

# Traffic Management Plan Artarmon Bulk Supply Investigation

Line Wide Works Contract Sydney Metro City & Southwest.

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## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
A	21/08/2019	J. Luna				
B	11 Sep 2019	Mong Sim	Matt Billings			
C	26 Sep 2019	Mong Sim	Matt Billings			
00	30 Sep 2019	Mong Sim	Wee Tee	Scott Brown		Final approval.
01	11 Oct 2019	Mong Sim	Wee Tee	Scott Brown		Carlotta St TCP added.
Signature:						

## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Traffic Manager is responsible for updating this plan to reflect changes to legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

### Revision Details

Revision	Details
A	First submission.
B	Update per Stakeholder comments. Additional work area at Whiting St is added in to the scope.
C	Update per Stakeholder comments - TCPs in Appendix A slit trench mark removed. Sec. 6, 9.1, 9.2 and 11.6 with minor additions. Copy of correspondence added to Appendix B for information.
00	Final version after RMS approval.
01	Added scope to investigate Carlotta St per Ausgrid suggestion. TCP for Carlotta St added to Item 3.1, 12.2 and Appendix A.

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## 1. Project Overview

### 1.1 Abbreviations

Acronym	Definition
AADT	Annual average daily traffic
AS 1742.3	Australian Standard 1742.3
CEMP	Construction Environmental Management Plan
Ch	Chainage
ESCP	Erosion and Sediment Control Plan
ESD	Entering sight distance
FAS	Flashing Arrow Signs
G1	Road and Maritime “JOB Specific Requirements”
G10	Roads and Maritime QA Specification g10 Traffic Management
PMP	Pedestrian Management Plan
R141	Pavement Marking
R142	“Retro reflective raised pavement markers”
RMS	Road and Maritime Services
ROL	Road Occupancy License
SISD	Safe Intersection Sight Distance
SZA	Speed Zone Authorization
TCP	Traffic Control Plan
TCWS	Traffic Control at Work Sites Manual
TMP	Traffic Management Plan
TR	Thermal Resistivity
TRSB	Temporary Road Safety Barrier
VMP	Vehicle Management Plan
VMS	Variable Message Sign

### 1.2 References and Compliance Requirements

- TCAWS Traffic Control at Worksites Manual V.5 (July 2018)
- Workplace Health and Safety Traffic Management for Construction or Maintenance Work Code of Practice 2008
- AS/NZS ISO 31000:2000 Risk Management – Principles and Guidelines
- AS/NZS ISO 9001:2008 Quality Management Systems – Requirements
- Australian Standard AS1742.3, Fourth Edition 2009

In addition to addressing the requirements of the documents referenced above and otherwise in this plan, this document has been developed to address CSSI 8256 -Sydney Metro City & Southwest Sydenham to Bankstown Condition of Approval E 47;

*Construction Traffic Management Plans (CTMPs) must be prepared for each Construction site or stage (or Low Impact Activity where required) in accordance with the CEMF and relevant Austroads, Australian Standards and RMS requirements. The CTMPs must be submitted to the RMS following engagement with the Sydney Coordination Office and before Construction commences at the relevant Construction site or stage. A copy of the Construction Traffic Management Plans must be submitted to the Planning Secretary for information.*

### 1.3 Executive Summary

The purpose of this Traffic Management Plan is to ensure that, Systems Connect commitment to safety, traffic management, reporting and reviewing, is met during the life of this project.

This will be accomplished with consideration given to; Traffic Plans, Traffic Demands, Traffic Routing, Traffic Control Devices, Other road users and stake holder, Special (emergency) vehicle requirements and access, Accredited Traffic Controllers

Early work services investigation includes potholing, slit trenching, surveying, soil testing TR Testing (Thermal Resistivity) and GPR (Ground Penetration Radar). The investigation results will be used to finalize the design routes for the bulk power supply (BPS). See attached "Services Investigation Route" shown the activity types and indicative durations.

This plan aims to identify the risks to persons undertaking work on, or adjacent to, a road. It shall ensure that appropriate control measures for any identified hazard are assessed, controlled, implemented, monitored, and reviewed by elimination, substitution, engineering, administration or by using personal protective equipment.

The legislative and reference documents used in conjunction with this plan include, but are not limited to: -

- WH&S Act and Regulations (New South Wales)
- Transport Operations (Road Use Management) Act and Regulations (New South Wales)
- Risk Management Code of Practice (2007)
- Traffic Management for Construction or Maintenance Work Code of Practice (2008)
- Traffic Control at Worksites Manual (TCAWS)
- Australian Standard AS1742.3 Traffic Control Devices (2009)

All contractors, subcontractors, employers, self-employed persons, workers and other persons will be bound by the requirements set out in this plan.

This plan forms the basis of ongoing programs in continuous improvement of traffic management and the required ongoing training and commitment of all personnel involved in this project.

Risk assessments will be conducted before Traffic Guidance Schemes are prepared and prior to erecting any traffic control device on site. This will determine a safe environment of workers and a safe route for pedestrians and on-coming vehicular traffic.

## 2. Project Details

**Project Name** Line Wide Works Contract Sydney Metro City & southwest

**Project Location** Reserve Road, Artarmon

## 3. Description of Proposed Works and Lane/Road Closures

The Traffic Management Plan has been prepared for Systems Connect specific to Reserve Road, Artarmon works location as per TCPs attached. It addresses the traffic management requirements as specified in the Traffic Control at Worksites Manual provision for traffic.

Works entail GPR/3D Surveying, Soil Testing, TR Testing, Pothole & Still Trenching (Non-Destructive Excavation) will be taking place as part of this scope of works.

### 3.1 Early works investigation – Indicative Duration

- TGS 1 (TCP # 191930) - Campbell St – 3 shifts
- TGS 2(TCP # 191979) - Reserve Rd – 5 shifts
- TGS 3 (TCP # 192472) - Reserve Rd – 4 shifts
- TGS 4 (TCP # 192004) - Reserve Rd – 4 shifts
- TGS 5 (TCP # 192143) - Reserve Rd – 3 shifts
- TGS 6 (TCP # 193446) – Whiting St – 3 shifts
- TCG 7 (TCP # 195400) – Carlotta St – 2 shifts

To be used in conjunction with all TCP stages (see Appendix A and Section 13.1). Duration will be based on site specific works that need to be completed.

It has been prepared in accordance with Include all the following elements as detailed in TCAWS.

The TCP contained herein shall show traffic control device layouts (including TRSB, temporary pavement marking and temporary islands), be fully dimensioned and shall generally agree with the work sequence and other requirements shown elsewhere.

### **3.2 Working Hours**

Works will be conducted in daylight hours from 07:00-18:00 Mon-Sat. Works located on Reserve Road/Artarmon Rd carriageway will be conducted during nights from 21:00-05:00 Mon-Sun, based on Approval from Transport Management Centre (TMC).

## **4. Identification and Assessment of Traffic Impacts of Proposed Works**

### **4.1 Road Network**

Early investigation work is required to collect data (soil sampling, underground services verification) from existing Reserve Road at Artarmon between the extremities of Whiting Street and Campbell Street (Refer to Appendix A for the work areas). Reserve Road traffic is heavily used by industrial traffic coming off from Campbell Street, Carlotta Street and Dickson Avenue. Work is planned after business hours via combination of contraflow and lane closure to mitigate the heavier traffic volume during normal business hours. Side streets traffic movement from Carlotta Avenue and Dickson Avenue are not expected to be constant during afterhours. Traffic queue is also not to be anticipated to be an issue due to the general traffic management setup is not a stop slow setup. Slim majority of the general traffic along Reserve Road is expected to use the side streets to navigate bypassing the work area.

Data collected from the work is critical for the design team to refine the design details for design phase of the project. Work is scheduled to start from 14 October 2019 and all data collected within a 6 week timeframe.

### **4.2 Identified Impacts**

Systems Connect will conduct the required assessments of the road network directly affected by the pre-construction investigation activities, which will be documented in the (TMPs). This assessment will assist in determining the need for specific mitigation measures. The facilities to be assessed will include, but are not limited to:

- Existing on-street parking (including type and associated time limits)
- Existing traffic controls
- Existing junction configurations
- Restrictions on existing traffic movements (right turn bans etc)
- Existing road occupancies
- Public transport (buses, including bus stops, taxis)
- Traffic generating developments, (e.g. schools, shopping centers, churches, industrial areas, sporting complexes, clubs etc)
- Temporary access arrangements or restrictions for residents, businesses, traffic generating developments, major and special events etc
- Emergency vehicle access points
- Heavy vehicle movement restrictions, including over dimension vehicle loads
- Pedestrians, including disabled persons
- Cyclists, (general road, cycle and share way facilities).

## 5. Detail Traffic Management Measures to Ameliorate the Impacts of Proposed Works

### 5.1 Minimizing Delay during Implementation of Road Occupancies

The delay minimization strategies to be applied by Systems Connect project team will not delay the free flow of traffic in any direction more than 500 meters in accordance to G10 through the following strategies: -

- Minimizing the impacts of each work area;
- Maximizing the operating performance of the individual routes;
- Eliminate the need to work adjacent to live traffic as far as possible through the investigation techniques and traffic phasing;
- Undertaking an AM and PM drive through as part of the maintenance plan to ensure no debris, detritus, broken down vehicle are not impeding traffic which may lead to traffic delays;
- Aiming to maintain access;
- Over Dimensional movements to be conducted at pre-dawn or pre-dusk outside of peak times and under escort; and
- Coordinating works at each work area to ensure road users do not encounter several delays in quick succession.
- Police will be contacted for illegal parking to contact the vehicle owners.
- Situation will be re-assessed if there is breakdown vehicle. Stop/Slow traffic will be maintained if possible. Otherwise, works will be stopped until the path is clear.

Systems Connect acknowledge there are various measures that can be applied to minimize road user delays, and these are generally divided into four categories:

- Design;
- Isolation of work areas (the hierarchy of controls);
- Work methods; and
- Planning road occupancies during times of low traffic volumes.

Where practical, Systems Connect will apply the measures below via Systems Connect Traffic representative/coordinator:

Ensure road user delays are given consideration during the concept phase (i.e.; develop alignments to avoid conflicts and potential impact with the existing road network);

- Ensure that road user delay is given consideration during vehicle movement planning development;
- Develop traffic staging and temporary works; avoid conflicts with the existing road network, maximizes separation between work areas and travel lanes or isolates work areas and maintain existing "LOS" of the road network;
- Isolate work areas from traffic flows (e.g.; using alternative routes, temporary side-tracks, lane deviations / widenings and temporary safety barriers);
- Develop alternative work methods to minimize impact (e.g.; utilize more efficient plant/equipment, apply different design solutions, enclosed work platforms, time of day applications);
- Plan all lane closures/road occupancies with the aim to: minimize the actual work area, limit obstructions and restrictions, maximize the road's capacity and avoid peak traffic flow periods;
- Provide road users with changed traffic condition information to enable them to plan their journey ahead and avoid the roadwork impact.

Despite the importance of minimizing road user delays, Systems Connect will not pursue the minimization of delays to the extent that it will compromise the safety of workers or road users.

## **5.2 Closure of Shoulders or Auxiliary Lanes**

Road occupancies involving closure of any shoulder or auxiliary lane, where auxiliary lane(s) exist, Systems Connect will always consider providing a minimum of one travel lane in each direction through the road occupancy.

For partial closures of any length of auxiliary lanes; it may only be implemented if the remaining open length of the auxiliary lane is equal to or greater than 600m where the posted speed is 100km/h or equal to or greater than 400m where the posted speed is 80km/hr. (According to G10.2.2.3)

## **6. Assessment of Public Transport Services Affected**

Some of the routes will have buses operating. Depending on the works and the closures of lanes and roads. Different implementation strategies will be used in order assist Public Transport services. Such as detour routes and/or Traffic controllers positioned at bus stops to assist passengers at bus stops.

Systems Connect will need to consult with STA regarding impacts on bus services and Bus Stops as required. Work on Campbell St closest to Reserve Rd has a bus stop # 206450 serving M20 bus which ends at 20:13 on the southbound run. No buses should be impacted after 20:13. There are no other bus stops along Reserve Road, Carlotta St nor Dickson Ave.

## **7. Public Car Parking**

Public car parking will be accessible around sites. During the contraflow implementation, temporary parking restriction on the side of traffic flow needs to apply.

## **8. Impact on Cycleway**

When provided with a scope of works on the cycle way specific implementation controls will be in effect. Traffic controllers to assist cyclists and pedestrians and the work crew on cycle way during investigations along the routes.

## **9. Details of Provisions Made For Emergency Vehicles, Heavy Vehicles, Cyclist and Pedestrians**

### **9.1 Maintaining Access for Heavy Vehicle**

The effective management of loads carried by the heavy vehicles vary considerably and over-dimension loads may be transported within Reserve Road/Artarmon location. These loads vary in width, height, length and mass. For Systems Connect to safely and efficiently facilitate the movement of heavy vehicles, TMP will:

- Consider the movement of heavy vehicles and over-dimension loads when preparing temporary works drawings and TCPs (adopting designs which provide a minimum lane width
- Limit obstructions and restrictions on the carriageways, and when required, provide alternatives.
- Liaise with the police, permit authority and operators, as well as provide up-to-date information of any obstructions (specify minimum dimensions) which may impact on the movement of over dimension vehicles. (To be actioned only if required)
- Keep a register of proposed over-dimension vehicle movements, determine the best opportunity to proceed through the work site and advise the transport operator accordingly. (To be actioned only if required)
- When traffic control operations are in place, traffic controllers will effectively co-ordinate the movement of over-dimension vehicles through the work site.
- Assist the Special Permits Unit and over-dimension operators by notifying the relevant authority of any obstructions which may impact on over-dimension vehicle movements.
- Arrange the removal and re-instatement of roadside furniture and traffic control devices which impede over-dimension vehicle movements.
- Regularly monitor heavy vehicle movements through the work site and when required, implement the appropriate controls to mitigate potential hazards and/or congestion.



Systems Connect will liaise with Roads and Maritime's Representatives to establish communication protocols for the passage of over-dimension heavy vehicle prior to any deliveries.

For slit trench, a vac truck of 12m long, bore holes will be 8.8m truck with bore rig attachments. These are not oversized vehicles. Heavy vehicles turn are maintained. Traffic controllers are available to assist as required.

## 9.2 Managing Pedestrians

When planning pre-construction investigation activities, Systems Connect will consider the following:

- Number of pedestrians.
- Type of pedestrian activity: whether commercial, retail, residential or recreational.
- Origin and destination points of the pedestrians, as well as their desired travel path.
- Needs of vulnerable pedestrians such as young children, the elderly, vision impaired, disabled people, people with prams and trolleys.
- Proximity of pedestrian generation developments such as schools, shopping centers, railway stations, bus terminals etc.

