* for suggested test messages.)

G. Use for Advance Notification

Messages should not project anticipated road conditions due to expected extreme weather more than 24 hours in advance. Information on extended road or lane closures for construction or maintenance activities should be displayed beginning two

weeks in advance of the closure unless directed otherwise by the Region Traffic Engineer, Construction Project Manager or project traffic control plans.

H. Special Public Safety Messages

With the approval of the State Traffic Engineer, special public safety messages (e.g., extreme fire danger) may be displayed on a VMS. Such uses will only be permitted if the message can be immediately overridden with a higher priority message.

I. Displaying Messages Related to Icy Conditions

It is not possible to display messages regarding icy conditions everywhere or every time they occur. Messages related to icy conditions should only be posted if conditions are unusual and not normally experienced on that section of roadway. Black ice or ice that develops rapidly are examples of unusual conditions. District maintenance personnel are in the best position to determine if icy conditions at a particular location are unusual. Previous ice-related incidents or crashes at the location could provide additional support for providing motorists information about the current situation. If the icy conditions are unusual, an available VMS or PVMS can be used to display an ice-related message. An acceptable message is "WATCH FOR ICE" which may be followed by the additional message "NEXT xx MILES".

The message should be removed when the conditions no longer require its display.

Supplement A

Allowed Abbreviations for VMS

Due to limitations in the number of characters, abbreviations may be required, especially on portable signs. The following three tables are to be used to determine the right abbreviation whenever one is needed.

Table 1 lists the acceptable abbreviations for many commonly used terms.

Table 2 has abbreviations that can only be used with another word that defines the abbreviated term.

Table 3 lists abbreviations that can never be used as they are easily mistaken for inappropriate words or have multiple possible common interpretations.

Guidance:
Where multiple abbreviations for a word are permitted in the table, the same abbreviation should be used throughout a single jurisdiction.

Table 1: Acceptable Abbreviations:

Word Message	Standard Abbreviation
Afternoon / Evening	PM
Alternate	ALT
Avenue	AVE, AV
Bicycle	BIKE
Boulevard	BLVD
Cannot	CANT
CB Radio	CB
Center	CNTR
Circle	CIR
Civil Defense	CD
Compressed Natural Gas	CNG
Court	CT
Crossing (other than highway-rail)	XING
Diesel Fuel	D
Do Not	DONT
Drive	DR
East	E
Eastbound	EB
Electric Vehicle	EV
Emergency	EMER
Entrance, Enter	ENT
Expressway	EXPWY
Feet	FT
FM Radio	FM
Freeway	FWY
Friday	FRI

Hazardous Material	HAZMAT
High Occupancy Vehicle	HOV
Highway	HWY
Highway-Rail Grade Crossing Pavement Marking	RXR
Hospital	H
Hour(s)	HR
Information	INFO
Inherently Low Emission Vehicle	ILEV
Junction / Intersection	JCT
Lane	LN
Left	LFT
Liquid Propane Gas	LP-GAS
Maintenance	MAINT
Mile(s)	MI
Miles Per Hour	MPH
Minute(s)	MIN
Monday	MON
Morning / Late Night	AM
Normal	NORM
North	N
Northbound	NB
Parking	PKING
Parkway	PKWY
Pedestrian	PED
Place	PL
Pounds	LBS
Right	RT
Road	RD
Saturday	SAT
Service	SERV
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	SB
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Terrace	TER
Thursday	THURS or TH
Tires With Lugs	LUGS
Tons of Weight	T

Traffic	TRAF
Trail	TR
Travelers	TRAVLRS
Tuesday	TUES or TU
Two-Way Intersection	2-WAY
Two-Wheeled Vehicles	CYCLES
US Numbered Route	US
Vehicle(s)	VEH
Warning	WARN
Wednesday	WED
West	W
Westbound	WB
Will Not	WONT

Table 2: Abbreviations Used Only with a Prompt Word

Word	Abbreviation	Typical Prompt Word*
Access	ACCS	Road or Business
Ahead	AHD	Fog*
Blocked	BLKD	Lane*
Bridge	BR or BRDG	[Name]*
Chemical	CHEM	Spill
Condition	COND	Traffic*
Congested	CONG	Traffic*
Construction	CONST	Ahead
Downtown	DWNTN	Traffic
Exit	EX, EXT	Next*
Express	EXP	Lane
Frontage	FRNTG	Road
Hazardous	HAZ	Driving
Interstate	I	[Number]
Local	LOC	Traffic
Lower	LWR	Level
Major	MAJ	Accident
Minor	MNR	Accident
Oversized	OVRSZ	Load

Prepare	PREP	To Stop
Pavement	PVMT	Wet*
Quality	QLTY	Air*
Roadwork	RDWK	Ahead [Distance]
Route	RT, RTE	Best*
Township	TWNSHP	Limits
Turnpike	TRNPK	[Name]*
Upper	UPR	Level

* Words with an asterisk should precede the abbreviation

Standard:
The abbreviations shown in Table 3: Unacceptable Abbreviations shall not be used in connection with traffic control devices because of their potential to be misinterpreted by road users.

