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CONSTRUCTION TRAFFIC MANAGEMENT PLAN

PROJECT:
Wellington Street Depot Upgrade

PROJECT LOCATION:
37 Wellington Street

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1 PURPOSE

1.1 GENERAL

This Construction Traffic Management Plan details how A. Gabrielli Constructions will manage traffic management, as Principal Contractor, for this project – Recycled Water Treatment Facility and Pipeline.

This form is to assist project supervisors / traffic control supervisors in assessing the factors relating to traffic control and to develop traffic control plans appropriate to the site. The intent of traffic control plan is to clearly direct and control the flow of traffic with as little interruption to the normal flow as possible.

Misuse, lack of, or over use of traffic control devices can increase the traffic hazards to workers on this and future work sites. Any sign not necessary must be turned or removed as soon as possible.

This plan meets the requirements of:

- A. Gabrielli Constructions' Policies and Procedures
- Workplace Health and Safety Legislation
- AS / NZS 4801 Health and Safety Management System
- Codes of Practice

This Construction Traffic Management Plan, and supporting appendices, are to be made available to all employees and persons involved in the project.

1.2 PLAN APPROVAL

	NAME	POSITION	SIGNATURE	DATE
Plan Prepared by:	Bernie Travers	Construction Manager		20/02/2023
Plan Reviewed by:	Kris Williams	Project Manager		20/02/2023
Plan Authorised by:				
Plan Approved by:	Adrian Gabrielli	Managing Director / General Manager		20/02/2023

DATE OF PLAN

20/02/2023

VERSION NO.

1A

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1.3 PLAN DEVELOPMENT

Personnel that have been consulted whilst developing this plan are detailed below.

NAME	COMPANY	SIGNATURE
Richard Gabrielli	AGC - Foreman	

1.4 PLAN DISTRIBUTION

PERSON	ROLE	LOCATION

1.5 REVISION SCHEDULE

DATE	SECTION AMENDED	AUTHORISED BY	AMENDED BY
1A	Issued for Approval	Kris Williams	Bernie Travers

1.6 PROJECT DESCRIPTION AND DETAILS

PROJECT NAME	Wellington Street Depot Upgrade
PROJECT NO.	J22024
EXACT SITE LOCATION	37 Wellington Street, Mundingburra
START DATE	13/01/2023
FINISH DATE	25/09/2023

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1.7 CONSTRUCTION TRAFFIC MANAGEMENT PLAN REVIEW

This Construction Traffic Management Plan shall be reviewed in accordance with the Monitoring and Review Matrix ([Refer Appendices Summary](#)) and any changes made shall be reflected in the table below. This plan may be revised / updated in response to:

- Significant proposed changes to the work that is being carried out
- Where there is evidence the risk assessment is no longer valid; or
- Following any incident with potential or actual major consequences or any adverse audit findings.

REVIEW	DATE	NAME	POSITION	COMMENTS	SIGN
1	28/7/2022	Kris Williams	PROJECT MANAGER	Issued for approval	
		Richard Gabrielli	SITE MANAGER		
		Tim Staatz	SITE SAFETY ADVISOR		
2		Kris Williams	PROJECT MANAGER		
		Richard Gabrielli	SITE MANAGER		
		Tim Staatz	SITE SAFETY ADVISOR		
			TMD		
3			PROJECT MANAGER		
			SITE MANAGER		
			SITE SAFETY ADVISOR		
4			PROJECT MANAGER		
			SITE MANAGER		
			SITE SAFETY ADVISOR		
5			PROJECT MANAGER		
			SITE MANAGER		
			SITE SAFETY ADVISOR		

**Copy to additional pages / rows as required.*

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2 PROCEDURAL FACTORS

2.1 OPERATOR QUALIFICATIONS

Conditions of vehicle operation are as follows:

- The drivers of vehicles must have a valid and current licence.
- The operators of mobile plant must be deemed competent, holding a valid recognised certificate or high-risk work licence for the specific plant being operated.
- Learners must have a license, a competent operator nearby and remain under supervision at all times.

2.2 WORK ON A ROADWAY

Prior to commencing work on a state-controlled road, a 'Road Corridor Permit' must first be obtained from the Department of Transport and Main Roads (DTMR).

2.3 TRAFFIC CONTROL

Traffic control units employed by AGC will be used where required. This will consist of signage for speed reduction around the site access roads which will be used extensively throughout the intersection works stage. Traffic Controllers may be used as required within the site for the same period.

Where deemed necessary Level 2 Traffic Controllers will be utilised to stop heavy traffic to enable heavy haulage vehicles.

2.4 SITE ACCESS

All site signage located on site and at access/egress points must be obeyed at all times.

All AGC employees, subcontractors, material/service suppliers and visitors must report to the site office before entry to the construction site to ensure the required checks and or inductions are completed. After the appropriate checks and inductions, personnel are required to make contact with site personnel as signed at the entry point of the construction site prior to any authorisation so the required site briefing can be provided.

All QLD road rules and signage must be adhered to whilst travelling to and from site.

2.5 CHANGES OF ACTIVITY AS PROJECT PROGRESSES

Anticipated changes to the volume, type of mobile plant and heavy equipment on site will be advised in the daily pre-start meetings. Changes to the onsite management of traffic, will be managed through the Construction Traffic Management Diagram (CTMD).

2.6 HOURS OF WORK: DAY / NIGHT

Work may only be carried out between the hours of 6am to 6pm Monday to Sunday for the RWTF and Monday - Saturday for the distribution network works, unless otherwise approved by the superintendent, such as night works for cut-overs. All hours of work shall comply with regulatory and permit approvals necessary for the works. Any changes to these hours will be advised in the pre-start as project specific activities start and finish.

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2.7 TRAFFIC CONTROL DURING OFF HOURS

During off hours, site access will not be available without prior approval.

2.8 EMERGENCY VEHICLE ACCESS

Emergency vehicles must be given right of way on site.

2.9 MOBILE PLANT, HEAVY VEHICLES

All mobile plant and heavy vehicles operating on site, must be approved for use on the project. Requirements are outlined in the Construction Health and Safety Plan, CON 20-Form-01.

2.10 LIGHT VEHICLES

All light vehicles not essential to work must be parked in the designated parking areas on site. Light vehicles essential to work on site must be approved for use on site.

2.11 MV ACCIDENTS SCENARIOS & RESPONSE

MV accidents and the co-ordinated response will be in accordance with Construction Health and Safety Plan – CON 20- Form 01.

