TGS-23-BTC-BD-NOTES

This TGS must be fully implemented Prior to works commencing.

TGS Installation - General

ITM measures shall be installed, maintained and removed in a planned and safe manner. Prior to commencing, the TMI shall check and review the approved TMP / TGS, the worksite and the proposed activity to ensure they are complementary and are appropriate. This section provides best principles and practices guidance.

The TMI shall check the road environment, especially the "on the day" traffic flows, to ensure that it is at an appropriate level for the TTM intended. A 5-minute count of traffic should provide an appropriate estimate of volumes to reference against values recorded in the TMP or the TGS.

If the worksite and the approved TMP are not complementary, before occupying the worksite the TMI shall determine whether they can:

make compliant adjustments (e.g. lengthen taper within tolerances) to the TGS

contact the TMD to approve relevant modifications (e.g. additional signs or distances outside of tolerances) to the TGS

contact the relevant Road Infrastructure Manager traffic control facility to initiate actions identified on the

TGS to be taken (e.g. change in the VMS, Variable Speed Limit Signs or Lane Usage Signage).

Where the TMP and TGS cannot be suitably adjusted or modified, the TMI should advise the Principal Contractor that they are not appropriate, and the works should be postponed.

All adjustments and authorised modifications are to be recorded on the TMP and TGS or on-site record

Typical Installation Principles

Installation is typically carried out applying one of the processes in accordance with QGTTM Part 5 as "short term - low impact works" to protect the TTM staff. The examples in this section are based on limiting high risk manoeuvrers during installation including U-Turns and loops exposing workers to live traffic without protection.

Fundamental principles that should be complied with to ensure safety during this work activity are that: travel should only be in a forward direction on any road

the TTM vehicle may be used as added protection considering the:

- availability of safe park up area(s) near the signage placement location
- line of sight to approaching vehicles
- visibility of the worker and TTM vehicle to approaching vehicles
- location of signage/devices on vehicle which need to be accessed
- worker access to vehicle (e.g. not through crush zones)
- available space on road shoulder or median
- geometry/terrain of shoulder or median
- distance between vehicle and travel path / shoulder drop off
- TMI proximity to 'expected travel path while traversing between vehicle and signage location
- likely area in which the vehicle may move if impacted
- availability of 'gaps in traffic' or lookout
- turn around procedures shall be conducted in a safe and legal manner
- TMI shall face the traffic when placing devices
- all workers shall know their escape route at all times
- the vehicle mounted warning device shall be operating and the hazard/arrow board used as required
- all workers shall wear correct PPE
- a look out person/spotter shall be used for all activities where required in accordance with QGTTM Part 5
- full co-ordination of any ITS infrastructure which may assist the TGS installation
- the locations and types of devices are recorded in the diary

the TGS is implemented as approved and a copy is available on site.

If it is considered too dangerous due to speed or volume to install the TGS using the protections defined in QGTTM Part 5, then consideration needs to be given to adopting a mobile convoy (refer QGTTM Part 4) or other controls e.g. manual traffic control to hold traffic during installation under its own TGS (refer QGTTM Part 3). A different installation sequence may need to be adopted to address any site-specific circumstances

and can be approved by TMD or other authorised person.

TGS Overview



TGS Installation

Installation Process

The general procedure for setting up a site is to:

- . locate the work area using GPS, landmarks, side streets, chainage
- install devices as outlined in the TGS for side streets first
- 3. install devices as outlined in the TGS for the non-working lane (un-affected direction)
- 4. install devices as outlined in the TGS for the working lane (affected direction) to complete installation

All sign spacings and taper lengths will be noted on the TGS and should be in accordance with QGTTM Part 3.

Placement of Signs and Devices

The scenarios in this Section are designed to encourage workers to review the safest installation process.

Many factors can influence the appropriate sequence for installation including but not limited to road geometry, hills, crests, curves, surface condition, lane widths, shoulder width, traffic volumes, peak traffic flows, road user travel speed, road user make up (e.g. % of heavy vehicles or cyclists), lighting and time of day, and weather.

Positioning of Signs and Devices

- Signs and devices are to be positioned and erected so that a. they are properly displayed and securely mounted.
- b. they are within the line of sight of the intended road user.
- c. they cannot be obscured from view (e.g. by vegetation or parked cars). d. they do not obscure other devices from the line of sight of the intended road user
- e. they do not become a possible hazard to workers, pedestrians, cyclists or vehicles f. they do not deflect traffic or vulnerable road users into an undesirable path
- g. they do not restrict sight distance for drivers entering from side roads, streets or
- private driveways h. they are not installed using supports that could be a hazard if struck by a vehicle.

