



Woollahra
Municipal
Council

Traffic Management Guide for Field Staff



Version 1.1 June 2023

References:

- TfNSW Traffic Control at WorkSites manual V6, 2020
- Australian Standard 1742.3 2019
- Austroads Guide to Traffic Management 2020
- WHS ACT 2011
- WHS Regulation 2017

TRAFFIC MANAGEMENT FIELD GUIDE

Standard work activities such as those listed below should be managed in line with divisional requirements and through the development of localised procedures to manage the risk associated with these works.

TRAINING

Personnel undertaking TTM in NSW must hold a valid traffic control qualification relevant to the type of work they are undertaking. As of 1 July 2020, traffic control training in NSW is prescribed under the WHS Regulation 2017 and is managed by SafeWork NSW. As a requirement of the WHS Regulation 2017, a person undertaking traffic control work must hold the relevant qualification for the work they are performing. The three qualifications outlined in the WHS Regulation 2017 are as follows: • Traffic Control (TC); • Implement Traffic Control Plans (ITCP); and • Prepare Work Zone Traffic Management Plans (PWZTMP)

DEFINITIONS

APPROACH SPEED - speed of traffic approaching the work site measured in km/h and may be the speed limit applying to the road

CARRIAGEWAY - portion of a road or bridge devoted particularly to the use of vehicles, inclusive of shoulders and auxiliary lanes

CONTRAFLOW - when a carriageway of a divided road is closed to traffic and the traffic is transferred to the other carriageway which then operates as a two-way road

DELINEATION - general term for treatments which regulate, warn or provide tracking information and guidance to drivers (e.g. linemarking, raised pavement markers, traffic cones, bollards and post-mounted reflectors are delineation devices)

DIMENSION D - distance expressed in metres for the positioning of TTM signs, devices and determining other TTM related factors

FOOTWAY - public way largely reserved for the movement of pedestrians

INTERMITTENT WORK - work which is undertaken on travel lanes, in gaps in traffic, without obstructing traffic and without compromising the safety of road workers

LONG TERM WORK - work requiring traffic control for longer than one work shift and where some form of traffic control remains when the site is left unattended

LOOKOUT PERSON - any person whose sole responsibility is to watch out for and warn road workers of approaching traffic

PORTABLE TRAFFIC CONTROL DEVICE - (PTCD) portable device that removes the need for manual traffic control or allows traffic controllers to perform their roles at a safe distance from traffic (e.g. type 2 (automatic) portable traffic signals, type 1 (manual) portable traffic signals and portable boom barriers)

PREPARE WORK ZONE TRAFFIC MANAGEMENT PLAN - (PWZTMP) SafeWork NSW qualification principally concerned with the competency of developing or modifying a work zone traffic management plan (TMP) and/or a traffic guidance scheme (TGS)

ROAD OCCUPANCY LICENCE (ROL) permit which conditionally allows the holder to use or occupy a specified road space at approved times

SAFETY BARRIER - physical barrier designed to resist penetration by an errant vehicle and as far as practicable, to redirect errant vehicles back into the travelled path

SHORT TERM WORK - work requiring traffic control taking less than or equal to one work shift and where road conditions are returned to normal when the shift ends

SIGHT DISTANCE - distance between the point at which an approaching driver first sees the whole of an object and the object itself (in the context of this Technical Manual the object is the traffic control sign or device)

TEMPORARY TRAFFIC MANAGEMENT - (TTM) the organisation, arrangement, guidance and control of both stationary and moving traffic, including pedestrians, cyclists and all types of vehicles, around a hazard or work site for the safety of both road workers and road users

TRAFFIC GUIDANCE SCHEME - (TGS) diagram showing signs and devices arranged to warn traffic and guide it around, past or, if necessary, through a work site or temporary hazard Note to entry: Traffic guidance scheme (TGS) was previously referred to as traffic control plan (TCP)

TRAFFIC MANAGEMENT PLAN - (TMP) document detailing work to be undertaken, identifying associated risks and the accepted control measures to reduce risks by describing its effect on the general area, especially its effect on public transport, cyclists, pedestrians, motorists and commercial operations with required approvals from road authorities

VEHICLES PER DAY - (vpd) number of vehicles observed passing a point on a road in both directions in a 24 hour period

WORK AREA - area on the road or within the road reserve where the construction or maintenance work is being undertaken

WORK SITE - an area of road or road reserve which includes the work area or areas and any additional length of road required for traffic control such as signs and tapers

SIGN INSTALLATION

Before work commences, signs and devices at the work site must be installed in a sequence that is safe and efficient. After the work area has been located, via the use of a GPS, survey, landmarks, side streets or chainage, setting up a site to install signs and devices should be in accordance with the general procedures described below:

installation should occur in the following order:

1. Install termination signs (if no side roads).
2. Install on side streets.
3. Install in the non-working lane (unaffected direction).
4. Install in the working lane (affected direction).