Table 3: Unacceptable Abbreviations

Abbreviation	Intended Word	Common Misinterpretations
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (Merge)
LT	Light (Traffic)	Left
PARK	Parking	Park
POLL	Pollution (Index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
WRNG	Warning	Wrong

SUPPLEMENT B

STANDARD MESSAGE LIST

Most sign legends included in the ODOT document, *Sign Policy and Guidelines for the State Highway System*, may be used on a variable message sign (VMS) when needed for traffic control purposes. Arrows and chevrons may be used. Graphics shall not be used. Messages may include distance information expressed in feet or miles.

Column 1 shows message on the first panel, Column 2 shows the message on the second panel. Do not flash if only 1 panel is shown. The '/' mark separates lines on a panel and are not part of the message. Center each line or align left if centering is not possible. Column 3 contains abbreviations as explained below, plus any notes on options or use of the message.

Messages are grouped in 5 categories: Traffic Management; Incident Management; Work Zone Management; Bridges; and Truck Messages.

Traffic Management includes all messages relating to driver maneuvers regardless of why the message is needed. The messages in this category may be relevant to incident, bridge and work zone traffic control as well as general traffic management needs.

Incident Management includes all specific emergency or other immediate hazard messages including weather-related messages.

Work Zone Management includes messages specific to work crews near the road including flagging and equipment operations.

The *Bridges* category includes all messages specific to bridges including bridge work.

Truck Messages includes truck only messages.

Line lengths: each line is assumed to have 8 characters. For smaller signs with a line length of 7 characters, the standard abbreviation for any 8 character word used is shown to the right in parentheses. For some situations (e.g., xing for crossing) a preferred abbreviation is shown with the longer version shown to the right.

Right/Left/Center lane or placement: only one option is usually shown. Any abbreviations needed to use the alternate options are shown next to it in parentheses.

Message options: Messages shown are those commonly used. If an exit number is known, the message 'USE / EXIT / XX' can be substituted for 'USE / NEXT / EXIT' especially if the sign is placed farther than 2 miles from the exit. The word 'AHEAD' can be dropped from messages such as 'LANES / NARROW' if the action needed is immediate.

At travel speeds above 45 MPH, eliminating extra words such as 'SLOW' at the beginning of a merge or other action message supports faster, and so more, driver comprehension.

Abbreviations: Don't use abbreviations other than those shown, as they are difficult for people to translate at travel speeds.

TRAFFIC MANAGEMENT:

