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**REVISION OF THE CONSOLIDATED RESOLUTION
ON ROAD TRAFFIC (R.E.1)**

Safety in the area of roadworks and incidents/accidents

Note by the secretariat

1. This document is submitted in accordance with the terms of reference of WP.1, as set out in document TRANS/WP.1/100/Add.1, paragraph 1 (c), in regard to developing, updating and circulating Consolidated Resolutions R.E.1 and R.E.2, and with the programme of work 2006-2010 of the Inland Transport Committee adopted at its sixty-eighth session, in 2006 (ECE/TRANS/166/Add.1, section 02.3 (b)).

2. Members of WP.1 will find below a draft recommendation concerning safety in the area of roadworks and incidents/accidents, revised by the secretariat on the basis of the discussions of WP.1 at its fifty-second session. It will constitute the new chapter 14 of Consolidated Resolution R.E.1.

R.E.1

Changes to document ECE/TRANS/WP.1/2006/21 appear in bold.

Chapter 14 Safety in the area of roadworks and incidents/accidents

14.1 Context

Roadworks are **carried out** to enhance the comfort and safety of road users. **Yet** accidents around roadworks continue to occur too frequently. **Such accidents, or “secondary accidents”, are also reported too often in the vicinity of incidents (flat tyres, breakdowns, objects fallen on the roadway, etc.) or accidents.** On motorways especially, **all such** accidents/incidents have potentially serious consequences not only for road users, but also for highway maintenance workers and persons called upon to secure the scene of the incident/accident.

This chapter sets out recommendations intended to sensitize road users to dangers **in the area of roadworks or incidents/accidents** and to ensure the safety of highway maintenance workers and persons attending at the scene of an incident/accident.

As for the first steps to be taken by road users in case of accident, **they** are described in chapter 13 of this Resolution.

14.2 Recommendations on the safety of road users

Roadworks involve heightened safety measures owing to unusual traffic conditions (modification of signs and signals, reduction in the number of lanes, changes in the direction of traffic, elimination of emergency lanes, etc.). Safety measures are also necessary to secure the site of a road accident/incident.

(a) In the area of roadworks

Authorities **should apply the recommendations set out on this subject in the Consolidated Resolution on Road Signs and Signals (R.E.2).**¹ **In addition, they should take the following measures to avoid accidents in the area of roadworks:**

- (i) **Position appropriate information panels, signs and signals [...] sufficiently in advance to warn road users of the presence of roadworks so as to alert them to the risks involved and the rules to be observed;**

¹ See document TRANS/SC.1/296/Rev.3, the content of which is taken up and further developed in the document with the provisional symbol ECE/TRANS/WP.1/2007/5.

(ii) **To that end, indicate to drivers:**

- **The speed limit not to be exceeded when driving through the roadworks, which should be lower than the limit usually authorized on the road segment in question;**

The applicable speed limit should also be repeated at regular intervals along roadworks of significant length;

- **The lane to follow by setting up appropriate and clearly legible vertical and horizontal signalling;**

so that they are able to adapt their behaviour accordingly and with full knowledge of the circumstances;

(iii) **Set the authorized speed limit at 30 km/h if pedestrians are obliged to walk on the roadway owing to the roadworks;**

(iv) **Carry out frequent controls using any appropriate method to enforce strict respect for speed limits established in the area of roadworks.**

(b) **In the area of a road incident/accident**

(i) ***Detecting an incident/accident and securing the area***

When the competent **authorities** [...] are notified of a road incident or accident, they should proceed, **firstly**, to make the area safe as rapidly as possible by positioning appropriate signs and signals sufficiently in advance **and**, **secondly**, to alert approaching road users to the **existence of the incident/accident, requiring** them to reduce speed **so as to** avoid secondary accidents.

To help the competent authorities to rapidly detect any problem, high-speed roads such as motorways and similar roads (see article 25, paragraph 4, of the Vienna Convention on Road Traffic) and strategic locations (such as interchanges and toll areas) and roads with high traffic density such as urban ring roads should to the extent possible be equipped with information systems such as video surveillance systems and automatic incident detectors, and/or should be subject to surveillance by continuous patrols.

In order to be operational as soon as possible, in particular on the roads mentioned above, and to ensure the greatest possible effectiveness, the competent authorities should prepare contingency plans.

(ii) *Informing road users*

To the extent possible, information should be relayed to road users in real time, as soon as an event is detected, **in particular by means of dynamic information panels and/or by radio. The need for such information is all the more critical on high-speed or high-traffic density roads where it is important to rapidly set up an information system in advance of the incident or accident so as to warn road users to be vigilant.**

To that end, the use of vehicles **fitted with warning signs** (for example, rotating beacons, flashing lamps and illuminated arrows indicating a track shift) **and a rear-mounted illuminated panel** indicating the nature of the incident ahead **is preferable to** signs and signals at ground level [...].

14.3 Recommendations on protection measures for highway maintenance workers

At roadworks, whether fixed, mobile or in emergencies, every effort must be made to protect highway maintenance workers, besides the positioning of appropriate reflectorized signs and signals. Highway workers are at greater risk when **they are working directly on the roadway, as they are less well protected** [...].

Accordingly, it is important that safety garments for persons working on the road should **make them visible from afar. For this purpose, such garments should meet performance criteria such as those corresponding to European standard EN 471 class 2 (or national equivalent). The EN 471 standard specifically defines the essential colour and retro-reflectivity characteristics of such garments (area of fluorescent and retro-reflective material, quality of the material, etc.), so as to offer maximum visual performance in all circumstances, night and day.**

[...]

In addition, it is recommended that the authorities pay particular attention to the positioning of emergency vehicles in the area of incidents or accidents, so as to ensure optimum safety for workers in such areas.

14.4 Recommendations on sensitization measures

(a) *Highway maintenance workers and persons attending road-related incidents*

Ensuring the maximum safety of highway maintenance workers and persons attending road-related incidents [...] is of vital importance because they are directly exposed to traffic dangers in the course of their work. It is therefore essential that they receive adequate training, especially on the need to be seen by road users, **on the risks they face** [...] and on measures to prevent accidents.

(b) **Road users**

Various means (campaigns, leaflets, etc.) should be used to raise awareness among road users of the following topics:

- (i) **The risks they face in the area of roadworks, incidents or accidents, as well as those to which they may expose highway workers [...] in such places;**
- (ii) The importance of heeding the safety instructions **given [...]**, in particular:
 - The specific speed limits posted **for such purposes** by information panels and road signs, **including dynamic information panels;**
 - The safety distance **between vehicles when approaching roadworks, or the scene of an incident or accident and when** driving through roadworks;
- (iii) [...] **The need**, in poor weather conditions, for extra care to anticipate any danger connected with the roadworks or the behaviour of other motorists (collision with an obstacle, skidding on gravel, etc.).