SIGN REMOVAL

Removal of traffic control signs and devices should be undertaken in the reverse order of installation, progressing from the work area out toward the approaches. On motorway type carriageways, the removal of signs can be difficult in this sequence, in which case, signs should be removed in the same order that they were installed. The work vehicle should be positioned between the workers and approaching traffic when removing signs in this manner. When removing delineation devices, such as cones, bollards or barrier boards used to close a lane, an advanced warning vehicle should be used to warn road users of workers on foot and a work vehicle must also be positioned between the workers and approaching traffic. A work vehicle must only proceed in a forward direction towards approaching traffic along the closed roadway if it is determined by the PWZTMP or ITCP qualified person that it is safe to do so. This should not occur at night-time where it may create motorist confusion or distraction, such as headlight glare.

SIGN MOUNTING

The method of mounting signs must consider the duration of display, the placement location and frequency of removal or covering. Signs may be mounted in frames or on posts; however at all times the signs must:

- Provide secure sign attachment;
- Be stable in windy conditions and from the effects of passing traffic;
- Be suitable for both gravel and bitumen surfaces
- Be able to accommodate various sign sizes; and
- Not be a hazard if struck in their normal upright position or after being knocked over

For ease of installation and removal, signs mounted in frames are the preference for works taking less than two weeks. Signs required for works which will be in progress for less than two weeks may be erected in a permanent manner if it is considered to be justified. Signs continuously required for works, which will be in progress for longer than two weeks, should be installed on posts in a permanent manner.

SIGN PLACEMENT

Placement of signs must be arranged so that they are prominently displayed to traffic and will command attention. Signs must be properly displayed at all times and within the line of sight of the intended road user. Regulatory and detour signs must be located nearest to the travel edge of the lane.



WOOLLAHRA MUNICIPAL COUNCIL TGS SELECTION

- Assess the site and location of the work area.
- Is the work area in a location safe enough for us to work with regards to the passing traffic? If yes, go to the TCP selection chart and chose appropriate TCP
- If the answer is no, i.e., work area is in middle of high speed road or at a dangerous intersection etc., contact supervisor to organize contract traffic control.

TOLERANCES ON POSITIONING OF SIGNS AND DEVICES

Local constraints might not allow signs and devices to be placed exactly in accordance with the designed and approved TGS.

Where a specific distance is provided for the longitudinal positioning of signs or devices with respect to other items or features, the tolerances provided in the table below may be applied.

Tolerance	Positioning of signs, length of tapers or markings	Spacing of delineating devices
Minimum	10% less than the distances or lengths given	Nil
Maximum	25% more than the distances or lengths given	10% more than the spacing shown

These tolerances must not be applied where a distance, length or spacing is already given in the text or a figure as a maximum, a minimum or a range on a TGS. They may need to be exceeded where road features such as intersections or median openings intervene with approval from the TGS designer who is PWZTMP qualified. Any sign location changes must be marked and initialled on the TGS held on site, with the name of the person making the changes shown.



Woollahr
Municipal
Council

Date: VARIOUS Author: ANDREW RAPER TCT CARD # 0004825 Project: SHOULDER WORK

Comments:



At least 1 flashing light operating on vehicle
Risk assessment before commencing
Work abandoned if workers safety is compromised.

WORK AREA

KEEP AT LEAST
1.5M FROM THE
PASSING TRAFFIC

NOTE:
Delineation can be cones
with extension poles, bollards,
safety tape, water filled barriers
or similar to guide pedestrians
safely past the work area.
Pedestrians can be sent
either side of work area given
sufficient space of no less
than 1.5m width.

Legend

-  Cone
-  Work Area

100m



TGS
WMC
01

Crew.....
Date.....
Location.....
TCT card #.....
Signature.....

