

GENERAL NOTES

This Traffic Guidance Scheme(s) has been created to allow
Naturform to conduct works and display a commitment to traffic and pedestrian management.

*TGS/SITE

- The TGS shall to be used in conjunction with the requirements of the associated pre works (onsite) Risk Assessment.
- A site specific risk assessment is undertaken prior to ALL traffic control setups or when required due to changes in conditions on site.
- The TGS has been designed based upon information supplied by the client and information researched by the TMD.
- In the event that road features and/or conditions have changed prior to or during the implementation/ operation of the TGS JTS Operations Team shall be notified.
- TGS shall be installed by a Traffic Management Implementer qualified & competent person.
- A TMI Competent person can move signs within specified requirements outlined in the MUTCD Tolerances (including away from intersections, driveways, median openings, or similar). Tolerances from optimum position shall be in accordance with MUTCD Clause 4.1.6
- A TMI Competent person may modify the TGS on site in response to an incident, an unplanned event, or in response to traffic queuing (MUTCD Cl 4.7.8). Any changes which have been made on site must be noted on the TGS, JTS Documents (SWMS & Audit Book) & TMD & JTS Operations must be notified immediately.
- Queue Lengths shall be monitored at regular intervals. At locations with increased queue lengths the setup shall be adjusted to avoid end of queue collisions. MUTCD Clause 4.7.8
- Ensure TGS has been approved & all relevant permits are in date and on site
- Temporary speed zones shall be in accordance with MUTCD Clause 4.2 & Table 4.7
- Minimum Lane width shall be in accordance with MUTCD Clause 4.13.3 & Table 4.11
- Clearance between edge of traffic lane and delineating devices or road safety barrier system shall be in accordance MUTCD Clause 4.13.4
- Recommended Taper Length in accordance to MUTCD Table 4.6
- Recommended Maximum spacing of traffic cones and/or bollards in accordance to MUTCD table 3.7
- Inspections to be completed after setup, during closure & upon completion of pack up, or as specified/requested.

Records are to include times and any actions that were required during each check.

*TRAFFIC CONTROLLERS

- Traffic Controllers shall operate in accordance with the procedures contained within the Queensland Department of Transport & Main Roads Traffic Controller Accreditation Scheme Approved Procedures, when directing traffic
- Traffic Controllers shall not be located in positions where the sight distance is less than 2D (where the value of D is the greater value of the range of dimensions shown in Table 4.2)
- meters between the Controller and oncoming traffic. MUTCD Clause 4.10.3
- Traffic Controllers shall be relieved from their duty after not more than two hours for a period of rest or other duties of at least 15 minutes MUTCD Clause 4.10.5
- A person must not perform traffic control duties at any time unless they are medically fit to perform the role; and are not fatigued. Whilst controlling traffic, Traffic Controllers must have a 'zero percent' blood / alcohol concentration level, and must not be adversely affected by any drug or other medication causing impairment or loss of concentration.

MUTCD Appendix J

- *SIGNAGE DETAILS:
 - Existing regulatory or advisory signs that conflict with the requirements of this TGS are to be covered with no-transparent material. Refer to Clause 2.4.4 of the MUTCD
 - Advanced Signage shall be displayed as prominently as possible
 - Symbolic signs shall be covered or removed when relevant personnel are not on site or not visible to traffic at the end of work hours
 - Short term Sign offset 1 meter from edge of travel path
 - Short term Sign Height 200mm Min
 - All long term signage shall be erected on posts 2.2 from the ground level to bottom of sign 2.2m in Clause 2.5.2
 - Signs to be within the line of sight of the intended road user
 - Signs to be not obstructed by vegetation or other signs
 - All signage and equipment used shall be in accordance with the MUTCD Part 3, November 2019
- *RESIDENTS/BUSINESSES
 - Cones/bollards or barriers to be separated for driveways
 - All residents and businesses to be notified of works
- *PUBLIC TRANSPORT
 - Bus stops shall remain maintained unless otherwise specified on the TGS
 - All relevant approvals shall be in place prior to the movement or closure of a bus stop
- *PEDESTRIANS & CYCLISTS
 - Pedestrians and cyclists shall be managed as required and indicated on the TGS in accordance with the site specific notes and MUTCD Part 3
 - Traffic controllers to help pedestrians and cyclists around, through or past the work area
- *EMERGENCIES/INCIDENTS
 - Emergency vehicles will be given the absolute preference in traffic control holding delays. This will be based on the "can this be done safely" by each traffic controller onsite. The time delays will be minimal on the site.
 - If an accident or incident involving the public on site, traffic controllers shall continue to control traffic at all times. The site supervisor shall be notified immediately and emergency services. Once it is safe to do JTS Supervisor shall be contacted.