Understanding that unlike motor vehicles, pedestrian movements within and outside of the road reserve are generally unrestricted, with free access available to most areas. Because of this and to ensure provision of a safe environment to all pedestrians, Systems Connect will ensure provisions will be made for the safe ongoing access by pedestrians. Appropriate barrier or Fencing will be installed to restrict physical access to hazardous areas as well as for site security, which will be appropriately sign posted. Various types of temporary and semi-permanent fencing may be installed, including plastic mesh, water filled plastic delineators, weld mesh, pool fencing, chain wire mesh and so on. All physical barriers will be maintained during the project and appropriately secured to prevent injury to the public.

To implement these requirements, all temporary footpaths will be:

- Clearly defined and revised locations of these routes will be developed in consultation with Road and Maritime and forwarded to the local council for review and acceptance if it applies to a Local Road;
- Advice of pending changes to the routes will be provided to the users, together with signage detailing the changes when implemented;
- Signposted appropriately to indicate the direction of the footpath;
- Constructed with an all-weather surface, free of trip hazards;
- Designed to accommodate the type of pedestrians to be encountered within the area;
- Where required, provided with pram ramps, hand rails and street lighting;
- The minimum width specified by the relevant authority;
- Where pedestrian and cyclist flow are in a direction that may not satisfy a clear desire line, special provisions for notification will be made; and
- Kept well maintained while in operation.

Where feasible, Systems Connect aim will be to maintain all existing pedestrian crossing facilities. Where this cannot be achieved, alternative facilities which are a similar standard to the present facility will be provided. Types of temporary crossing facilities may include pedestrian refuges, marked foot crossings, pedestrian-actuated traffic signals, temporary grade separated pedestrian bridges and so on.

## 9.3 Managing Cyclists

When planning pre-construction investigation activities, Systems Connect will consider the following:

- Number of cyclists.
- Type of cycling activity: school children, recreational, commuter, utility, touring or sport training.
- Origin and destination points of the cyclists and the connectivity of their routes.
- Needs of vulnerable cyclists, such as young children under 14 years.

- Proximity of cyclist generating developments, such as schools, universities, public transport terminals, shopping precincts and CBDs, etc.
- The travel speed of cyclists.

Cycle routes are not available along Reserve Road. A recommended cycle route exists at Carlotta St to Taylor Lane. On a recommended cycle routes, cyclist to follow standard road rules.

In general Systems Connect appreciate that unlike motor vehicles, bicycle movements can be either on or off road. Cyclists generally travel along footpaths, cycle ways, shared paths, road shoulders or within travel lanes. To provide a safe environment for cyclists, the boundaries of all work areas will be clearly defined and measures to mitigate any hazards will be implemented. The speed of cyclists can be high, at around 50 km/h on downhill grades, and most bicycles have no suspension. Any hazards, whether rough and loose surfaces, squeeze points, obstacles, low clearance heights and so on can be potentially dangerous.

Where possible, the introduction of hazards into the travel path of cyclists will be avoided. Where this is not feasible, appropriate physical barriers, treatments and/or warning signs will be implemented. Fencing will be installed to restrict physical access to hazardous areas and for site security, which will be appropriately sign posted. All physical barriers must be maintained during the project and appropriately secured to prevent injury to the public. Where work areas restrict access to cycle paths, alternative routes and facilities will be implemented.

Alternatives may include using the opposite side of the road, detours via other streets/cycle routes, or the provision of temporary cycle paths through the work area.

Systems Connect will ensure that all temporary cycle paths will be:

- Clearly defined.
- Signposted appropriately to indicate the direction of the cycle path.
- Constructed of an asphalt or concrete with a smooth surface, equivalent to the section of path on each approach to the temporary path.
- Free of loose materials and obstacles.
- Designed to accommodate the type of cyclists to be encountered along the route.
- Where required, provided with ramps, holding rails and street lighting.
- Kept well maintained while in operation.

The provision of on-road cycle facilities requires careful assessment and the factors below will be strictly considered by Systems Connect:

- On-street parking conditions
- Travel speed of traffic
- Traffic volumes
- Bicycle volumes
- Experience of the cyclists
- Percentage of heavy vehicles
- Carriageway, lane and parking lane widths available
- The alignment of the road.

Where feasible, Systems Connect will aim to maintain all existing cycle crossing facilities. Where this cannot be achieved, alternative facilities which are a similar standard to the present facility will be provided.

## 10. Managing Unplanned Incidents

The occurrence of unexpected incidents listed below, within the project boundary or any adjacent site will potentially have a negative impact on the operation of the road network and might temporarily restrict pre-construction investigation activities. Systems Connect will create and plan an emergency response procedure which will incorporate standard operating procedures for managing any unexpected pre-construction site emergencies/incident that may occur during the project delivery. Systems Connect will provide traffic control by qualified controller for emergencies and develop strategies to manage: -

- Unplanned incidents on the road network
- Pre-construction site emergencies/unplanned incidents.

## 10.1 Types of Incidents

Different types of emergencies/unplanned incidents that may occur include, but are not limited to:

- Motor vehicle accidents;
- Bush fires;
- Environmental spills;
- Pre construction-type incidents;
- Catastrophic structural failures;
- Inclement weather conditions;
- Flooding;
- Anti-social behavior;
- Terrorist attacks; and Bomb threats.

## 10.2 Manage Emergencies

Systems Connect acknowledge the inevitable nature of emergencies and their potentially significant social, economic and environmental consequences. Accordingly, we are aware that the NSW Government has enacted the State Emergency & Rescue Management Act 1989 to support emergency management activities.

In NSW, the agencies primarily responsible for controlling hazards/emergencies are:

Unplanned Incident Agency Responsibility	
Law Enforcement / Emergencies	NSW Police Force
Fire	Fire Brigades / Rural Fire Service
Hazardous Materials	Fire Brigades
Flood	State Emergency Service
Storm and Tempest	State Emergency Service

## 10.3 Roads & Maritime Services / Local Council Responsibilities

In accordance with its statutory obligations, Roads and Maritime Services and the local councils are responsible for road safety and traffic management of the road network. In conjunction with emergency service agencies, this includes the management of incidents and emergencies.

Systems Connect understand the detailed management of large-scale emergencies and incidents happening within the boundary of the site shall be in accordance with the State requirements as laid out in the State Disaster Plan. Systems Connect will provide support to emergency service agencies and/or the Roads and Maritime Services/local councils when emergencies/incidents occur within or adjacent to the site.

## 10.4 Manage Unplanned Incidents on the Road Network

The occurrence of unplanned incidents within the site may impact on the operation of the road network. Similarly, incidents occurring on the surrounding road network may restrict pre-construction activities. To address this issue, Systems Connect Traffic Representative will:

- Apply and maintain communication protocols.
- Inform the road authority of any incident and provide assistance.
- If resources are available, provide initial response to unplanned incidents with the aim of making the scene of the incident safe and prevent further harm to persons or property.
- Provide support to emergency services, including traffic control, near the incident.
- During major incidents, provide a senior project representative on-site to liaise with the road authority and emergency service agencies.

- Reschedule planned works that will interfere with the incident or create additional delays to those road users already affected by the incident.
- Disseminate road condition information to Roads and Maritime Services and the local council for their distribution to road users.

## **11. Proposed Public/Tenant Notification Process**

### **11.1 General**

A cooperative and coordinated approach among traffic and transport providers and Systems Connect will enable the public and freight transport operators to receive timely, accurate and credible information.

All information intended for release to the community in relation to the management of the roadways in the project area will be submitted to the Roads and Maritime Services for approval before it is distributed. Roads and Maritime Services & Willoughby Council will be informed immediately of any changes to information provided to the community.

Approval will be obtained from the Transport Management Centre for all communications related to changes affecting the operation of the carriageway. The Systems Connect Project Manager will submit all traffic communication via the normal approval process to the Roads and Maritime Services.

### **11.2 Consultation**

Systems Connect will regularly consult with relevant stakeholders directly, or through the forum provided by the community consultative committees, ahead of any works to ensure all appropriate management and mitigation measures are adopted where possible. Systems Connect Traffic Representative will regularly attend and update the local council Traffic Committees and provide regular information sessions and workshops with key stakeholders.

### **11.3 Altered Traffic Arrangements**

The project team will be required to:

- Be available at all reasonable times to address any community questions concerning planned traffic arrangements including any traffic switches;
- Establish Stakeholder or Issues Groups to inform the community on:
  - Traffic management (including property access);
  - Cyclist needs

### **11.4 Notifications and Advertising**

The project team will be required to:

- Notify residents and businesses about pre-construction activities which will affect access to their properties or otherwise significantly disrupt use of their premises. Such notification shall be made at least five working days before commencing work affecting the premises and shall advise the nature of the work, why it is necessary, indicate the expected duration plus any changes to arrangements for traffic or property access. Contact details for the Project team shall also be provided;
- Advertise significant traffic management changes, detours, traffic disruptions and work outside the working hours contained in the environmental assessment documents.
- Advise (RMS) if any part of the Temporary Works that is the subject of an advertisement is to be changed or varied to make the advertisement substantially incorrect
- Notify Willoughby Council as the road manager for local and regional roads.

### **11.5 Media and Community Events**

The project team will be required to:

- Hold on-going discussions with RMS and respective Council regarding dates, commencing prior to the anticipated occurrence of the event, for major milestones / traffic switches and the opening of the Works or any stage of the Works and Local Road Works to traffic;
- Plan for an event of some form to mark the opening of the works to traffic; and

- Not announce the proposed opening of the Works and / or any stage of the works or Local Road Works to traffic without the approval of RMS and/or respective Council.

## 11.6 Identification of Key Stakeholders

Systems Connect recognize a critical first step is to identify the audience and key stakeholders. The following stakeholders will be consulted when preparing long term (TCPs) as required;

Name	Role	Contact Details
TBA	Roads and Maritime Services	13 22 13
TBA	Sydney Coordination Office	1800 019 989
Phil Brogan / Ken Kind	Sydney Metro	1800 171 386
Gordon Farrelly	Willoughby Council	02 9777 1000
Duty Officer	NSW Fire and Rescue	02 9265 2999
Duty Officer	NSW Police	131 444
Duty Officer	NSW Ambulance	02 9320 7777
Matt Billings	Systems Connect – Environment Manager	0428 781 599
Scott Brown	Systems Connect – Project Manager	0408 162 755
Wee Lee	Systems Connect – Sr. Project Engineer	0448 571 184
Craig Godwin	Systems Connect – Safety Manager	0458 498 107
Helena Olen	Systems Connect – Community Manager	0419 705 798
Dean Kellett	Systems Connect – Supervisor	0437 261 824
Mong Sim	Systems Connect – Traffic Engineer	0448 378 883

## 11.7 Communication Methods

Systems Connect will consult with community members to ensure there is minimum disruption and inconvenience and alternative routes publicized and sign posted accordingly. The Traffic Representative in conjunction with the Community Relations Officer will disseminate changed traffic condition information using the methods below as required:

- Consultation with key stakeholders.
- Temporary roadwork information signage.
- Changed traffic condition advertising.
- Community letterbox notifications.
- Project information signage.

## 11.8 Notification Requirements to Authorities

Systems Connect acknowledge the importance of keeping (RMS) and all stakeholders regularly informed. Therefore, during section 4 pre-construction investigation work, the project team will report to RMS, TMC, SCO, Council & community consultative committees and other relevant stakeholders on all road safety and traffic management issues that may impact the road network

Any unplanned closure of lanes or imposed restrictions in the flow of traffic occurs on the exiting Highway or adjacent local road within the project boundaries, the Systems Connect project team will immediately advise (RMS) of the nature of the closure or restriction and of the schedule for reopening of the lanes. The project team will take all the required measures to open the lane as quickly as possible.

## 12. Specific Method of Traffic Control

### 12.1 Speed Restrictions

Speed limit reductions shall be kept to a minimum. 40kph should only be used when personnel are working closer than 1.2 meters to the nearest edge of a traffic lane. These

reductions should commence just prior to the work (area) and concluding immediately at the end of the work (area).

## 12.2 Traffic Guidance Schemes

Schedule of included Traffic Guidance Schemes;

TGS 01 - 191930-CONTRAFLOW-CAMPBELL ST ARTARMON-440358591  
TGS 02 - 191979-CONTRAFLOW-RESERVE RD ARTARMON-440358591  
TGS 03 - 192473-FAST LN CLOSURE-RESERVE RD ARTARMON-440358591  
TGS 04 - 192004 REV 00-CONTRAFLOW-RESERVE RD, ARTARMON-440358591  
TGS 05 - 192143 REV 01-CONTRAFLOW-RESERVE RD, ARTARMON-440358591  
TGS 06 - 195400 REV 01-CARLOTTA ST, ARTARMON-440358591

## 12.3 Site Access

All Site access is to be followed as set out in TGS provided. (Refer to Appendix A)

## 12.4 Vehicles Movements

All works vehicles are to enter and exit the site under traffic control/site marshals' directions Or under signage display only (under 20 movements and forward entry /exit).

## 12.5 Restrictions to Traffic Lanes

**Single lane reversible flow** – Where single lane reversible flow (to serve both directions) is allowed, the Contractor shall maintain traffic flow under the control of traffic controllers or portable traffic signals in such a way that no road user is unduly delayed. In all cases, the length of one-lane, two-way operation shall be limited to one kilometer.

**Stopping traffic in both directions** – The Contractor may stop traffic in both directions simultaneously only for purposes of specific pre-construction investigation work and during the specific period. Where it is necessary to stop traffic then the time should not extend greater than three minutes, Longer periods may require the installation of a suitable detour so as to avoid extensive queueing and impacts on intersections.

**Specific periods where lane closures are not permitted** – Work not under the Contract involving lane closures, stop/slow arrangements or pre-construction investigation traffic entering or leaving any through traffic lanes shall not be carried out during any periods and unless otherwise stated.

Days during which lanes shall not be closed and work involving stop / slow arrangements shall not be carried out as below unless specific approval is granted by the Superintendent prior to commencement of the works.

- All Public Holidays, plus the preceding and succeeding days to the public holidays
- Other Public events not mentioned could also be deemed a special case for stopping the closure of lanes

## 12.6 Road Closures and Detouring Traffic

No Detours and Rd closures as requested by Willoughby Council from previous correspondence.

## 12.7 Access to Private Property

Existing accesses to private properties affected by the work shall be maintained in useable condition during the pre-construction investigations, or alternative access arrangements acceptable to the property owners/tenants shall be made.

The Contractor shall permit and provide for the free movement of traffic in and out of the properties at all times except as otherwise agreed to by the property owners/tenants.