Authorized by





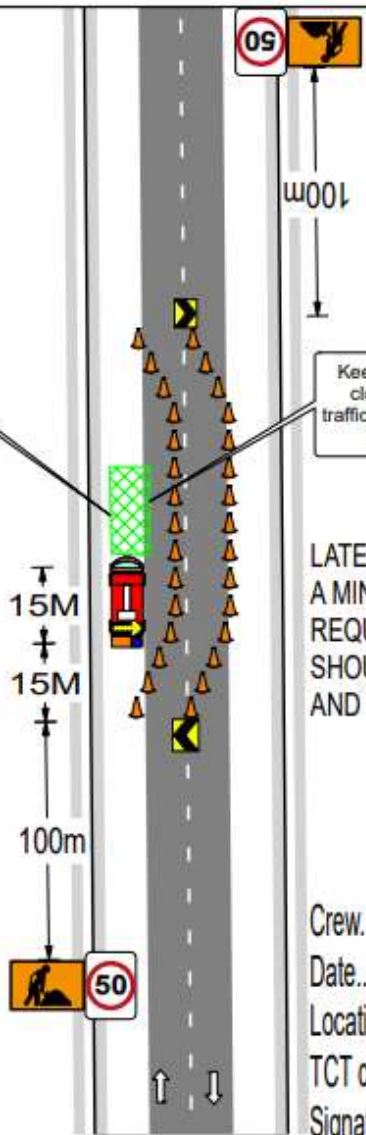
Date: VARIOUS Author: ANDREW RAPER TCT 0004825 Project: LATERAL SHIFT

Comments:

Road with needs to be at least 6 m wide for 2-way traffic
Risk assessment prior to start
At least 1 flashing light on work vehicle

TGS WMC 02

Work area



Keep at least 1.5m clear of passing traffic or reduce speed to 40km/h

LATERAL SHIFT
A MINIMUM OF 3M PER LANE REQUIRED.
SHOULDER MUST BE CLEAR AND TRAFFICABLE/

Legend

- Cone
- Work Area

Crew.....


Date.....

Location.....

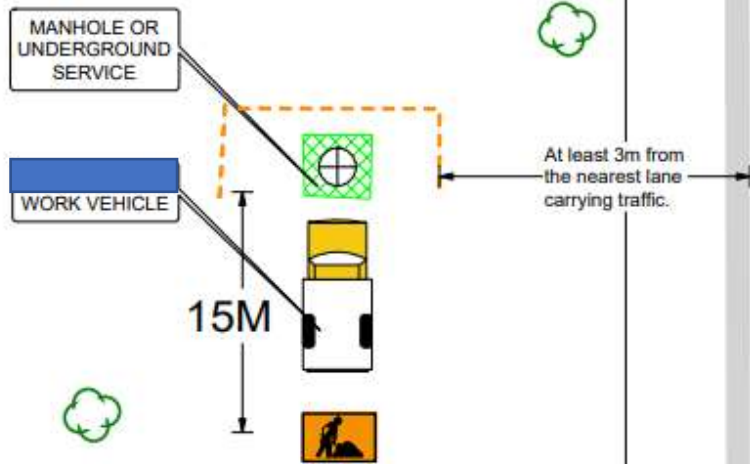
TCT card #.....

Signature.....

Authorized by


 <p>Woolahra Municipal Council</p>	Date: VARIOUS Author: ANDREW RAPER PWZ #0051768388 Project: WORK CLEAR OF ROADWAY
	Comments: AT LEAST ONE FLASHING LIGHT ON VEHICLE MANHOLE NOT TO BE LEFT OPEN WHEN WORKERS LEAVE CONSIDER TEMPORARY FENCING IN HIGH VOLUME PEDESTRIAN AREAS. OR USE SPOTTER TO WATCH FOR PUBLIC