Panel 1	Panel 2	Abbreviations & notes
ABRUPT / EDGE	ABRUPT / EDGE / RIGHT	
CHILDREN / XING / HIGHWAY	USE / CAUTION	(CHILDRN; CROSSNG)
CROSS / TRAFFIC / AHEAD	WARNING	
DO / NOT / PASS	STAY / IN / LANE	
DO / NOT / STOP	NO / PARKING / SHOULDER	(SHOULDR)
EXIT / CLOSED / AHEAD	USE / NEXT / EXIT	
EXIT / OPEN / LEFT	LEFT / EXIT / OPEN	Only Panel 1 at speeds > 45 MPH
HEAVY / TRAFFIC / AHEAD	PREPARE / TO / SLOW	
HEAVY / TRAFFIC / AHEAD	PREPARE / TO / STOP	
LANE / NARROWS / AHEAD	WARNING	
LANES / SHIFT / AHEAD	LANES / SHIFT / LEFT	Only Panel 2 at speeds > 45 MPH
LANE / ENDS	MERGE / RIGHT	
LEFT / LANE / CLOSED	MERGE / RIGHT	
LEFT LN / CLOSED / AHEAD	MERGE / RIGHT	(RT LANE – Panel 1, line 1)
LEFT LN / CLOSED / 1000 FT	MERGE / RIGHT	(RT LANE – Panel 1, line 1)
LEFT LN / CLOSED / X MILE	MERGE / RIGHT	(RT LANE – Panel 1, line 1)
LEFT / LANE / NARROWS	NO / TRUCKS	
RT LANE / CLOSED / X MILE(S)	PREPARE / TO / MERGE	(LEFT LN – Panel 1, line 1)
LEFT / 2 LANES / CLOSED	USE / RIGHT / LANE	
MERGE / LEFT		
MERGE / RIGHT		
MERGE / AHEAD	TRAFFIC / ENTERS / RIGHT	
NO / CENTER / STRIPE	KEEP / RIGHT	
NO / LANE / LINES	USE / CAUTION	
NO / LANE / LINES	KEEP RT / EXCEPT / TO PASS	
NO / SHOULDER	DO / NOT / STOP	
ROAD / CLOSED / AHEAD	LOCAL / TRAFFIC / ONLY	note: only use AHEAD for advance
ROAD / CLOSED / AHEAD	USE / DETOUR	note: only use AHEAD for advance
ROAD / CLOSED / X MILE(S)	USE / DETOUR	
ROAD / NARROWS / AHEAD		
ROUGH / PAVEMENT / AHEAD	PREPARE / TO / SLOW	(PAVEMNT)
ROUGH / ROAD / AHEAD	SLOW	
SHARP / CURVE / AHEAD	SLOW	
SLOW / TRAFFIC / AHEAD	PREPARE / TO / SLOW	
SOFT / SHOULDER	USE / CAUTION	(SHOULDR)
STAY / IN / LANE	NO / LANE / CHANGES	
STEEP / GRADE	SLOW / TRUCKS	
SUNKEN / PAVEMENT (PAVEMNT)	BUMP / SLOW	note: either panel can stand alone
TRAFFIC / CONTROL / CHANGE	YIELD / AHEAD	
TRAFFIC / CONTROL / CHANGE	STOP / AHEAD	
TRAFFIC / CONTROL / CHANGE	SIGNAL / AHEAD	
TRAFFIC / DELAYS	PREPARE / TO / SLOW	
TRAFFIC / DELAYS	PREPARE / TO / STOP	
TRUCKS / XING / ROAD	USE / CAUTION	(CROSSING; CROSSNG)
TWO-WAY / TRAFFIC / AHEAD		(2 WAY)
WATCH / FOR / TRUCKS	TRUCKS / ENTER / RIGHT	

YIELD / AHEAD		
YIELD / AHEAD	YIELD / TO / ONCOMING	(ONCOMNG)

WORK ZONE MANAGEMENT:

Panel 1	Panel 2	Abbreviations & notes
CREW / PAINTING / CENTER	KEEP / TO / RIGHT	(PAINTNG)
DETOUR / AHEAD	FOLLOW / DETOUR / SIGNS	
DETOUR / NEXT / LEFT	FOLLOW / DETOUR / SIGNS	
DETOUR / 1000 FT	FOLLOW / DETOUR / SIGNS	
DETOUR / X MILE(S) / AHEAD	FOLLOW / DETOUR / SIGNS	(XX MI)
FLAGGER / AHEAD / 1 MILE	BE / PREPARED / TO STOP	
FLAGGER / AHEAD	PREPARE / TO / STOP	
FRESH / OIL / ON ROAD	SLOW	note: can be 1 panel
FRESH / TAR / ON ROAD	SLOW	note: can be 1 panel
MEDIAN / WORK / AHEAD	USE / RIGHT / LANE	
MEDIAN / WORK	KEEP / RIGHT	
MOWERS / IN / MEDIAN	MOWING / NEXT / ¼ MILE	
MOWERS / IN / MEDIAN	MOWING / NEXT / X MILE(S)	
RAMP / CLOSED / AHEAD	USE / NEXT / EXIT	
PILOT / CAR / 1 MILE	BE / PREPARED / TO STOP	
PILOT / CAR / AHEAD	PREPARE / TO STOP	
ROAD / WORK / AHEAD	WORK / NEXT / X MILE(S)	
ROAD / WORK / AHEAD	USE / LEFT / LANE	
SHOULDER / WORK	WORK / ON / SHOULDER	(SHOULDR)
SHOULDER / WORK	CLOSED / SHOULDER / X MILES	(XX MI)
SHOULDER / WORK / AHEAD	USE / CAUTION	
SHOULDER / WORK / AHEAD	USE / LEFT / LANE	
SHOULDER / WORK / AHEAD	WORKERS / ON / SHOULDER	
SIGNAL / WORK / AHEAD	PREPARE / TO / STOP	
SIGNAL / WORK / AHEAD	LEFT / TURN LN / CLOSED	
SIGNAL / WORK / AHEAD	USE / RIGHT / LANE	
SIGNAL / WORK / AHEAD	WORKERS / IN / ROAD	
SLOW / MOVING / WORK	PREPARE / TO / SLOW	
SLOW / MOVING / WORK	LEFT / LANE / CLOSED	
SLOW / MOVING / WORK	KEEP / RIGHT	
SLOW / MOVING / WORK	SHOULDER / CLOSED	(SHOULDR)
SLOW / MOVING / WORK	MEDIAN / CLOSED	
SNOW / BLOWERS / AHEAD	DO / NOT / PASS	
SNOW / BLOWERS / AHEAD	PLEASE / USE / CAUTION	
SNOW / BLOWERS / AHEAD	USE / LEFT / LANE	
SNOW / PLOW / AHEAD	DO / NOT / PASS	
STRIPING / TRUCKS / AHEAD	CENTER / LANE / CLOSED	(STRIPNG or PAINT)
STRIPING / WORK / RIGHT	USE / LEFT / LANE	(STRIPNG or PAINT)
STRIPING / WORK / CENTER	KEEP / RIGHT	(STRIPNG or PAINT)
SURVEY / WORK / AHEAD	PREPARE / TO / STOP	
SURVEY / WORK / AHEAD	PREPARE / TO / SLOW	
SURVEY / WORK / AHEAD	USE / LEFT / LANE	
SWEEPER / AHEAD	USE / CAUTION	