WORK LOCATION MAP



IMPLEMENTATION NOTES

1. TGS Implementation: Setup and Removal of Temporary Signage:
 - a. The installation and removal of this TGS shall be in accordance with MUTCD Clause 2.5. Setup and Removal of signs shall be carried out, where practicable, as work off the travelled path in accordance with clause 4.3.7, or as short term work in traffic in accordance with clause 4.3.3, for locations in open road areas.
 - b. In built-up areas this operation shall be carried out in accordance with clause 4.4.2 or 4.4.3. A mobile works method (Clause 4.6) shall be used if the above method is not practicable due to the volume or speed, or both, of approaching and passing vehicles.
 - c. The installation sequence is:
 1. Advance warning & regulatory signs,
 2. Intermediate advance warning & regulatory signs,
 3. taper & delineation devices,
 4. termination and end of speed zone signs.
 - d. Recovery of devices at the conclusion of the work shall be done in the reverse order using the same work method as for setting out of the signs and devices
 - e. In no circumstances should a Traffic Controller cross roads that have two lanes or more in each direction with a posted speed greater than 80kmph
 - f. A Traffic Implementation Officer is responsible for installing, maintaining and removing traffic management devices.

TGS SUITE: UQ Gatton Campus - Galletly Rd & South Ridge Rd

Project Reference	TGS Number	Revision	Description
	20-0275	001	Site-Specific TGS

Tolerances in Distances MUTCD Clause 4.1.6		
Measurement (m)	-10% (m)	+25% (m)
15	13	18
20	18	25
30	27	37
45	41	56
60	54	75
90	81	112
100	90	125
160	144	200
200	180	250
300	270	375

Recommended Maximum Spacing of Cones & Bollards
Temporary Speed Limit During Works

All Purposes 50km or below		4m
	60-70km/h	>70km/h
Traffic Controller	4m	4m
Lateral Shift Taper	12m	18m
Merge Taper	9m	12m
Separating Opposing Traffic	12m	18m
Lane Closure	12m	18m
Shoulder Closure	18m	24m
At Crossovers	2m	2m

Recommended Taper Length, (m)- Table 4.8

Permanent Posted Speed km/h	Traffic Controller at beginning of Taper	Lateral Shift Taper	Merge Taper
40 km or Less	15	5	15
50	15	10	30
60	30	30	60
70	30	60-80	120-160
80	30	60-80	120-160
90	30	60-80	120-160
100	30	60-80	120-160
110	30	60-80	120-160

RECORDS AND MONITORING

Regular inspections of traffic control devices SHALL be carried out a minimum twice daily and recorded in the SIGNAGE AUDIT BOOK. These records are available for inspection during the project. These records will be held on site by THE CLIENT Work Foreman/ In the event of a traffic related incident with in the site, THE CLIENT SHALL immediately notify the principal's representative, the police, and any necessary emergency services

Project Reference: TBA	Scope of Works: Intersection Upgrade - Island Installation
TGS Number: 20-0275	Site Address: Galletly Rd & South Ridge Rd
Long/Short Term: Short	Suburb: Lawes
Static/ Mobile: Static	First Cross St: South Ridge Rd
Open/ Built Up Road: Built Up	Second Cross St: Nursery Ln
Workers to Traffic: <1.2m	Working Hours: Permit Pending
Local Council: Lockyer Valley Regional Council	Road Configuration Two-way
QDTMR: Darling Downs	Traffic Method: Shuttle Flow with Give-Way signs
QPS District: Gatton Police Station	Additional Affected Roads: N/A

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DISCLAIMER

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Effectiveness and/or suggested improvements and modifications for TGS please Email: megan@justtrafficsolutions.com.au

As this sign is used to warn of the presence of personnel, it shall be only displayed when they are actually working, or are visible to traffic, or both, and shall be replaced with ROAD WORK AHEAD (TC1160) when workers have left the work area or are no longer visible to traffic.

