



TRAFFIC CONTROLLERS' HANDBOOK



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Produced by Main Roads Western Australia

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Introduction

Roadwork sites are particularly hazardous compared to normal road operation.

Traffic Controllers are used when signs and devices for roadworks are considered insufficient, to provide traffic control for personal safety, public convenience and efficient job control and management.

As a Traffic Controller you, therefore, have an extremely important job on a worksite. In addition, you are a front line representative of your organisation and have an important public relations role.

This handbook provides brief guidelines for effectively carrying out your work as a Traffic Controller. It forms part of the training package for Traffic Controllers.

Main Roads Western Australia requires all accredited Traffic Controllers at roadwork sites in Western Australia to operate in compliance with the guidelines contained in this handbook.

Part I. Seven Requirements

1. Be Properly Dressed and Prepared

Being properly dressed just means being neat and tidy and wearing the appropriate safety clothing and footwear. You do not have to wear your best clothes. Being properly dressed not only shows respect for yourself and your job but will increase the respect of the motorists. They will be more likely to obey your signals.

The high visibility clothing for Traffic Controllers must comply with AS/NZS 1906.4 and AS/NZS 4602 for Types D, N or D/N. You must wear a high visibility garment which is fluorescent for daytime visibility. For night-time works, you must wear a night-time Type N garment with appropriate retro-reflective strips. There are high visibility safety garments designed for both day and night use comprising fluorescent background material with retro-reflective strips. Safety garments may also have retro-reflective tape with the lettering "TRAFFIC CONTROL" on the front and back to be used only when conducting traffic control.

You must wear an appropriate hat and safety footwear that complies with AS/NZS 2210 - Occupational Protective Footwear (You may need to wear a safety helmet at certain roadwork sites).

You also need to have tinted safety glasses, sun screen and lip cream to protect yourself from the sun.

Also, do not forget to have a bottle of drinking water, pen, note pad, your accreditation "ticket" and a copy of this handbook with you, whenever you are at work. Before you start, test-check to make sure that your two-way radio is working properly.

2. Understand Your Authority and Responsibilities

2.1 Traffic Controller Accreditation

Main Roads Western Australia (MRWA) requires any person who undertakes on-site manual traffic control tasks at works on a public road to have successfully completed the "Traffic Controller" course provided by a MRWA accredited training provider. In addition, such person must have a current accreditation as a "Traffic Controller". Traffic Controllers need to be re-accredited every three years.

As a Traffic Controller, you must always keep with you the "Traffic Controller's ticket" indicating your accreditation details.

You are not authorised to undertake any on-site traffic controlling tasks, unless you have a valid accreditation as a Traffic Controller at the time.

Upon request you must present your accreditation "ticket" to any Police officer, WorkSafe officer, MRWA officer or the person in-charge of your worksite or his/her delegate.

2.2 Road Traffic Code Regulation 83

In accordance with Regulation 83 of the Road Traffic Code 2000, an offence is committed if a motorist fails to comply with a hand-held "STOP" sign displayed by a Traffic Controller.

2.3 Traffic Controller's Authority

Accredited Traffic Controllers have the authority to:

- Legally stop/slow traffic where the approach speed of traffic is brought down to 60 km/h or below;

- Use a "STOP/SLOW" bat;
- Use hand signals to control traffic; and
- Report motorists who fail to follow reasonable directions to the supervisor or the Police.

2.4 Traffic Controller's Responsibilities

- Controlling traffic to enable them to negotiate through, past or around the worksite safely.
- Dealing with motorists and other road users professionally.
- Enabling works at the site to be conducted safely by minimising the risk associated with traffic movement.
- Maintaining traffic control in emergencies and other difficult situations.
- Minimising delays to traffic.
- Safety of fellow workers
- Safety of motorists and other road users.
- To remain at your station at all times unless directed by the supervisor to leave or relieved by another traffic control. You will be relieved after 2 hours.
- Your own safety

Be courteous at all times when dealing with the public. If requested, tell the driver the reason for the delay but be brief.

3. Know Correct Procedures

3.1 Hand-held “STOP/SLOW” sign



R6-8B

STOP

White reflectorised legend and border, red reflectorised background.



T7-1B

SLOW

Black legend and border, yellow reflectorised background.

