

Implement Traffic Management Plan

LEARNER GUIDE

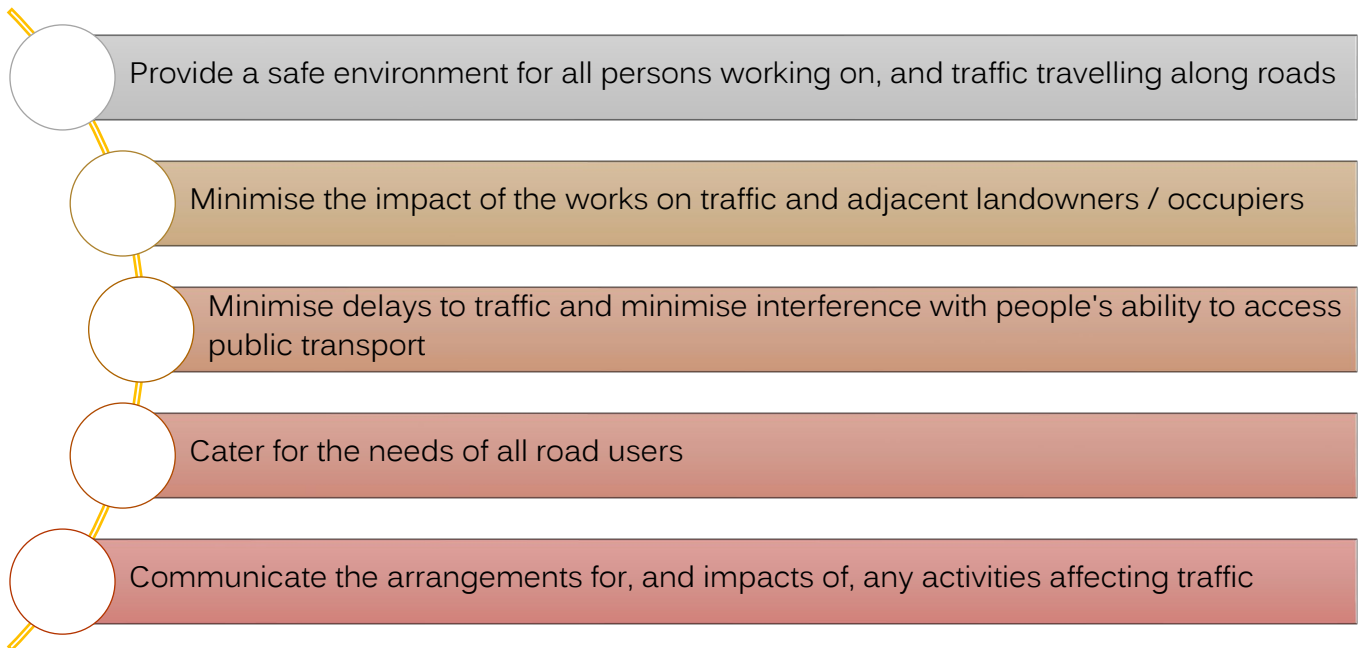


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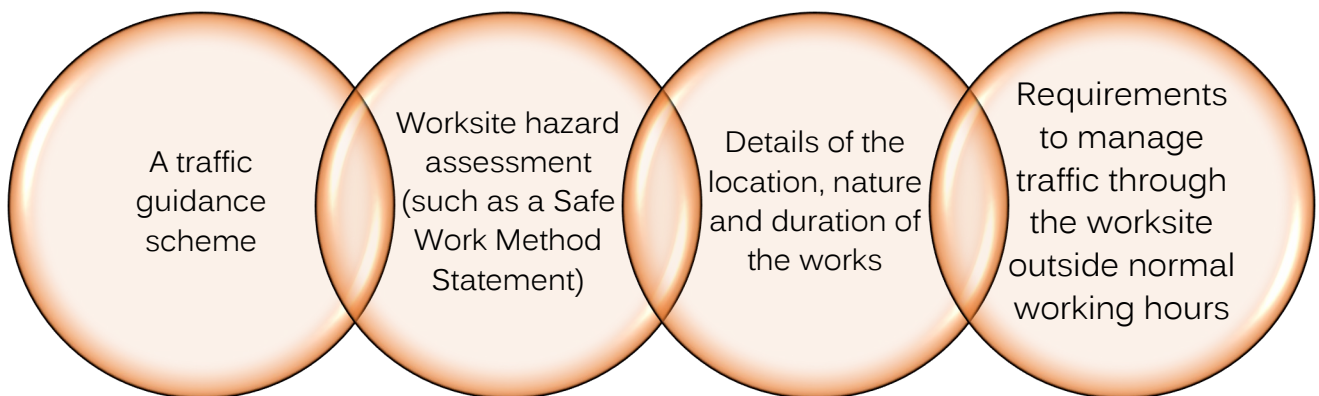
1. WHAT IS A TRAFFIC MANAGEMENT PLAN

Traffic Management Plans are an essential requirement of any work being undertaken within the civil construction industry, whether the works are on the roadway, shoulder or roadside). Traffic Management Plan objectives include:



The Road Safety Act 1986 requires any person conducting works on a road to 'have in operation a traffic management plan'.

A traffic management plan provides the details of proposals for the management of traffic during the conduct of works on roads and normally includes:



2. SELECT TRAFFIC CONTROL SIGNAGE AND DEVICES, TOOLS AND EQUIPMENT

When preparing a traffic management plan the traffic control signage and devices, tools and equipment required for the task will need to be selected. It is important that the correct traffic control signage and devices, tools and equipment are chosen for each specific task as this will increase efficiency and quality of output.

When selecting traffic control signage and devices, this may include:



Vehicle mounted signs and flashing lights



Guide signs



Warning signs



Barriers



Hazard markers



Portable traffic signals



Bollards



Arrow boards

Appropriate tools and equipment may include:

- High visibility vests
- Cones
- Signage
- Notebooks
- Pens
- Radios
- Stop-slow bats
- Delineators
- Barricades
- Barriers
- Bollards
- Warning lights and beacons
- Arrow boards
- Signalling devices.

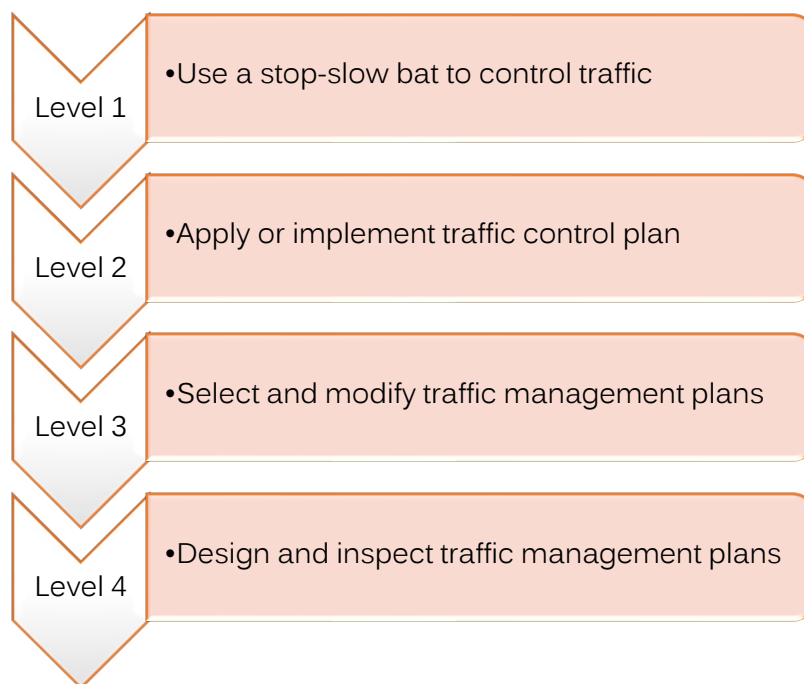


It is vital to ensure that all equipment is checked and tested to ensure it is functional and safe to use. Always test and inspect tools and / or equipment every day before use to ensure it is safe for use. Should you find a fault with any tools and / or equipment you must:



3. TRAFFIC CONTROLLER TRAINING AND QUALIFICATION

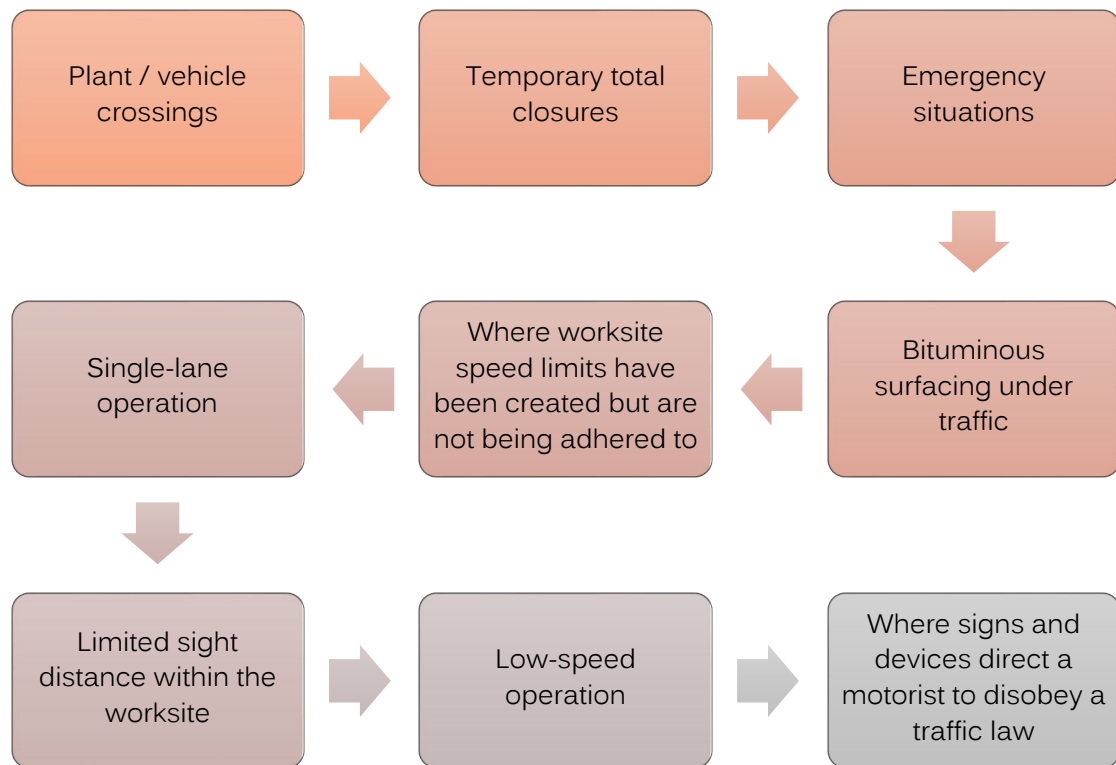
Traffic management regulations require anyone working within traffic control roles must have the appropriate traffic control training. There are four (4) levels of traffic controller accreditation, they are:



A refresher course is required to be completed every three (3) years for all workers involved in traffic management and traffic control.

4. TRAFFIC CONTROLLER REQUIREMENTS

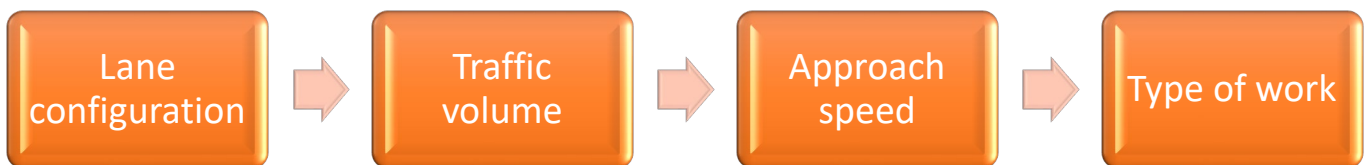
Traffic controllers may be required to assist in slowing down, stopping or redirecting traffic using stop-slow bat for certain situations such as the following:



Pre-work and daily meetings / briefings should be held with traffic controllers to ensure they are informed of their duties at all times and the site requirements. They must also be notified immediately upon any changes to the traffic management plan and / or traffic guidance scheme.

5. SELECT SUITABLE TRAFFIC GUIDANCE SCHEME

A traffic guidance scheme shows the arrangement of temporary traffic control devices to warn traffic and guide it through, past or around a work area or temporary hazard. When selecting a suitable traffic guidance scheme the following factors should be considered:



As a minimum requirement, only a person who has undertaken a course in implementing traffic management plans or an appropriate refresher course within the last three (3) years.

The below traffic guidance scheme diagrams are sourced from the *Road Management Act 2004: Code of Practice: Worksite Safety – Traffic Management*.

Figure 1 – Frequently Changing Work Area – Not in a Traffic Lane

This traffic guidance scheme can be used for works with a vehicle equipped with a vehicle-mounted warning device involving a frequently changing work area not in a traffic lane (for a speed zone of 60 km/h or less) with a minimum sight distance to oncoming traffic of 50 metres. The works (eg. pit cleaning, litter collection, tree pruning) should be for a maximum period at any one location of 20 minutes, or 40 minutes on roads with 150 vehicles per hour or less, or 1 hour for roads with 40 vehicles per hour or less.

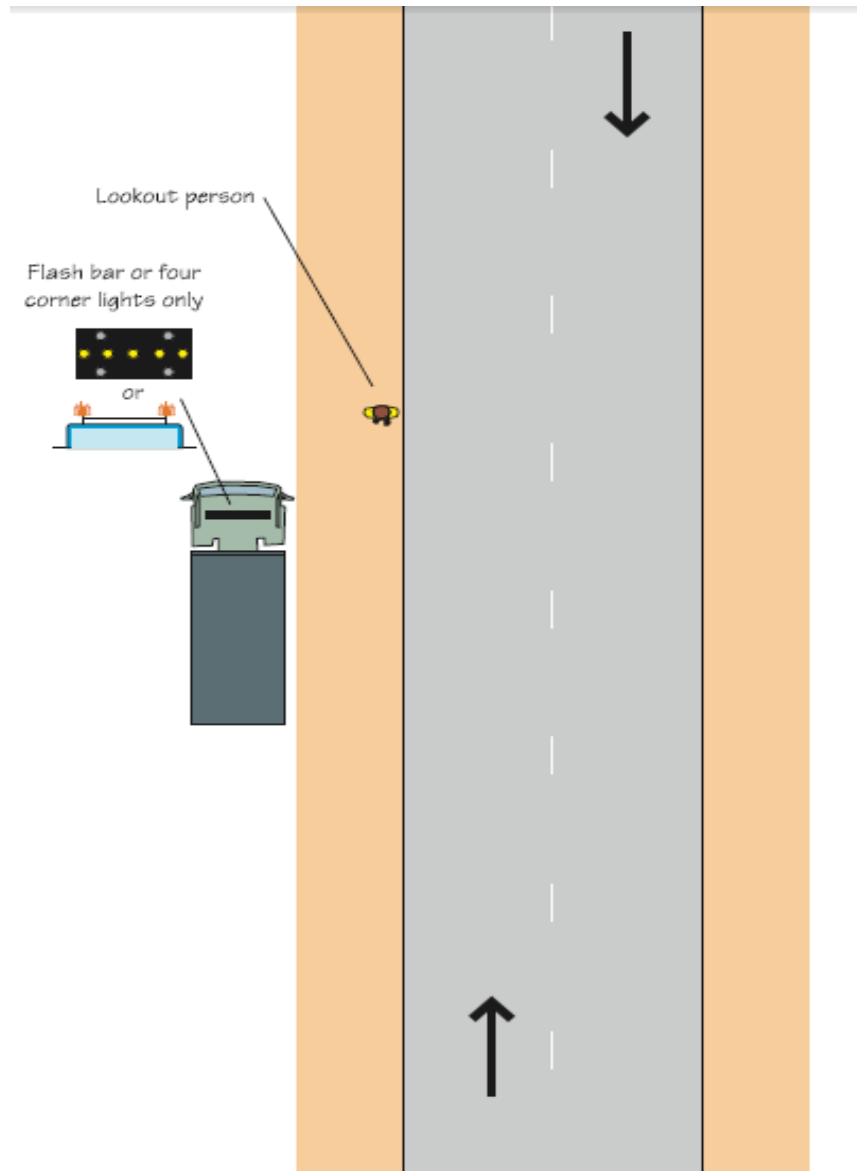
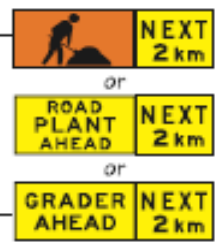