2.12 MONITORING OF OPERATING CONDITIONS

Road conditions, suitability of safety signage and driver behaviour will be reviewed regularly in accordance with the monitoring and review matrix and after significant changes to site operations, significant weather event, and the occurrence of an incident or near miss.

2.13 ROAD ASSET OWNER

A Traffic Management Plan (TMP) in accordance with Queensland Guide to Temporary Traffic Management (QGTTM) & Austroads Guide to Temporary Traffic Management (AGTTM) Parts 1-10 detailing all temporary signage and traffic control measures prior to construction.

- Prior to event commencing, required documents must be submitted to Townsville City Council (or their representatives) and a permit or letter of no objection will be confirmed.
- Particular attention must be given of the impact on the traffic conditions along local roads by the proposed event (including pedestrians & cyclists), specific traffic management measures and/or timing arrangement have been considered (e.g. off peak holiday sessions, off peak school hours), the event has been held for many years and is supported by the local community.
- Maintenance of safe pedestrian access around the event while setting up, during the event and after the event should be available.
- Adequate parking arrangements for workers and participants.

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2.14 COMMUNITY INFORMATION – List of Key Stakeholders in the area

- Townsville City Council
- Emergency Services
- Delivery drivers to the Cleveland Bay Treatment Plant
- Contractors of Cleveland Bay Treatment Plant

2.15 NOTIFICATIONS AND APPROVALS

This traffic management plan (and TGS) is to be submitted to Townsville City Council and/or their representative for approval.

Stake holders, residents, public transport services and emergency services should be notified of the changes and reductions and this can be done with consultation with the major stakeholders found in section 2.14.

Details of the process for the co-ordination of the traffic changes with TCC or their representative

3 ON SITE TRAFFIC CONTROL PLANS

On Site Traffic Control Plans need to be developed where Site Hazards include the interaction between Mobile Plant Workers or Other Persons or where there is a Hazard between two or more items of Mobile Plant on site.

3.1 SIZE OF SITE

The Recycled Water Treatment Facility Site is approximately 220m long and 100m wide.

3.2 SHARED POINTS OF ACCESS AND EGRESS FROM SITE

The primary point of access will be from the Cleveland Bay Processing Plant Road, located off the Southern Port Access Road.

3.3 TYPES OF MOBILE PLANT ON SITE

Mobile plant on site will include the following:

- Civil earth works equipment – Bulldozer, Grader, Excavator etc.
- Heavy Haulage Plant e.g.: Truck and Dog, Side Tippers, Semi Tippers.
- Lifting Equipment and EWP's associated with construction.
- Concrete Pumping plant.

3.4 HEAVY VEHICLES AND MOBILE PLANT MINIMUM REQUIREMENTS

Mobile plant on site must be fitted with the following operational equipment:

- UHF radio.
- Reverse beeper.
- Flashing amber light.
- Fire extinguisher Powder – ABE.
- First Aid Kit.

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3.5 LIGHT VEHICLE MINIMUM REQUIREMENTS

Light Vehicles on site must be fitted with the following operational equipment.

- UHF radio.
- Reverse beeper.
- Flashing amber light.
- Fire extinguisher Powder – ABE.
- First Aid Kit.

3.6 SEGREGATION DISTANCES BETWEEN ITEMS OF MOBILE PLANT

AGC recognise that eliminating the risk by separating mobile plant and pedestrians should be the first consideration when establishing a worksite.

Where this is not reasonably practicable, the use of physical separation structures should be installed to keep pedestrians out of areas where powered mobile plant or other vehicles operate.

Accordingly, it is important to provide areas of safe passage for pedestrians to access worksites, designated car parks, work site briefing areas, site offices, facilities and amenities.

The following safety measures shall be considered where pedestrians are working with or adjacent to vehicles including powered mobile plant delivering or picking up loads:

- Non-essential workers (e.g. office staff) should not be permitted into areas where vehicles including powered mobile plant are operating.
- Provide sufficient clear warning signs to show that vehicles including powered mobile plant operate in the area.
- Instruct all workers and visiting drivers to stand clear when vehicles including powered mobile plant are moving or being loaded/unloaded and have a designated safe area for them to wait.
- Ensure workers including visiting drivers and other pedestrians wear high-visibility clothing.
- Where workers are required to work near mobile plant, ensure that the mobile plant operators do not to operate unless all workers and drivers are clear of the operating area. Where drivers are required (e.g. to move bearers) the operator of the mobile plant should not operate the plant until the driver is clear of the area.
- Provide safe passage.
- Maintain positive communication when interacting with working plant.

Positive communication includes hand signals, eye contact and verbal confirmation. When using a radio as your primary form of communication, a back-up communication process should be in place in the event of radio failure. Line of sight communication can include the use of hand signals. The person receiving the message must provide acknowledgement that the message has been received and understood.

3.7 EXCLUSION ZONES AND RESTRICTED AREAS

The use of exclusion zones, where mobile plant is operating is to be considered as part of the SWMS and reviewed as necessary as site conditions change.

A restricted area is to be identified clear of the boom, swing or slew radius of plant and machinery such as cranes (including vehicle mounted) and mobile plan. The use of a physical barrier or a designated restricted area in the form of witches hats around the area.

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3.8 NEED FOR PEDESTRIAN ACCESS TO THE SITE

Pedestrian access to site is limited to essential activities.

3.9 APPROACHING WORKING PLANT – VEHICLES, MOBILE PLANT

When a vehicle or mobile plant is approaching the working area of another vehicle or mobile plant:

- Positive contact must be made with the spotter/worksite supervisor and/or operator to obtain authority to proceed.
- Once positive communication via UHF radio or a physical signal is given, and only then, the driver/operator of the oncoming vehicle or mobile plant is to proceed.

3.10 APPROACHING WORKING PLANT - PEDESTRIANS

Pedestrians are to stay well clear of all moving mobile equipment. If a pedestrian needs to approach mobile equipment, the following guidelines are to be followed:

- Attract the attention of the operator.
- Only approach when you have been seen, the operator acknowledges your presence, and the working plant is stopped and secured.
- Do not approach from blind spots – If you cannot see the operator, the operator cannot see you.

3.11 DEFINE WORKSITE BOUNDARIES

Where practical worksite boundaries will be defined by use of signage placed at the start and finish of the worksite boundaries, with the UHF channel and mobile phone numbers of the contact person for that worksite.

