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CONSOLIDATED RESOLUTION ON ROAD SIGNS AND SIGNALS (R.E.2)

Variable message signs

Note by the Small Group on Variable Message Signs

1. This document is submitted in conformity with the mandate of the Working Party (WP.1) as defined in document TRANS/WP.1/100/Add.1 (item c) which aims to develop, update and circulate the Consolidated Resolutions R.E.1 and R.E.2, as well as the Programme of Work for 2008-2012 of the Inland Transport Committee, adopted at its 70th session in 2008 (ECE/TRANS/200/Add.1, item 2.3 (b)).
2. This document presents the revised proposal regarding variable message signs prepared by the small group created in this regards (France, Germany, Netherlands and Spain (chairman)). Once adopted, this proposal will be incorporated into R.E.2.

VARIABLE MESSAGE SIGNS

Preliminary remarks

Practically all suggestions made at the 53rd session of WP.1 have been taken into account. In particular, the small group discarded the possibility of making a nuance in the meaning of some pictograms (notably, A, 5; A, 24; A, 31). It has also changed the order of rules for message content and message structure, etc.

In addition, the Group saw the opportunity of further simplifying the document, eliminating the point which gave rise to long discussions (“Rules for the choice between indicating a warning or an advice on a VMS”). Because of this deletion, point 5 became point 4.

The Small Group has also suggested adding five informative pictograms (G, 27; G, 28; G, 29; G, 30; G, 31). These pictograms would suffice nowadays in order to accomplish most frequent and daily traffic management tasks.

PROPOSED TEXT FOR INCLUSION IN THE CONSOLIDATED RESOLUTION ON ROAD SIGNS AND SIGNALS (R.E.2)

1. Context

The variable message signs (VMS) were officially introduced into the 1968 Vienna Convention on Road Signs and Signals by an amendment that entered into force on 30 November 1995. However, the related provision contained in article 8, paragraph 1 (bis), gave only some very general principles.

Taking into account the significant development of this type of signalisation on the roads and in particular the motorways of the UNECE, the need for defining rules aiming to harmonise and unify the conditions of use of these signals appeared obvious. This is the objective of the recommendations that are presented below. Their goal is to define not only the rules for the use of VMS, but also the signals of the current Vienna Convention that can be used on the VMS, as well as the specific signals intended for the VMS for which there is no equivalent signal in the Convention and the European Agreement supplemented it.

2. Definition

A Variable Message Sign (VMS) is a sign for the purpose of displaying one of a number of messages that may be changed or switched on or off as required.

3. Recommendations

3.1 Signs that can be used on VMS

The signs recommended for use on VMS as mentioned in below paragraphs 3.1.1 and 3.1.2 are reproduced in Annexes 1 and 2 of this document.

3.1.1 *Existing signs of the 1968 Convention on Road Signs and Signals*

The signs of the Vienna Convention on Road Signs and Signals which can be used on VMS are the following:

Danger warning signs

A, 4 ^a	Carriageway narrows
A, 4 ^b	Carriageway narrows
A, 5	Swing bridge (<i>used to indicate that the bridge is lifted</i>)
A, 9	Slippery road
A, 16	Road works
A, 17 ^a	Light signals
A, 23	Two-way traffic
A, 24	Traffic congestion on the section of the road ahead
A, 31	Strong crosswind on the section of the road ahead
A, 32	Other dangers

Prohibitory or Restrictive signs

C, 1a	No entry
C, 2	Closed to all vehicles in both directions
C, 3 ^e	No entry for goods vehicles
C, 10	Driving of vehicles less than ... metres apart prohibited
C, 13 ^{aa}	Overtaking prohibited
C, 13 ^{ba}	Overtaking by goods vehicles prohibited
C, 14	Speed limit
C, 17 ^b	End of speed limit
C, 17 ^c	End of prohibition of overtaking
C, 17 ^d	End of prohibition of overtaking for goods vehicles

Mandatory signs

D, 1 ^a	Direction to be followed
D, 9	Snow chains compulsory

Direction, position or indication signs

G, 1 ^a	Advance direction sign
G, 1 ^b	Advance direction sign
G, 1 ^c	Advance direction sign