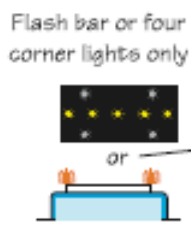
Figure 2 – Frequently Changing Work Area (and Shoulder Grading)

This traffic guidance scheme can be used when there are a series of short term works involving a frequently changing work area (e.g. shoulder grading, grass mowing, longitudinal surveys) along the road. If there are workers on foot on the roadway or shoulder, they should only work on the same side of the road as the truck and there should be a lookout person ready to warn them of approaching traffic.

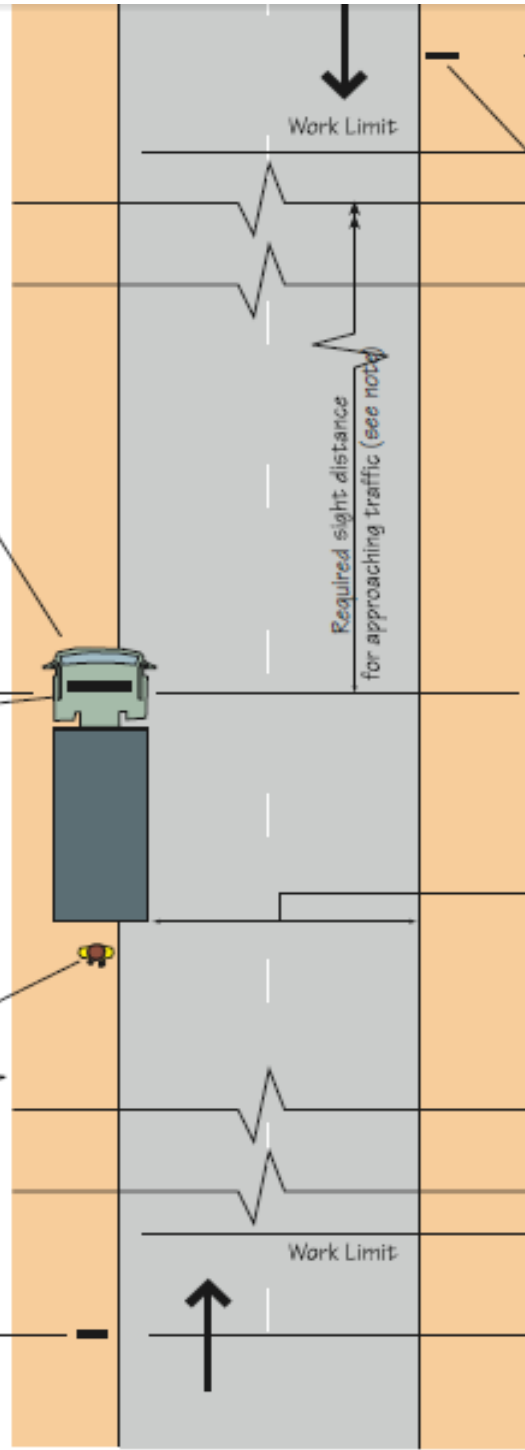
These could be multi-message signs



Lookout person (only needed if there are workers on foot)



Work vehicle or shoulder grader



Not more than 2 km

Speed Limit	Length X
60	45 m
70	140 m
80	160 m
90	180 m
100	200 m

Must be wide enough for two-way traffic to pass the site safely and without crossing any barrier line

Note: Minimum sight distance to vehicle-mounted lights needs to be:

- 150 m in speed zones 60 km/h or less
- 250 m in speed zones 70 km/h or more



These could be multi-message signs

Figure 3 – Partial Closure on a 50 km/h Street

This traffic guidance scheme can be used when traffic volumes are less than 40 vehicles per hour and only an occasional vehicles travels at a speed greater than 50 km/h. This traffic guidance scheme could also be used for works on a nature strip, or off the roadway, where a work vehicle is used as a buffer between the work area and passing traffic.

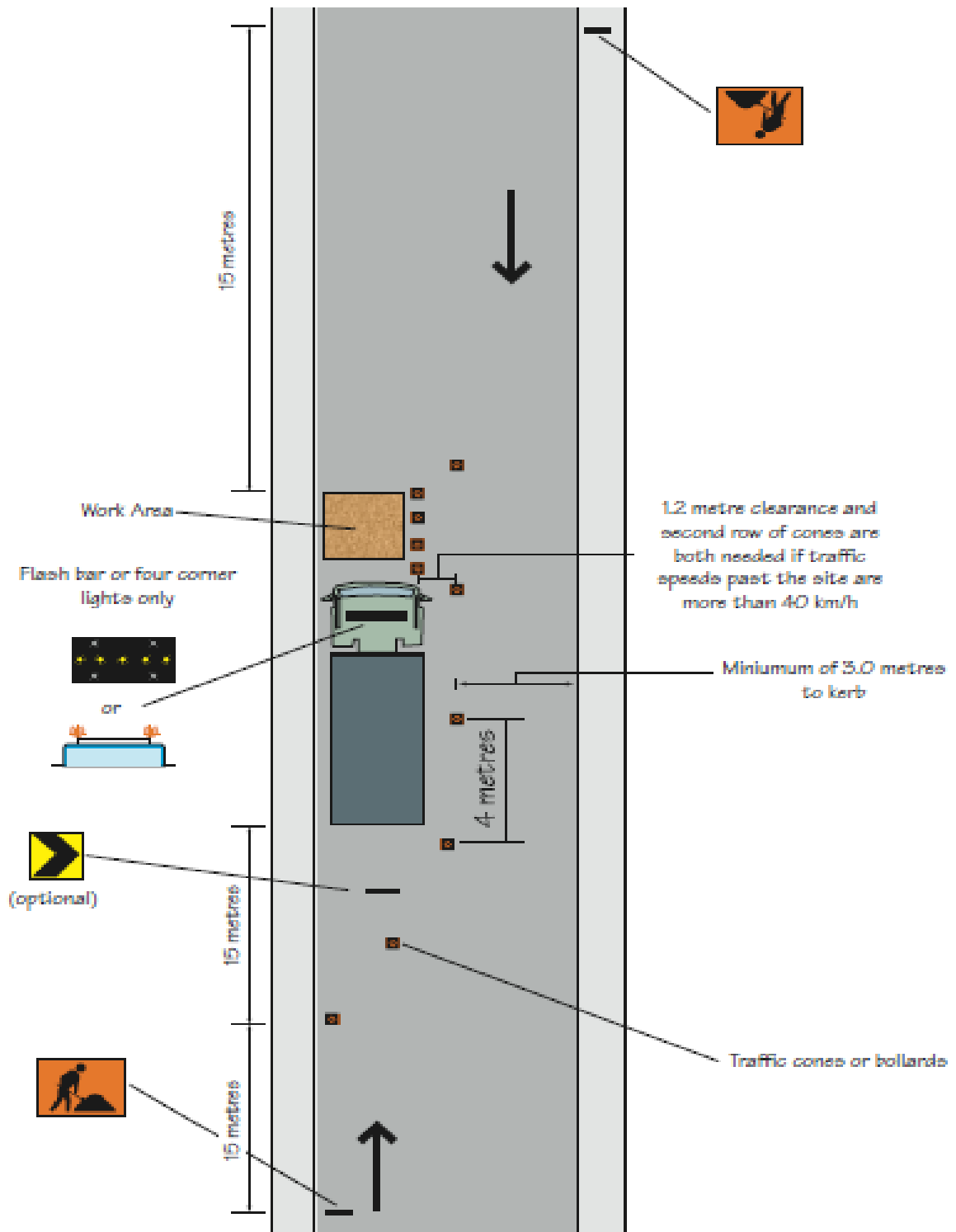


Figure 4 – Lane Closure on a 60 km/h Four Lane Road

A similar traffic guidance scheme, but with different dimensions, would be applicable for approach speeds lower or higher than 60 km/h.