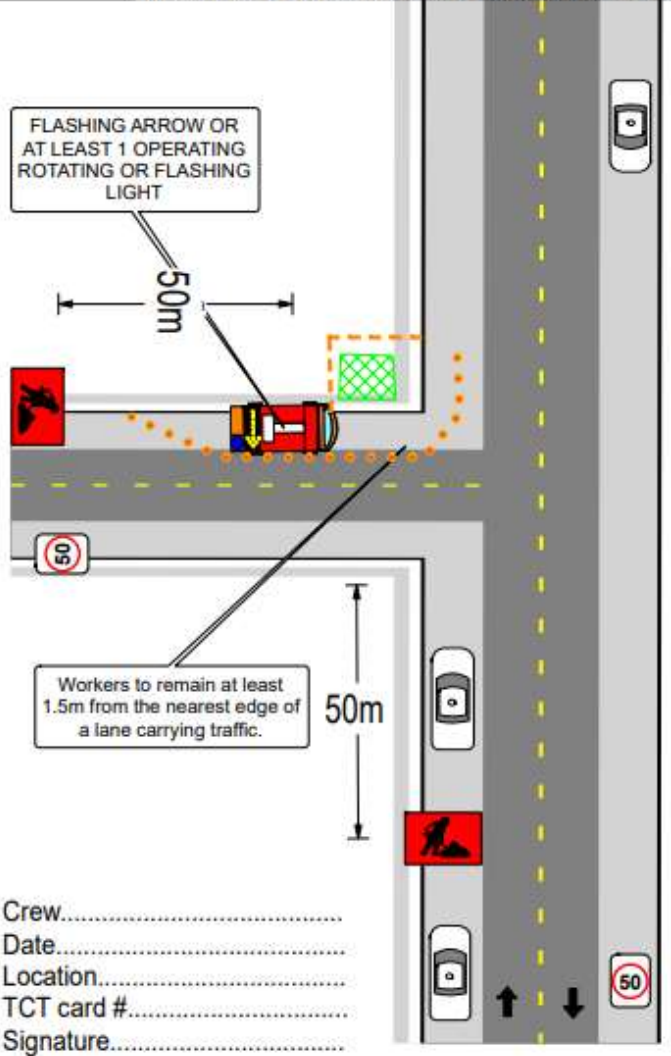
TGS WMC 03



Crew.....
Date.....
Location.....
TCT card #.....
Signature.....

Authorized by

 Woolahra Municipal Council	Date: Various Author: ANDREW RAPER PWZ TCT0004825 Project: INTERSECTION/CORNER
	Comments: RISK ASSESSMENT TO BE COMPLETED PRIOR TO WORK COMMENCING AND WORK ABANDONED IF SAFETY OF THE PUBLIC OR WORKERS IS COMPROMISED. WORKERS ON FOOT TO STAY 1.5M CLEAR OF TRAFFIC.



Workers to keep watch for pedestrians entering the work area.
 # Temporary fencing may need to be installed in high traffic areas.

TGS
WMC
04

Crew.....
 Date.....
 Location.....
 TCT card #.....
 Signature.....

Checked and authorized by



Date: VARIOUS Author: ANDREW RAPER TCT #0004825 Project: LANE CLOSURE

Comments:

See table for merge taper lengths
Sign distances determined by speed
Flashing lights/ arrow operating
Risk assessment carried out and work abandoned if workers safety compromised.

Maintain 1.5m between workers and passing traffic

30m
Merge Taper

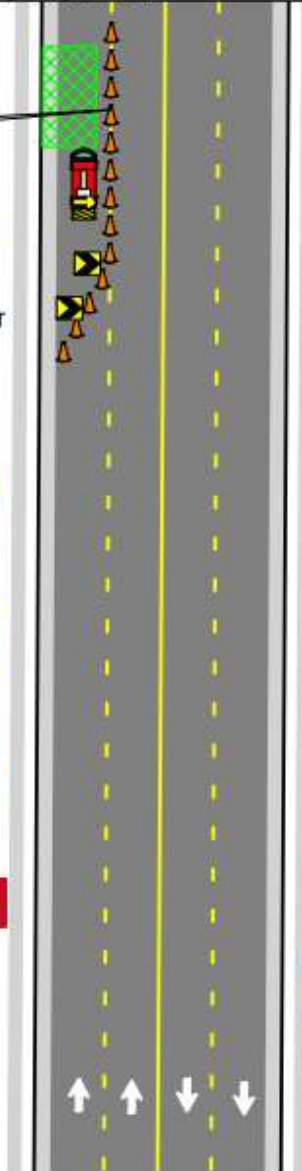
D



D



D is equal to:
The approach speed, speed limit, in metres



TGS WMC 05

Recommended taper lengths in m
Existing permanent speed in km/h

45 or less	15
46 to 55	30
56 to 65	60
66 to 75	115
76 to 85	130
86 to 95	145
96 to 105	160
Over 105	180

Crew.....

Date.....

Location.....

TCT card #.....

Signature.....

Authorized by



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Date: VARIOUS Author: ANDREW RAPER TCT CARD # 0004825 Project: FOOTWAY WORK

Comments:

At least 1 flashing light operating on vehicle
Risk assessment before commencing
Work abandoned if workers safety is compromised.

WORK AREA

KEEP AT LEAST
1.5M FROM THE
PASSING TRAFFIC

NOTE:

Delineation can be cones with extension poles, bollards, safety tape, water filled barriers or similar to guide pedestrians safely past the work area. Pedestrians can be sent either side of work area given sufficient space of no less than 1.5m width.