SWEEPER / AHEAD	USE / LEFT / LANE
TUNNEL / CLOSED / AHEAD	EXPECT / DELAYS
TUNNEL / CLOSED / AHEAD	DETOUR / NEXT / LEFT
TUNNEL / CLOSED / AHEAD	USE / OTHER / ROUTE
TUNNEL / CLOSED / AHEAD	PREPARE / TO / STOP
USE / DETOUR / ROUTE	FOLLOW / DETOUR / SIGNS
USE / DETOUR / ROUTE	TURN / NEXT / RIGHT
WET / PAINT	STAY / IN / LANE
WORKERS / AHEAD	WATCH / FOR / WORKERS
WORKERS / IN / MEDIAN	WATCH / FOR / WORKERS
WORKERS / IN / ROAD	PLEASE / SLOW
WORKERS / IN / TUNNEL	PLEASE / SLOW

INCIDENT MANAGEMENT:

WEATHER-RELATED

Panel 1	Panel 2	Abbreviations & notes
ACTIVE / SLIDES / AHEAD	REDUCE / SPEED	
BLACK / ICE / LIKELY	USE / CAUTION	
BLOWING / DUST / AHEAD	NEXT / X MILE(S)	
BLOWING / DUST / AHEAD	SLOW / TURN ON / LIGHTS	
BLOWING / SNOW / AHEAD	NEXT / X MILE(S)	
BLOWING / SNOW / AHEAD	SLOW / TURN ON / LIGHTS	
DENSE / FOG / AHEAD	SLOW / TURN ON / LIGHTS	
FREEZING / FOG / AHEAD	SLOW / TURN ON / LIGHTS	(FREEZNG)
FREEZING / FOG / LIKELY	USE / CAUTION	(FREEZNG)
ICE / ON / BRIDGES	SLOW / USE / CAUTION	
ICE / ON ROAD / AHEAD	SLOW / USE / CAUTION	
ROAD / FLOODED	SLOW	
ROCKS / ON / ROADWAY	USE / CAUTION	
SLIDE / BLOCKS / ROAD	PREPARE / TO / STOP	
SLIDE / ON / ROAD	KEEP / RIGHT	
SNOW / BLOWERS / AHEAD	DO / NOT / PASS	
SNOW / BLOWERS / AHEAD	USE / CAUTION	
SNOW / BLOWERS / AHEAD	USE / LEFT / LANE	
SNOW / PLOW / AHEAD	DO / NOT / PASS	
SNOW / ZONE	CHAINS / REQUIRED / ALL VEH	
SNOW / ZONE	CHAINS / REQUIRED/ OVER 10K	(REQUIRD; OVER10K)
SNOW / ZONE	CARRY / CHAINS	
WATCH / FOR / ICE	NEXT / X MILE(S)	(XX MI)
WATER / ACROSS / ROAD	USE CAUTION	