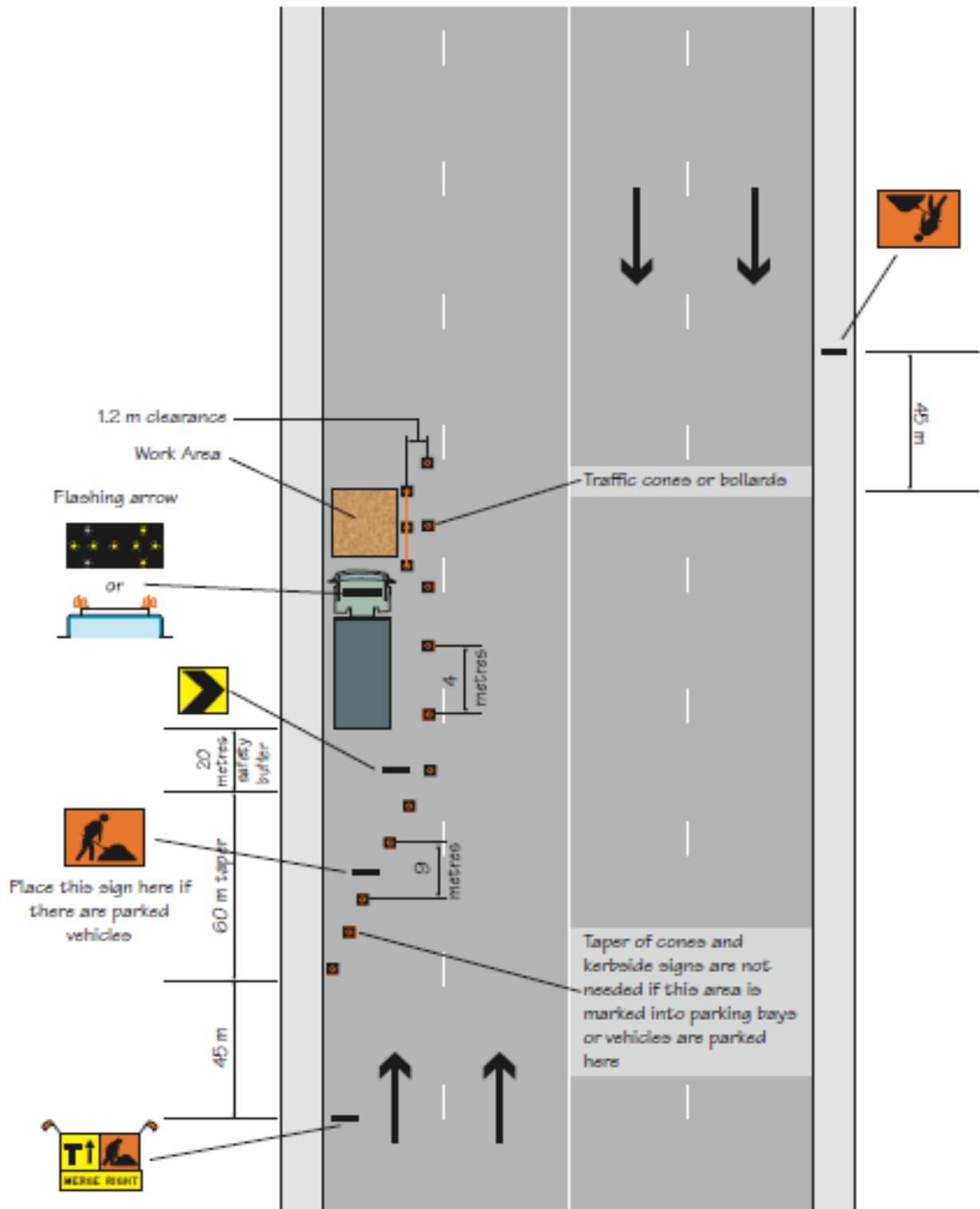


Figure 5 – Traffic through the Work Area on a 100 km/h road

This traffic guidance scheme can be used whenever works need to block the road for only a few minutes at a time, and traffic can move through the worksite at other times. A speed limit of 60 km/h or lower should be used. If workers or plant are working within or close to the roadway and there is no containment fence to keep them at least 1.2 metres clear of traffic, then a 40 km/h speed limit should be used.