Hand-held “STOP” and “SLOW” signs can be mounted back to back on a timber or aluminium pole. The bottom of the sign should be 1.8m from the bottom of the pole. The diameter of the disc is normally 600mm.

A support holder for the pole can be utilised.

- Always use the “STOP/SLOW” sign in conjunction with hand signals while watching the approaching vehicles.
- Hold the sign steady.
- Gain the driver’s attention by using hand signals and making eye contact.
- Never wave the sign. This prevents the driver from clearly seeing it and causes confusion.

- Hold the sign in the left hand allowing the right hand to be free to give clear directions. (This is also best in case of emergency.)
- Take care not to inadvertently display "STOP" or "SLOW" sign to traffic.

3.2 Warning signs (PREPARE TO STOP - TRAFFIC CONTROLLER (symbolic))

The “PREPARE TO STOP” sign shall be used in conjunction with the “TRAFFIC CONTROLLER (Symbolic)” (T1-34) sign and where possible the signs should be positioned side by side with the “PREPARE TO STOP” sign closest to the travel way.

TRAFFIC CONTROLLER
(Symbolic)



(T1-34)

PREPARE TO STOP



(T1-18)

Size of the signs (mm): Type A - 900 x 600 Type B - 1200 x 900

The position of the “PREPARE TO STOP” sign and “TRAFFIC CONTROLLER (symbolic)” shall be according to the local prevailing conditions, it is recommended they be placed a minimum of D metres, or 30 metres, whichever is greater, in advance of the Traffic Controller.

In situations where it is not possible for the signs to be placed side by side the distance of the “PREPARE TO STOP” sign for speeds less than 55 km/h may be reduced to 15 metres (D) in advance of the Traffic Controller provided the “TRAFFIC CONTROLLER (Symbolic)” sign is positioned 15 metres (D) in advance of the “PREPARE TO STOP” sign. For approach speeds greater than 55 km/h the distance between signs shall remain at D metres.

Table 1 Value of Dimension 'D'

Approach Speed of Vehicles (Km/h)	Value of 'D' m
55 or less	15
56 to 65	45
Greater than 65	Equal to speed of traffic, in Km/h

It is your responsibility to set up the "PREPARE TO STOP" and the “TRAFFIC CONTROLLER (Symbolic)” signs at the beginning of your work and take them away at the end. Note this can only be done under the guidance of a person holding BWMT accreditation.

If you take over traffic control part way through a shift, you must check that both signs are properly set up.

3.3 Changing hand-held “STOP/SLOW” sign

When changing from:



- Stand facing the traffic but just outside the path of vehicles.
- Wait for a break in the traffic.
- Give the lead vehicle enough warning so the driver does not have to brake suddenly to stop. (Where possible avoid stopping large vehicles at the front of the queue.)
- Turn the sign to “STOP”, signal with the right hand raised up with the palm facing the traffic (See Section 3.4).
- Only once traffic has stopped, change your position as necessary (where safe to do so) so you are clearly visible to road users as they arrive.
- Be cautious of vehicles approaching from both directions.
- Make sure your escape route is still available.
- Transmit the basic details (make, colour, etc.) of the last vehicle through to the other Traffic Controller, via the two-way radio.

When changing from:



- Check the other Traffic Controller is showing “STOP” to his/her traffic.
- Check the last car has come through from the opposite direction.
- Check there is no machinery or trucks in the traffic lane or about to enter or turn into it.
- Move back to the side of the road.
- Re-check behind you.
- Turn the sign to “SLOW” and signal traffic with the right hand the ‘to go’ signal (See Section 3.4).
- Stand clear of traffic.
- Remember the basic details (make, colour, etc.) of the first and the last vehicle to leave.