NON-WEATHER EVENTS

Panel 1	Panel 2	Abbreviations & notes
BURN / AREA / AHEAD	SLOW / TURN ON / LIGHTS	
DEBRIS / ON / ROAD	KEEP / LEFT	
DEBRIS / ON / ROAD	RIGHT / LANE / CLOSED	
DEBRIS / ON / ROAD	PREPARE / TO / STOP	
DEBRIS / ON / ROAD	EXPECT / DELAYS	
DENSE / SMOKE / AHEAD	STOP ON / SHOULDER / ONLY	(SHOULDR)
DENSE / SMOKE / AHEAD	SLOW / TURN ON / LIGHTS	
DENSE / SMOKE / AHEAD	PREPARE / TO / SLOW	
DENSE / SMOKE / AHEAD	PREPARE / TO / STOP	
EXTREME / FIRE / DANGER	USE / CAUTION	
FIRE / AHEAD	PREPARE / TO / SLOW	
FIRE / AHEAD	PREPARE / TO / STOP	
FIRE / AHEAD	STOP ON / SHOULDER / ONLY	(SHOULDR)
FREEWAY / BLOCKED / AHEAD	PREPARE / TO / STOP	
FREEWAY / CLOSED / AHEAD	ALL / VEHICLES / EXIT	(ALL VEH / MUST / EXIT)
FREEWAY / CLOSED	USE / NEXT / EXIT	
FREEWAY / CLOSED	FOLLOW / DETOUR / SIGNS	
SIGNAL / OUT	ALL-WAY / STOP / AHEAD	
SIGNAL / OUT	ALL VEH / YIELD / RIGHT	
STALLED / VEHICLE	PREPARE / TO / STOP	
STALLED / VEHICLE / AHEAD	SHOULDER CLOSED	(SHOULDR)
STALLED / VEHICLE / AHEAD	RIGHT / LANE / CLOSED	
STALLED / VEHICLE / ON RAMP	KEEP / LEFT	(ON EXIT; ON ENTRY)
WRECK / AHEAD	CENTER / LANE / CLOSED	
WRECK / AHEAD	EXPECT / DELAYS	
WRECK / AHEAD	LEFT / LANE / CLOSED	
WRECK / AHEAD	LEFT / 2 LANES / CLOSED	
WRECK / AHEAD	KEEP / RIGHT	
WRECK / AHEAD	PREPARE / TO / STOP	
WRECK / AHEAD	USE / CAUTION	
WRECK / AHEAD	USE / CENTER / LANE	

BRIDGES:

Panel 1	Panel 2	Abbreviations & notes
BRIDGE / CLOSED / AHEAD	USE / DETOUR	
BRIDGE / CLOSED / AHEAD	FOLLOW / DETOUR / SIGNS	
BRIDGE / OUT / AHEAD	USE / DETOUR	
BRIDGE / OUT / AHEAD	USE / OTHER / ROUTE	
BRIDGE / WORK / AHEAD	LANES / NARROW	
BRIDGE / WORK / AHEAD	PREPARE / TO / STOP	
BRIDGE / WORK / AHEAD	USE / CENTER / LANE	
BRIDGE / WORK / AHEAD	WORKERS / ON / ROAD	
BRIDGE / WORK / AHEAD	SLOW	
ONE / LANE / BRIDGE	PREPARE / TO / STOP	

TRUCKS:

Panel 1	Panel 2	Abbreviations & notes
ALL / TRUCKS	TRUCKS / EXIT / RIGHT	
ALL / OVERSIZE / VEH	OVERSIZE / MUST / EXIT	(OVRSIZE)
ALL / TRUCKS	TRUCKS / USE / RT LANE	(LEFT/CNTR LN)
ALL / TRUCKS	TRUCKS / KEEP / RIGHT	
ALL / TRUCKS	USE / LOW / GEAR	
ESCAPE / RAMP 1 / CLOSED	TRUCKS / USE / RAMP 2	
ESCAPE / RAMP / CLOSED		
OVERSIZE / MUST / EXIT	NEXT / EXIT / X MILE(S)	(OVRSIZE) (XX MI)
TRUCKS / OVER / 80,000	TRUCKS / MUST / EXIT	
TRUCKS / OVER / 80,000	USE / NEXT / EXIT	

SUPPLEMENT C

Instructions and Sample Messages for Display on Permanent Variable Message Signs

These messages are from the standard message list in Supplement C showing how to expand them for greater comprehension when appropriate.