Where practical operators of these machines are to identify exclusion zones from the end of the boom or extension of the plant. Where it is determined a spotter is required the spotter must be vigilant and prevent people and/or plant from entering within the exclusion zone if required. The spotter is to have constant communication with the plant operator and is not to have additional duties. The exclusion zone and worksite boundaries to be clearly defined and discussed at the pre-start worksite safety briefings.

3.12 PARKING

All parking is to be clear of the access roads and preferably in an allocated parking area. All vehicles parked on site, where reasonable are to be reverse parked in designated parking areas. Operators are to ensure that:

- Vehicles are secured to prevent uncontrolled movement;
- Vehicles are not behind or too close to mobile plant or equipment;
- Parked vehicles do not obstruct traffic or pedestrian access ways or access to emergency equipment.

3.13 DIRECTION ON TRAVEL ON SITE

Main roads on site, are one-way only where possible. The direction of these roads will be identified using signage and (CTMD).

3.14 ON SITE SPEED LIMITS

Maximum speed of 30km/h is to be always adhered to on site unless signed or the prevailing conditions (reduced visibility due to dust, rain etc.) require a reduced speed. Whilst passing working plant and machinery a maximum of 15km/h is to be adhered to.

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3.15 INSTALLATION PROCESS

All traffic control devices to be installed in accordance with QGTTM, AGTTM Parts 1-10 and the Traffic Control accreditation Scheme.

Staging to be in accordance with the event program & Traffic Staging Plans

Traffic management Implementation (TMI) trained personnel to place out signage in accordance to the installation sequence taught in the TMI training starting with advanced signage and exit signage then intermediate signage, then setting up of tapers and event area including pedestrian controls – further guidance available in TGS Note Sheets to be printed and handed out with each TGS.

3.16 SIGNAGE INSTALLATION AND POSITIONING

Long- and Short-Term Definitions

Short term (general placement); Placed on bipod legs, sitting level minimum 200mm from road surface and positioned not to obstruct traffic or pedestrians and 1m clear of the travelled path at approximately right angles to the line of sight of drivers. Figure – 1. The event is a long term event however all signage will be set up in a short term nature for it is not continuously up for more than 2 weeks.

Long term (perimeter Signage); Advance and termination signs shall be displayed as prominently as possible by selecting the longitudinal location of the sign for best sight distance for approaching traffic. Signs continuously required for events which will be in progress for periods longer than 2 weeks should be erected in a permanent manner, e.g. on posts sunk into the ground (or wizard sockets). Figure – 2

Figure 01 & 02 – Sign Installation and Positioning

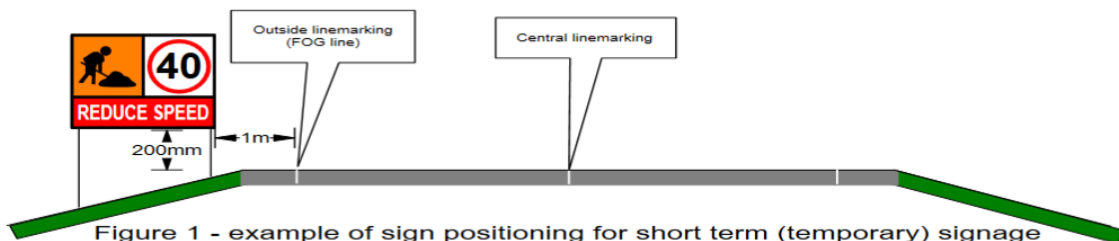


Figure 1 - example of sign positioning for short term (temporary) signage

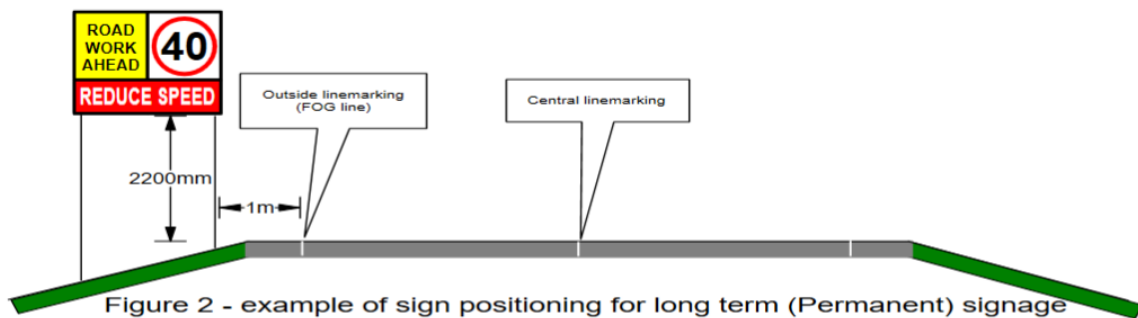


Figure 2 - example of sign positioning for long term (Permanent) signage

3.17 SPEED ZONES

Current road speeds are a combination of 20km/hr to 40km/hr and speed will not be required to be altered. Any existing signs and devices which will conflict with the site's signage are to be covered or removed.

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3.18 TOLERANCES ON POSITIONING

Tolerances shall not apply where a distance, length or spacing is already given in the text or a figure as a maximum or a minimum. They may need to be exceeded where road features such as intersections or median openings intervene. Where this Standard gives a specific distance for the longitudinal positioning of signs or devices with respect to other items or features, for the spacing of delineating devices or for the length of tapers or markings, the following tolerances may be applied:

- (a) Positioning of signs, length of tapers or markings:
 - (i) Minimum, 10% less than the distances or lengths given.
 - (ii) Maximum, 25% more than the distances or lengths given.
- (b) Spacing of delineating devices:
 - (i) Maximum, 10% more than the spacing shown.
 - (ii) No minimum.

Also refer to TGS Note Sheet for further guidance with distances and speed comparisons

4 SITE HAZARDS

4.1 WILDLIFE/LIVESTOCK

Care should be taken when travelling on site to avoid collision with wildlife or livestock. Any collision with wildlife or livestock should be reported to the HSE Manager.

4.2 OVERHEAD POWER LINES

Any works to be undertaken in the direct vicinity of these lines requires a risk assessment. Where appropriate, warning signage will be located, advising of the overhead power lines.