The Contractor shall, at no expense to the Principal, make good any damage to accesses to private properties which results from the pre-construction investigations required under the Contract.

## 12.8 Night Works

Pre-construction investigation work that is likely to cause noise is to be restricted to day time operations only.



City and Southwest Out of Hours Work Protocol to be followed.

### **12.9 Preventing End of Queue Collisions**

Additional traffic controllers, or other end of queue risk control measures deemed to be adequate for the site circumstances, shall be used in high speed situations or where sight-distance is restricted, to prevent rear end collisions where vehicles are stopped or slowed by the work under the Contract. Additional traffic controllers shall also be used in other situations where described in AS 1742.3. Additional guidance is provided in TCAWS regarding supplementary devices at roadworks to reduce speed.

### **12.10 Delineation of Traffic Corridors**

Where described in Traffic Control at Worksites Manual, direction hazard markers, temporary raised reflective pavement markers, line marking, reflective mesh fencing and/or other such delineation devices shall be used in addition to the requirements of the AS1742.3 to delineate trafficked corridors. Where star pickets are used they shall be kept 1 meter or more from an adjacent traffic lane where the speed is 80kph or less.

### **12.11 Lighting of Work Site**

Where roadway lighting currently exists, lighting shall generally be provided during roadworks. Ideally, existing lighting shall not be removed until alternative temporary lighting is provided to at least the same standard as the existing lighting. If temporary lighting is not provided, the associated risk must be managed.

Temporary road lighting may include conflict points and potential hazards and it shall include two spans of lead-in lighting in advance of the conflict point, including: significant changes in carriageway width, changes from single to divided carriageway, on verging and diverging traffic streams, crests and humps, curves below 100m radius, and road sections with high night time crash rates.

The Contractor shall install, operate and maintain the temporary road lighting installations for the full period during which the relevant road is required and/or until the permanent road lighting is installed and becomes operational.

The lighting over the work area will be such as to provide a minimum intensity of 20 lux at road level. Artificial lighting shall be arranged in such a manner as to avoid creating levels of glare arising from shallow angles of incidence towards the drivers of vehicles using the adjacent traffic lanes. At no time shall artificial lighting be directed towards oncoming traffic.

### **12.12 Direction and Street Signage**

Where access to streets and side roads has been altered during the pre-construction investigations the Contractor shall supply and erect all such temporary signs necessary to assist the travelling public to find their way to such streets and roads.

### **12.13 Temporary Road Safety Barriers & End Treatments**

Temporary Road Safety Barriers (TRSB) shall be used to contain and redirect errant vehicles so as to reduce the likelihood of them entering the work site. They may also be used to separate opposing traffic. Where TRSB are shown on the TCP, the type and location of barriers shall be as shown on those TCP. Opposing flows of traffic may be separated with TRSB with sufficient offset provided to reduce the likelihood that TRSB deflect into opposing traffic flow in the event of impact.

When TRSB are used to protect the works site, the requirements to maintain a clearance zone behind the TRSB as specified in the TCAWS shall apply. The maximum dynamic deflection is specified by the manufacturer. Provision shall be made to treat the approach and/or departure ends of both permanent and TRSB that are exposed to on-coming traffic, including barriers that are flared to terminate outside the clear zone.

The ends of TRSB shall be protected using appropriate end treatments. End treatments to be used should comply with the list of end treatments provided in "RMS Safety Barrier Products (Terminals) accepted for use on classified Roads in NSW".

### **12.14 Dust and Sediment Control**

Prior to work commencing on site sediment and erosion control measures shall be installed along the contoured edges immediately down slope of any future disturbed areas.

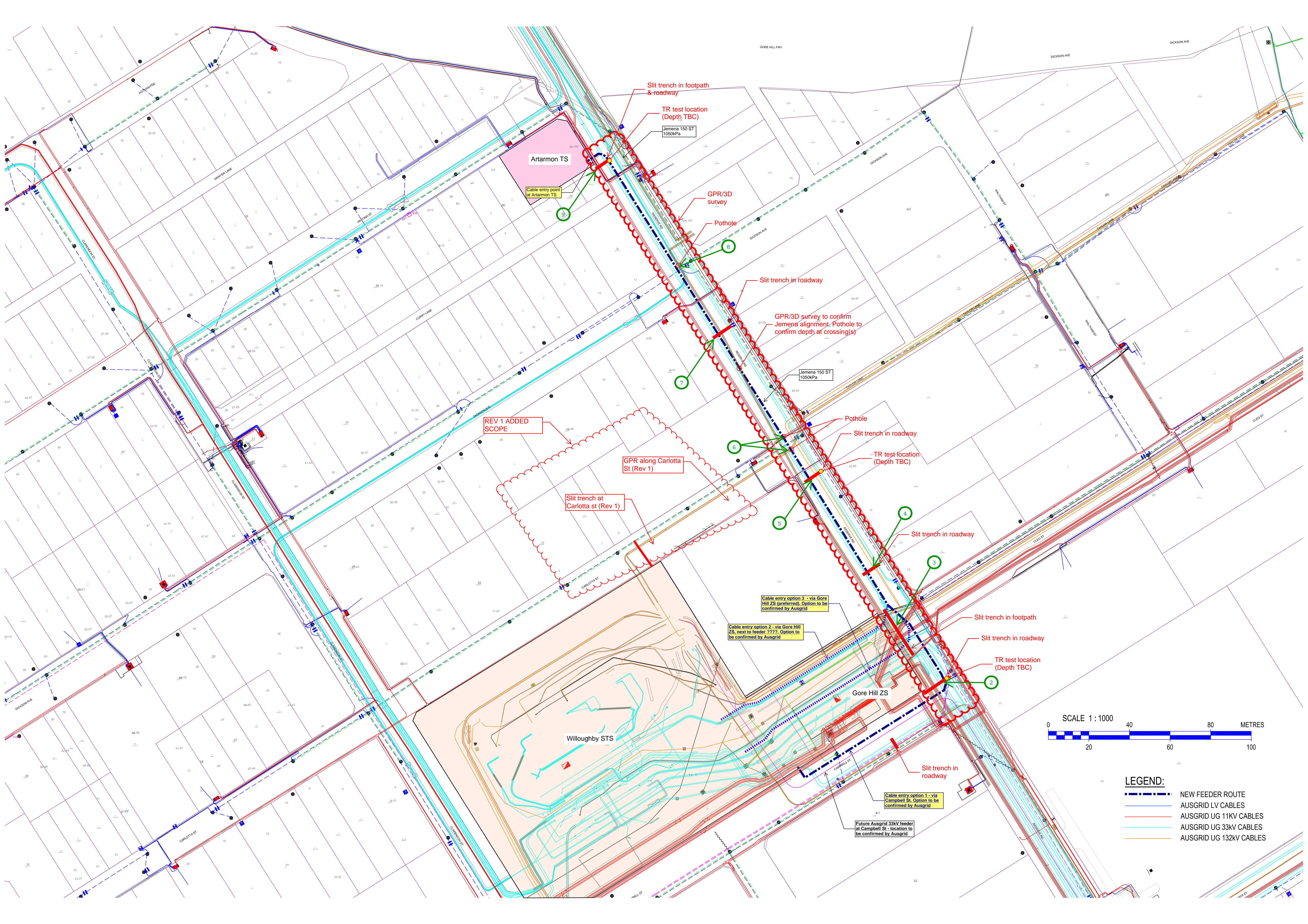
The controls shall be maintained in an operational condition until the development activities have been completed.



## **13. Appendix A**

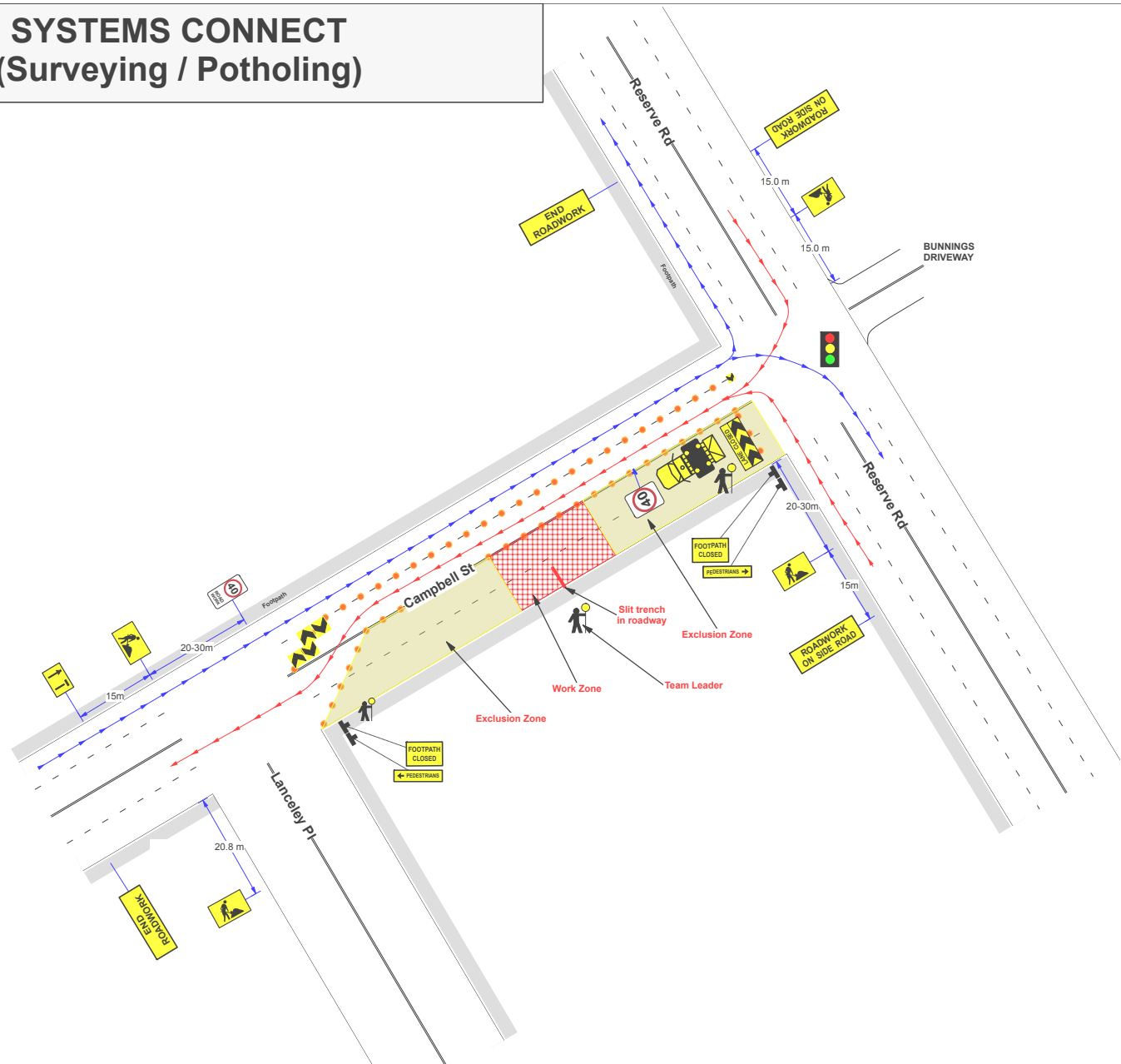
### **13.1 Design location for investigation and Traffic Guidance Schemes**







# SYSTEMS CONNECT (Surveying / Potholing)



- MINIMUM REQUIREMENTS**
- 3 - Traffic Controller/s (inc Team Leader)
  - 1 - Vehicle/s (B Class Arrow Board)
  - 0 - Cone Truck / POD Truck
  - 0 - C Class Arrow Board (Trailer)
  - 0 - Truck Mounted Attenuator
  - 0 - VMS Board/s (Trailer)
  - 0 - Light Tower/s (Trailer)
  - 0 - Portable Traffic Signal/s (set of 2)

THIS (TGS) SHALL BE READ IN CONJUNCTION WITH **NOTES 01**. IT HAS BEEN DEVELOPED TO ALLOW THE CLIENT TO CONDUCT WORKS AT THE LISTED LOCATION AND TO DISPLAY A COMMITMENT TO TRAFFIC AND PEDESTRIAN MANAGEMENT, REPORTING AND REVIEWING. AN ON SITE RISK ASSESSMENT SHALL BE CONDUCTED PRIOR TO ERECTING ANY TRAFFIC CONTROL DEVICES.