DESIGNER: Name: Sandy Yang
Signature: *Sandy Yang*
TMD No: OP 193
Date: 28.10.20

TGS DEVELOPMENT

TGS Development shall be completed with careful consideration. Considerations should include:

1. Protection of workers
2. Provision of adequate warning for road hazards, workers on site and/or plant engaged on the road
3. Adequate warning and instruction to road users for guidance through, around or past the work site

Risk management entails the identification and analysis of all safety risks likely to arise during works on road including the setting up, operating, changing and ultimate dismantling of a traffic guidance scheme, followed by the determination of appropriate measures to mitigate those risks. The process is appropriate at all levels of planning and operation including the following:

1. When preparing a standardised plan and safe work method statement for the conduct of all types of closures on the road and footpath.
2. Preparing traffic guidance schemes for more extensive or complex works where site specific risks will assume importance.

RISK MATRIX

Likelihood	C x L = Risk Rating	Consequences				
		Catastrophic (5) Death	Major (4) Hospital Required	Moderate (3) Medical Treatment	Minor (2) First Aid Treatment	Insignificant (1) No Injuries
	Almost Certain (5) Could Happen Anytime	Catastrophic (25)	Catastrophic (20)	High (15)	High (10)	Moderate (5)
	Likely (4) Could Happen Sometime	Catastrophic (20)	Catastrophic (16)	High (12)	Moderate (8)	Moderate (4)
	Possible (3) Could happen or known to happen	High (15)	High (12)	Moderate (9)	Moderate (6)	Low (3)
	Unlikely (2) Could happen but very rarely	High (10)	Moderate (8)	Moderate (6)	Moderate (4)	Low (2)
Rare (1) Could Happen but probably never will	RISK	Moderate (5)	Moderate (4)	Low (3)	Low (2)	Low (1)

SUGGESTED TREATMENT APPROACH

CATASTROPHIC	Must be corrected
HIGH	Should be corrected or the risk significantly reduced, even if the treatment costs are high
MODERATE	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
LOW	Should be corrected or the risk reduced, if the treatment cost is low

HEIRACHY OF CONTROL

HIGHEST LEVEL OF CONTROL	MEDIUM LEVEL OF CONTROL	LOWEST LEVEL OF CONTROL
Elimination (Highest)	Substitution	Engineering Isolate Administration PPE (Lowest)

Elimination	Modify the process method or material to eliminate the hazard completely
Substitution	Replace the material, substance or process with a less hazardous one.
Redesign / Engineering Controls	Redesign or modify the plant or process to reduce or eliminate the risk
Isolate	Isolate the hazard from the person by safeguarding or by space or time.
PPE & Administration	Use appropriately designed and properly fitted equipment where other controls are not practicable or are accepted. Adjust the exposure time or conditions or process by training, procedure, signs etc

RISK MANAGEMENT PROCESS TABLE

STEP 1	Determine Site Risk Rating
STEP 2	Determine Required Level Of Planning
STEP 3	Consider Risk At Work Site
STEP 4	Consider Risk Control Measures
STEP 5	Decide Risk Controls

Project Reference: TBA	Scope of Works: Intersection Upgrade - Island Installation
TGS Number: 20-0275	Site Address: Galletly Rd & South Ridge Rd
Long/Short Term: Short	Suburb: Lawes
Static/Mobile: Static	First Cross St: South Ridge Rd
Open/ Built Up Road: Built Up	Second Cross St: Nursery Ln
Workers to Traffic: <1.2m	Working Hours: Permit Pending
Local Council: Lockyer Valley Regional Council	Road Configuration Two-way
QDTMR: Darling Downs	Traffic Method: Shuttle Flow with Give-Way signs
QPS District: Gattton Police Station	Additional Affected Roads: N/A



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TC1332

WORKER SYMBOLIC (TC1332) MUTCD3.4.4
As this sign is used to warn of the presence of personnel, it shall be only displayed when they are actually working, or are visible to traffic, or both, and shall be replaced with ROAD WORK AHEAD (TC1169) when workers have left the work area or are no longer visible to traffic.