It is important that payement markings and raised payement markers are considered in conjunction with the placement of other delineation devices, temporary barriers and channelising barricades, to ensure road users are safely directed through the site without conflicting messages. Delineating devices (e.g. traffic cones, bollards, post mounted delineators) should be placed as per the location on the TGS as designed by the TMD, or if not noted should generally be placed as follows:

a. Edge of traffic lane to line of traffic cones, bollards or longitudinal channelising

- i. 0.5m offset for posted speed limit during roadworks up to and including 60 km/h
- i. 1.0m offset for posted speed limit during roadworks over 60 km/h
- b. Edge of traffic lane to road work delineators or temporary hazard markers 1.0 m
- . Edge of traffic lane to road safety barrier system:
- . 0.3m for a posted speed limit during roadworks up to and including 40 km/h
- ii. 0.5m for a posted speed limit during roadworks 50 km/h to 60km/h iii. 1.0m for a posted speed limit during roadworks 70 km/h to 80km/h
- iv. 2.0m for a posted speed limit during roadworks greater than 80 km/h
- Typical Locations for Signs

Short term - Signs mounted on portable supports used for short-term operation should generally be located as follows:

(i) In open road areas

On the road shoulder a minimum of 1m clear of the travelled path if practical

(ii) In built-up areas

Behind the kerb if visible to oncoming traffic and not obstructing pedestrians or cyclists, otherwise on the pavement as near as practicable to the kerb without the sign becoming obscured and without obstructing moving traffic or cyclists.

All signs on portable supports shall be a minimum height of 200mm above the level of the nearest lane of traffic and shall be level

Tolerances

Adjustments to a TTM installation are the relocation of signs and devices within approved tolerances. Any changes that exceed tolerances are classed as a modification and shall be endorsed and authorised by a TMD. If signs and devices are required to be moved due to obstructions, and relocation exceeds tolerances, the TMI shall contact the TMD for instruction on alternate installation methods or options Local constraints may not allow signs and devices to be placed exactly in accordance with the relevant TGS

Judgement will therefore be necessary to place signs and devices as close as possible to the locations / spacings indicated. Should variations to the recommended spacing be required then it is generally preferable to increase the spacing within tolerances.

- a. Tolerances for placement of signs are: . up to 10% less than the distances given
- ii. up to 25% more than the distances given
- b. Tolerances for placement of delineation is:
- no minimum and up to 10% more the distances given
- . Tolerances for taper lengths are: up to 10% less than the distances given
- ii. up to 25% more than the distances given

Any sign or device location adjustments are to be marked and initialled on the TGS held on site, with the name of the person making the adjustments clearly shown. Orientation of Signs and Devices

Signs are to face towards approaching traffic approximately at right angles to the line of sight from the driver to the sign.

SET UP/DISMANTLE REQUIREMENTS:

0 X TRAFFIC CONTROLLERS

0 X SIGNAGE VEHICLES

WORKSITE REQUIREMENTS:

DEVICE REQUIREMENTS:

TOTAL HATS: 0

TOTAL SIGNS: 0

Traffic controllers

control position

Worksites are hazardous areas so use manual traffic control only where PTCDs are insufficient to provide the safety, capacity and efficiency required for effective traffic control. When traffic controllers are used, traffic controllers cannot direct a road user to contradict upcoming intersection signals. Traffic controllers are to coordinate activities with operating signals. If traffic controllers are operating within close proximity to a signalised intersection and the lights are flashing yellow or are off, a traffic controller shall only control one lane and the approach to this intersection shall be reduced to one lane of traffic. Where works cause delays to traffic flow or a side road intersects the worksite, do not use an automated PTCD, a traffic controller is required. The following requirements and recommendations apply when using traffic controllers:

 Only competent persons with appropriate certification shall be appointed as a traffic controller (see QGTTM Part 7).

· Speed shall be 60 km/h maximum. Provide a temporary speed limit of 60 km/h or less on the approach to a traffic controller if the speed is higher (see Section 5.5.1) An escape route shall be identified for each traffic controller from their traffic