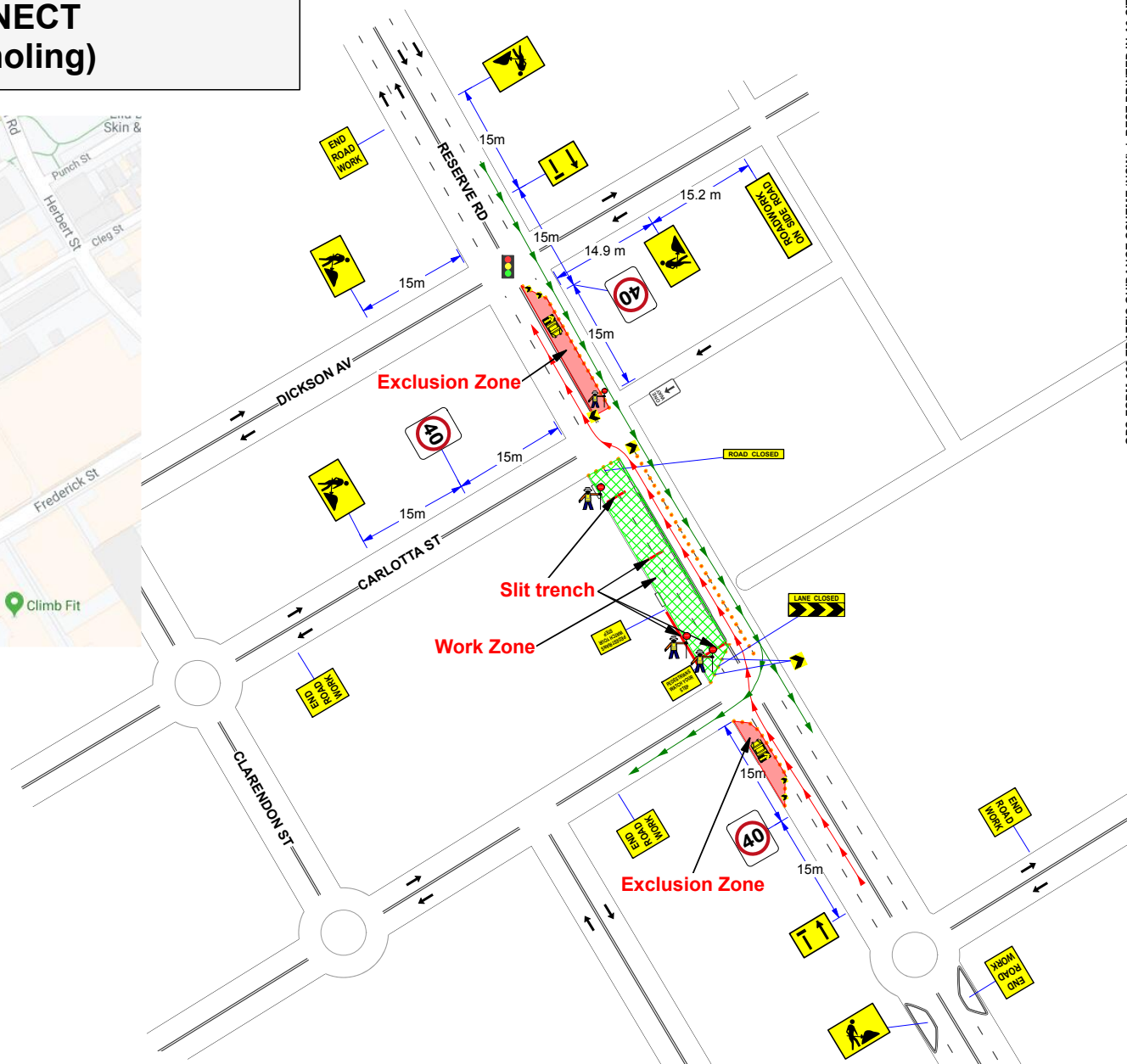
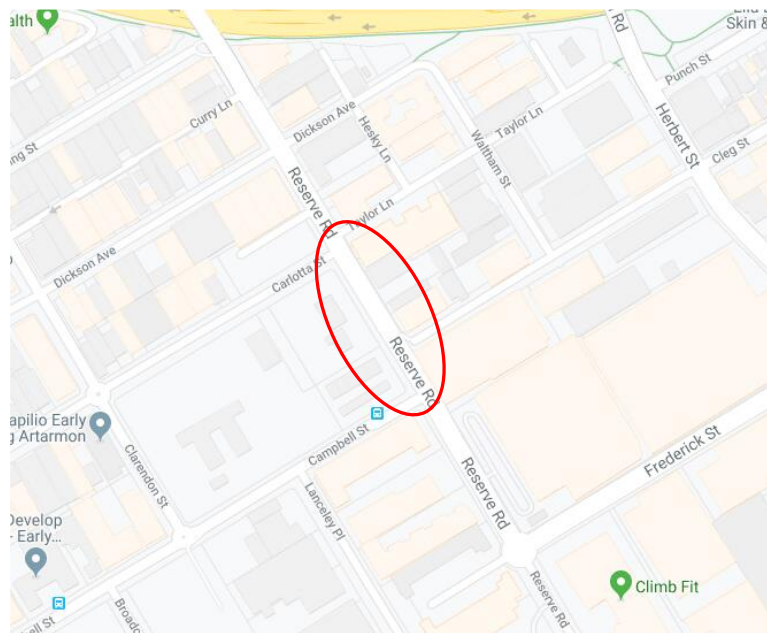
Location:  
Suburb:  
Campbell St  
Ararmon  
Carlotta St  
Frederick St  
UBD Map Ref#:  
GPS/Chainage:

Term:  
Road Type:  
2 Way  
Posted Speed:  
50 km/h  
Operation:  
Partial Road Closure  
Travelled Path:  
AADT:  
>1000



PREPARED BY:  
**Jonathan Luna**  
J.Luna  
EVOLUTION JOB NUMBER:  
**440358591**  
TGS REF. ID: **191930** REV# **00** PAGE: **1 of 1**

# SYSTEMS CONNECT (Surveying / Potholing)



## MINIMUM REQUIREMENTS

- 5 - Traffic Controller/s (inc Team Leader)
- 0 - Vehicle/s (B Class Arrow Board)
- 2 - Cone Truck / POD Truck
- 2 - C Class Arrow Board (Trailer)
- 0 - Truck Mounted Attenuator
- 0 - VMS Board/s (Trailer)
- 0 - Light Tower/s (Trailer)
- 0 - Portable Traffic Signal/s (set of 2)

THIS TGS SHALL BE READ IN CONJUNCTION WITH **NOTES 01**. IT HAS BEEN DEVELOPED TO ALLOW THE CLIENT TO CONDUCT WORKS AT THE LISTED LOCATION AND TO DISPLAY A COMMITMENT TO TRAFFIC AND PEDESTRIAN MANAGEMENT, REPORTING AND REVIEWING. AN ON SITE RISK ASSESSMENT SHALL BE CONDUCTED PRIOR TO ERECTING ANY TRAFFIC CONTROL DEVICES.



Location:  
Suburb:  
1st Cross St:  
2nd Cross St:  
UBD Map Ref#:  
GPS/Chainage:

Reserve Rd  
Artarmon  
Carlotta St  
Frederick St  
...  
...

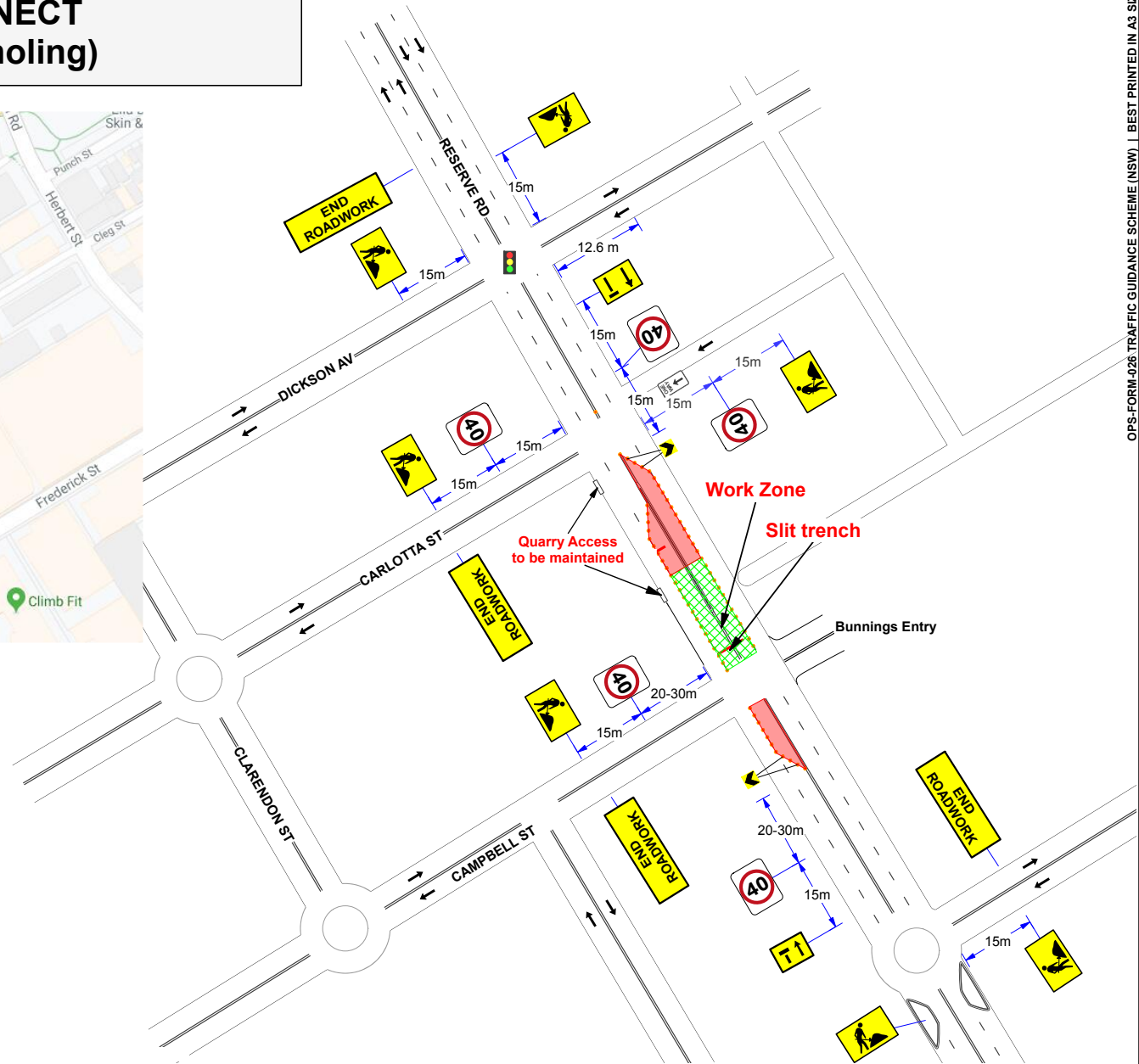
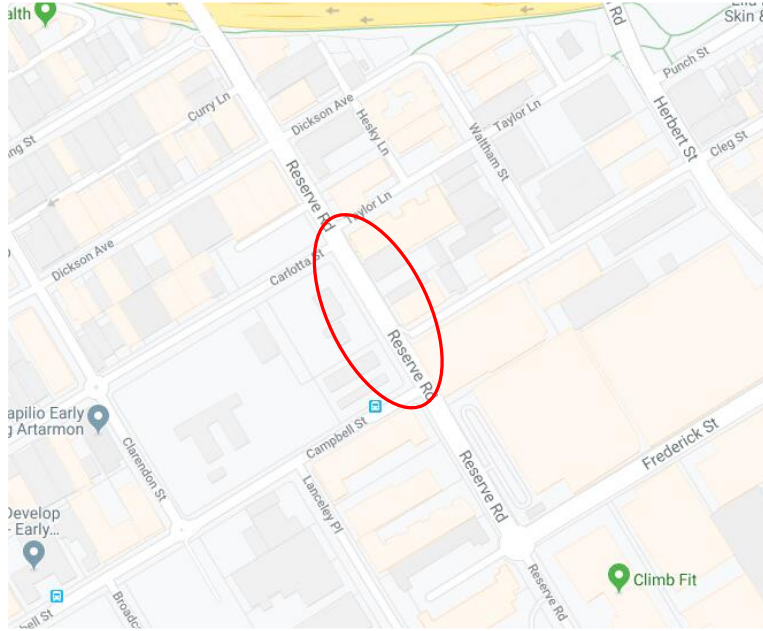
Term:  
Road Type:  
Posted Speed  
Operation:  
Travelled Path:  
AADT:

SHORT  
2 Way  
50 km/h  
CONTRAFLOW  
PAST  
>1000



PREPARED BY:  
Jonathan Luna J. Luna  
PRINCIPAL: 403812735  
EVOLUTION JOB NUMBER:  
**440358591**  
TGS REF. ID: 191979 REV# 00 PAGE: 1 of 1

# SYSTEMS CONNECT (Surveying / Potholing)



## MINIMUM REQUIREMENTS

- 4 - Traffic Controller/s (inc Team Leader)
- 0 - Vehicle/s (B Class Arrow Board)
- 2 - Cone Truck / POD Truck
- 0 - C Class Arrow Board (Trailer)
- 0 - Truck Mounted Attenuator
- 0 - VMS Board/s (Trailer)
- 0 - Light Tower/s (Trailer)
- 0 - Portable Traffic Signal/s (set of 2)

THIS (TGS) SHALL BE READ IN CONJUNCTION WITH **NOTES 01**. IT HAS BEEN DEVELOPED TO ALLOW THE CLIENT TO CONDUCT WORKS AT THE LISTED LOCATION AND TO DISPLAY A COMMITMENT TO TRAFFIC AND PEDESTRIAN MANAGEMENT, REPORTING AND REVIEWING. AN ON SITE RISK ASSESSMENT SHALL BE CONDUCTED PRIOR TO ERECTING ANY TRAFFIC CONTROL DEVICES.



Location:  
Suburb:  
1st Cross St:  
2nd Cross St:  
UBD Map Ref#:  
GPS/Chainage:

Reserve Rd  
Artarmon  
Carlotta St  
Frederick St  
...  
...

Term:  
Road Type:  
Posted Speed  
Operation:  
Travelled Path:  
AADT:

SHORT  
2 Way  
50 km/h  
LN CLOSURE  
PAST  
>1000



PREPARED BY:  
Jonathan Luna J. Luna  
EVOLUTION JOB NUMBER:  
**440358591**  
TGS REF. ID: **192473** REV# **00** PAGE: **1 of 1**

**GENERAL NOTES**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AS1742.3 & TCAMS JULY 2018
2. ALL TRAFFIC CONTROL DIAGRAMS TO BE READ IN CONJUNCTION WITH THE TCAMS JULY 2018.
3. NON-APPLICABLE EXISTING SIGNAGE SHALL BE COVERED EG. SPEED SIGNS DUE TO THE TEMPORARY SPEED ZONE.
4. ALL SIGNAGE DISTANCE SHALL COMPLY WITH AS 1742.3 & TCAMS JULY 2018
5. IN ACCORDANCE WITH TCAMS JULY 2018 TRAFFIC CONTROLLERS TO ASSIST PEDESTRIANS WITH MOVEMENT THROUGH & AROUND THE WORKSITE.
6. SIGNAGE SHALL BE PLACED ON THE SIDE OF THE ROAD ADJACENT TO THE TRAFFIC FLOW.
7. REMOVAL OF TRAFFIC CONTROL SIGNS AND DEVICES SHOULD BE UNDERTAKEN IN THE REVERSE ORDER OF ERECTION, PROGRESSING FROM THE WORK AREA OUT TOWARD THE APPROACHES.

