



## The Norwegian Public Roads Administration

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NA CIRCULAR 2015/12

### Amendment of requirements for high visibility warning clothing and signalling boards in handbooks N301 and R310

New technical requirements are being introduced for the design of high visibility warning clothing.

New technical requirements are being introduced for the design of jackets for manual traffic direction.

Requirements are being introduced for high visibility trousers for manual traffic direction.

New requirements are being introduced for the use of signalling boards.

New technical requirements are being introduced for signalling boards.

Breaks for traffic directors have been clarified.

This circular replaces the following sections in **Handbook N301** "Work on and alongside roads" (2012/2014) and **Handbook R310** "Road Traffic Safety Equipment" (2011/2014):

- Provision **3.5.2.2** in section **3.5.2** "Requirements for anyone directing traffic manually" in **N301**
- Section **3.7.1** "Personal protective equipment" in **N301**
- Section **4.2.2** "Signalling boards" in **R310**
- Section **4.4** "Personal protective equipment" in **R310**

### Transitional scheme

All requirements are hereby applicable. A transitional period will be granted for requirements for high visibility warning clothing, jackets for manual traffic direction and signalling boards. Equipment pursuant to the preceding provisions must not be used after 1

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January 2018. Equipment pursuant to both provisions may be used during the transitional period.

### **High visibility warning clothing**

NS-EN 471:2003+A1:2007 "High-visibility warning clothing for professional use" has been withdrawn and replaced by NS-EN ISO 20471:2013 "High visibility clothing – Test methods and requirements".

Section 3.7.1 "Personal protective equipment" in **N301** and section 4.4.1 "Workwear" in **R310** are replaced in their entirety with the following:

Anyone carrying out work on/alongside to public roads open to general traffic must wear class 3 high visibility warning clothing compliant with NS-EN ISO 20471.

Combination of garments:

It is possible to combine garments with a lower visibility class in order to achieve class 3 visibility. In this case, the garments together must be approved for a higher visibility class. This must be specified in each individual garment.

### **Traffic direction**

#### **Jackets for manual traffic direction**

Section 4.4.2 "Jackets for manual traffic direction" in **R310** is replaced in its entirety with the following:

Colours: High visibility jackets shall have a fluorescent red-orange mid-piece and side panels and sleeves of fluorescent yellow. The cuffs and the bottom part of the jacket must be fluorescent red-orange. The reflective strip must emit white light.

Reflectors: A 25 mm wide reflective strip must pass from the shoulders and down to the lower part of the sleeves, front and rear.

All the yellow and red-orange sections must be separated using a 50 mm wide reflective strip. There must be a 50 mm wide reflective strip on the bottom part of the sleeve, a 50 mm wide reflective strip around the waist, and a 50 mm wide reflective strip which passes over both shoulders and down to the waist. The reflective strip which passes over the shoulders must be centred on the shoulders.

See the diagram with dimensions.

Other points: Such jackets shall not have extremely visible logos or other departmental or company markings. A plastic pocket 6x9 cm in size for an ID card is permitted on the left sleeve. It is also possible to place a manufacturer's label 3x3 cm in size on the jacket.



### Use of signalling boards

The provision 3.5.2.2 in section 3.5.2 "Requirements for anyone directing traffic manually" in **N301** is replaced in its entirety with the following:

Personnel directing traffic manually in connection with roadworks must wear a specific type of high visibility jacket in order to improve their visibility. High visibility trousers must also be worn. This jacket must only be worn when directing traffic manually.

Anyone directing traffic manually is particularly vulnerable, and it is important for the traffic to be directed correctly and clearly. Anyone directing traffic must stand in a position clearly visible to road users and have a complete overview of traffic at any points of conflict.

One person must not be responsible for more than one point of conflict. If the section is more than approximately 50 metres long, two people must direct the traffic. (This will often be appropriate on shorter sections as well.) If there is insufficient visual contact, there must be contact in another way as well, e.g. using radios or telephones.

The traffic must be stopped by using a signalling board with a red flashing light. When the traffic is to be stopped, the person must stand facing the traffic to be stopped. The signalling board is held in the right hand and raised with the red side facing the traffic. The left hand is also moved up and down in order to signal to road users to reduce their speed.

The signalling board must always have a red flashing light when it is used to stop traffic.

When the traffic is clear to pass, the signalling board must be lowered, with the red side facing away from road users. The light must always be switched off when the signalling board is lowered. It is also necessary to signal clearly with the left hand to indicate that road users may proceed.

The red light must be dimmed to a lesser brightness in darkness, fog or other conditions that amplify the effect of the light.

Signalling boards may be used for short-term stopping of traffic or inspections carried out by the Norwegian Public Roads Administration. Signalling boards must otherwise only be used by people directing traffic manually.

One person must not direct traffic manually for a consecutive period of more than 2 hours without a break. If traffic is required to be directed manually for longer periods, it is necessary to ensure that the person directing the traffic is relieved. Driving an escort vehicle does not constitute a break.

The speed limit must not exceed 50 kph when traffic is being directed manually.

### **Design**

Section 4.2.2 "Signalling boards" in R310 is replaced in its entirety with the following:

A signalling board is made up of a handle and a sign part. Signalling boards must have a total length of 40 cm, while the diameter of the sign disc must be 20 cm. The sign part must meet requirements for a class 3 red reflective film on one side. The other side must be neutral grey.

There must be a light which shines red in the middle of the red side. The red light must only be capable of emitting flashing red light. It must be simple to switch off and on. It must have a manual dimmer function to switch easily between two different brightness levels.

The red light must be compliant with NS-EN 12368:2015 "Traffic control equipment. Signal heads" with regard to the following functional requirements:

*Aperture:* 10 cm

*Brightness:* Min 500cd/Max. 1000cd

*Dimming:* Min 100cd/Max. 200cd

*Distribution of brightness:* Wide Beam signal (type W), or Medium wide beam signal (type M)

*Flash frequency:* approx.  $60 \pm 5$  flashes/min. Flash time between 250 and 500 msec.

*Light source:* LED

*Red colour:* C red compliant with NS-EN 12352:2006 "Traffic control equipment. Warning and safety light devices"

Department of Public Roads and Transport  
With regards

Jane Bordal  
Director

Jacob Trondsen

*Tekst for godkjenning settes inn ved ekspedering.*