15M

Legend	
	Cone
	Pedestrian Tape
	Work Area




TGS
WMC
06

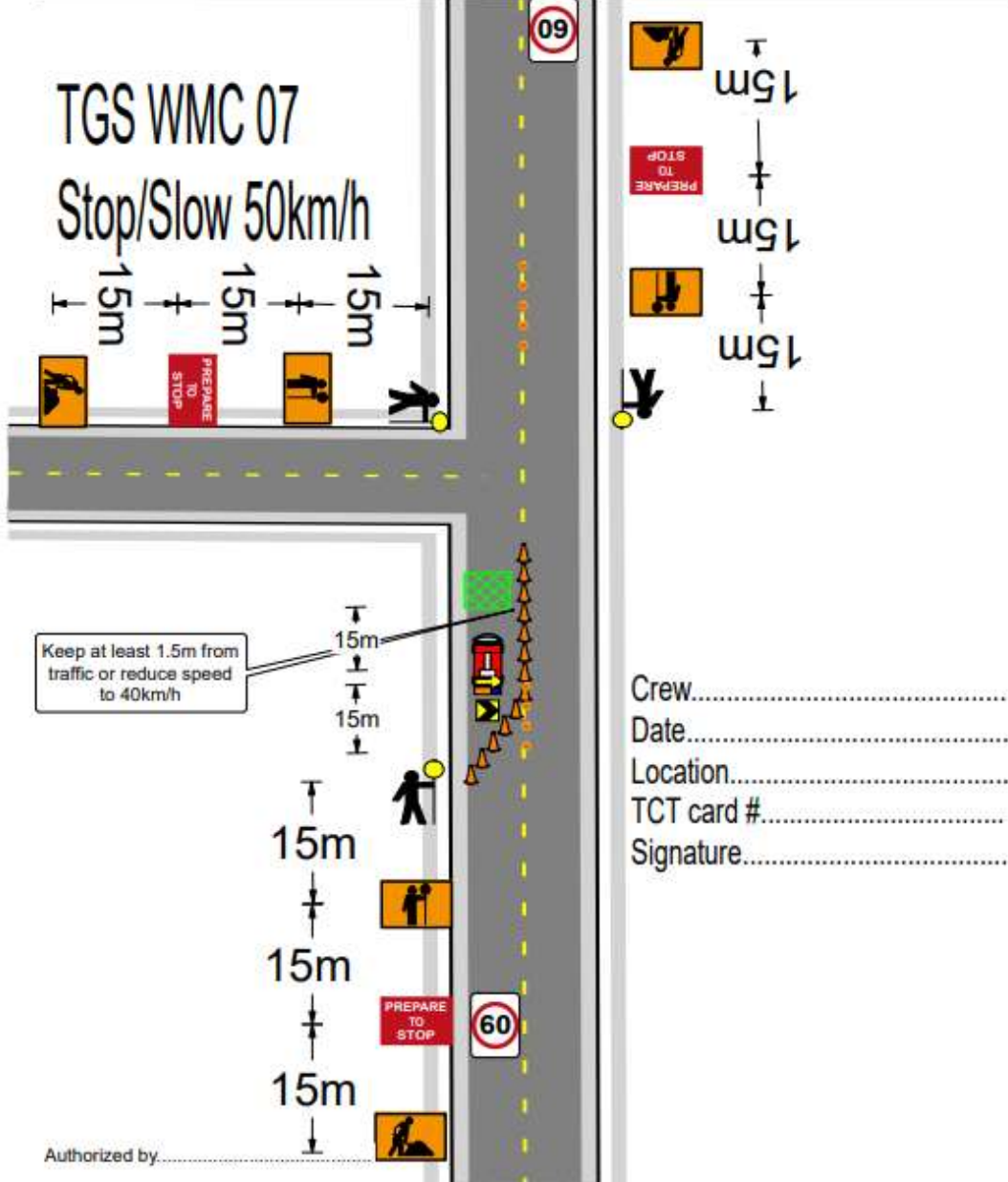
Crew.....
Date.....
Location.....
TCT card #.....
Signature.....