**RECOMMENDED TAPER LENGTH**

APPROXIMATE SPEED OF TRAFFIC KM/H	TRAFFIC CONTROL AT BEGINNING OF TAPER	LATERAL MERGE TAPER	TRAFFIC CONTROL AT END OF TAPER
45 OR LESS	15	0	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
> 105	N/A	110	180

**DIMENSION "D" (AS 1742.3)**

SPEED OF TRAFFIC KM/H	DIMENSION "D" M
45 OR LESS	5m
46 - 55	15m
56 - 65	45m
GREATER THAN 65 KM/H	EQUAL TO POSTED SPEED

**TOLERANCES**

POSITIONING OF SIGNS  
MINIMUM 10% LESS THAN THE DISTANCE OR LENGTHS GIVEN  
MAXIMUM 25% MORE THAN THE DISTANCE OR LENGTHS GIVEN  
SPACING OF DELINEATING DEVICES  
MAXIMUM 10% MORE THAN THE SPACING GIVEN  
NO MINIMUM

**LANE WIDTHS**

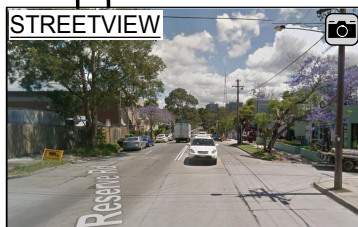
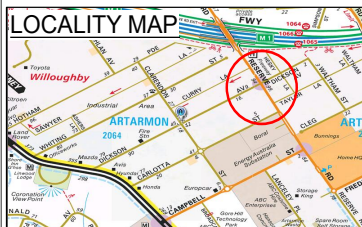
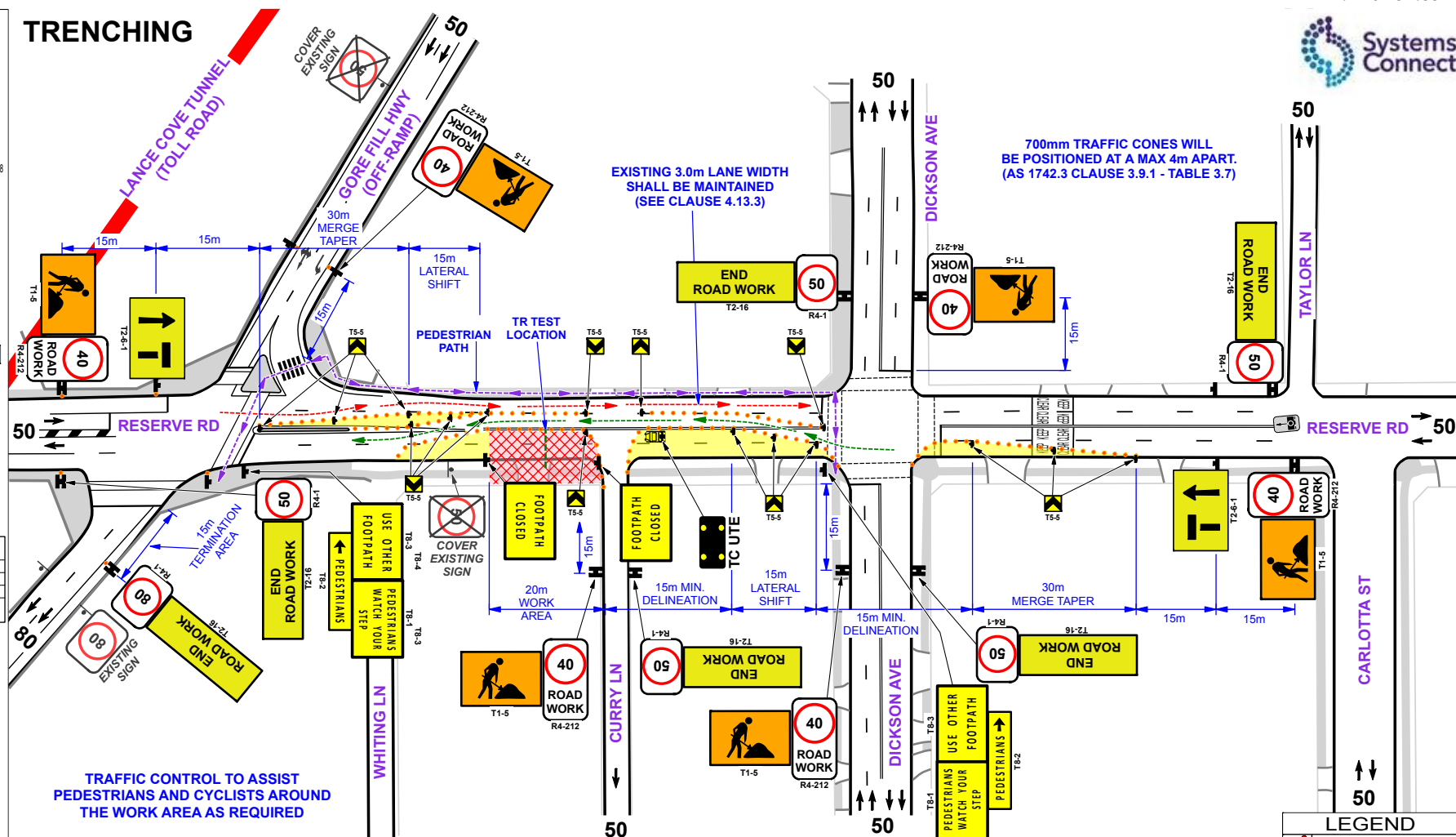
THE MIN LANE WIDTH TO BE PROVIDED THROUGH OR PAST THE WORKSITE SHALL BE 3.0m (3.5m DESIRABLE)

**QUEUE MANAGEMENT PLAN**

AT ALL TIMES DURING THE COURSE OF THE WORK TRAFFIC QUEUES SHALL BE MONITORED TO ENSURE THAT TRAFFIC DOES NOT EXCEED BEYOND THE LIMITS OF ADVANCED WARNING SIGNS

**VEHICLE MOVEMENT PLAN**

ALL WORK VEHICLES TO ENTER AND EXIT WORKSITE UNDER THE DIRECTION OF TRAFFIC CONTROLLER WITH THE TRAFFIC FLOW ON DESIGNATED UHF CHANNEL

**TRENCHING**

**ADDITIONAL INFORMATION:**  
TRAFFIC CONTROLLERS ARE TO CONE/BARRIER AROUND WORK AREA ON FOOTPATH TO FORCE PEDESTRIANS AWAY FROM THE WORKSITE.  
ADVANCE WARNING SIGNAGE TO BE USED FOR PEDESTRIAN MOVEMENTS



TRAFFIC CONTROL SHALL GUIDE OR DIRECT PEDESTRIANS AND OR CYCLISTS PAST, AROUND OR THROUGH THE WORK AREA AS REQUIRED TO MAINTAIN A SAFE ENVIRONMENT IN CONSULTATION WITH THE WORK CREW. SIGNAGE AND DELINEATION PROVIDED AS REQUIRED.

**MINIMUM REQUIREMENTS**

- 2 - Traffic Controller/s (inc Team Leader)
- 1 - Vehicle/s (B Class Arrow Board)
- 0 - Cone Truck / POD Truck
- 0 - C Class Arrow Board (Trailer)
- 0 - Truck Mounted Attenuator
- 0 - VMS Board/s (Trailer)
- 0 - Light Tower/s (Trailer)
- 0 - Portable Traffic Signal/s (set of 2)

**LEGEND**

	ACCREDITED TRAFFIC CONTROLLER
	TRAFFIC CONTROL VEHICLE
	TRUCK MOUNTED ATTENUATOR
	LATERAL HAZARD MARKER
	WORK VEHICLE
	TRAFFIC CONES
	PROPOSED WORK AREA
	PROPOSED EXCLUSION ZONE
	PROPERTY BOUNDARY

REV	DATE	DESCRIPTION	Client:	CPB UGL JV SYSTEMS - SYSTEMS CONNECT LINE WIDE	Term:	SHORT	DESIGNED:	STEVE ROBERTS	SIGNATURE:	0049937533	PWZTMP-RIICWD503D	JOB #	440358591	PLAN #	192143	51 HEATHCOTE ROAD, MOOREBANK, NSW, 2170 PH: 1300 880 481
00	08/08/19	DRAWN: MELISSA JESTRE	Road Name:	RESERVE ROAD	Road Type:	MULTILANE UNDIV	Speed Limit:	50 KPH	Traveller Path:	PAST	Operation:	CONTRAFLOW				
			Works Location:	BETWEEN CARLOTTA STREET AND CURRY LANE												
			Suburb:	ARTARMON												
			Map Reference:	-33.815663, 151.186654												



PLAN MAY NOT BE TO SCALE



**GENERAL NOTES**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AS1742.3
2. ALL TRAFFIC CONTROL DIAGRAMS TO BE READ IN CONJUNCTION WITH THE TCAMS JULY 2018
3. NON-APPLICABLE EXISTING SIGNAGE SHALL BE COVERED EG. SPEED SIGNS DUE TO THE TEMPORARY SPEED ZONE.
4. ALL SIGNAGE DISTANCE SHALL COMPLY WITH AS 1742.3 & TCAMS JULY 2018
5. IN ACCORDANCE WITH TCAMS JULY 2018 TRAFFIC CONTROLLERS TO ASSIST PEDESTRIANS WITH MOVEMENT THROUGH & AROUND THE WORKSITE.
6. SIGNAGE SHALL BE PLACED ON THE SIDE OF THE ROAD ADJACENT TO THE TRAFFIC FLOW.
7. REMOVAL OF TRAFFIC CONTROL SIGNS AND DEVICES SHOULD BE UNDERTAKEN IN THE REVERSE ORDER OF ERECTION, PROGRESSING FROM THE WORK AREA OUT TOWARD THE APPROACHES.

**RECOMMENDED TAPER LENGTH**

APPROXIMATE SPEED OF TRAFFIC KMH	TRAFFIC CONTROL AT BEGINNING OF TAPER	LATERAL MERGE TAPER	MERGE TAPER
45 OR LESS	15	0	15
46 - 55	15	15	30
56 - 65	30	30	60
66 - 75	N/A	70	115
76 - 85	N/A	80	130
86 - 95	N/A	90	145
96 - 105	N/A	100	160
> 105	N/A	110	180

**DIMENSION "D" (AS 1742.3)**

SPEED OF TRAFFIC KMH	DIMENSION "D" M
45 OR LESS	5m
46 - 55	15m
56 - 65	45m
GREATER THAN 65 KMH	EQUAL TO POSTED SPEED

**TOLERANCES**

POSITIONING OF SIGNS  
MINIMUM 10% LESS THAN THE DISTANCE OR LENGTHS GIVEN  
MAXIMUM 25% MORE THAN THE DISTANCE OR LENGTHS GIVEN  
SPACING OF DELINEATING DEVICES  
MAXIMUM 10% MORE THAN THE SPACING GIVEN  
NO MINIMUM

**LANE WIDTHS**

THE MIN LANE WIDTH TO BE PROVIDED THROUGH OR PAST THE WORKSITE SHALL BE 3.0m (3.5m DESIRABLE)

**QUEUE MANAGEMENT PLAN**

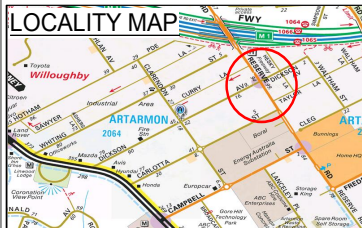
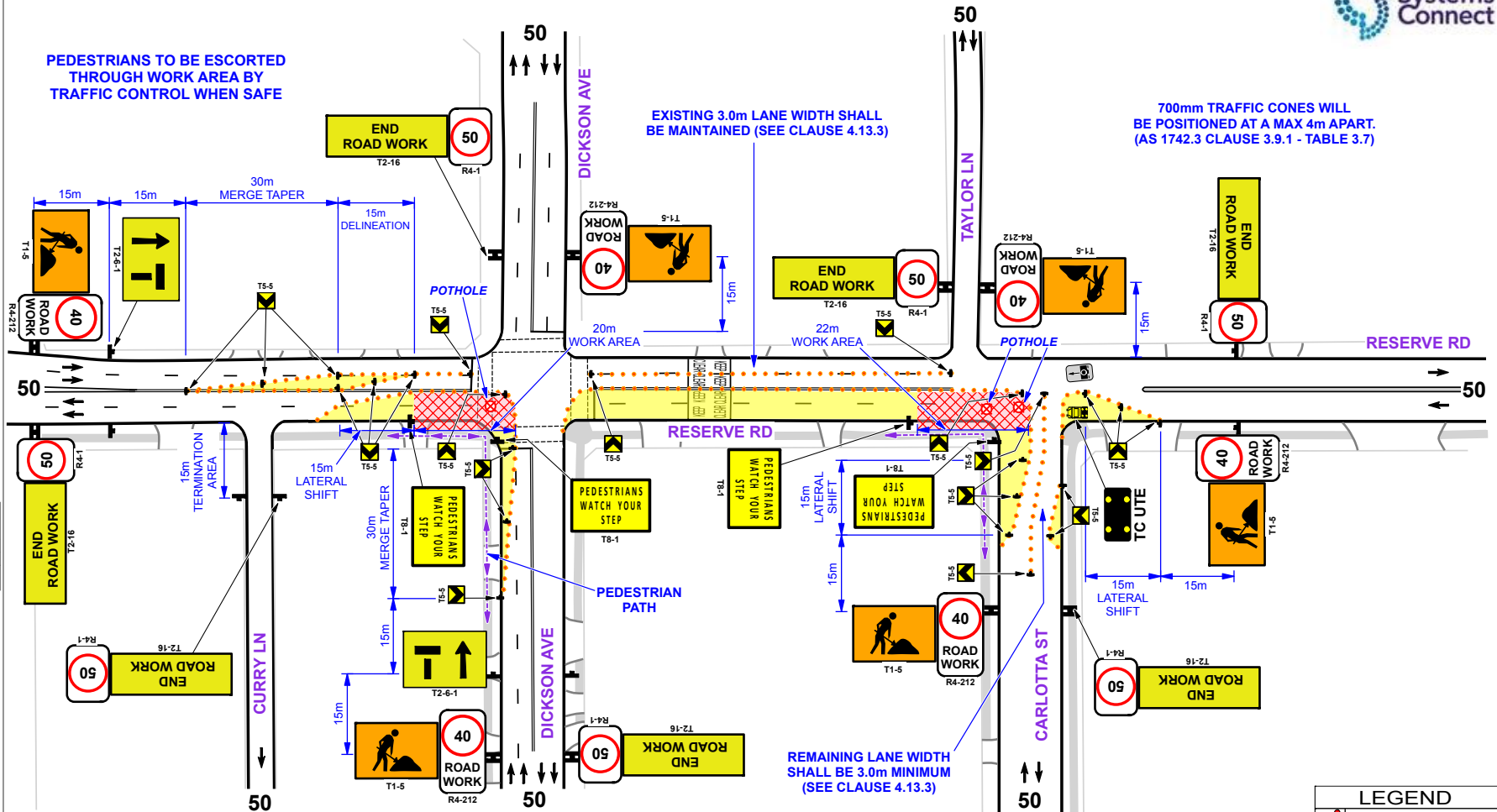
AT ALL TIMES DURING THE COURSE OF THE WORK TRAFFIC QUEUES SHALL BE MONITORED TO ENSURE THAT TRAFFIC DOES NOT EXCEED BEYOND THE LIMITS OF ADVANCED WARNING SIGNS

**VEHICLE MOVEMENT PLAN**

ALL WORK VEHICLES TO ENTER AND EXIT WORKSITE UNDER THE DIRECTION OF TRAFFIC CONTROLLER WITH THE TRAFFIC FLOW ON DESIGNATED UHF CHANNEL

**POTHOLING WORKS**

**PEDESTRIANS TO BE ESCORTED THROUGH WORK AREA BY TRAFFIC CONTROL WHEN SAFE**



**ADDITIONAL INFORMATION:**  
TRAFFIC CONTROLLERS ARE TO CONE/BARRIER AROUND WORK AREA ON FOOTPATH TO FORCE PEDESTRIANS AWAY FROM THE WORKSITE.  
ADVANCE WARNING SIGNAGE TO BE USED FOR PEDESTRIAN MOVEMENTS






TRAFFIC CONTROL SHALL GUIDE OR DIRECT PEDESTRIANS AND OR CYCLISTS PAST, AROUND OR THROUGH THE WORK AREA AS REQUIRED TO MAINTAIN A SAFE ENVIRONMENT IN CONSULTATION WITH THE WORK CREW. SIGNAGE AND DELINEATION PROVIDED AS REQUIRED.