3.4 Hand signals by Traffic Controller

To Stop



To Go



To Slow

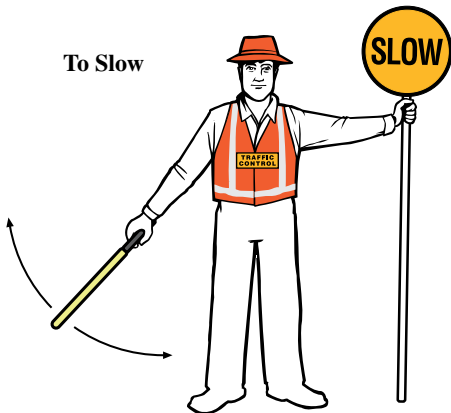
(Eg. detouring traffic where stopping is not needed)

3.5 Luminous wand signals for night time traffic control

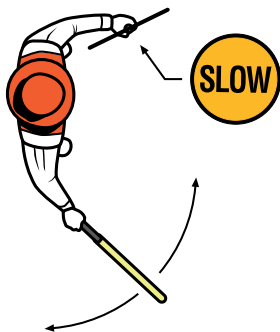
To Stop



To Slow



To Go



3.6 What to watch

- Primarily watch for approaching traffic (assess changes in traffic patterns, look for drivers who do not see or choose to ignore signs or directions).
- Keep aware of job progress and any problems within the work area.
- Communicate with the other Traffic Controller (by sight or two-way radio).
- Anticipate when machines require the use of the roadway and, therefore, need traffic controlling. (Such anticipation by Traffic Controllers can improve the efficiency of the job.)

Note: *If there are long queues the position of the "PREPARE TO STOP" sign may need to be adjusted to provide adequate warning.*

3.7 When is a third Traffic Controller needed?

- When the two Traffic Controllers cannot see each other and two-way radios are not available.
- When a traffic queue gets so long that it approaches a blind corner or crest. Vehicles may not have sufficient chance to stop in time.
- When controlling traffic at a T-junction (In this situation, it is essential that all three Traffic Controllers be in two-way communication).
- When traffic is approaching too fast (The third Traffic Controller will signal to slow down by using "SLOW" sign facing the traffic, extend the free arm and wave it up and down but not extended above shoulder level (See Section 3.4).

3.8 At traffic signals

- You must never direct traffic contrary to that indicated by traffic signals.
- If the works are expected to interfere in any way with the operation of the traffic signals (i.e. turning them off, to flashing amber, masking displays, moving traffic lanes so that detectors are no longer functional, generating traffic queues through the intersection etc), details must be provided to the MRWA Traffic Operations Centre on Phone (08) 9323 4848, at least 24 hours prior to the work commencing.
- If traffic is required to move contrary to a traffic signal display, then the signals must be switched off or covered and traffic controlled manually by Traffic Controllers stationed at each intersection approach, releasing traffic one approach at a time.

- Switching of traffic signals to flashing amber or modification to traffic signal operation settings is only to be undertaken by the MRWA Traffic Operations Centre.
- The MRWA Traffic Operations Centre must also be notified of the commencement and completion of works when they occur and also of any changes in site conditions.
- If such traffic control will result in traffic congestion that is considered unacceptable by both the Road Authority and the WA Police and it is not possible to safely detour traffic or conduct the works at another time when the congestion can be avoided, a Traffic Police pointsman must be arranged from the relevant Police District.
- Traffic Police pointsmen can be arranged by contacting the WA Police State Traffic Co-ordination Section on Phone (08) 6274 8654. No less than three (3) weeks notice is required by the WA Police to arrange Traffic Police pointsmen.
- If there is a risk of motorists departing the traffic controlled section and ignoring nearby traffic signals after reading the hand-held “SLOW” sign, an additional Traffic Controller should be stationed at the approach of the signals (from the works), to display a hand-held “STOP” sign when the traffic signals display red.
- In emergency situations, such as where a vehicle may have collided with traffic signals and traffic control is urgently required, Police emergency assistance can be arranged by contacting the Senior Sergeant at Police Communications on Phone 131 444. For life threatening or emergency only situations call the WA Police ‘000’ number.

- If you are using a double-sided “STOP/SLOW” hand-held sign to control traffic at an intersection, you must have the “SLOW” sign covered or removed to ensure that vehicles on other approaches do not proceed into the intersection.