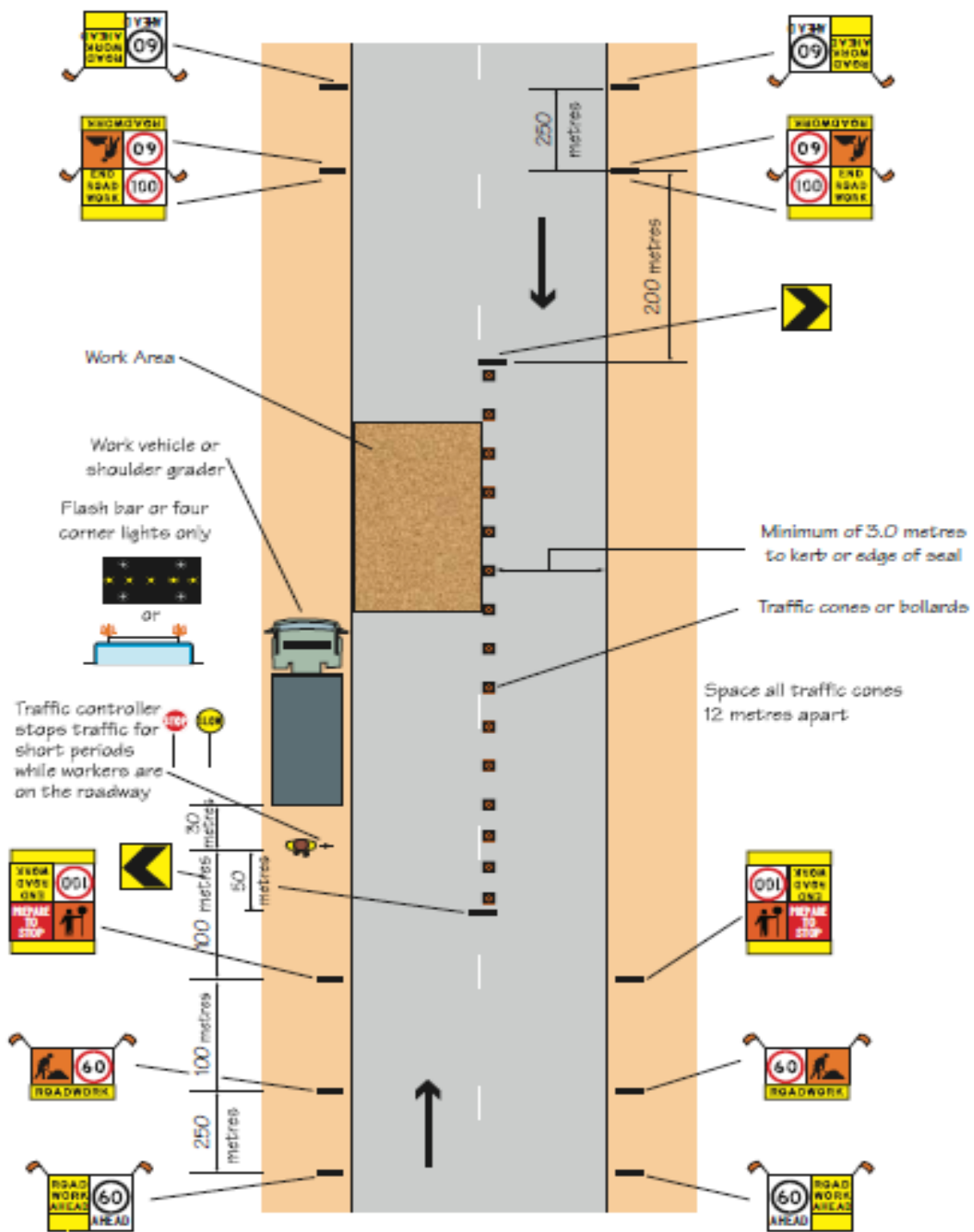
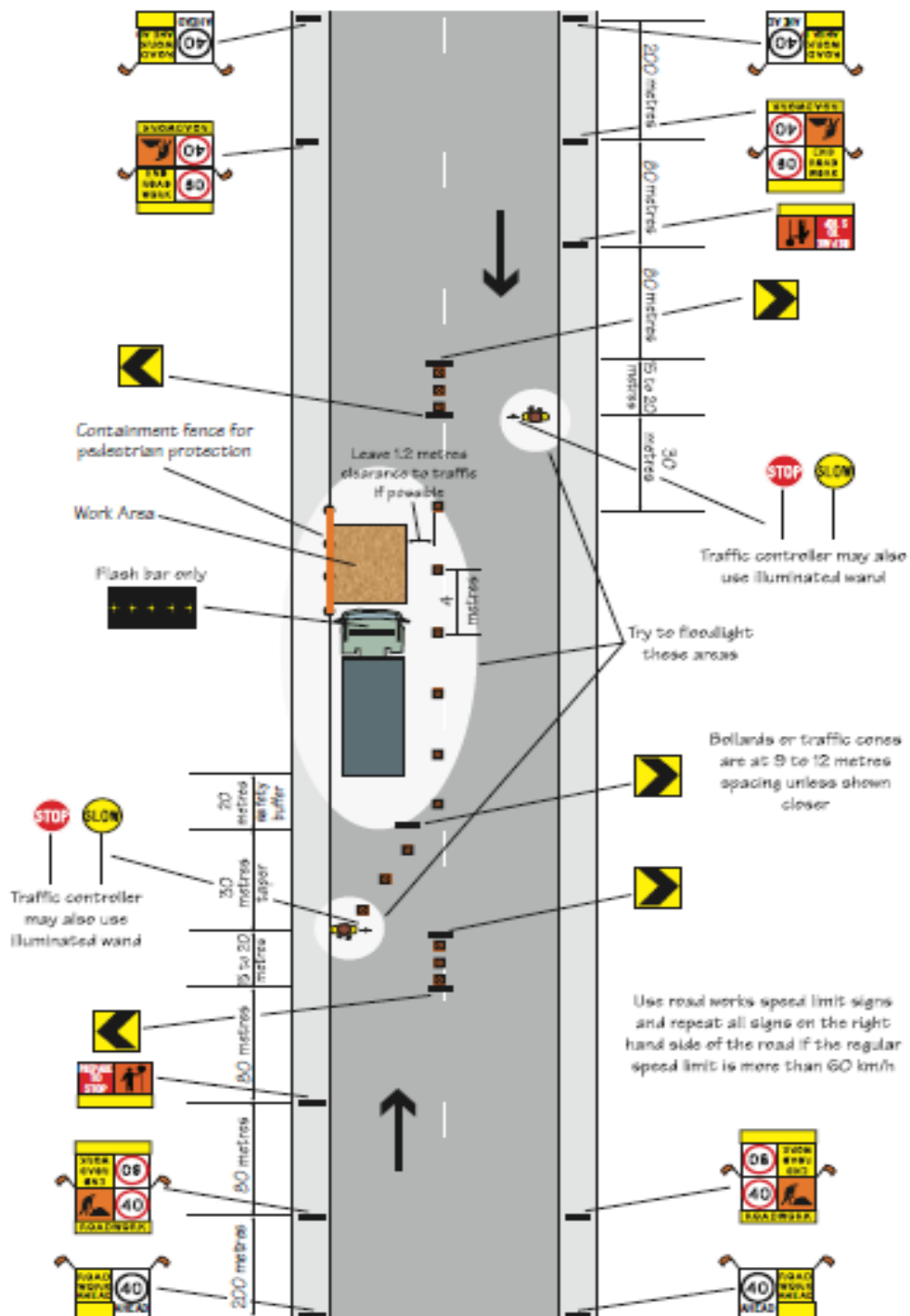


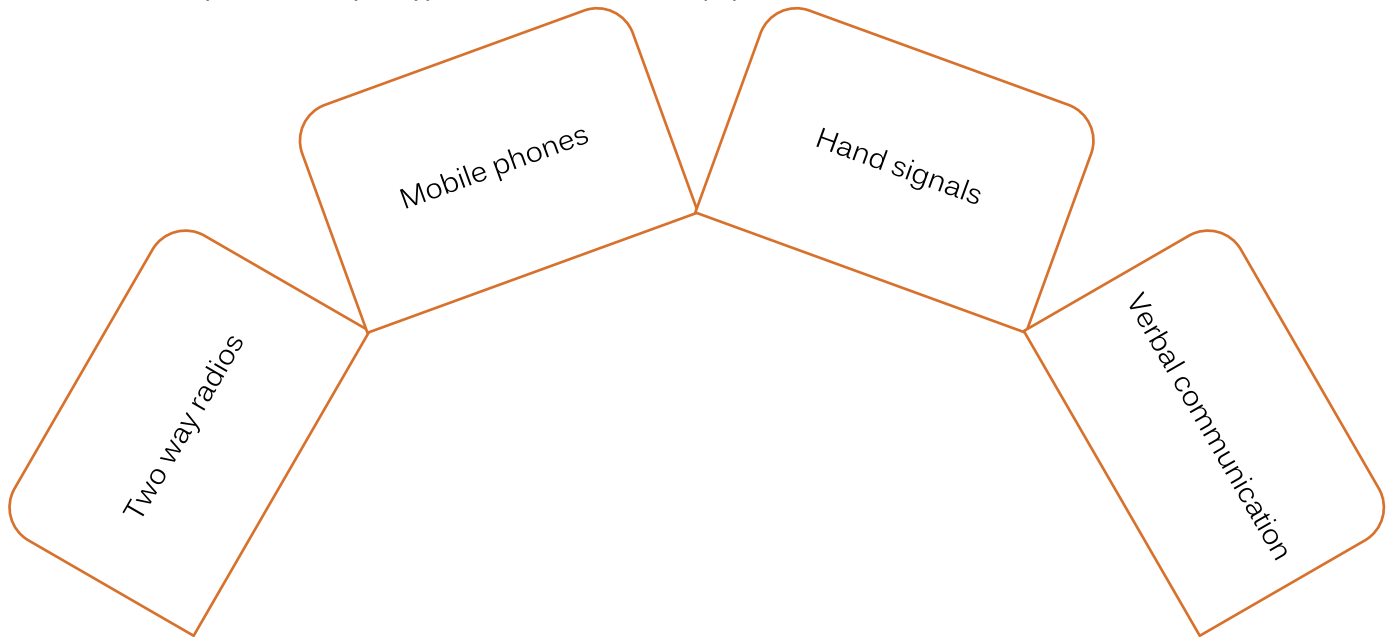
Figure 6 – Works at Night of Duration Less than One Shift on a 80 km/h Road

On a residential street, a traffic controller may not be needed provided that road users can see past the work area. A similar traffic guidance scheme, but with different dimensions, would be applicable for different approach speeds.