4.3 HAZARDS ASSOCIATED WITH LIGHT VEHICLES, MOBILE PLANT AND PEDESTRIANS

Traffic and pedestrian movement at workplaces should be designed, planned and controlled to allow for safe passage of both pedestrians and vehicles. Incidents involving light vehicles, mobile plant and pedestrians may occur during:

- Pedestrian movement;
- Vehicles or plant reversing and manoeuvring;
- Arrivals or departures;
- Loading or unloading;
- Hitching or unhitching of trailers;
- Mounting or dismounting from vehicles;
- Securing of loads;
- Movement of materials; and
- Maintenance work.

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4.4 DELIVERIES

Delivery of materials is to only be done in designated delivery and loading/unloading areas.

4.5 EMERGENCY ACTIONS

All incidents, injuries and emergency situations shall be reported to the Site Manager immediately.

4.6 SPEED MANAGEMENT PLAN / SPEED MONITORING

The goal of the Speed Management Plan is to ensure compliance with MRTS02 Appendix A

The objective of the Speed Management Plan is to achieve compliance by road users with the events speed limits. The requirements will vary based on the duration of event and traffic volumes. These items have been assessed in the Risk Assessment in Appendix B.

The nominated speeds within the event site are based on planning principles as outlined in the Australian Standard, QGTTM and AGTTM Part 3.

Controls will vary for the Event but can be considered in the order below

Immediately after the site is set up the TMI will conduct a drive through to assess driver behaviour and compliance with site signage to ensure all event workers and road users are safe.

An assessment of ten vehicles for speed compliance is the minimum size required to provide for a suitable sample size. The tolerable variation in speed is considered +10kph. Based on this sample size if one vehicle is not complying with the site speed (i.e. travelling at 10kph or higher than the site speed limit) this is considered acceptable. If two vehicles are not compliant then this shall trigger a new risk assessment being completed in consultation with the TMD. The ideal sample size would provide an 85% speed compliance rate with the site speed.

Speed Monitoring Controls used to achieve this are listed below:

For events greater 2 weeks a random sample will be observed by TMI immediately after setup and recorded on their job docket. This may also be conducted again throughout the day as required.

For events equal or greater than 2 weeks a random sample will be observed by TMI immediately after setup & periodically throughout the day's activities using some form of electronic assisted monitoring.

Manual Time Travel Survey:

Time Recording Observed:	Manual Time Travel Survey Distance: _____ divided by Time: _____ = _____ Total Speed = Distance / Time 10m per 1 Second = 36kph or 45m per 4 Seconds = 40kph https://www.calculatorsoup.com/calculators/math/speed-distance-time-calculator.php
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The above Speed Compliance monitoring calculator may be used if electronic methods are not available.

Minimum qualification should be TMI. This individual (TMI/TMD) should place a Traffic Cone at a point 40-45m from their location (a good example of this would be to use the TC Stop/Slow location). This will assist in using this above manual Time Travel Survey as well as using a stopwatch or similar app on a smart phone. The time that this observation occurs also needs to be recorded to assist the TMD to assess traffic volumes at different times of the day. These manual counts need to be recorded and saved with daily signage records

If any of the observed speeds are considered unsafe, then the Nominated Traffic Officer shall be notified, and a new risk assessment conducted and TGS modified accordingly.

This may take the form of:

- Pilot Vehicle may be considered to assist with controlling speed through/past/around the event area.
- Extra Delineation to create a tunnelling effect
- Electronic Speed Assessment Sign or similar built into a VMS board or other Handheld radar type device
- Extra Signage

If Speed compliance is still low after the engineering remedial actions are taken, then the TMD/Event Manager/Construction Manager/Site Supervisor may request Enforcement through the MRTS 02 Appendix B process using the Enforcement Request Form.

The area is a low-speed environment on an internal road with no public access and continued speed compliance issues would be unlikely. Also, there will be no speed reductions as part of the project. Therefore, Speed monitoring will not be required for this project.

4.7 SPEED ENFORCEMENT

There are a number of factors for consideration during site assessment if police enforcement is required, including but not limited to:

- Clear line of sight
- Room for vehicles to pull over
- Location of police officer
- Escape route
- Speed sign placement.

Provide relevant contact details to enable police to be contacted and requested to attend the site to enforce the temporary posted speed limit, in the case that road users are observed to continue to travel in excess of the posted speed limit. The method of enforcement will be determined by Police.

Note that if enforcement is requested the following should be discussed with the police to ensure site suitability for speed enforcement presence, and provided if requested:

The TMP

Any relevant TGSs

Relevant information relating to the approved speed limit and signage

Confirmation that the speed zone will not be changed throughout the enforcement period

Confirmed location for enforcement activities that will not hinder the event or Police activities.

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4.8 MONITORING AND MANAGEMENT FOLLOWING IMPLEMENTATION

Traffic checks shall be conducted periodically throughout the day and a shutdown (Aftercare) check shall be completed at the day's end to ensure only appropriate signs remain on display and signage such as traffic controller or workmen signs are removed or covered.

A "Daily Traffic Management Checklist" may be used to record the erection, maintenance and removal of event signage. Section 17. Appendix F contains a sample checklist; this must be carried out daily or recorded in "Asignit" programme.

A Traffic Management Audit should be carried out by a competent Main Roads trained person (e.g. traffic representative or representative from the traffic control company to ensure the signage is installed as per drawings or amendments.

An "As Constructed Drawing" of the erected event signage should be compiled by the traffic Control Company representative. Any known or reported vehicular accidents are to be investigated, recorded and reported.

Date stamped photographic records or Dash cam Video is recommended for the erection of event signage installation and any known vehicular accidents.

Method to verify drivers are able to traverse event without confusion

- Day – Traffic control supervisor is to drive through the event site in both directions upon setting up signage to ensure the site is clearly marked and not confusing. If required additional bollards and arrow boards are to be installed.
- Night – Prior to leaving the site each night construction supervisor and Traffic Control Supervisor are to drive through the event site in both directions to ensure the site is clearly marked and not confusing. If required additional bollards and arrow boards are to be installed.

4.9 EXCAVATIONS

An excavation is a longitudinal depression with a side slope of 1.5 horizontal to 1 vertical or steeper adjacent to traffic.

Excavations require special consideration to ensure their structural integrity and minimise the risk of road users losing control and driving into them, and the safety of road workers. Consider also any above ground hazards near the excavation (e.g. signs, other devices, excavated material).