G, 11 ^b	Indication of the number and direction of traffic lanes
G, 12 ^a	Indication of the closure of a traffic lane
G, 17	Advisory speed
E, 3 ^a	One way sign

Additional panels

H, 1	Distance to the section of road or the zone to which the regulation applies
H, 2	Length of the dangerous section of road or the zone to which the regulation applies
H, 5 ^a	Restriction to goods vehicles

Note: *As stated in article, 8, paragraph 1 bis, of the Vienna Convention on Road Signs and Signals, the prescribed dark-coloured signs or symbols used for VMS may appear in a light colour, light-coloured backgrounds then being replaced by dark backgrounds, but the red colour of the symbol of a sign and its border shall not be changed.*

3.1.2 New signs to be used [...] on VMS

In brackets, possible numbers to be attributed to these signs.

Danger warning signs

(A, 33)	Warning of the expected presence of pedestrians walking along the road
(A, 34)	Warning of a section of road ahead that is slippery because of ice or snow
(A, 35)	Warning of an accident on the section of the road ahead
(A, 36)	Warning of reduced visibility due to fog, rain or snow on the section of the road ahead

Special regulation signs

(E, 19)	Sign notifying a lane allocation
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If there is no possibility to show the signals over the traffic lanes, the lane allocation can be shown in one sign. Any other combinations of crosses and arrows are allowed, even for roads with more than two lanes.

Note: This as an alternative to “lane signals” above each lane of a carriageway, proposed in the Vienna Convention as modified by the amendment entered into force on 30 Nov 1995.

(E, 20)	Sign notifying the temporary use of the hard shoulder.
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Three different signs may be used in case of the temporary use of hard shoulder:

- E, 20^a Sign notifying that the hard shoulder may be used,
- E, 20^b Sign notifying the end of the use of the hard shoulder,
- E, 20^c Sign notifying that the hard shoulder may not be used

(E, 21) Sign notifying the availability of a High Occupancy Vehicle (HOV) lane

Other designs are allowed depending on the occupancy requested per vehicle.

Direction, position or indication signs

- (G, 23) Sign notifying a recommended alternative route
- (G, 24) Sign notifying that the section of the road ahead is temporary closed and the next exit is compulsory
- (G, 25) Sign notifying that the next exit is closed
- (G, 26^a) Sign notifying that the exit after the next exit is closed
- (G, 26^b) Sign notifying that the next exit is closed (case of close exits)
- (G, 27) Sign notifying congestion
- (G, 28) Sign notifying road works
- (G, 29) Sign notifying snow/ice
- (G, 30) Sign notifying wind
- (G, 31) Sign notifying slippery road

3.2 Rules for message content and message structure for VMS

3.2.1 *Traffic related VMS messages*

1. When using VMS with pictograms the main information is given by the pictogram. The use of specific pictograms instead of generic ones (e.g., the pictogram A, 24 representing “congestion” instead of general danger A, 32) is preferred, when they exist.
2. Make use of graphical elements as much as possible when using text (e.g., pictograms, symbols).
3. Use regulatory messages without any text, if possible.
4. Danger warning messages (using the red triangle) should only be used when the dangerous spot or stretch of road is nearby the VMS (for instance, no more than 2 km). When using words in danger warning messages, place the information about the nature of the danger first and then brief complementary advice can be given under.
5. When a VMS is used to inform about a situation at some distance (for instance, 2 km or more) or in the future (e.g. expected road works), additional information (e.g. distance, or respectively an indication of date and time) is necessary. The recommended structure of the message is the following: first give the information concerning the nature of the event on the first line, then distance and/or time

indication on the second line. A third line can be used for additional information (e.g. advice, cause).

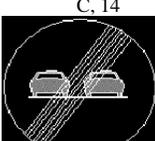
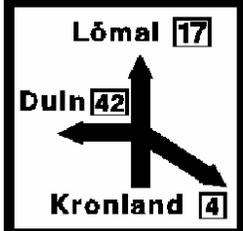
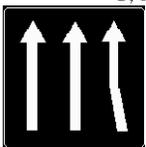
6. Avoid alternating messages.
7. Avoid redundancy, except for the purpose of making drivers familiar with new pictograms.
8. Use only well-known and international abbreviations (e.g., 'Km' for kilometre, 'Min' for minutes, etc.).
9. Minimize the number of words and symbols (e.g. maximum 7).