**LEGEND**

	ACCREDITED TRAFFIC CONTROLLER
	TRAFFIC CONTROL VEHICLE
	TRUCK MOUNTED ATTENUATOR
	LATERAL HAZARD MARKER
	WORK VEHICLE
	TRAFFIC CONES
	PROPOSED WORK AREA
	PROPOSED EXCLUSION ZONE
	PROPERTY BOUNDARY

**MINIMUM REQUIREMENTS**

- 2 - Traffic Controller/s (inc Team Leader)
- 1 - Vehicle/s (B Class Arrow Board)
- 0 - Cone Truck / POD Truck
- 0 - C Class Arrow Board (Trailer)
- 0 - Truck Mounted Attenuator
- 0 - VMS Board/s (Trailer)
- 0 - Light Tower/s (Trailer)
- 0 - Portable Traffic Signal/s (set of 2)

 PLAN MAY NOT BE TO SCALE	REVISIONS	REV	DATE	DESCRIPTION	Client:	CPB UGL JV SYSTEMS - SYSTEMS CONNECT LINE WIDE	Term:	SHORT	DESIGNED:	STEVE ROBERTS	SIGNATURE:	 51 HEATHCOTE ROAD, MOOREBANK, NSW, 2170 PH: 1300 880 481
		00	07/08/19	DRAWN: MELISSA JESTRE	Road Name:	RESERVE ROAD	Road Type:	MULTILANE UNDIV	0049937533			
					Works Location:	BETWEEN CARLOTTA STREET AND CURRY LANE	Speed Limit:	50 KPH	PWZTMP-RIICWD503D			
					Suburb:	ARTARMON	Travelled Path:	PAST	JOB #	PLAN #		
					Map Reference:	-33.815663, 151.186654	Operation:	CONTRAFLOW	440358591	192004		

51 HEATHCOTE ROAD,  
MOOREBANK, NSW, 2170  
PH: 1300 880 481

# SURVEY & SAW CUTTING

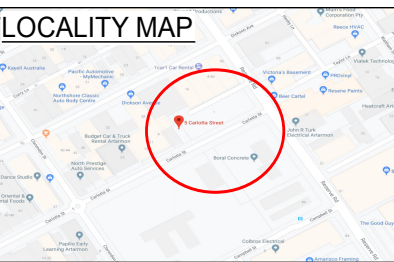
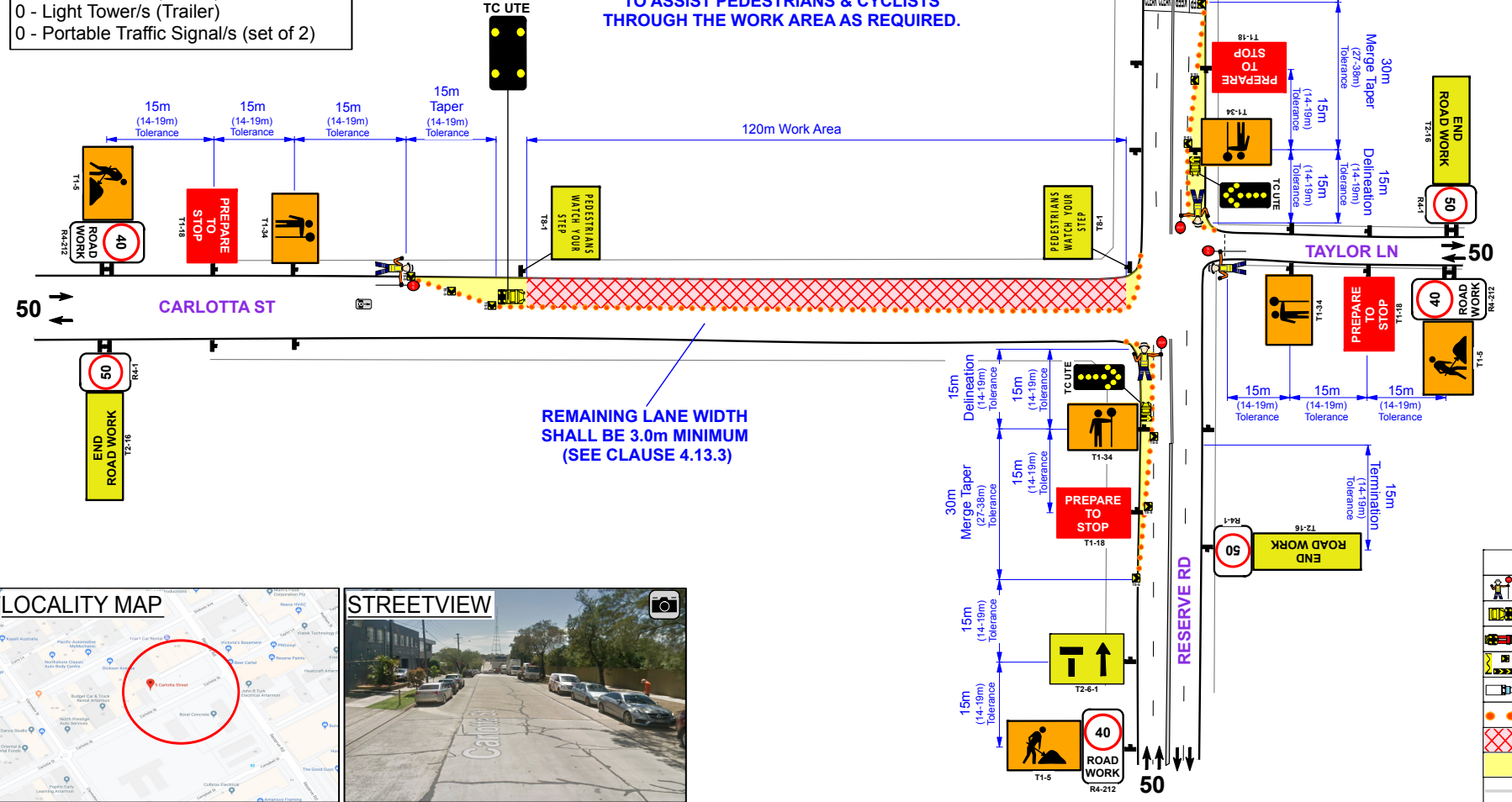
**ADDITIONAL INFORMATION:**  
TRAFFIC CONTROLLERS ARE TO CONE/BARRIER AROUND WORK AREA ON FOOTPATH TO FORCE PEDESTRIANS AWAY FROM THE WORKSITE.  
ADVANCE WARNING SIGNAGE TO BE USED FOR PEDESTRIAN MOVEMENTS

TRAFFIC CONTROL SHALL GUIDE OR DIRECT PEDESTRIANS AND OR CYCLISTS PAST OR THROUGH THE WORK AREA AS REQUIRED TO MAINTAIN A SAFE ENVIRONMENT IN CONSULTATION WITH THE WORK CREW

- MINIMUM REQUIREMENTS**
- 5 - Traffic Controller/s (inc Team Leader)
  - 3 - Vehicle/s (B Class Arrow Board)
  - 0 - Cone Truck / POD Truck
  - 0 - C Class Arrow Board (Trailer)
  - 0 - Truck Mounted Attenuator
  - 0 - VMS Board/s (Trailer)
  - 0 - Light Tower/s (Trailer)
  - 0 - Portable Traffic Signal/s (set of 2)

700mm TRAFFIC CONES  
WILL BE POSITIONED  
AT A MAX 4m APART.  
(AS 1742.3 CLAUSE 3.9.1 - TABLE 3.7)

TRAFFIC CONTROL  
TO ASSIST PEDESTRIANS & CYCLISTS  
THROUGH THE WORK AREA AS REQUIRED.



LEGEND	
	ACCREDITED TRAFFIC CONTROLLER
	TRAFFIC CONTROL VEHICLE
	TRUCK MOUNTED ATTENUATOR
	LATERAL HAZARD MARKER
	WORK VEHICLE
	TRAFFIC CONES
	PROPOSED WORK AREA
	PROPOSED EXCLUSION ZONE
	PROPERTY BOUNDARY

REV	DATE	DESCRIPTION	Client:	SYSTEMS CONNECT LINE WIDE	Term:	SHORT	DESIGNED:	SIGNATURE:
00	09/10/2019	DRAWN: RONNIELL DINGLE	Road Name:	CARLOTTA STREET	Road Type:	TWO WAY	STEVE ROBERTS	
01	10/10/2019	REVISED AS PER CLIENT	Works Location:	BETWEEN CLARENDON STREET & RESERVE ROAD	Speed Limit:	50 KPH	<b>0049937533</b> <b>PWZTMP-RIICWD503D</b>	
			Suburb:	ARTARMON	Travelled Path:	PAST	JOB #	PLAN #
			Map Reference:	-33.815957, 151.185930	Operation:	STOP SLOW	<b>440358591</b>	<b>195400</b>

**evolution**

51 HEATHCOTE ROAD,  
MOOREBANK, NSW, 2170  
PH: 1300 880 481

**GENERAL NOTES**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AS1742.3 & TCAMS 2010
- ALL TRAFFIC CONTROL DIAGRAMS TO BE READ IN CONJUNCTION WITH THE TCAMS 2010.
- NON-APPLICABLE EXISTING SIGNAGE SHALL BE COVERED EG. SPEED SIGNS DUE TO THE TEMPORARY SPEED ZONE.
- ALL SIGNAGE DISTANCE SHALL COMPLY WITH AS 1742.3 & TCAMS 2010
- IN ACCORDANCE WITH TCAMS 2010 TRAFFIC CONTROLLERS TO ASSIST PEDESTRIANS WITH MOVEMENT THROUGH & AROUND THE WORKSITE.
- SIGNAGE SHALL BE PLACED ON THE SIDE OF THE ROAD ADJACENT TO THE TRAFFIC FLOW.
- REMOVAL OF TRAFFIC CONTROL SIGNS AND DEVICES SHOULD BE UNDERTAKEN IN THE REVERSE ORDER OF ERECTION, PROGRESSING FROM THE WORK AREA OUT TOWARD THE APPROACHES.

**RECOMMENDED TAPER LENGTH**

APPROXIMATE SPEED OF TRAFFIC KM/H	TRAFFIC CONTROL AT SHIFT BEGINNING OF TAPER	LATERAL MERGE TAPER
45 OR LESS	15	15
46 - 55	15	30
56 - 65	30	60
66 - 75	N/A	70
76 - 85	N/A	80
86 - 95	N/A	90
96 - 105	N/A	100
> 105	N/A	110

**DIMENSION "D" (AS 1742.3)**

SPEED OF TRAFFIC KM/H	DIMENSION "D" M
45 OR LESS	5m
46 - 55	15m
56 - 65	45m
GREATER THAN 65 KM/H	EQUAL TO POSTED SPEED

**TOLERANCES**

POSITIONING OF SIGNS  
MINIMUM 10% LESS THAN THE DISTANCE OR LENGTHS GIVEN  
MAXIMUM 25% MORE THAN THE DISTANCE OR LENGTHS GIVEN  
SPACING OF DELINEATING DEVICES  
MAXIMUM 10% MORE THAN THE SPACING GIVEN  
NO MINIMUM

**LANE WIDTHS**

THE MIN LANE WIDTH TO BE PROVIDED THROUGH OR PAST THE WORKSITE SHALL BE 3.0m (3.5m DESIRABLE)

**QUEUE MANAGEMENT PLAN**

AT ALL TIMES DURING THE COURSE OF THE WORK TRAFFIC QUEUES SHALL BE MONITORED TO ENSURE THAT TRAFFIC DOES NOT EXCEED BEYOND THE LIMITS OF ADVANCED WARNING SIGNS

**VEHICLE MOVEMENT PLAN**

ALL WORK VEHICLES TO ENTER AND EXIT WORKSITE UNDER THE DIRECTION OF TRAFFIC CONTROLLER WITH THE TRAFFIC FLOW ON DESIGNATED UHF CHANNEL

**REVISIONS**

PLAN MAY NOT BE TO SCALE







# SURVEY WORKS

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AS1742.3 & TCAMS JULY 2018
2. ALL TRAFFIC CONTROL DIAGRAMS TO BE READ IN CONJUNCTION WITH THE TCAMS JULY 2018.
3. NON-APPLICABLE EXISTING SIGNAGE SHALL BE COVERED E.G. SPEED SIGNS DUE TO THE TEMPORARY SPEED ZONE.
4. ALL SIGNAGE DISTANCE SHALL COMPLY WITH AS 1742.3 & TCAMS JULY 2018
5. IN ACCORDANCE WITH TCAMS JULY 2018 TRAFFIC CONTROLLERS TO ASSIST PEDESTRIANS WITH MOVEMENT THROUGH & AROUND THE WORKSITE.
6. SIGNAGE SHALL BE PLACED ON THE SIDE OF THE ROAD ADJACENT TO THE TRAFFIC FLOW.
7. REMOVAL OF TRAFFIC CONTROL SIGNS AND DEVICES SHOULD BE UNDERTAKEN IN THE REVERSE ORDER OF ERECTION, PROGRESSING FROM THE WORK AREA OUT TOWARD THE APPROACHES.