Consider the following when designing road user protection around an excavation:

- risk assessment
- length of the excavation adjacent to the roadway
- clearance between the excavation and the nearest traffic lane (see Table 6.1)
- width of the excavation
- depth of excavation
- duration of exposure
- speed
- traffic volume
- road alignment
- safe placement of material excavated.

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Where an excavation is readily accessible to any person and likely to collect or retain water of such a depth as to constitute a danger, or is left unattended, it is required that:

- the excavation is fully covered, fenced or backfilled when the worksite is unattended
- the excavation is covered, fenced or filled when work is completed
- only approved skid resistant plating must be used to cover an excavation
- fully enclose the excavation.

Do not use barricades, traffic cones or plastic mesh fencing that is not supported by a solid frame as they are not sufficient to adequately protect road users from excavations. Table 6.1 shows clearance between an excavation, or any ground level hazard associated with the excavation, and the nearest traffic lane, relative to speed and traffic volume. The delineation method is also shown as one of three options. These are as follows:

- Option 1. Use traffic cones or bollards spaced as shown in Section 5.4.1.
- Option 2. Use traffic cones or bollards spaced at 4 m maximum.
- Option 3. Use a road safety barrier system (see Section 5.3.1)

Table 6.1 from AGTTM Part 3
Protection/Delineation Adjacent to Excavations

Speed of Traffic (posted speed limit during road-works)	Traffic Volume (2 way road - sum of both directions)	Clearance to excavation (nearest edge to traffic lane in m)	Depth of Excavation, mm STD = Standard Delineation - 12m @ 60km/h or 18m above 75km/h CLS = Close Delineation - 4m spacings all speeds		
			50 to 250mm	260 to 500mm	> 500mm
<_ 65	All	<2.5	STD Delineation	CLS Delineation	Safety Barrier
		2.5 to 5.0	STD Delineation	STD Delineation	CLS Delineation
>_ 70	<_ 1500	<_ 5.0	STD Delineation	CLS Delineation	Safety Barrier
		> 5.0	STD Delineation	STD Delineation	STD Delineation
	> 1500	<_ 6.0	STD Delineation	CLS Delineation	Safety Barrier
		> 6.0	STD Delineation	STD Delineation	STD Delineation

4.10 WIDE LOADS

Wide loads are unlikely to be travelling through site due to not being a through road or public road.

4.11 EMERGENCY CONTACTS

Queensland Police Service; Emergency 000 – Non Emergency – 131 444 (policelink)

Queensland Ambulance Service; Emergency 000 – Non Emergency – 137 468 – 13QGOV

Queensland Fire Service; Emergency 000 – Non Emergency – 137 468 – 13QGOV

- It is the responsibility of the Project Manager to ensure that all Emergency Services are notified of any works that could affect the routes of any vehicle under their care or control. This includes local Police, Ambulance and Fire Departments. Project Manager will communicate via email, in person or phone to notify all of the above and TCC.
- On a day to day scenario, in the event of an emergency that traffic controllers aware of, notify the Works Crew via radio communication and assist emergency services to a timely and safe passage through the work site.

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4.12 PROJECT SPECIFIC EMERGENCY / AFTER HOURS CONTACTS

Project Manager: Kris Williams – 0457 419 757

Townsville City Council – 13 48 10

4.13 MANAGING END OF QUEUE COLLISIONS

Regular inspections are to be carried out to assess the queue lengths of vehicles approaching the work site. This is to be done by all site staff (including haul trucks and delivery vehicles) and they are to be made aware of the provisions of AGTTM Part 3.

To estimate the end of queue position

Queueing is expected for 'through' methods at stop locations where PTCDs or traffic controllers are positioned, sometimes resulting in collision. Collision can occur when the stationary queue extends past the PREPARE TO STOP sign location, most commonly when speed is greater than 70 km/h or the sight distance of approaching traffic to the end of the queue is:

- less than two times the speed limit in open road areas
- less than 1.5 times the speed limit in built-up areas.

To estimate queue length:

- Count the number of average and oversized vehicles that pass the PTCD/traffic controller
- position for five (5) minutes.
- Consider whether the majority of vehicles have been average or oversized (i.e. trucks). This will influence the 'multiplier' column used in Table 4.4.
- Multiply the number of vehicles counted by the number in the chosen 'multiplier' column (Ma for mostly average sized vehicles, or Mo for mostly oversized vehicles) using the maximum stop time required at the specific worksite.
- If you are unsure of the maximum required stop time or whether to use the 'average' or 'oversized' multiplier, seek assistance from a competent person or road authority.
- Use the formula below to calculate the estimated queue length:
- $(\text{number of average vehicles} \times Ma) + (\text{number of oversized vehicles} \times Mo) = \text{queue length}$