Authorized by

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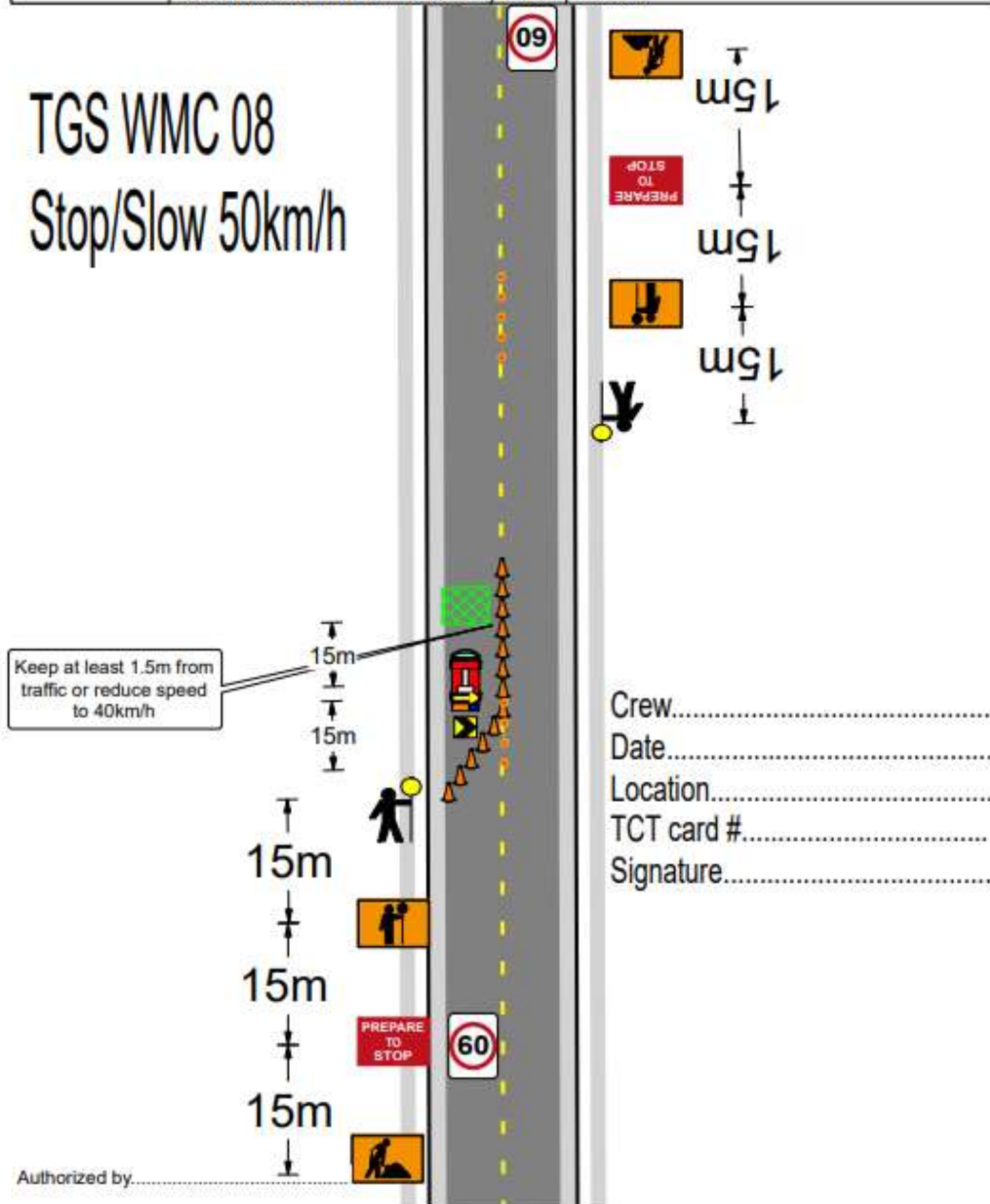
 Woollahra Municipal Council	Date: Various Author: Andrew Raper TCT card # 0004825 Project: Stop/Slow 50kmh
	Comments: At least 1 flashing light on vehicle Full PPE to be worn Risk assessment prior to start Work abandoned if workers safety is compromised



 Woollahra Municipal Council	Date: Various Author: Andrew Raper TCT card # 0004825 Project: Stop/Slow 50kmh
	Comments: At least 1 flashing light on vehicle Full PPE to be worn Risk assessment prior to start Work abandoned if workers safety is compromised

TGS WMC 08

Stop/Slow 50km/h



Crew.....
 Date.....
 Location.....
 TCT card #.....
 Signature.....

Authorized by.....