3.9 At railway crossings (including crossings without flashing signals)

- Railway crossings are different from road intersections in that trains always have the right of way and are unable to stop quickly. Therefore, special care needs to be taken when directing traffic adjacent to railway crossings.
- Generally, motorists will follow directions from Traffic Controllers when they differ from other signals, signs and devices on the road. You must take special care at railway crossings to ensure you do not direct traffic through flashing railway crossing signals or "STOP" or "GIVE WAY" signs that require vehicles to stop and give way to approaching trains.
- No work within 10m of a railway crossing must be undertaken without prior approval from the relevant Rail Authority, except in an emergency in which case notification should be provided to the Rail Authority as early as practically possible.
- Where a railway crossing exists within a section of road being controlled by a Traffic Controller, a flag person accredited by the relevant Rail Authority must be stationed at the traffic stop line of the railway crossing or at least 3m from the nearest rail, equipped with a two way radio, to watch for trains and advise the other Traffic Controllers to stop traffic in time for train movements through the crossing. (The flag person shall also be an accredited Traffic Controller.)

- If the section of road under traffic control is to one side of the railway crossing, but within the distances in the following table, the flag person must be stationed at the railway crossing on the same side of the crossing as the section under traffic control, at the traffic stop line or at least 3m from the nearest rail.

Speed Limit (Km/h)	Distance from Railway (m)
<70	150
70 to 90	200
>90	300

- If you are stationed at a railway crossing you must be equipped with a hand-held “STOP/SLOW” sign that has the rear "SLOW" sign covered. This is to prevent vehicles approaching the other side of the railway crossing following the "SLOW" instruction and ignoring other signs or flashing signals.
- You must also ensure that vehicles stopped do not queue back over a railway crossing. If there is a chance of this happening, vehicles must be stopped prior to the railway crossing.
- Traffic Controllers and all other personnel working within 10m of any railway crossing must wear a high visibility orange or yellow day/night safety garment as specified by the Rail Authority that complies with the current versions of AS/NZS 1906.4 and AS/NZS 4602.

3.10 If a driver disobeys

What do you do if a driver disobeys your directions?

- Think of your own safety.
- Use your escape route if necessary.
- Warn the other members of the crew as early as possible (A warning system should be agreed beforehand such as shouting, whistles etc. Use the two-way radio to communicate with the other Traffic Controller).
- Get as many details as possible.
 - Registration number
 - Make/model/year of vehicle
 - Colour of vehicle
 - Time of incident
 - Special features (roofrack, bullbar etc.)
 - Description of driver
 - Number of passengers
- Report the offence to the supervisor who can report the incident to the Police if the non-compliance results in injury or is considered serious enough.

4. Be Properly Located

4.1 Where to stand

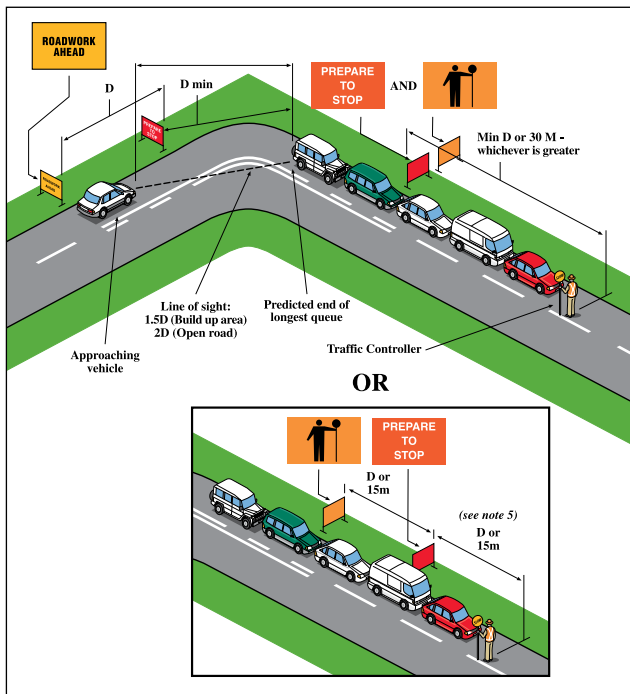
- Try to stand where you can see both ends of the work area (your end and the end where the other Traffic Controller is located).
- You must be clearly seen. Do not stand in the shade, dusty areas or where the sun may obstruct you or the on-coming driver's vision.

In particular you should take care that you can be seen at dawn or dusk, against low morning or evening sun and when in shadow on a sunny day.