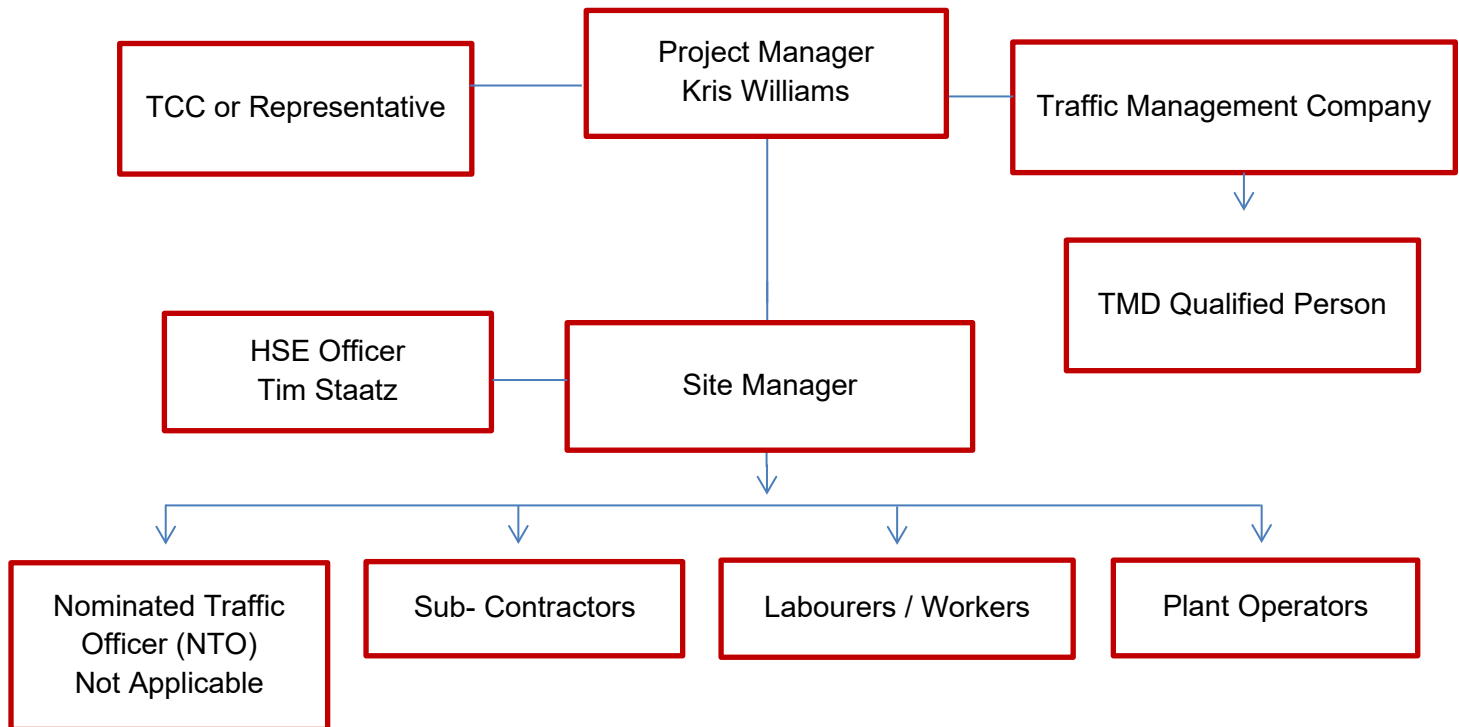
(MA = Multiplier for average vehicles & MO = Multiplier for oversized vehicles)

If more accurate data is available (e.g. traffic counts), this should be used instead of counting vehicles for five (5) minutes

There will be no stopping of traffic therefore managing end of queues will not be a concern.

4.14 PROJECT ORGANISATION CHART

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4.15 RESPONSIBILITIES

Principal Contractor - Has overall event accountability and is available for coordination meetings with all key stakeholders as required. It is the responsibility of Gabrielli Constructions to ensure;

- On site supervision of works including the effective implementation of the approved TMP and TGSs by a Traffic Management Implementation (TMI) qualified person.
- Adequate Supervision of traffic control in accordance with approved procedures, and correcting any unsuitable work behaviours;
- Ensuring traffic controllers have the required breaks;
- Providing suitable amenities for the work area including access to toilets, eating areas, drinking water and washing areas;
- Checking daily sign records for accuracy and ensuring they are completed correctly;
- First point of contact for out of hours issues.

Traffic Management Designer (TMD) Responsible for:

- developing the TMP and TGSs and assisting with gaining their relevant approvals including sign off from a RPEQ engineer if required;
- processing any amendments required to the TMP or TGSs;
- assisting with developing corrective actions for any non-conformances identified during the event; available to process any variations to the approved TMP and / or TGS

Site Manager / Site Supervisor – It is the responsibility of the person in control of the workplace to ensure;

- All Personnel are adequately trained to carry out their assigned tasks,
- Review and assist in installation of traffic control devices as per this TMP and drawings.
- Monitor site signage on a regular daily basis to ensure signage effectiveness for the travelling public which includes but is not limited to cleanliness, appropriateness, clear vision of signage, removal of all existing signs

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and devices that may conflict with the traffic control devices, public notifications, records and training and road / signage permits.

- Communication and consultation with the traffic control company and their personnel.

Workers (including plant operators and Sub-Contractors) – it is the workers responsibility to ensure;

- That they don't tamper or in-avertedly restrict any traffic control devices that are in place to assist the travelling public.
- Assist the traffic control company with setting up any traffic control devices and to report any damaged or misplaced devices.

Traffic Control Company and Representatives – It is their responsibility to ensure;

- They carry out their duties in accordance with their accreditation, licenses and company policies and procedures,
- Current membership of TMR Traffic Management Registration Scheme;
- Providing the required signs and devices in a serviceable condition to enable the TMP and TGSs to be implemented correctly;
- Providing the required personnel with the relevant competencies to install and remove signs and devices;
- Providing traffic control supervision in line with the Site Coordinators instructions and approved procedures;
- Providing accredited and competent traffic controllers (if required);
- Correcting any irregularities onsite and gaining approval first if required;
- Documenting and maintaining daily signs records accurately and in a timely manner;
- Assisting with investigating and reporting any traffic management related incidents onsite.

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5 TRAFFIC DIAGRAM

To be provided

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6 COMPLAINT HANDLING

The goal for the project is to have zero complaints. In order to achieve this goal the traffic control hazards of each construction task and activity are to be assessed and control measure are to be implemented as outlined above to mitigate and minimise risk.

The implementation of communication and consultation framework also contributes to the goal of zero complaints through the engagement of affected stakeholders in accordance with A. Gabrielli Constructions' Communication and Consultation process.

A. Gabrielli Constructions further implements a project specific Communication and Consultation Matrix with traffic control communication and consultation requirements identified in this matrix. This project specific Communication and Consultation Matrix is available as an Appendices to the project specific Construction Work Health and Safety Management Plan.

Where a complaint is recorded this will be managed in accordance with the procedure as detailed under project specific Construction Work Health and Safety Management Plan, subheading 'Arrangements for Managing Work Health and Safety Incidents'.

7 INDUCTION, TRAINING AND COMPETENCY

As detailed in site specific Construction Environmental Management Plan developed for this project, subheading 'Induction, Training and Competency' outlines the awareness and training provisions in place for this project.

Training will be provided to all project personnel, including relevant subcontractors, on traffic control requirements from this plan through inductions, toolboxes and targeted training.

Elements to be addressed include:

- Existence and requirements of this sub-plan;
- Relevant legislation;
- General traffic control measures; and
- Specific responsibilities for the management of traffic control measures.

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8 MONITORING AND REVIEW

8.1 MONITORING

To ensure the effectiveness of mitigation and management measures put in place in response to the environmental risk assessment, a schedule of environmental inspections, audits and other requirements will be detailed in the project specific Monitoring and Review Matrix.