Panel 1	Panel 2
FREEWAY CLOSED AT EXIT nn	I-84 BOISE USE EXIT yyy DETOUR ROUTE OR203
FREEWAY CLOSED xx MILES	I-5 SEATTLE USE NEXT EXIT FOLLOW DETOUR SIGNS
FREEWAY BLOCKED	KEEP RIGHT PREPARE TO STOP
BRIDGE CLOSED xx MILES	ALL TRAFFIC USE I-405 LEFT LANES
SNOW ZONE	CARRY CHAINS OR TRACTION TIRES
SNOW ZONE	CHAINS REQUIRED** ON VEHICLES TOWING OR OVER 10000 GVW
SNOW ZONE CHAINS REQUIRED	TRACTION TIRES ALLOWED ON VEH UNDER 10000 GVW
DENSE FOG AHEAD	LOW VISIBILITY
EXTREME HAZARD FREEZING FOG	
WATCH FOR ICE	NEXT xx MILES
WRECK AHEAD	USE RIGHT LANE*
WRECK AHEAD	PREPARE TO STOP
WRECK xx MILES AHEAD	LEFT LANE CLOSED
WRECK xx MILES AHEAD	I-5 SEATTLE USE I-405 LEFT LANES
WRECK xx MILES AHEAD	CITY CENTER EXIT LLOYD BLVD
WRECK xx MILES AHEAD	FWY CLOSED AT NE 43RD AVE
WRECK xx MILES AHEAD	ALL TRAFFIC USE I-405 RIGHT LANES

Panel 1	Panel 2
CONSTRUCTION xx MILES AHEAD	WATCH LANE RESTRICTIONS
SWEEPER AHEAD	USE RIGHT LANE
ROAD WORK xx MILES AHEAD	USE RIGHT LANE
SHOULDER WORK	USE RIGHT LANE
EVENT PARKING EXIT nn	
EVENT PARKING EXIT LLOYD BLVD	
EVENT PARKING FOLLOW I-5 SEATTLE	
EVENT PARKING USE I-5 RIGHT LANES	THRU TRAFFIC USE I-405 LEFT LANES
EVENT PARKING FOLLOW I-5 EXIT nn	
EXPO CNTR PARKING EXIT 306B RIGHT LANE ONLY	THRU TRAFFIC PORTLAND-SALEM LEFT LANE
TRUCKS	ESCAPE RAMP UNDER REPAIR
TRUCKS	SECOND ESCAPE RAMP CLOSED
MOBILE HOMES nn ROAD CLOSED	HIGH WINDS
MOBILE HOMES nn EXIT CLOSED	ROAD CONSTRUCTION
OVERSIZED VEH USE EXIT nn	I-84 CLOSED TO OVERSIZED VEH
TRAVEL TIME INFO VLY JCT-LINCOLN CTY xx MIN	
SIGN UNDER SYSTEMS TEST ODOT TEST	ODOT TEST SYSTEMS TEST
OREGON DEPARTMENT OF TRANSPORTATION	SIGN UNDER TEST

Supplement D

Amber Alert System

This supplement to the *Guidelines for the Operation of Variable Message Signs on State Highways* addresses the use of Variable Message Signs (VMS) for public safety messages concerning the abduction of a child when that abduction has activated the Amber Alert System. Public safety messages approved by the State Traffic Engineer are allowed (Section VI.G.).

The Amber Plan, established in October 2002 by Executive Order No. 02-22, uses the Emergency Alert System, television, radio, and the state highway variable message system to provide timely emergency information to the public regarding a child abduction.

The messages posted on a VMS are referred to as Amber Alert messages.

I. Operation

A. An Amber Alert message shall only be posted when there is verification of a legitimate Amber Alert activation from the Oregon State Police (OSP) Northern Communications Center or the Washington County Consolidated Communications Agency (WCCCA) 911 Center.

B. No Amber Alert message shall be displayed on an ODOT VMS at the request of any other law enforcement offices.

C. When an Amber Alert is active, ODOT Transportation Operations Centers will activate all fixed VMSs unless otherwise directed in the Amber Alert activation notice. Activation of portable VMSs is at the discretion of the TOC shift supervisor.

D. When a sign is needed to warn motorists of conditions on the highway needing their immediate attention, an Amber Alert message should not be displayed.

E. The following uses will typically have higher priority than the display of an approved Amber Alert message (Section VI, Conditions Warranting Message Display):

1. Drawbridge operation, road or ramp closure, and emergency situations;
2. Incidents or crashes;
3. Construction or maintenance operations; and
4. Adverse weather or environmental conditions.

F. Unless the Amber Alert is updated with additional vehicle information, or reissued, the message should be displayed for no more than eight hours or until the Amber Alert is officially called off, whichever occurs first. Exceptions are:

1. Extension: If the issuing agency request an extension, two hours will be added to the remaining display time. If still needed, an additional 2 hour extension may be given at the request of the issuing agency.
2. Update: If an update is needed such as new color, make or model of the vehicle or license plate information, any VMS previously activated will be updated with the new information. If the update is within the first four hours of the Amber Alert, the message will continue to be activated for the original eight hour period. If the update occurs after the first four hours of an Amber Alert, the updated message will be extended two hours beyond the original eight hour period.
3. If the Amber Alert occurs between 8 PM and 1 AM, the Amber Alert will remain active until 9 AM the following morning or until the Amber Alert is officially called off, whichever occurs first.