AFTER CARE**LEGEND**

Temporary Hazard Marker	Traffic Controllers: 2
Traffic Island/Roundabout	Traffic Control Ute: 2
Pedestrian Route	Traffic Cones: <80
Through Traffic Movement	Sign Frames & Legs: 29 & 58
Bus Stop	Other: 2 X Barrier Boards
Carpark	

TGS shall be revised either 12 months from First Design or upon any changes to the MUTCD Part 3, MUTCD Part 3 Supplement, Austroads Cod of Practice, TM Code Of Practice, TCASAP, MRTS02 specifications or any relevant legislation changes. TMD approval shall be required to use the TGS past the revision date.

REV	DATE	DETAILS
001	28.10.20	First Design

FATIGUE MANAGEMENT	
Controllers on Stop Slow	Recommended Additional Staff Required to Provide Breaks
2 - 4	1
5 - 8	2
9 - 12	3

RESOURCE REQUIREMENTS		TMD SIGN OFF
DESIGNER:	Name: Sandy Yang	
Signature:		
TMD No: OP 193		
Date: 28.10.20		

RISK ASSESSMENT

Prepared By: Sandy Yang	Qualification: TMD OP 193	Date: 28.10.20
Site Address: UQ Gatton Campus - Galletly Rd & South Ridge Rd	Scope of Works: Intersection Upgrade - Island Installation	
Existing Sign Posted Speed: <50km/h	Lateral Clearance between Traffic Lanes & Workers: <1.2m	
Road Type/ Functional Hierarchy: Built Up	Site Risk Rating: Low	Level of Planning Required: Site Specific TGS

No.	Activity (Risks Associated With)	Safety Hazard Description	Risk Rating (CxL)	Safety Control Measure(s) Required	Risk Rating (CxL)	Action Required By
1	Work may encroach on footpath	Potential injury to pedestrians	3 x 3 = 9	Pedestrian signage may be required. TCs to assess on-site and install appropriate pedestrian signs if required TC to also monitor and assist pedestrians if required	3 x 3 = 9	JTS TMI
2	There is a driveway in the one lane section	Resident confusion	2 x 3 = 6	TC to monitor traffic coming in and out of driveway.	2 x 3 = 6	JTS TMI

Notes: This Risk Assessment does not fulfill other WH&S requirements, such as the development of work procedures/method statements, hazard registers and so on.

Project Reference: TBA		Scope of Works: Intersection Upgrade - Island Installation		Pedestrian Travel Path: Past/Around		TGS shall be revised after 12 months from First Design or upon any changes to the MUTCD Part 3, MUTCD Part 3 Supplement, Austroads Code of Practice, TM Code of Practice, TCASAP, MTRISQ2 specifications or any relevant legislation changes. TMD approval shall be required to use the TGS past the revision date.		FATIGUE MANAGEMENT																											
TGS Number: 20-0275 - Sheet 1 of 2		Site Address: Galleys Rd & South Ridge Rd		Vehicle Travel Path: Past/Around		<table><thead><tr><th>REV</th><th>DATE</th><th>DETAILS</th></tr></thead><tbody><tr><td>001</td><td>28.10.20</td><td>First Design</td></tr></tbody></table>		REV	DATE	DETAILS	001	28.10.20	First Design	<table><thead><tr><th>Controllers on Stop Slow</th><th>Recommended Additional Signs Required to Provide Breakers</th></tr></thead><tbody><tr><td>2-4</td><td></td></tr><tr><td>5-8</td><td></td></tr><tr><td>9-12</td><td></td></tr></tbody></table>		Controllers on Stop Slow	Recommended Additional Signs Required to Provide Breakers	2-4		5-8		9-12													
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* See Sheet 1 of 2 for Site-Specific Notes

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Long/Short Term: Short	Suburb: Laves	Cyclist Travel Path: Past/Around		2-4	
Static Mobile: Static	First Cross St: South Ridge Rd	Public Transport: Past/Around		5-8	
Open/ Built Up Road: Built Up	Second Cross St: Nursery Ln	Emergency Services: Past/Around		9-12	
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