## RECOMMENDED TAPER LENGTH

APPROXIMATE SPEED OF TRAFFIC KMH	TRAFFIC CONTROL AT BEGINNING OF TAPER	LATERAL MERGE TAPER
45 OR LESS	15	0
46 - 55	15	15
56 - 65	30	30
66 - 75	N/A	70
76 - 85	N/A	80
86 - 95	N/A	90
96 - 105	N/A	100
> 105	N/A	110

## DIMENSION "D" (AS 1742.3)

SPEED OF TRAFFIC KMH	DIMENSION "D" M
45 OR LESS	5m
46 - 55	15m
56 - 65	45m
GREATER THAN 65 KMH	EQUAL TO POSTED SPEED

## TOLERANCES

POSITIONING OF SIGNS  
MINIMUM 10% LESS THAN THE DISTANCE OR LENGTHS GIVEN  
MAXIMUM 25% MORE THAN THE DISTANCE OR LENGTHS GIVEN  
SPACING OF DELINEATING DEVICES  
MAXIMUM 10% MORE THAN THE SPACING GIVEN  
NO MINIMUM

## LANE WIDTHS

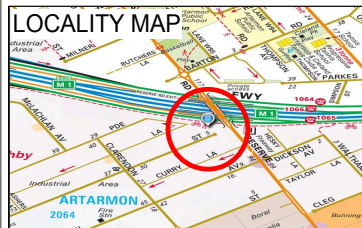
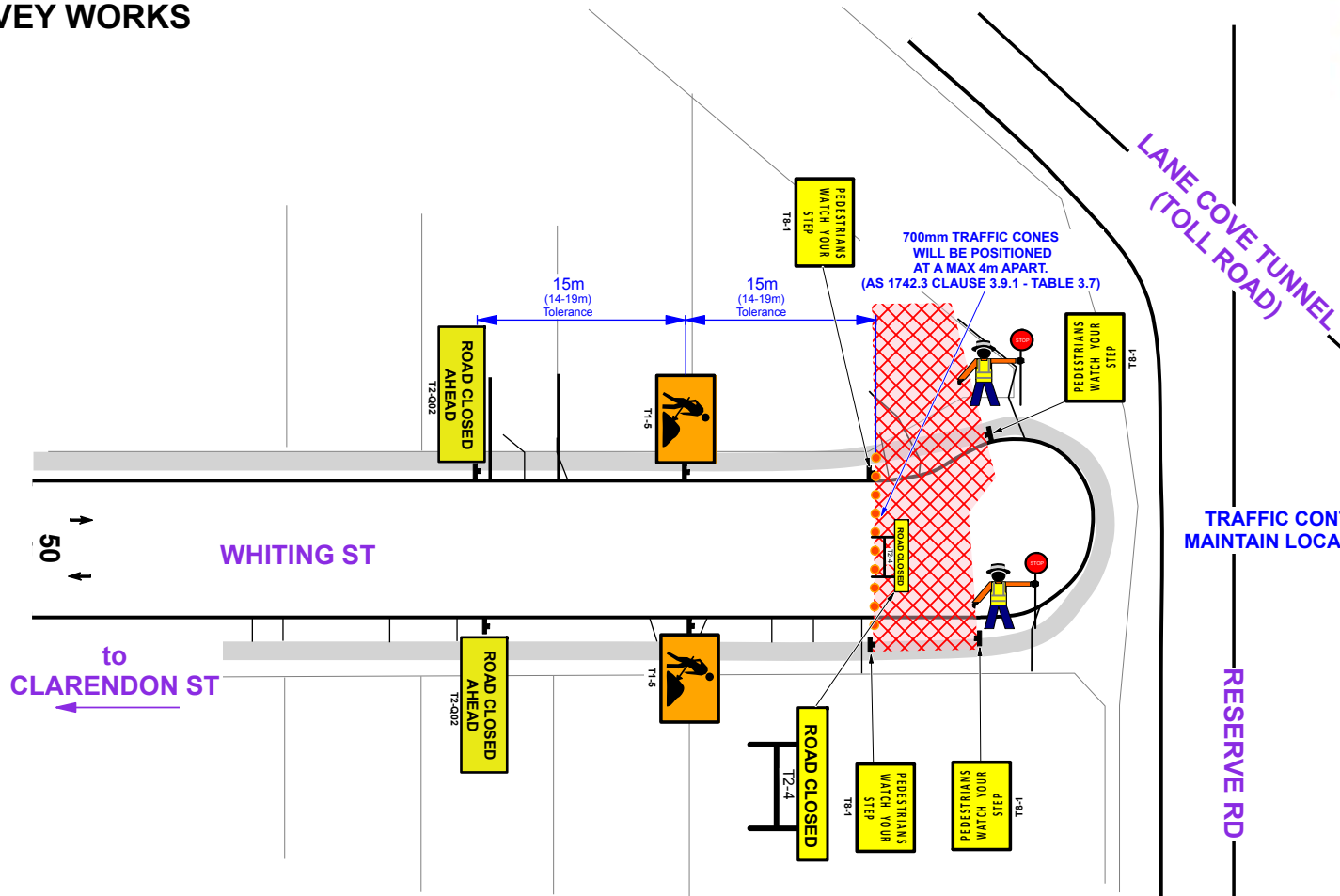
THE MIN LANE WIDTH TO BE PROVIDED THROUGH OR PAST THE WORKSITE SHALL BE 3.0m (3.5m DESIRABLE)

## QUEUE MANAGEMENT PLAN

AT ALL TIMES DURING THE COURSE OF THE WORK TRAFFIC QUEUES SHALL BE MONITORED TO ENSURE THAT TRAFFIC DOES NOT EXCEED BEYOND THE LIMITS OF ADVANCED WARNING SIGNS

## VEHICLE MOVEMENT PLAN

ALL WORK VEHICLES TO ENTER AND EXIT WORKSITE UNDER THE DIRECTION OF TRAFFIC CONTROLLER WITH THE TRAFFIC FLOW ON DESIGNATED UHF CHANNEL






- ### MINIMUM REQUIREMENTS
- 2 - Traffic Controller/s (inc Team Leader)
  - 1 - Vehicle/s (B Class Arrow Board)
  - 0 - Cone Truck / POD Truck
  - 0 - C Class Arrow Board (Trailer)
  - 0 - Truck Mounted Attenuator
  - 0 - VMS Board/s (Trailer)
  - 0 - Light Tower/s (Trailer)
  - 0 - Portable Traffic Signal/s (set of 2)

### LEGEND

	ACCREDITED TRAFFIC CONTROLLER
	TRAFFIC CONTROL VEHICLE
	TRUCK MOUNTED ATTENUATOR
	LATERAL HAZARD MARKER
	WORK VEHICLE
	TRAFFIC CONES
	PROPOSED WORK AREA
	PROPOSED EXCLUSION ZONE
	PROPERTY BOUNDARY

**TRAFFIC CONTROL SHALL GUIDE OR DIRECT PEDESTRIANS AND OR CYCLISTS PAST, AROUND OR THROUGH THE WORK AREA AS REQUIRED TO MAINTAIN A SAFE ENVIRONMENT IN CONSULTATION WITH THE WORK CREW. SIGNAGE AND DELINEATION PROVIDED AS REQUIRED.**

**ADDITIONAL INFORMATION:**  
TRAFFIC CONTROLLERS ARE TO CONE/BARRIER AROUND WORK AREA ON FOOTPATH TO FORCE PEDESTRIANS AWAY FROM THE WORKSITE.  
ADVANCE WARNING SIGNAGE TO BE USED FOR PEDESTRIAN MOVEMENTS

	REV	DATE	DESCRIPTION	Client:	CPB UGL JV - SYSTEMS CONNECT LINE WIDE	Term:	SHORT TERM	DESIGNED:	STEVE ROBERTS	
	00	04/09/19	DRAWN: HERNIE JAN D.CABE	Road Name:	WHITING STREET	Road Type:	TWO WAY	SIGNATURE:		
				Works Location:	BETWEEN CLARENDON STREET & CUL-DE-SAC	Speed Limit:	50KPH			
				Suburb:	ARTARMON	Travelled Path:	PAST			
				Map Reference:	-33.814199, 151.185185	Operation:	ROAD CLOSURE	JOB #	440358591	
								PLAN #	193446	

PLAN MAY NOT BE TO SCALE

51 HEATHCOTE ROAD,  
MOOREBANK, NSW, 2170  
PH: 1300 880 481

## 14. **Appendix B – Consultation/Comments Record**

# Sydney Metro City & Southwest Stakeholder Comment Tracker

Desc: Reserve Road, Artarmon  
Document: SMC5W1WC-SYC-ATS-TF-PLN-000934 - TMP  
Version: A  
Date of review: 30/08/2019

RESPONSE STATUS  
O Open  
C Closed  
CS Closed subject to additional action / information



Transport  
for NSW



Transport  
Roads & Maritime  
Services

Item No	Contract	Contractor	Doc Rev	Requires main Ref (COA or REMM)	Stakeholder	Reviewer	Date	Item Description, Para, Para, Dig ref	Comment by each Organisation	Contractor Response	Date	Response Status (date)	RMS response (date)	Contractor Response	Response Status (date)
1	LWC	SYC	1		RMS	SS	30-Aug-2019	3.1	The indicative durations gives the false impression that all stages will be occurring at once between the proposed dates. Please be more specific with the durations for each stage of work.	The work will take approx. 6 weeks to complete. Due to the dynamic work, work will progress to the next site as soon as data is collected. Duration for each stage of work corresponding to each TCP is now shown on item 3.1.		25/09/2019	Noted		
2	LWC	SYC	1		RMS	SS	30-Aug-2019	3.2	The propose route does not appear to include Artarmon Road?	Artarmon Road is not part of the work area. TMP will be updated on Section 3.1		25/09/2019	Noted		
3	LWC	SYC	1		RMS	SS	30-Aug-2019	3.2	The Artarmon Burnings open unit 19m Man-Pit. In addition, some businesses in the area may operate 24/7. Have these businesses been consulted?	Access will be maintained at all times. Trenches are not across any driveways. Communication notice and community team has completed "door knocking" introduction to the business operation.		25/09/2019	Noted		
4	LWC	SYC	1		RMS	SS	30-Aug-2019	4	What type of vehicles will be used in the worksite to carry out the work? Number of movements etc.	For all trench, a vec truck of 12m long, bore holes will be 8.8m truck with bore rig attachments. These are not oversized vehicles and their movement is one off and is one movement per location. Aim to complete the sampling, survey and move out.		25/09/2019	Noted		
5	LWC	SYC	1		RMS	SS	30-Aug-2019	10	Contact details of site personnel?	Supervisor in charge- Dean Kellan: Phone # 0437 261 824.		25/09/2019	Noted. Details should be included in the TMP	TMP in Rev C has contacts details added in Section 11.6. All future TMPs will have this table added.	
6	LWC	SYC	1		RMS	SS	30-Aug-2019	11.6	Consider Royal North Shore Hospital as a key stakeholder due to close proximity to the works.	Campbell St leading to the RNSH is not out off. It is still passable. It is acknowledged that Campbell St and Carolla St are 2 of the aged posted streets as Emergency Route via Campbell St-Pacific Highway SB to Herbert St. SCLWW will provide details to RNSH for information. SL has contacted RNSH - Renee McCarthy - regarding the upcoming work.		25/09/2019	Noted		
7	LWC	SYC	1		RMS	SS	30-Aug-2019		Intersection should be shown it as 4 leg for clarity. How far is the start of the work zone from the intersection and how wide is the work zone? Does the exclusion zone need to extend to the intersection? Road users who want to go East on Campbell St from Reserve Rd may be confused with the contra-flow arrangement. What controls are in place to prevent this?	Burnings entrance is now shown. TCP is updated to show the sight curve leading from Reserve Road to Campbell. Detectors are provided to guide traffic as standard delineation items.		25/09/2019	Noted		
8	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192130	The Road Closed sign gives the false impression that the whole road is closed	Agreed. The closure could be better managed with Lane Closed sign.		25/09/2019	Noted		
9	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 191979	Sign showing lane configuration on the southern side (bottom of page) shows incorrect lane configuration.	Lane status sign is now updated.		25/09/2019	Noted		
10	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 191979	Intersection of Reserve Rd/Campbell Street is signalled. Intersection should be shown as 4 leg for clarity. The signal operations allow left turn movement from Campbell St to Reserve Rd. Why is there a NLT sign?	Similar to item 7, Burnings signalled driveway is shown. NLT sign removed.		25/09/2019	Noted		
11	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 191979	The road closed sign gives the false impression that the whole road is closed	Road Closed is replaced with Lane Closed		25/09/2019	Noted		
12	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 191979	If a vehicle turning right from Carolla St to Reserve Rd into the wrong direction of travel, how will this be managed/prevented?	There is a sufficient delineation. Additional Chevron sign could be used. A TC and a TC vels is used to direct traffic to the correct lane.		25/09/2019	Noted		
13	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192473	Intersection of Reserve Rd/Campbell St should be shown as 4 leg for clarity	Similar to item 7, Burnings signalled driveway is shown.		25/09/2019	Noted		
14	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192473	Silt trenches exposed to live traffic?	No. Trench is at least 1.2m away from traffic lanes.		25/09/2019	Noted. However, in the TCP, the silt trench is still shown on the live traffic lanes? Please confirm.	Trench is going to be 1.2m away from live lanes. TCP # 191979 and 192473 indicative trenches are removed from the live lanes on the TCPs.	
15	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192473	Lane configuration signage on bottom of page incorrect?	Lane status sign is now updated.		25/09/2019	Noted		
16	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192004	Are both work zones required at the same time?	Yes. Work area will start on the western side.		25/09/2019	Noted	Further clarifying the previous comments, work will start on the western side and a second work site will be established on the other end shortly. A multiple crew will be working - one for scanning, one for ground breaking etc- thus the set up per TCP will be required to accommodate the various scopes of the work. However, if a task is completed sooner, consideration to reduce the length of the work zone/split the work zone could be considered.	
17	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192004 & 192143	What controls are in place to ensure that vehicles from Dickson Ave or Carolla St do not end up in the wrong direction of travel?	Similar to item 12.		25/09/2019	Noted		
18	LWC	SYC	1		RMS	SS	30-Aug-2019	App A - 192004 & 192143	Advance warning signs along Reserve Rd appears to be missing?	Road Work Ahead is not necessary for a short term work. A Workmen symbol is sufficient.		25/09/2019	Noted		
19	LWC	SYC	1		SCO	S.Brown	29/08/2019	1.3 Executive Summary	The executive summary provides very little detail about the type of work being carried out, particularly the road locations and the duration of the works.	TMP from Section 1.1 to 1.3 is a standard overall project overarching statement. Details for the temporary work is detailed from section 3.0. TMP is rephrased to suit the details of work.				24/09/2019	
20	LWC	SYC	1		SCO	S.Brown	29/08/2019	4.1 Road Network	This section should briefly summarise all road impacted by the works and other attributes of this network, including traffic signals impacted and bus routes.	This section is now revised on Rev 1 with a brief description.			Noted		24/09/2019
21	LWC	SYC	1		SCO	S.Brown	29/08/2019	5.1 Road Network	The final point states: "Provide road users with changed traffic condition information". It is not clear whether this refers to static signage, VMS and/or "Live Traffic" updates.	This statement is not applicable for short term early investigation work as no changed traffic conditions will occur. Next TMP structure will be refined and simplified.			Noted		24/09/2019
22	LWC	SYC	1		SCO	S.Brown	29/08/2019	6.0 Assessment of Public Transport Services Affected	The impact to specific bus routes and/or other public transport services should be detailed in this section. This section should include reference to consulting SCO's transport integration team, as per other Systems Connect works.	Work on Campbell St closed to Reserve Rd has a bus stop # 206450 serving M20 bus which ends at 2013 on the southbound run. No buses should be impacted after 2013. There are no other bus stops along Reserve Road, Carolla St or Dickson Ave.			Noted. In future, this information should be included in the TMP	Item 6.1 is revised and future TMP to have these details as required.	24/09/2019
23	LWC	SYC	1		SCO	S.Brown	29/08/2019	9.1 Maintaining Access	This section should describe what size vehicles are to be used for the investigation work. It should also detail whether that swept paths have been checked for all relevant heavy vehicle turns using the worksite.	For all trench, a vec truck of 12m long, bore holes will be 8.8m truck with bore rig attachments. These are not oversized vehicles. Heavy vehicles turn are maintained. Traffic controllers are available to assist as required.			Noted. In future this info should be included in the TMP	Item 9.1 is revised and future TMP to have these details as required.	24/09/2019
24	LWC	SYC	1		SCO	S.Brown	29/08/2019	9.3 Managing Bicycles	This section should identify whether any formal bike routes are impacted by these works and if so, what mitigation measures are proposed	Cycle routes are not available along Reserve Road. A recommended cycle route exists at Carolla St to Taylor Lane. On a recommended cycle routes, cyclist to follow standard road rules.			Noted. In future this info should be included in the TMP	Item 9.2 is revised and future TMP to have these details as required.	24/09/2019
25	LWC	SYC	1		SCO	S.Brown	29/08/2019	10.4 Manage Unplanned Incidents on the Road Network	In the event of an incident that has an impact on traffic and/or transport the Transport Management Centre's Transport Operations Room should be contacted at the earliest possible time. For further detail regarding escalation procedures or emergency response plans, seek guidance from SCO / RMS.	Noted.			Noted		24/09/2019
26	LWC	SYC	1		SCO	S.Brown	29/08/2019	11.5 Identification of Key Stakeholders	Please include SCO as a key stakeholder	Noted. SCO added to the TMP Section 11.5 on Rev 1.			Noted		24/09/2019
27	LWC	SYC	1		SCO	S.Brown	29/08/2019	12.7 & Appendix A	How will the driveways within the closed lane segments be managed (eg. under traffic control or will there be a gap in the traffic cones or barriers)? If there are any properties where alternative access is required, this should be detailed.	It will be managed under traffic control. At the time of operations, it is not expected driveways movement is constant.			Noted		24/09/2019
28	LWC	SYC	1		SCO	S.Brown	29/08/2019	Appendix A - Plan 192143	It should be noted that Curry Lane is one way westbound and not two-way as shown in the TCP	Noted. TCP # 192143 is updated.			Accepted		24/09/2019
29	LWC	SYC	1		SCO	S.Brown	29/08/2019	Appendix A	Please provide swept paths for turning movements at Curry Lane, Dickson Ave and Carolla St	Soil sampling process is quick. Work area is under traffic control and turning into side street is not impossible.			Accepted		24/09/2019
30	LWC	SYC	1		SCO	S.Brown	15/05/2019	General	ROL will need to be applied for from the TMC at least 10 business days prior to commencement of works	ROL applied min. 10 days before work start.			Noted		24/09/2019
31	LWC	SYC	1		SM	JOSE ARGU	2019-08-30	General	No Comments	Nil					
32	LWC	SYC	1		SM	Ken Hind	2019-08-29	General	Ensure pothole does not impact in-ground cabling for traffic signals. Is it proposed to operate this intersection under traffic control while potholing occurring? Traffic signals would need to be switched to fixed time by RMS as northbound detectors would not be operational. Is traffic control proposed to assist traffic exiting Carolla Street with TC to be utilised in Reserve Road and sight distance would be restricted.	Each work area will have a workpack containing UG details and relevant permits. TCS are to remain as is. No plan to turn the signal to flashing amber or fixed time. TC will be assisting side street traffic exiting to Reserve Road.					
33	LWC	SYC	1		SM	Ken Hind	2019-08-29	General	Need to provide a suitable detour and signposting for left turning traffic from Campbell Street to Reserve Road.	No detour staging is planned. Left turn traffic from Campbell to follow left chevron and/or direction from traffic controllers.					
34	LWC	SYC	1		SM	Ken Hind	2019-08-29	General	Works in Campbell Street will require RMS to adjust the operation of the traffic signals as westbound traffic will be passing over a detector.	TCS could be left as is. Detector will be triggered by Campbell approach.					
35	LWC	SYC	1		SM	Ken Hind	2019-08-29	General	Should include 'and/or Willoughby Council' in third paragraph after Roads and Maritime Services	Noted. TMP will be updated in Section 11.6 in Rev 1.					
36	LWC	SYC	1		SM	Ken Hind	2019-08-29	General	Is each section of work (TGS 01-05) proposed to be a month long? Either include all sections as separate time periods or provide as one line.	Yes. The program is 6 weeks long. Work is highly dynamic. A one line diagram will be more suitable for this highly dynamic program.					
37	LWC	SYC	1		SM	Chris Berg	2019-08-23	General	It appears the content of the TMP has been copied and pasted from another document. Like consideration has been given to formatting, spelling and correct punctuation. I would recommend a review of the entire document before releasing it.	Noted. TMP will be updated with more robust structure.					
38	LWC	SYC	1		SM	JOSE ARGU	2019-08-23	General	No Comments	Nil					