G. Any information regarding vehicle updates, extensions and/or cancellations will be shared with all other TOCs.

H. An Amber Alert message should be discontinued if there is a need to warn motorists of road conditions needing an immediate response.

II. Approved Amber Alert Messages

A. No phone numbers are to be placed on the VMS

B. Two panel Amber Alert message:
Panel A:

AMBER
ALERT

Panel B:

[VEHICLE DESCRIPTION]
[LICENSE PLATE NUMBER]

C. If an Amber Alert is activated and there is no vehicle license plate information, the message will be placed as follows:

AMBER ALERT
TUNE TO
LOCAL NEWS

III. Examples:

A. Vehicle descriptions:
1. Type 1 Sign: BLACK CHEVY P.U.
2. Type 2 Sign: BLACK PICKUP
3. If on PVMS: BLK PKUP

B. License plate number:

1. Type 1 or Type 2 Sign: OR PLATE XYZ 123
2. If on PVMS: XYZ 123

IV. Recordkeeping

A. Files of messages, display times, and the operator who posted the message should be maintained. Records may be electronic or other media and should be secure and accessible for review, retrieval and printing.

B. Local procedures for documenting communications regarding the use of VMS for Amber Alert should be established and followed.

Oregon Temporary Traffic Control Handbook

FOR OPERATIONS OF
THREE DAYS OR LESS
May 2006

Prepared by the Oregon Department of Transportation

EXHIBIT C

determine if floodlighting is well placed is to drive through the set up after dark from each approach direction.

Research indicates that 50 lux (five foot candles) is a desirable nighttime illumination level where workers are active. If everything in the light appears in full color, the lighting level is satisfactory. Sidewalks or pedestrian detours should be included in the lighted perimeter.

3.42 Portable Changeable Message Signs (PCMS): Also described as Portable Variable Message Signs (PVMS). PCMS include a message sign panel, control system, power source and mounting and transporting equipment. They shall conform to all requirements in the MUTCD and shall be listed on the ODOT Qualified Products List for use on state highways. PCMS are used mainly as a supplement to and not as a substitute for conventional signs, pavement markings and lighting. Standard messages and abbreviations should be used whenever possible. See *Guidelines for Operation of Variable Message Signs on State Highways* for information on standard messages (see http://www.oregon.gov/ODOT/HWY/TRAFFIC/).

Per MUTCD Section 2A.07, PCMS may be used in lieu of required warning signs for frequently changing situations. PCMS shall not be used for STOP or YIELD signs. For mobile work zones, a series of truck-mounted PCMS displaying the advance warning messages and moving with the work is recommended for all roads.

The display of a PCMS should be visible from ½ mile away under both day and night conditions. Choose a location such that the entire message can be read at least twice by approaching drivers.

A message may contain up to three lines per panel, although less is best. Display may be one or two panels when posted speeds are 55 mph and above. The display rate shall be set so that the entire message can be read at least twice when approached at the posted speed. It is appropriate to consider the operating speed if it is much higher than the posted speed when setting the display rate.

Only two panels shall be used; however, if three panels are required for the entire message, a second PCMS unit should be set up at the appropriate sign spacing so that drivers have the opportunity to see the entire message twice.

PCMS shall be mounted a minimum of seven feet above the road when in operating mode. PCMS should be placed on the shoulder of the road or, if practical, further from the travel lane. The installation should not block pedestrian facilities. The face of the sign should be located and angled to be legible to approaching traffic for the needed distance.

For greater visibility, trailer-mounted PCMS shall be delineated by a shoulder taper of six cones or drums. If space allows, drums may be used for greater visibility. Maximum spacing is 20 feet. For work lasting more than

one or more Type III barricade(s) should be placed facing traffic, equipment and behind the cones or drums, and 40 feet in front (see Diagram No. 001).