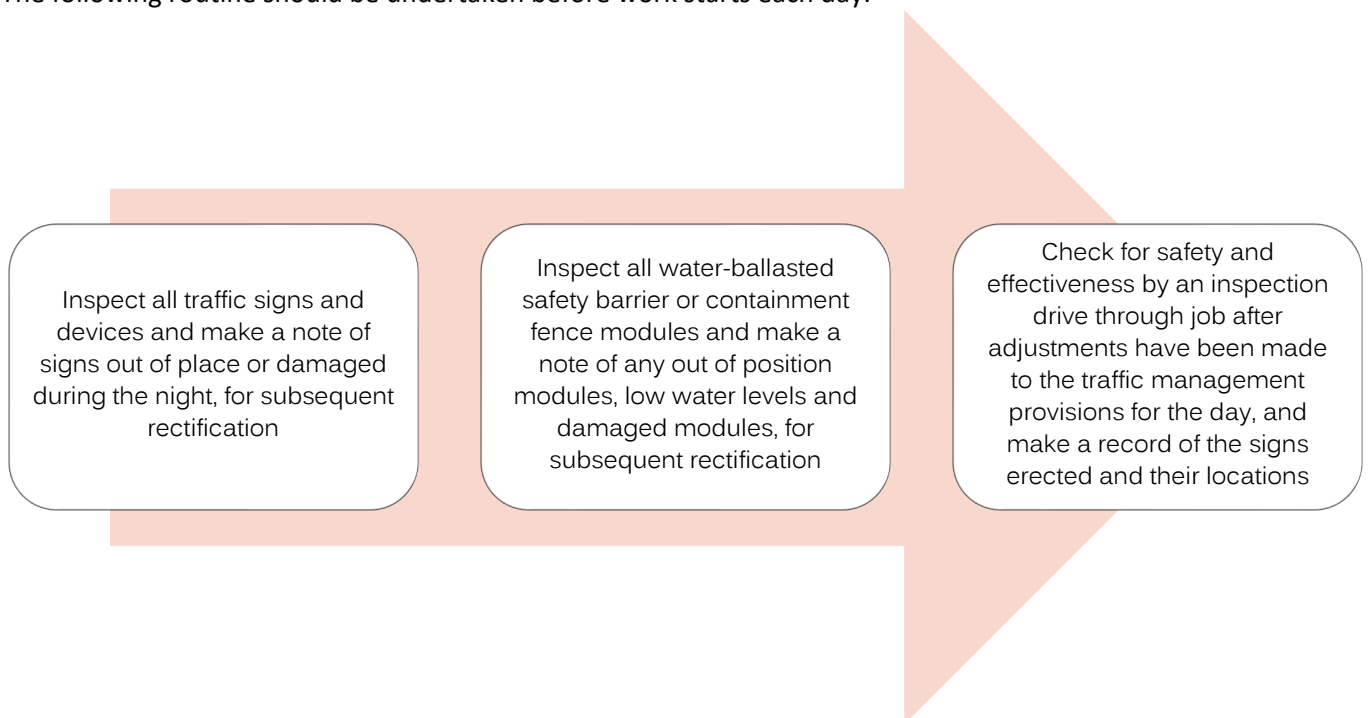
6. COMMUNICATION TECHNIQUES

Communication is vital to ensure adherence to work schedules, the work is being undertaken in a correct manner and minimise any traffic delays. Typical communication equipment includes:



7. BEFORE WORK STARTS CHECKLIST

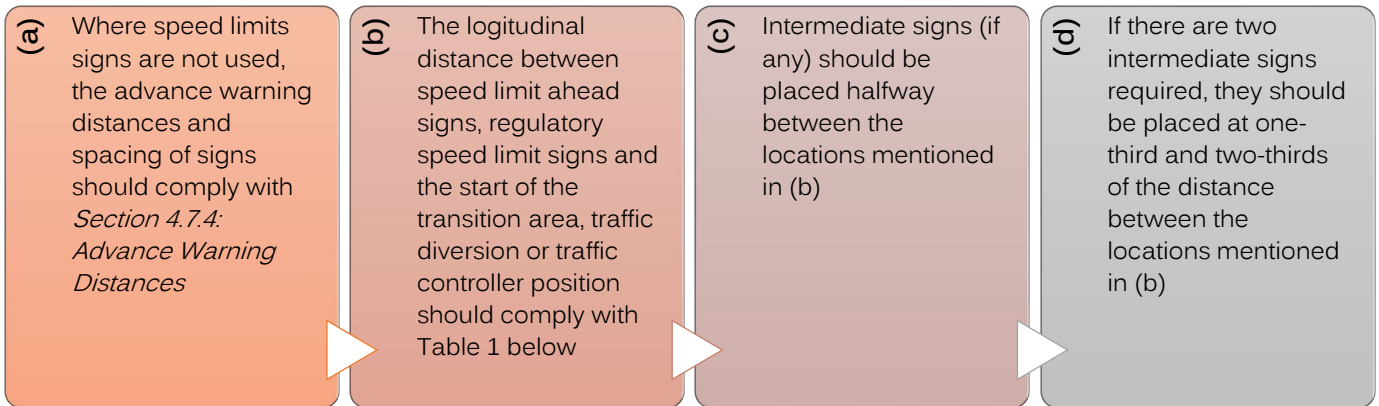
The following routine should be undertaken before work starts each day:



8. POSITION TRAFFIC CONTROL SIGNAGE AND DEVICES

When positioning traffic control signage and devices, including their supports and fittings, care should be taken to ensure they are used and located in such a way that they do not constitute a hazard to the workers on the worksite or people passing through the worksite, or to a vehicle that might collide with these signs.

The advance warning distances and intermediate spacing of signs leading up to the work area should comply with the following:



Worksite speed limits should be considered when certain conditions apply such as:

- The safety of workers may be compromised by the proximity of traffic
- Moving roadwork's plant or equipment shares the road through the worksite
- Loose material or stones are present on the road surface
- The standard of vertical or horizontal road geometry (eg. inadequate sight distance) at the approach to, or within, a worksite is reduced below that of the adjacent sections of the road
- The unobstructed clear width of the roadway is significantly reduced
- The safety of road users travelling through the worksite at the permanent speed limit is otherwise compromised
- The safety of pedestrians, cyclist and people with disabilities may be compromised.

SPEED LIMIT 15	SPEED LIMIT 20	SPEED LIMIT 25	SPEED LIMIT 30
SPEED LIMIT 35	SPEED LIMIT 40	SPEED LIMIT 45	SPEED LIMIT 50
SPEED LIMIT 55	SPEED LIMIT 65	SPEED LIMIT 70	SPEED LIMIT 75

All speed limit AHEAD signs should comply with *Section 3.5.5(d): Speed Limit AHEAD (G9-79)* of AS 1742.3-2009. The below table is sourced from the *Road Management Act 2004: Code of Practice: Worksite Safety – Traffic Management*.