- You must be aware of stopping distance in locating yourself and stopping the first vehicle.
- Always have an escape route in case a vehicle appears not to be stopping.
- You must be able to see approaching vehicles at least one and a half times the approach speed limit in metres (For example, if the speed limit is 60 km/h, you should be able to see at least 90m) and they must be able to see you at the same distance. (See diagram on next page). The end of the queue must not be closer than $1.5D$ or total stopping distance whichever is greater to the curve or crest.

If 1.5D cannot be achieved, consideration should be given to temporarily lowering the speed limit or using an additional Traffic Controller at the end of the queue.

- Do not obstruct a driver's view of other signs and devices and, make sure you are not yourself partially hidden by one of these.
- Stand facing the traffic but just outside the path of vehicles.
- Once traffic has stopped, ensure that you are clearly visible to further traffic as it arrives; stay at the head of the traffic queue and stand by yourself. **(do not permit people to congregate at the traffic control station.)**
- Always be aware of your surroundings and remember vehicles and plant from the work area pose a risk as well as public road users.



Notes:

1. Not to scale.
2. Signs shown on one side of the road to be duplicated on the other side of the road.
3. Not all advanced warning signs shown.
4. Separation of the 'TRAFFIC CONTROLLER (symbolic)' and 'PREPARE TO STOP' signs should only occur where there is no space to have them side by side.
5. For insert; speeds less than 55 km/h spacing is 15 m, for speeds greater than 55 km/h spacing is 'D' m.

5. Communicate Effectively

5.1 How to give your directions

All directions should be given;

- With the hand-held “STOP/SLOW” sign.
- With positive hand signals (See Section 3.4).
- With confidence (knowing what you are doing).
- With eye contact (when possible), so that drivers are sure you mean them.
- With a neat, tidy appearance; and
- With interest, do not appear bored, lazy or uninterested.

5.2 Public relations

- Remember you are a front-line representative of your organisation.
- Be polite and brief if asked a question or if giving verbal directions.
- Make accurate statements.
- Avoid using jargon.
- Never get involved in arguments.
- Never swear or use abusive language.

5.3 Using portable two-way radios

- Ensure you know what channel you are operating on.
- Speak clearly.
- Be accurate.
- Provide enough information to allow the other Traffic Controller to know exactly what is going on.
- Try to use standard messages such as:
 - A. “Stopping my vehicles now, last one through is a red commodore wagon”
 - B. “Starting my vehicles now” etc.
- Keep dialogue to a minimum.

6. Assess Changes in Traffic Patterns

6.1 Always be alert to changing conditions

- Remember to watch for the angle of the sun which may shade the traffic control station and make you hard to see, make signs difficult to read or blind or dazzle drivers.
- You should look for signs which may be set up in poor positions, blown over, vandalised, or too old or dirty.
- Be alert to peak hour traffic which may mean longer queues, or changes in road use mix i.e, heavy vehicles, pedestrians etc.
- Be alert to any near misses. These may indicate a problem.
- If you suspect any problems let your immediate supervisor know as soon as possible.

7. Know Emergency Procedures

7.1 Initial action

If a crash occurs:

- Never leave your post (unless your own safety is threatened). Get someone else to attend or get another accredited Traffic Controller to relieve you.
- Warn other Traffic Controllers, co-workers and your immediate supervisor as soon as possible.
- Secure the traffic behind the incident to prevent additional collisions.
- Radio for assistance, giving accurate location, number and details of any injuries and assistance required. (Police, ambulance, tow trucks etc.)
- If the crash is likely to be a serious injury or fatality; ensure traffic management devices and the scene are not contaminated until Police have inspected the site or given direction. Refer to TMP for further details.
- Only check and adjust traffic control, if directed to by Police or Worksafe.

7.2 Incident report

The Incident report should be completed and submitted to the supervisor at the end of the shift.


It should include:

- Date and time of incident/crash;
- Exact location;
- Description/diagram of incident;
- Make, model, registration of vehicle(s) involved;
- Name, address, licence number of driver(s) involved;
- Direction of travel;
- Description of any injuries;
- Signs displayed and their location;
- Details of any property damage; and
- Weather conditions.

A sample Incident report is provided at the end of this handbook.

7.3 Incidents involving hazardous loads


- All hazardous or explosive loads are required by law to display the emergency information panel as below on the vehicle.