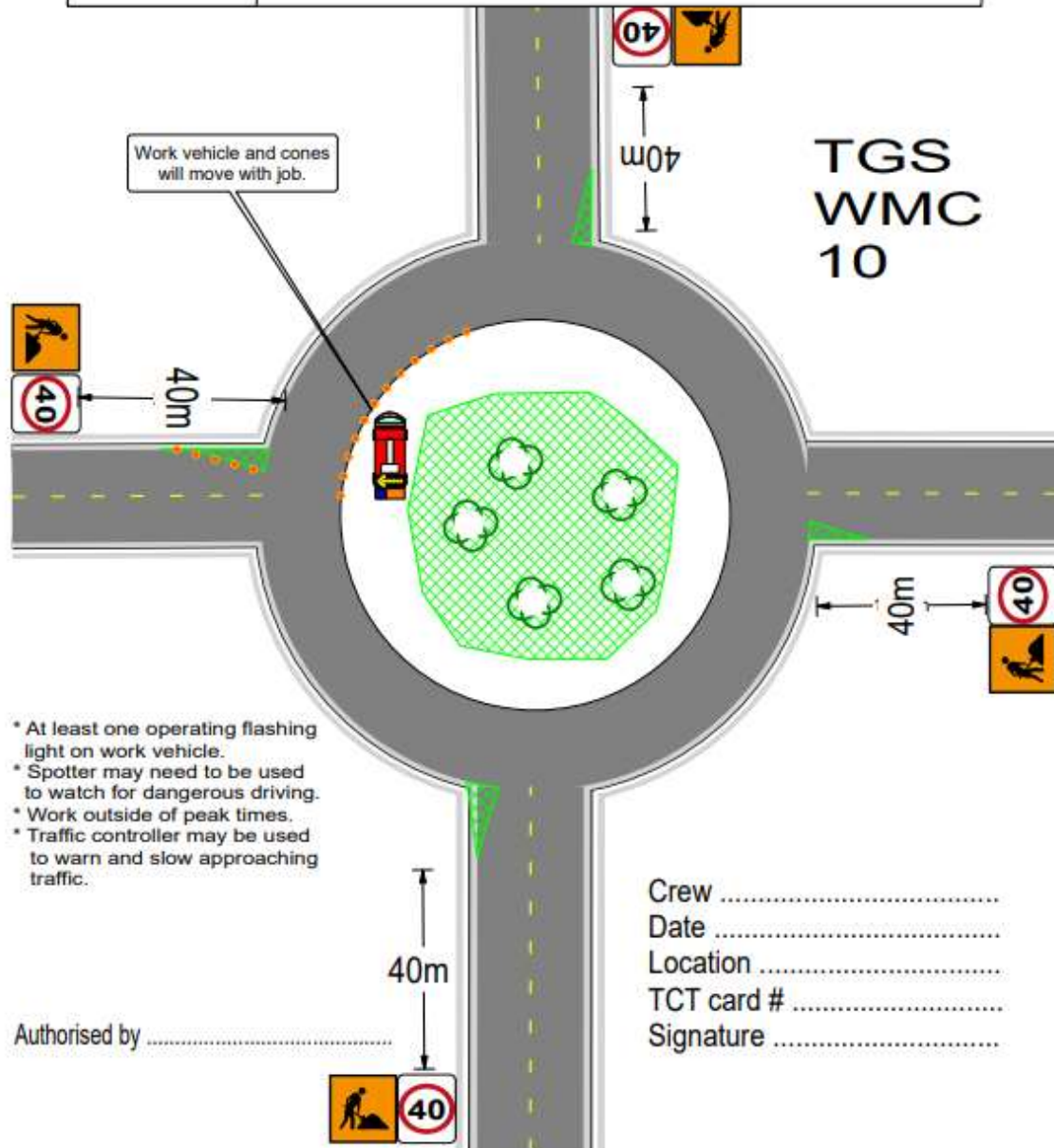


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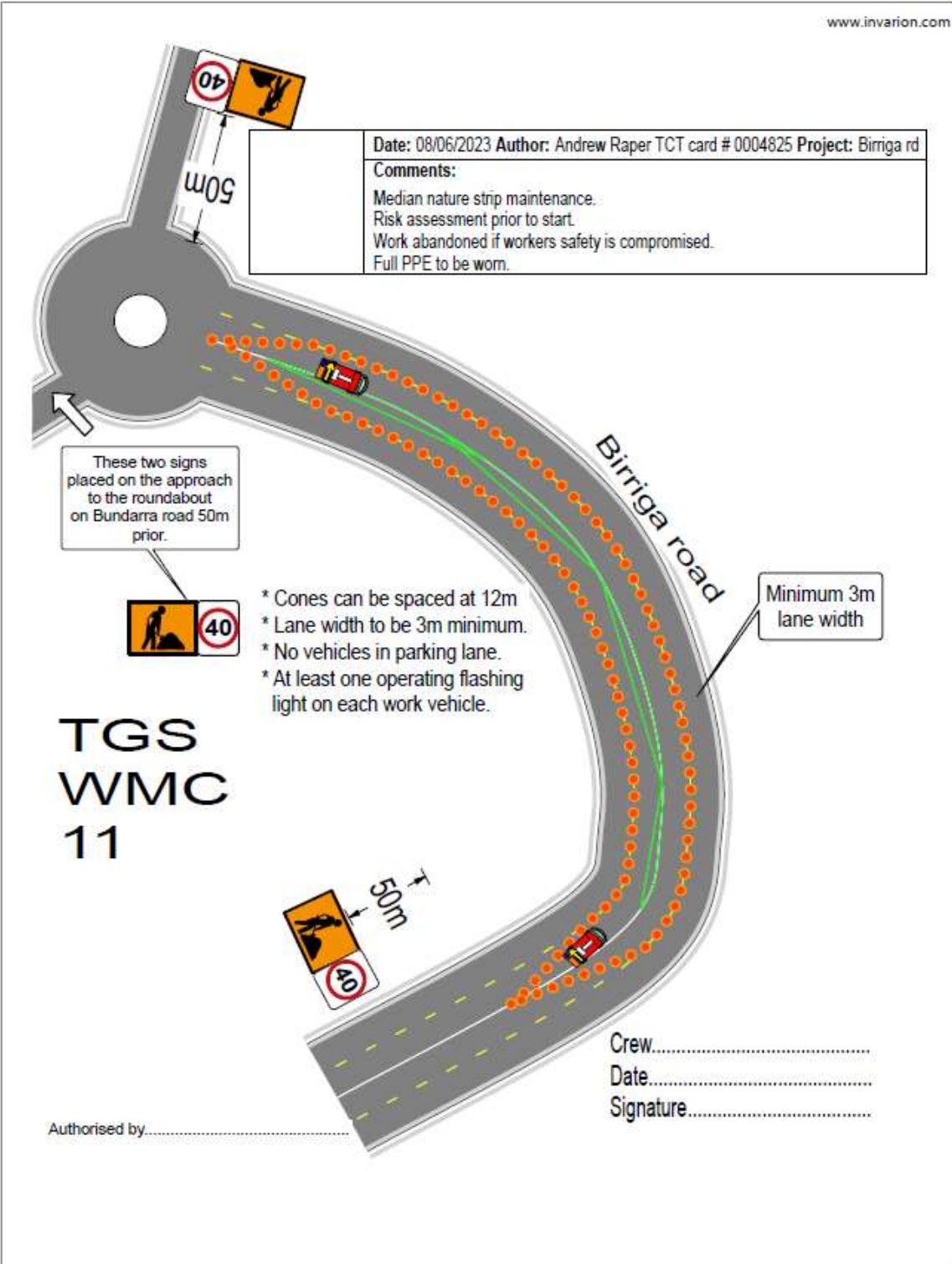
Date: 04/06/2023 **Author:** Andrew Raper TCT card # 0004826

Comments:

Full PPE to be worn
Risk assessment to accompany TGS pre start.
Work abandoned if workers safety is compromised.



- * At least one operating flashing light on work vehicle.
- * Spotter may need to be used to watch for dangerous driving.
- * Work outside of peak times.
- * Traffic controller may be used to warn and slow approaching traffic.



Date: 08/06/2023 **Author:** Andrew Raper TCT card # 0004825 **Project:** Birriga rd

Comments:
 Median nature strip maintenance.
 Risk assessment prior to start.
 Work abandoned if workers safety is compromised.
 Full PPE to be worn.

These two signs placed on the approach to the roundabout on Bundarra road 50m prior.



- * Cones can be spaced at 12m
- * Lane width to be 3m minimum.
- * No vehicles in parking lane.
- * At least one operating flashing light on each work vehicle.

Minimum 3m lane width

**TGS
 WMC
 11**

Crew.....
 Date.....
 Signature.....

Authorised by.....





Table 6-2. Required maximum spacing of cones and bollards

Purpose and usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic control position (centreline or edge line)	All cases	4
Merge tapers	55 to 75 greater than 75	9 12
Lateral shift tapers	55 to 75 greater than 75	12 18
Protecting freshly painted lines	55 to 75 greater than 75	24 60*
All other purposes	less than 55 55 to 75 greater than 75	4 12 18

Note* to Table 6-2: This spacing should be reduced on curves or crests or if the row of cones is not clearly defined at night.

Table 5-12. Traffic controller hand signals

Traffic direction	Action	Illustration
From Slow to Stop: stop traffic	<ol style="list-style-type: none"> 1. Choose a gap in the traffic flow and/or most appropriate vehicle to stop; 2. Turn the STOP/SLOW bat to STOP; 3. Raise the free arm into the stop signal position with the palm of the hand towards the traffic. 	
From Stop to Slow: allow traffic to proceed	<ol style="list-style-type: none"> 1. Check that all traffic from the other end of the work area has passed; 2. Turn the STOP/SLOW bat to SLOW; 3. Give the proceed signal with a sweeping motion. 	
Slow traffic	<ol style="list-style-type: none"> 1. When the STOP/SLOW bat is showing SLOW extend the free arm to the side and wave hand up and down. 	