Table 1

Approach Speed Limit (km/h)	Roadwork's Speed Limit (km/h)	Intermediate Speed Limit (km/h)	Reference	D1 (metres)	D2 (metres)	D3 (metres)
110	60	Not required	Figure 7.1	N/A	300	220
110	40	80	Figure 7.2	200	200	160
100	60	Not required	Figure 7.1	N/A	250	200
100	40	80	Figure 7.2	200	200	160
90	40	Not required	Figure 7.1	N/A	250	180
80	40	Not required	Figure 7.1	N/A	200	160

Figure 7.1

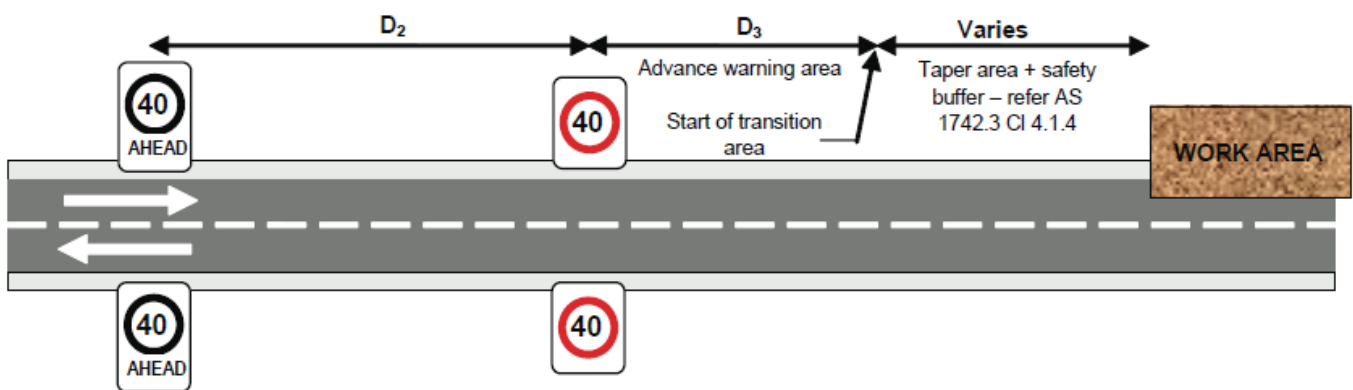
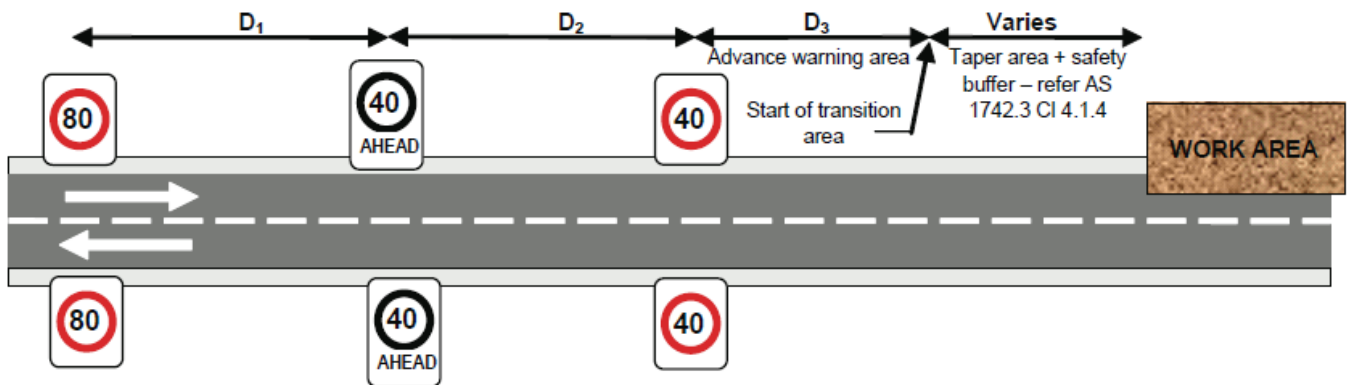


Figure 7.2



The erection of traffic control signage should be undertaken as follows:



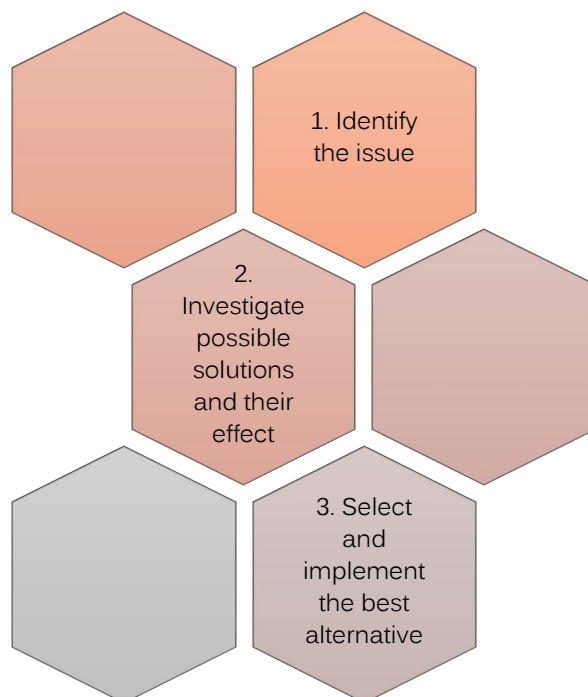
9. MONITOR TRAFFIC GUIDANCE SCHEME

Once a traffic guidance scheme has been implemented it should be monitored before and after opening to traffic and at each major change to the traffic management plan. This inspection should be carried out in a vehicle travelling at normal traffic speed through the traffic guidance scheme path and past all of the signs and devices. The same inspection should also be carried out at night if the traffic guidance scheme is to be implemented overnight.

Conditions that may cause changes to be made to an existing traffic guidance scheme may include:

- Changing traffic conditions
- Changing weather conditions
- Unexpected delays.

To diagnose potential issues with an existing traffic guidance scheme, the following process should be undertaken:



10. DURING WORK HOURS CHECKLIST

The following routine should be followed while work is in progress:

- Periodically drive through the worksite to check that all signs, markings and delineation devices, as seen by other road users, are satisfactory and in their correct position
- Attend to any minor problems, as they occur
- Move personnel clear of the work area during work breaks ; park plant clear of traffic lanes, and remove from view or cover inappropriate signs such as *Traffic Controller Ahead / Prepare to Stop*
- Instruct traffic controllers to remain on the job and relieve them as necessary, where there are traffic hazards, or where only one lane is open to traffic
- Reposition barriers, signs and tapers as necessary (eg. adjust the length of single lane traffic operation, as necessary, to keep it to a minimum), keep records of changes made, and the time these occurred
- Coordinate maintenance of the travelled path with other job operations.

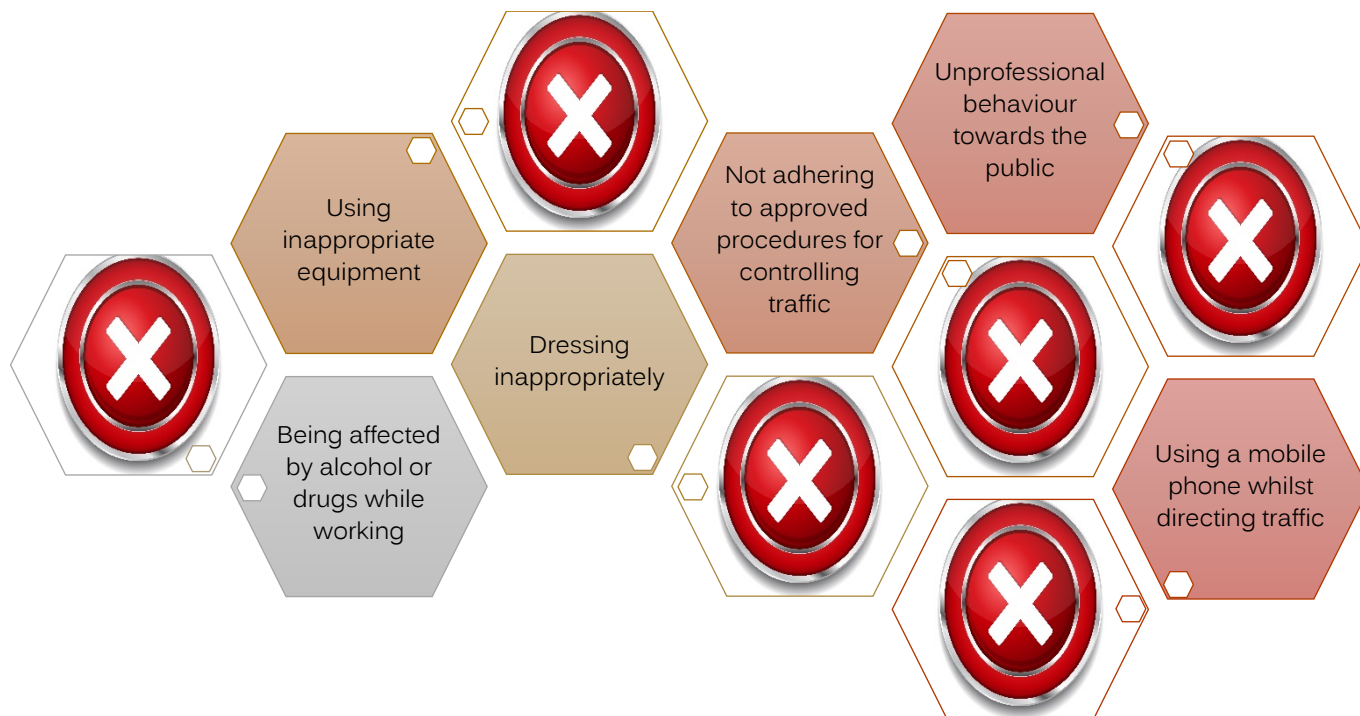
11. EXPECTED TRAFFIC CONTROLLER BEHAVIOUR