PETROLEUM FUEL	
UN No 1270	
HAZ CHEM 3YE	
IN EMERGENCY DIAL 000-POLICE OR FIRE BRIGADE	SPECIALIST ADVICE XYZ PETROLEUM LTD. PHONE: 9200222

- You need to take extra special care in an incident involving a vehicle carrying a hazardous load.
- Evacuate the area, if in doubt of the severity of the situation.
- Ascertain the type of load and relay the details to your supervisor as soon as possible so that appropriate emergency action plan can be implemented.

Hazchem Scale for Fire or Spillage (As used in UK and Australia)

1	JETS
2	FOG
3	FOAM
4	DRY AGENT

HAZCHEM	
UN No.	

P	V	FULL	DILUTE
R			
S	V	BA	
S	V	BA FOR FIRE ONLY	
T		BA	
T		BA FOR FIRE ONLY	CONTAIN
W	V	FULL	
X			
Y	V	BA	
Y	V	BA FOR FIRE ONLY	
Z		BA	
Z		BA FOR FIRE ONLY	
E		CONSIDER EVACUATION	

Notes for guidance for hazchem label:

FOG	In the absence of fog equipment a fine spray may be used.
DRY AGENT	Water must not be allowed to come into contact with the substance at risk.
V	Can be violent or even explosively reactive.
FULL	Full body protective clothing with BA.
BA	Breathing apparatus plus protective gloves.
DILUTE	May be washed to drain with large quantities of water.
CONTAIN	Prevent by any means available, spillage from entering drains or water course.

Part II. Night-work

Compared to works during day time, night-works are significantly more hazardous.

Where Traffic Controllers are required to work at night, special night time equipment needs to be used.

- A high visibility safety garment suitable for night-time use.
- Reflective night use hand-held “STOP/SLOW” sign.
- Reflective cones.
- Night wands (see section 3.5).
- Barrier boards.
- Night signs.
- Ripple/flashing lights.
- Two-way radio.

At all times Traffic Controllers must be well illuminated by portable floodlights, street lighting, car headlights etc. The light source should be shielded to minimise glare to approaching traffic.

Part III. Good Ideas

Here are some good ideas which can be practiced in your worksite.

- Regular advertising in newspapers and over radio of the location and time of roadworks which may cause delays to road users.
- Using rotating lamp on a stand near the Traffic Controller to draw drivers' attention. The lamp can be powered by a rechargeable battery.
- Using a mechanical traffic controller mounted on a trailer in addition to standard sign and Traffic Controllers to help gain the attention of motorists.
- Using CB radio to notify truck drivers and others of the location of roadworks.
- Using a pilot vehicle to guide traffic through the job if the route is unclear.
- Using a temporary stop line at the traffic control station if the same station is to be used over a long period.
- Using headset two-way radios for hands-free operation.

SAMPLE INCIDENT REPORT

Worksite: _____

Location: _____

Date: Time of incident: ____ / ____ / ____ @ ____ AM PM(Tick)

Weather condition at the time of the incident: _____

Driver Information:

Vehicle 1:

Name: _____ Licence No: _____

Address: _____

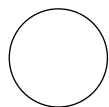
Vehicle 2:

Name: _____ Licence No: _____

Address: _____

Description of injury / property damage: _____

Description of incident (include a diagram): _____



Indicate North direction

Description of vehicle(s) involved (make, model, colour):

Vehicle 1:

Make: _____ Model: _____

Colour: _____ Registration No: _____

Vehicle 2:

Make: _____ Model: _____

Colour: _____ Registration No: _____

Direction of travel:

Vehicle 1: _____ Vehicle 2: _____

Description of any injuries: _____

Description of any property damage: _____

Signs displayed and their location (include a diagram):



Indicate North direction

Signature of Traffic Controller

Accreditation Number

Name of Traffic Controller

Supervisor

Contact details

For further information and your suggestions or comments please contact the:

Road Safety Policy Coordinator
Road and Safety Branch
Main Roads Western Australia
PO Box 6202 EAST PERTH WA 6892

Telephone: (08) 9323 4111 (or 138138)
Facsimile: (08) 9323 4430
Email: roadsafety@mainroads.wa.gov.au

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