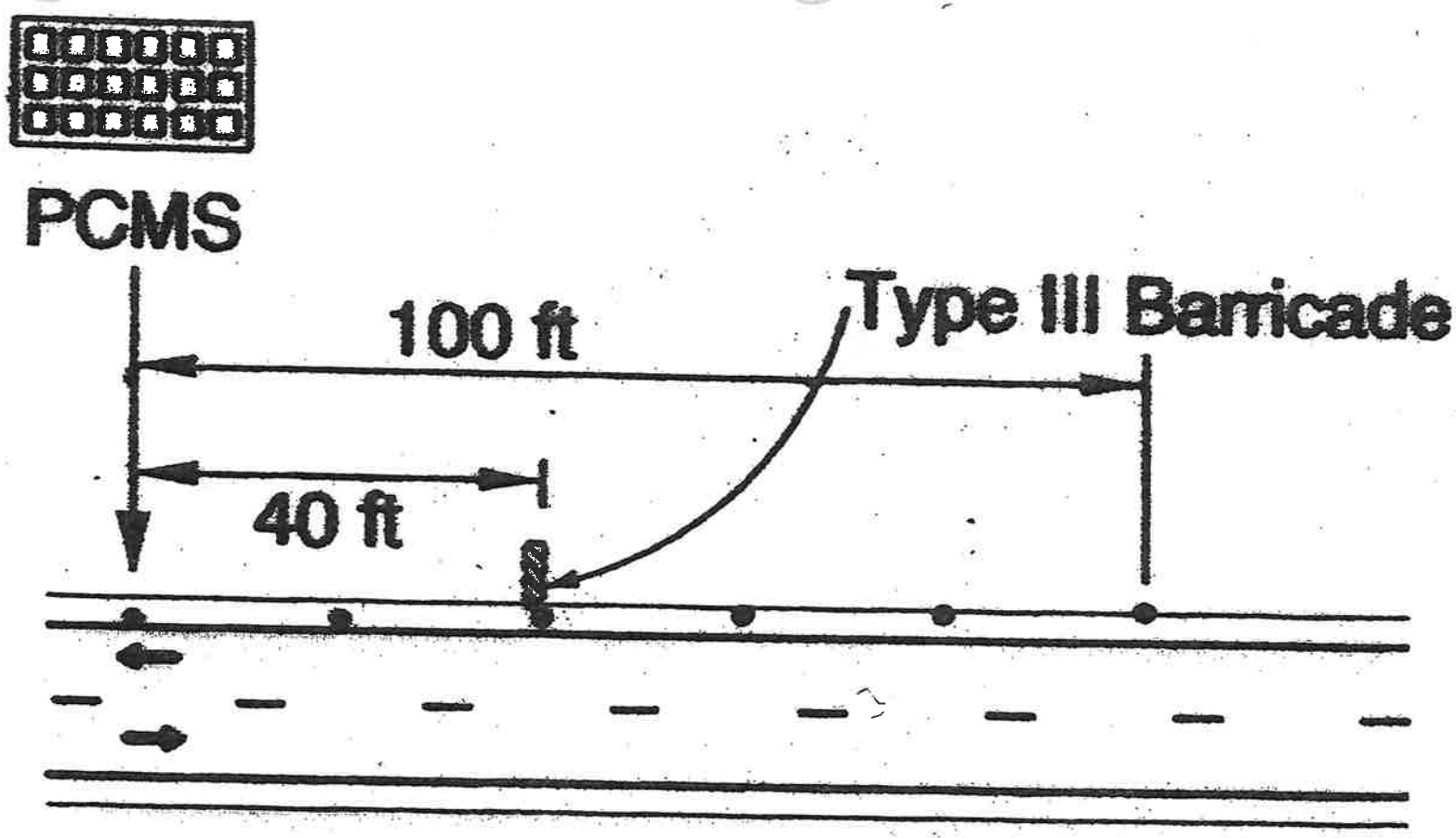
ning Lights (Flashers & Steady-Burn): Warning lights may to temporary signs or barricades as a means to increase device poorly lit areas, during inclement weather or at night.

combination of sign and light or barricade and light must have been tested and be approved as a crashworthy device under NCHRP 350 ies. Obtain proof of crashworthiness from vendors or manufacturers devices being used.

hing warning lights shall not be used for delineation. Maximum spacing arning lights should match TCD spacing requirements. All lights shall be nted a minimum of 30 inches from the ground to the bottom of the lens.

ype A, B, C and D, 360-degree warning lights shall be portable, closed, self-powered, lens-directed, amber-colored lights. All types shall accordance with the current Institute of Transportation Engineers (ITE) *chase Specification for Flashing and Steady-Burn Warning Lights*. All hts shall be visible on a clear night from 3000 feet.

ype A: Low-intensity flashing warning light used during night hours.
pe B: High-intensity flashing warning light. Shall be visible on a sunny day from 1000 feet. Used during day and night hours. For 24-hour use.
ype C: Flat lens, steady-burn warning light. Used at night to delineate edge of traveled way. If used in curved section, place only on outside of curve.
ype D: Steady-burn, 360-degree warning light. Used at night to delineate edge of traveled way. If used in curved section, place only on outside of curve.



Portable Changeable Message Sign (PCMS) Installation