Only personnel who can reasonably deal with the travelling public should be selected as traffic controllers. They should have a sound temperament and not allow themselves to be provoked by members of the public. By exercising restraint they will gain more respect

Correct appearance, behaviour and attitude are essential so that motorists will recognise traffic controllers as a form of authority and will react accordingly

A disinterested controller with a slovenly appearance and manner will create a bad impression to the travelling public. Traffic controllers must not attempt to control traffic while seated and should hold the traffic bat erect and not hold it upside down while giving hand signals. Traffic controllers must ensure that the signing on the approach to the job gives a timely and accurate warning of the situation facing drivers. If this is not the case, drivers may ignore the controller putting themselves and workers at great risk

The following actions are considered *not acceptable* by traffic controllers:



Should a traffic controller fail to adhere to approved procedures, they may face consequences such as:

- Verbal or written warning
- Performance management
- Relief from duties
- In serious cases, dismissal.

12. DEALING WITH OFFENDING MOTORISTS



A traffic controller does not have any power at law. The legal authority does not rest with the person but with the STOP sign when it is displayed to drivers. The driver is required to stop their vehicle before reaching the sign and as near as practicable to the sign. The driver must not proceed beyond the sign while it is displayed in the driver's direction. The law in this regard only applies to the STOP sign, which is regulatory in nature, and not the SLOW sign, which is an advisory sign and only used for guidance.

Traffic controllers have no authority to control or direct traffic by hand signals alone or by giving oral instructions to drivers, the control method is the use of the STOP sign. Hand signals by the traffic controller only enhance the use of the STOP/SLOW bat.

When dealing with offending motorists do not attempt to stop the motorist. Warn the workers ahead via a suitable communication method. Record the details of the vehicle along with the date, time, location and nature of the offence and pass the details along to the police or relevant authority. A form similar to Figure 8 should be used.

Figure 8:

Report by Traffic Controller

Registration Number	Body Type
<input type="text"/>	<input type="text"/>
Body Colour	Model of Vehicle
<input type="text"/>	<input type="text"/>
Offence	Date
Time	
<input type="text" value="am/pm"/>	<input type="text" value="/ /"/>
Location	
<input type="text"/>	
Direction of Travel	
<input type="text"/>	
Weather Conditions	<input type="text"/>
Remarks	
<input type="text"/>	
Controller (Print Name)	Controller (Signature)
<input type="text"/>	<input type="text"/>
Date of Report	Region/Project
<input type="text" value="/ /"/>	<input type="text"/>
Patrol Gang	<input type="text"/>

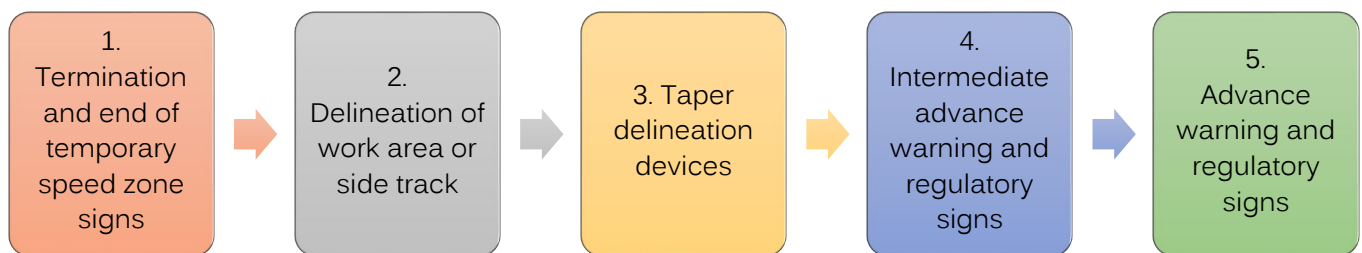
13. CLOSING DOWN AT THE END OF THE DAY CHECKLIST

The following actions are required to be undertaken at the end of the day:

- Carry out pre-closedown inspection, allowing time for urgent maintenance to the travelled path
- Remove *Traffic Controller Ahead / Prepare to Stop* and other inappropriate signage
- Affix and light lamps on advance signs, if appropriate
- Drive through the worksite to confirm that signs and devices are in position and operating before leaving the site
- Record any changes that have been made to the previously recorded traffic guidance scheme.

14. REMOVAL OF TRAFFIC CONTROL SIGNS AND DEVICES

When removing traffic control signs the following sequence should be followed:



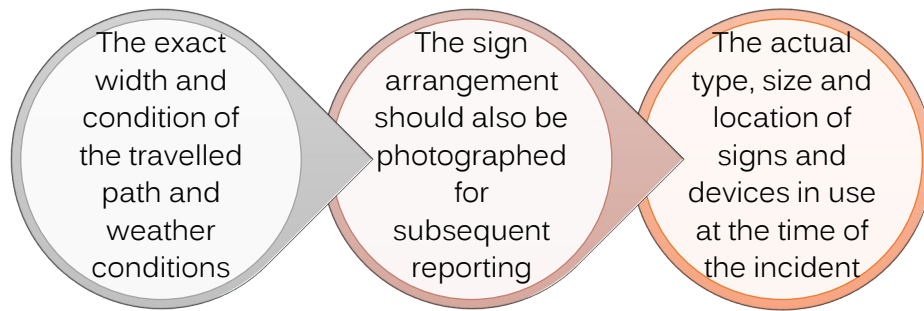
To ensure work crews are protected whilst removing traffic control signs and devices, a vehicle displaying a vehicle-mounted warning device should be used between the workers and the traffic while the workers are retrieving such equipment.

15. RECORDING AND REPORTING REQUIREMENTS

In accordance with Road Authority requirements the following details should be recorded relating to the traffic guidance scheme:

- The hours of operation
- Surface condition of the road
- The installation, alteration and removal of all regulatory signs and devices
- Any additional signage not included in the original traffic guidance scheme
- Details of any alterations to the traffic management plan or traffic guidance scheme made during the conduct of the works.

Along with recording and reporting details relating to the traffic guidance scheme, it is important to record and report all details should an incident occur involving workers or members of the public wherein legal proceedings may arise. The details reported and recorded should consist of:



16. CLEAR AND CLEAN THE WORK AREA

Housekeeping is the responsibility of all workers. To maintain a clean, hazard free jobsite the following processes should be completed and documented where applicable:

- Check all tools and other equipment
- Ensure they are clean and functional
- Any non-working or damaged items to be recorded and reported
- If the equipment is of critical use, isolate it to ensure it will not be inadvertently used if someone doesn't check the reports
- Store equipment and tools in their designated locations
- Remove any potential hazards. Duty of care towards others means not leaving a possible source of accident or danger for others
- Clean up waste materials and dispose of properly
- Make sure you use appropriate PPE when dealing with waste or possible hazardous materials as you clean.

Whilst undertaking clearing and cleaning work areas reference should be made to the Environmental Management Plan and Site Procedures to ensure these tasks are being undertaken correctly.