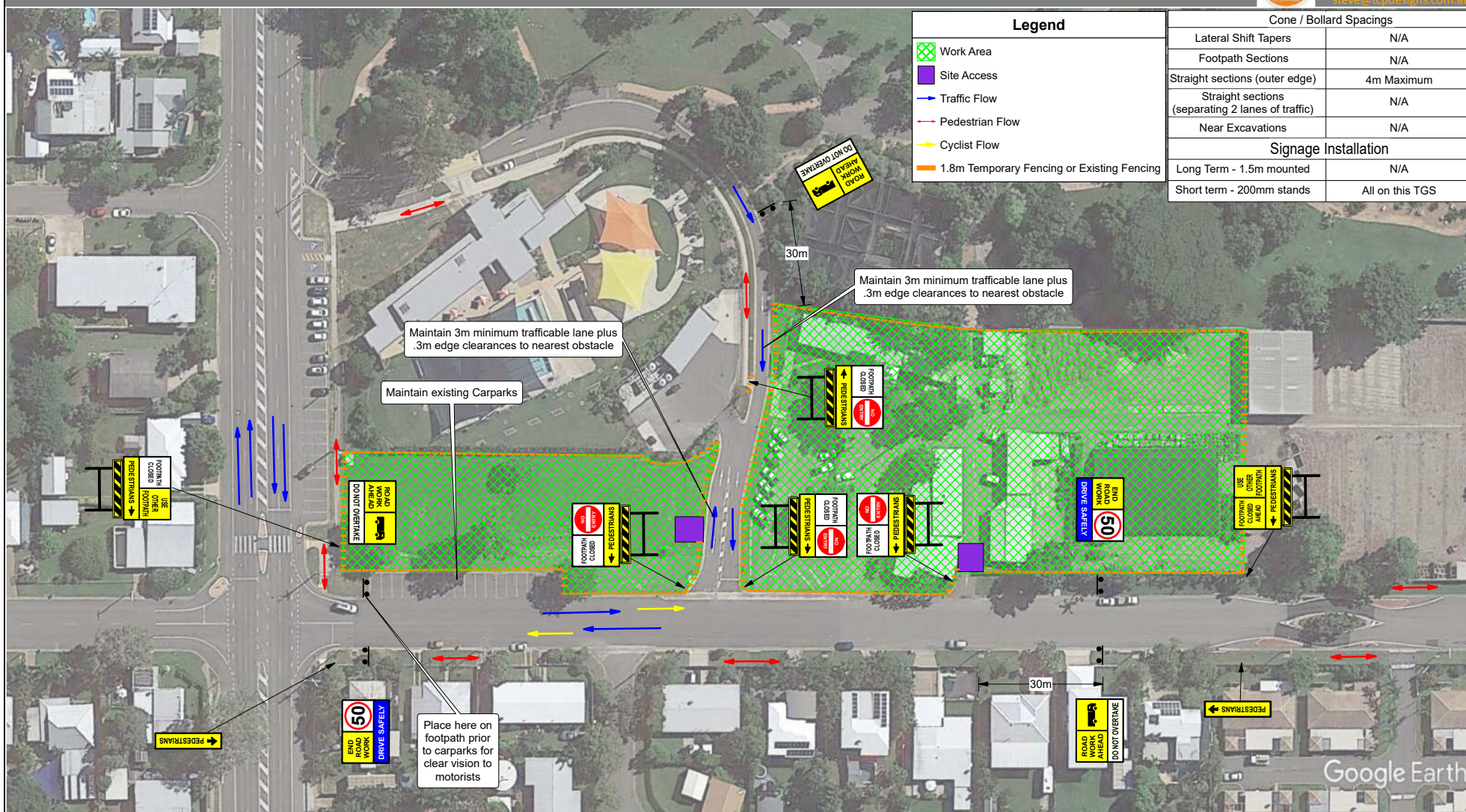
This project specific Monitoring and Review Matrix is available as an Appendices to the project specific Construction Work Health and Safety Management Plan.

Where additional monitoring requirements are identified during the course of the project, these will be updated to this project specific Monitoring and Review Matrix and undertaken in accordance with the frequency and other considerations detailed in this matrix.

8.2 REVIEW

The plan will be reviewed in accordance with the frequency identified in the project specific Monitoring and Review Matrix.

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TRAFFIC GUIDANCE SCHEME

CLIENT

Townsville City Council

NOTES:

This TGS is for site access and footpath closure to carry works for the Townsville City Council Wellington Street Depot Project. Work times are Mon - Fri 6.30am to 6pm.

No parking of trucks in residential streets blocking driveway accesses.

Refer to TGS 01A for Aftercare and TGS Note Sheet for set up guidance.

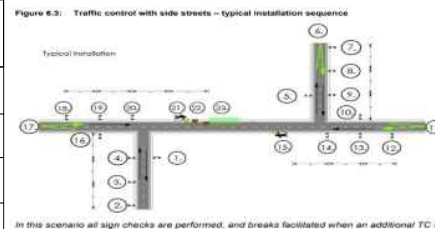
DATE	04/03/2023	TMR Registration #	1331	REVISION & DATE	A 04/03/2023	PROJECT	Wellington Street Depot	SITE CONTACT	Bernie Travers 0412 556 116
DESIGNER TMD	Steve Haines (O) #264	TMD SIGNATURE			TCP Designs 0407 734 398	TGS NAME	Site Access and Footpath Closure	TGS NUMBER	TGS-01


Notes to TGS:

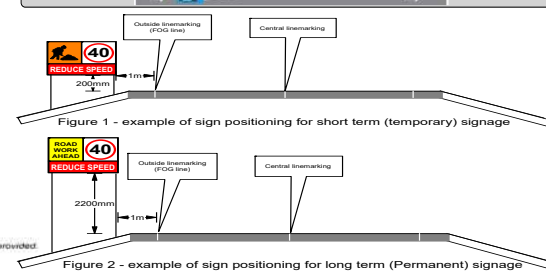
1. A site based risk assessment must be carried out by a competent person to ensure the details of this plan can be carried out to suit site distances, vision, work tasks and the requirements of QGTTM & AGTTM Parts 1 - 10
2. Drawings are not to scale, locations are indicative only and must be assessed on site and adjusted if required
3. A site prestart meeting is to be undertaken prior to the start of works to ensure all workers understand the work activities and details of this TGS.
4. Copies of current licenses and permits (i.e. TMR) must be kept on site and sighted by the Site Supervisor.
5. Signs and devices shall be set out by or under the supervision of a Traffic Management Implementation (TMI) qualified officer.
6. Signs and devices are to be set out in the following sequence and removed in the reverse order: see Figure 4.1. - i. Advanced warning and regulatory signage (Road Work Ahead and Workers Symbolic), ii. Termination Signage, iii. Intermediate advanced warning and regulatory signage and devices in advance of the taper or start of the work area, iv. Delineating devices to form taper, v. Delineation of the work area.
7. Signage is to be placed 1 metre clear of the travelled path - signage not to obstruct traffic or pedestrians. See Figure 1
8. Short Term (Temporary) Signage in place for a single shift or up to 2 weeks Maximum can be mounted 200mm from the level of the ground surface to the bottom edge of the sign See Figure 1. Long Term (Permanent) Signage shall be mounted via frangible steel posts/brackets and either wizard sockets or concreted in ground (or similar method).
9. Signage should face toward the approaching traffic at approximately right angles to the line of sight of drivers.
10. Signs should be duplicated on the right hand side of the road of a one way or multilane divided road where possible or on highway for extra notification if required.
11. Workmen and traffic light signage shall be removed or covered (with opaque material) when there are no workers/ traffic controllers present - see aftercare TGS.
12. In areas where workers are required to stand in traffic lane, a lookout person is to be used in conjunction with signage to warn worker/s to vacate roadway. Work to be carried out in between gaps of traffic.
13. 700mm cones or 750mm bollards should be used to delineate the work area. Lateral shift taper spacing - 4m, outer edge of traffic lane spacing - 4m (spacing may need to be reduced on curves or crests).
14. A minimum of 3 metres of lane width is to be retained for each open traffic lane, with 0.5m clearance to nearest obstacle (cones or bollards).
15. Traffic Controllers shall wear high visibility clothing as specified in the Traffic Controller Accreditation Scheme Approved Procedure (TCASAP) January 2017.
16. Existing regulatory or advisory signage that conflicts with this TGS shall be removed or covered with dense fabric (or similar).
17. Work should be carried out outside peak times (e.g. school times) where possible.
18. All personnel shall wear high visibility clothing while on or adjacent to the travelled path.
19. Plant, vehicles and other items are not to be stored or erected in positions where they may create a hazard, obscure signs or block line of sight for approaching drivers.
20. All plant and vehicles operating on the roadway shall be equipped with vehicle mounted warning devices.
21. All signage shall be Class 1W sheeting as specified in AS 1906.1.
22. TMI qualified officer shall conduct signage and work site checks prior to shift or placement (pre-start) & at regular intervals - this is to be documented using a Daily Inspection Report or similar e.g. Assignit.
23. Any changes required to the TGS (outside the scope of a TMI) shall be reported to a TMD officer immediately for approval or adjustment.
24. Excavation Works - must be carried out in accordance with AGTTM Part 3 see Table 6.1 below or contact TMD qualified officer for further advice.
25. Any excavations should be protected while workers not on site with a minimum 900mm high temporary fencing (such as Parra webbing) or 1.8m temporary fencing can be used but must be placed 1.8m away from trafficable lane or completely braced off so it cannot fall over and interfere with the trafficable lane.
26. Carry out works in times allocated only – shuttle flow times as stated on the TGS
27. In case of an incident - Call 000 if accidents occur needing assistance and instigate site emergency plan – (part of site safety management plan), if accident occurs within the vicinity of the worksite then supervisors and traffic controllers to encompass the accident area if possible and assist in first aid, all other personnel to stop work and gather at the nearest assembly point until cleared to return to work & document all incidents / accidents and take photos for record purposes
28. Removal of signs to be conducted as per the sites SWMS and methodology to be discussed at prestart before works commence
29. Delivery vehicles should first report to the site office to ensure Supervisor aware of delivery and sign onto site pre-start or visitors induction. Delivery vehicles including tipplers shall not use the Taper or Safety buffer for entry/exit or parking (these areas are to be left clear at all times) provisions should be made to either exit delivery vehicles off prior to these points or a gap can be left in the delineation to allow entry exit suggest blue coloured cones/bollards to help delivery vehicles identify when approaching.
30. For areas of no existing pedestrian facilities, pedestrians that may want to access the area to be allowed through or past the work site via stop work crews to allow pedestrians to safely pass, guide any potential pedestrians or ask if they require assistance, ensure no trip hazards are present maintaining minimum 1m area. For areas where facilities are existent then all controls on the TGS must be followed
31. When setting out signs and devices a lookout person will be made available with minimum 150m sight distance along with vehicles used in setting out to have vehicle mounted warning device.
32. Set out signage in order of figure 6.3 below.
33. Spotter / vehicle driver will call out or sound horn to notify workers when a vehicle is approaching their area.

Table 6.1 from AGTTM Part 3
Protection/Delineation Adjacent to Excavations

Sign Set out tolerances - 40 - 50 KPH			Speed of Traffic (posted speed limit during road-works)	Traffic Volume (2 way road - sum of both directions)	Clearance to excavation (nearest edge to traffic lane in m)	Depth of Excavation, mm		
Distance (m)	Minimum (-10%)	Minimum (+25%)				STD = Standard Delineation - 12m @ 60km/h or 18m above 75km/h CLS = Close Delineation - 4m spacings all speeds		
30m	27m	37.5m				50 to 250mm	260 to 500mm	> 500mm
60m	54m	75m						
80m	72m	100m						
100m	90m	125m						
160m	144m	200m						
200m	216m	250m						
240m	180m	260m						



Sight Distances to Traffic Control Devices	
Speed (km/h)	Distance (m)
≤ 45	50
46 - 55	70
56 - 65	90
≥ 66	Two times the speed (km/h)



TRAFFIC GUIDANCE SCHEME

To be printed in A3

CLIENT

Townsville City Council

NOTES:

This TGS Note Sheet is for a guidance on traffic management and signage set-up as part of the Wellington Street Mundingburra Project To be used in conjunction with each individual TGS To be printed out and kept with TGS at all times

DATE	04/03/2023	TMD ID NUMBER	1331	REVISION & DATE	A 04/03/2023	PROJECT	Wellington Street Depot	SITE CONTACT	Bernie Travers 0412 556 116
DESIGNED BY	Steve Haines	TMD SIGNATURE			TCP Designs 0407 734 398	TGS NAME	TGS Note Sheet	TGS NUMBER	TGS Note Sheet