3.2.2 *Non-traffic related VMS messages*

10. A VMS should be blank when no traffic related messages have to be displayed. An exception could be the display of dots or the time to indicate that the VMS is working.
11. Commercial/advertising messages should be forbidden.

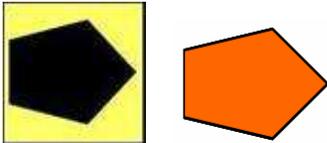
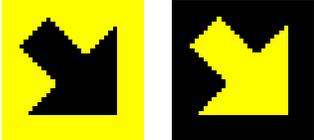
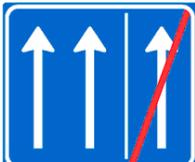
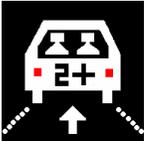
Annex I

List of recommended Vienna Convention signs for use on VMS

Prohibitory, restrictive or mandatory signs	Danger warning signs	Direction, position or indication signs and additional panels
<p><i>Prohibitory or restrictive</i></p>  <p>C, 1^a</p>  <p>C, 2</p>  <p>C, 3^e</p>  <p>C, 10</p>  <p>C, 13^{aa}</p>  <p>C, 13^{ba}</p>  <p>C, 14</p>  <p>C, 17^b</p>  <p>C, 17^c</p>  <p>C, 17^d</p>	 <p>A, 4^a</p>  <p>A, 4^b</p>  <p>A, 5</p>  <p>A, 9</p>  <p>A, 16</p>  <p>A, 17^a</p>  <p>A, 23</p>  <p>A, 24</p>  <p>A, 31</p>  <p>A, 32</p>	<p><i>Direction, position or indication</i></p>  <p>G, 1^a</p>  <p>G, 1^b</p>  <p>G, 1^c</p>  <p>G, 11^b</p>  <p>G, 12^a</p>  <p>G, 17</p> <p><i>Additional Panels</i></p>  <p>H, 1</p>  <p>H, 2</p>  <p>H, 5^a</p>
<p><i>Mandatory</i></p>  <p>D, 1^a</p>  <p>D, 9</p>		

Annex II

New signs for use on VMS

Special regulation signs	Danger warning signs	Direction, position or indication signs and additional panels
 <p>(E, 19) (lane allocation)</p>	 <p>(A, 33) (pedestrians)</p>	 <p>(G, 23) (rerouting)</p>
	 <p>(A, 34) (slippery road -ice or snow)</p>	 <p>(G, 23) (rerouting)</p>
	 <p>(A, 35) (accident)</p>	 <p>(G, 24) (road closed)</p>
 <p>(E, 20^a, E, 20^b, E, 20^c), (hard shoulder use)</p>	 <p>(A, 36) (fog)</p>	 <p>(G, 25) (next exit closed)</p>
 <p>(E, 21) (HOV lane)</p>		 <p>(G, 26^a) (exit after next exit closed)</p>
		 <p>(G, 26^b) (next exit closed -case of close exits-)</p>

Annex II (continued)

New signs for use on VMS

Special regulation signs	Danger warning signs	Direction, position or indication signs
		<div data-bbox="1166 478 1338 625"></div> <p data-bbox="1117 625 1386 655">(G, 27) (reported congestion)</p> <div data-bbox="1166 709 1338 856"></div> <p data-bbox="1117 856 1386 886">(G, 28) (reported road works)</p> <div data-bbox="1166 940 1338 1087"></div> <p data-bbox="1117 1087 1386 1117">(G, 29) (reported snow/ice)</p> <div data-bbox="1166 1171 1338 1318"></div> <p data-bbox="1117 1318 1386 1348">(G, 30) (reported wind)</p> <div data-bbox="1166 1402 1338 1549"></div> <p data-bbox="1117 1549 1386 1579">(G, 31) (reported slippery road)</p>