- · Traffic controllers shall be positioned a clear sight distance from approaching road users (see QGTTM Part 3 Section 2.5.4) with no obstruction and where they are not obstructing visibility to traffic control devices (i.e. signs). No obstruction should be located in the area between the traffic controller and the end of the line of four
- · Ensure that a work vehicle is not parked in a way that impacts the visibility of the traffic controller or, limits the traffic controller's escape route or, is parked between the traffic controller and the taper
- Ensure that traffic controllers are visible at all times of the day, particularly at dawn, dusk, against low morning or evening sun, when in the shade on a sunny
- day or working in dusty conditions Ensure that traffic controllers are well illuminated at night. Where required, provide additional lighting
- Relieve traffic controllers from traffic controller duties at least every 2 hours for at least 15 minutes.
- If cone tapers are used, position the traffic controller 6 m in front of the taper on the left-hand shoulder or edge of the road and facing approaching traffic.
- Place four traffic cones spaced 4 m apart, on the centre-line 6 m in front of the traffic controller position
- If there is a queue, traffic controllers can move to the driver's side when safe to do so to remain visible to all road users.
- Under no circumstances are traffic controllers to stand or operate unprotected in a lane carrying traffic.
- Traffic controllers are to only communicate with a road user once the vehicle has stopped and is safe to do so.
- Ensure a single traffic controller never controls more than one lane of traffic or more than one approach. A single traffic controller can operate two PTSS at one time in special
- · Provide a traffic controller at intersections to guide road users entering from a side
- Some intersections require three or more traffic controllers. Where multiple traffic
- controllers are used they are required to: - ensure that road users are not seeing conflicting message from other traffic controllers at different locations of the worksite
- be in continuous radio contact with each other when they are not visible to each

For detailed guidance on traffic controllers see QGTTM Part 7.



Omit this sign if workers are greater than 1.2m from traffic



FATIGUE MANAGEMENT Active Traffic Controllers

Requires 1 Additional TC Requires 2 Additional TC's Requires 3 Additional TC'S

WORK SITE LEGEND

Retroflective Cones AAA 700mm

Pedestrian Path

Work Area

Traffic Controller

Safety Buffer

Barrier Board

NOT TO SCALE - PRINT A3

ALTUS GROUP

Triathion Club Inc.

BARGARA DUATHLON 2023

EVENT:

CLIENT CONTACT:

COLIN STOLLERY

BETWEEN ROADS : ESTIMATED JOB DATE **ESTIMATED JOB TIME:** Garbage Collection Day DRAFTEE IDENTIFIER DRAFTEE PEER REVIEW Initial Design DATE TMD 18-07-202 DM ISSUE DESG DATE AMMENDMENT DESCRIPTION DM 18-07-2023 INITIAL DESIGN В C

WORKSITE ROAD AUTHORITY: BUNDABERG REGIONAL COUNCIL

TGS-23-BTC-BD-NOTES

GENERAL DISCLAIMER:

THE TGS/TMP HAS REEN PREPARED IN ACCORDANCE WITH THE INFORMATION SLIPPLIED BY ALL STAKEHOLDERS TECHNICAL DUE CARE HAS BEEN APPLIED IN THE COLLATION OF THE RELEVANT INFORMATION ON WHICH THIS TGS/TMP IS BASED.

TRAFFIC AND SITE CONDITIONS AT THE TIME OF THE WORKS MAY VARY FROM THOSE ESTABLISHED AT THE POINT OF DESIGN.

RARGARA TRIATHI ON CLUB IS RESPONSIBLE FOR LINDERTAKING AN EVALUATION OF THE SITE AND TRAFFIC CONDITIONS AGAINST THE 'ON SITE APPLICATION CONSTRAINTS' OUTLINED WITHIN THE TGS/TM WHERE CONDITIONS VARY FROM THOSE DOCUMENTED, ADDITIONAL INPUT FROM A TM DESIGN

PROFESSIONAL SHALL BE SOLIGHT PRIOR TO IMPLEMENTATION DAILY RECORD KEEPING SHALL BE PERFORMED, INCLUDING RELEVANT SITE INSPECTIONS, DURING WORKS. THIS TGS/TMP SHALL REMAIN VALID FOR 12 FROM DESIGN DATE OR WHERE STATE SPECIFIC GOVERNANCE IS CHANGED. AT THIS POINT THE TGS/TMP WILL NEED TO BE REVIEWED ON CURRENCY OF COMPLIANCE.

0 X TRAFFIC CONTROLLERS 0 X SIGNAGE VEHICLES

PTSS:0

THM'S:0

0 X VMS 0 X DDV 0 X TMA 0 X QPS

Stop Bats: 0

0 X DDV

0 X VMS

0 X TMA

DANIEL MCEWAN - OP 486 DESIGNED REVIEW

SHEET NO:

DESIGNED:

DANIEL MCEWAN - OP 486

APPROVED FOR

IMPLEMENTATION

APROVAL DATE: 18-07-2023 ALTUS NOMINATED CONTACT: 24Hr Contact - (07) 3292 4400

1 OF 1

Call Altus Traffic 1300 TRAFFIC (872 334) ABN 84 102 768 061





















