



Traffic Control Device: **Work Zone**

Date of Revision: **March 15, 2002**

Division:

Subject: **Fast Moving Operations/Nuclear Density Testing**

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Purpose

Fast moving operations present a special set of traffic control problems.

Protection of the travelling public, and the safety of workers is paramount. However, these must be weighed against the cost and time involved with installing and removing the necessary traffic control devices.

The lateral position of the flagperson, i.e. distance away from the relative safety of the shoulder, also must weigh personal safety against the flagperson's ability to adequately control and warn traffic.

Definition

Fast Moving Operations will generally be considered to include any operation which stops on the travelled surface of the road for a period not exceeding 10 minutes in daylight hours only.

This standard covers nuclear density testing only. Due to variations in their operations, other fast moving operations such as B-30 soil drill truck, coring unit, Benkelman beam testing, profilometer, and "hi-lo" measurements have similar complementary standards.

Policy

This standard covers nuclear density testing only. Due to the continuous mobile nature of this operation, static advance signing is not feasible. Vehicle and equipment mounted signs and lights must provide adequate warning.

This policy applies to all Provincial Trunk Highways and Provincial Roads and all surfacing and grading projects open to traffic.

RECOMMENDED: _____
Director, Traffic Engineering

APPROVED: _____
Executive Director
Highway Engineering

Traffic control should consist of at least the following (see drawing S-TMP-4):

- X Symbolic FLAGMAN sign (WD-A45) on portable sign stand, sign trailer or shadow vehicle.
- X Flagperson stationed **in the closed lane**, approximately 1 m from roadway centerline.
- X Ten traffic cones; 5 **required** for tapered lane closure, 5 **recommended** on tangent as shown on S-TMP-4.
- X Density inspector's vehicle equipped with the following warning devices: approved rotating beacon or strobe, rear-facing "wig-wag" amber flashers, **and headlights on high beam**. If headlights and "wig-wag" amber flashers are operating, use of rotating beacon or strobe is optional.

The density inspector's vehicle is to be parked in the closed lane. The density inspector's vehicle must be capable of carrying all signs, lights and cones required to create the work zone as per the standard.

- X Signs must be supplemented by fluorescent red flags. Flags are also highly desirable on the density inspector's vehicle.
- X This is a minimum standard. Where traffic volumes or sight restrictions create a problem, a second sign and a second flagperson for traffic in the opposite direction will be required on two-way roadways. The distance to the flagperson and sign will be 70 m and 150 m respectively, from the density inspector's vehicle.
- X Visibility (to the motorist) of the nuclear density testing operation is an ongoing problem. Extra care must be taken to ensure that all traffic control devices are in good condition, clean, and placed properly. All warning lights must be clean and operating effectively. All workers must be attired in clean, highly visible department approved safety vest and head wear.
- X The flagperson may be located up to 500 m from the symbolic FLAGMAN AHEAD sign **only where the flagperson is visible from the sign location, and no major accesses or intersections exist in the area between sign and flagperson.**
- X For urban areas with speed limits under 60 km/h, traffic controls may be compressed to 50 m overall (sign to density inspector's vehicle). In certain circumstances, i.e. parallel or diagonal parking, sign use may be impractical. Accesses from driveways, etc. may have to be taken into consideration in determining locations of cones and flagpersons. **(Crews are expected to base their decisions regarding sign use in urban areas, on experience and common sense to ensure worker and public safety is not compromised.)**

- X Where a shadow vehicle is used (recommended on high volume two-lane roadways) the shadow vehicle should be located half on the shoulder, half on the travel lane. The shadow vehicle must be equipped with rear-facing "wig wag" amber flashers. The flagman ahead sign must be mounted on the right hand rear of the shadow vehicle