39	LWC	SYC	1	Willough by Council	28-Aug-2019	General	<p>Council will require permits to be provided for the implementation of the TMP and TCP.</p> <p>The Council permits are in addition to RMS, SCO, TNSW, TNSW Transport Management Centre approval to the TMP and Road Occupancy Licences. Charges available on its website (use link below):</p> <p><a href="http://www.willoughby.nsw.gov.au/About/Council/Forms-Policies--Publications/CouncilFees/Charges/">http://www.willoughby.nsw.gov.au/About/Council/Forms-Policies--Publications/CouncilFees/Charges/</a></p> <p>Contact is Gordon Farrelly Traffic and Transport Team Leader</p>	Council permit will be applied in parallel.						
40	LWC	SYC	1	Willough by Council	28-Aug-2019	TGS 191930	<p>&gt;Management of street parking to ensure traffic capacity in Campbell Street Heavy vehicles turning paths i.e. left and right turn from Reserve Road into Campbell St.</p> <p>&gt;Why is southern footpath of Campbell St closed?</p> <p>&gt;Safe transition for eastbound traffic in Campbell St</p> <p>&gt;Safe pedestrian crossing of Campbell St in the vicinity of Lancelotti Pk?</p> <p>&gt;40 km/h speed limit?</p> <p>&gt;Area is dark and should be assessed for additional lighting for traffic and pedestrians.</p> <p>&gt;North side of Campbell Street is used for bus layover – will need to manage in collaboration with State Transit Authority.</p>	<p>&gt; Shoulder parking will be temporarily removed to allow flow of traffic. Should any heavy vehicles need to turn, traffic control could assist as the road is under traffic control. TCP is updated with a gradual taper on the corner to provide extra turning radius.</p> <p>&gt;The southern footpath has to be closed when trenching work is crossing the footpath. The closure is only temporary as once the data is taken, the footpath section could be backfilled or paved.</p> <p>&gt; Road is with a sufficient for transition.</p> <p>&gt;40 roadwork will be installed on this TCP.</p> <p>&gt;Bus stop serving Route M20 finished at 20:13.</p>						
41	LWC	SYC	1	Willough by Council	28-Aug-2019	TGS 191979	<p>&gt;Management of street parking to ensure traffic capacity in Reserve Road?</p> <p>&gt;Safe intersection operation through the worksite i.e. Carlotta St No left turn restriction from Campbell St into Reserve Road – Prefer that the left turn movement is retained.</p> <p>&gt;Where is the detour route?</p> <p>See above - Heavy vehicles turning paths i.e. left turn from Campbell St into Reserve Road.</p> <p>&gt;40 km/h speed limit should be introduced in advance of the worksite.</p> <p>&gt; Incorrect sign in Reserve Road north of Frederick St Pedestrian access / movement through the worksite is unclear?</p> <p>Needs to be safe at all times. Area is dark and should be assessed for additional lighting for traffic and pedestrians.</p> <p>&gt;Consider separators i.e. cones in Reserve Road to separate opposing flows in contra flow section.</p> <p><del>Consider traffic controller to regulate traffic movements and control traffic if necessary.</del></p>	<p>&gt;Shoulder parking will need to be temporarily restricted within the contraflow area to allow 2 directional traffic flow.</p> <p>&gt; Side street access is still maintained. No detour plan is planned. Traffic cones to be placed on taper to allow turning radius.</p> <p>&gt; 40km/h signs will be added to the TCP.</p> <p>&gt;The incorrect lane status sign is revised.</p> <p>&gt;Light boxes will be available for any introduced route.</p> <p>&gt; Noted. For this application, traffic cones is more suitable for quick deployment and removal.</p> <p>&gt; Traffic controllers will be stationed on key areas to assist.</p>						
42	LWC	SYC	1	Willough by Council	28-Aug-2019	TGS 192473	<p>Management of street parking to ensure traffic capacity in Reserve Road? Safe intersection operation through the worksite i.e. Carlotta St Incorrect sign in Reserve Road north of Frederick St Area is dark and should be assessed for additional lighting for traffic and pedestrians.</p>	<p>&gt;Shoulder parking will need to be temporarily restricted within the contraflow area to allow 2 directional traffic flow.</p> <p>Refer to similar response to item # 57.</p>						
43	LWC	SYC	1	Willough by Council	28-Aug-2019	TGS 192004	<p>Safe intersection operation through the worksite i.e. Carlotta St Heavy vehicles turning paths i.e. left turn into / out of Dickson Ave and Carlotta St Transition into worksite (northbound) and back to normal situation (southbound) in Reserve Road south of Carlotta St Area is dark and should be assessed for additional lighting for traffic and pedestrians.</p>	<p>&gt; Placement of cones will be on a smooth taper to allow maximum turning area. Traffic controllers are positioned on key areas to assist. Carlotta south is not a within the work zones or introduced diversion path, additional lighting is not necessary. Refer to similar response to item # 57.</p>						
44	LWC	SYC	1	Willough by Council	28-Aug-2019	TGS 192143	<p>Management of street parking to ensure traffic capacity i.e. Reserve Road? Safe intersection operation through the worksite i.e. Curry Lane Heavy vehicles turning paths i.e. left turn into / out of Curry Lane, right turn from Dickson Ave</p>	<p>&gt;Shoulder parking will need to be temporarily restricted within the contraflow area to allow 2 directional traffic flow.</p> <p>Refer to similar response to item # 57.</p>						

## Sim, Mong

---

**From:** Sim, Mong  
**Sent:** Wednesday, 18 September 2019 10:59 AM  
**To:** Rabih Bekdache  
**Cc:** Bushara Gidies; Patrick Wu; 'Egwin Herbert'  
**Subject:** RE: upcoming work near bus stops at Foveaux St, Surry Hills; and Campbell St, Artarmon

Rabih,

Thanks for the confirmation.

Regards,

Regards

## Mong Sim

Project Engineer - Systems Connect  
Sydney Metro City & Southwest Line-wide Works



Levels 1 and 3 116 Miller Street, North Sydney, NSW 2060, Australia  
**T M** 0448 378 883  
**E** [Mong.Sim@sclww.com.au](mailto:Mong.Sim@sclww.com.au)

---

**From:** Rabih Bekdache [mailto:rbekdache@transitsystems.com.au]  
**Sent:** Wednesday, 18 September 2019 10:57 AM  
**To:** 'Egwin Herbert' <Egwin\_Herbert@sta.nsw.gov.au>  
**Cc:** Sim, Mong <Mong.Sim@sclww.com.au>; Bushara Gidies <Bushara\_Gidies@sta.nsw.gov.au>; Patrick Wu <Patrick\_Wu@sta.nsw.gov.au>  
**Subject:** RE: upcoming work near bus stops at Foveaux St, Surry Hills; and Campbell St, Artarmon

Hello Mong

No objections from TSA as no service will be affected

Regards



# Rabih Bekdache

## NETWORK PLANNER

**M:** 0490 121 539  
**P:** (02) 8118 7214  
**A:** 282 Parramatta Rd Burwood 2134  
**E:** [rbekdache@transitsystems.com.au](mailto:rbekdache@transitsystems.com.au)  
**w:** [transitsystems.com.au](http://transitsystems.com.au)

---

**From:** Egwin Herbert <[Egwin\\_Herbert@sta.nsw.gov.au](mailto:Egwin_Herbert@sta.nsw.gov.au)>  
**Sent:** Wednesday, 18 September 2019 8:10 AM  
**To:** Rabih Bekdache <[rbekdache@transitsystems.com.au](mailto:rbekdache@transitsystems.com.au)>  
**Cc:** 'Mong.Sim@sclww.com.au' <[Mong.Sim@sclww.com.au](mailto:Mong.Sim@sclww.com.au)>; Bushara Gidies <[Bushara\\_Gidies@sta.nsw.gov.au](mailto:Bushara_Gidies@sta.nsw.gov.au)>; Patrick Wu <[Patrick\\_Wu@sta.nsw.gov.au](mailto:Patrick_Wu@sta.nsw.gov.au)>  
**Subject:** upcoming work near bus stops at Foveaux St, Surry Hills; and Campbell St, Artarmon

Rabih,

Can you comment on Campbell Street, Artarmon.

Regards

Egwin Herbert  
Traffic and Service Manager  
Northern & Western Region  
P: 9941 6885 | M: 0400 185 292  
Email: [egwin\\_herbert@sta.nsw.gov.au](mailto:egwin_herbert@sta.nsw.gov.au)



---

**From:** Bushara Gidies  
**Sent:** Wednesday, 18 September 2019 6:52 AM  
**To:** 'Sim, Mong'; Egwin Herbert; Patrick Wu  
**Cc:** Orel, Helena; Tee, Wee  
**Subject:** RE: upcoming work near bus stops at Foveaux St, Surry Hills; and Campbell St, Artarmon

Mong,

Regarding Foveaux St, I've no objection to night works 23 September between 21:00\_05:00 as long as parking removed where the bus stop should be relocated.

Egwin/ Patrick,

Please comment regarding Artarmon.

Regards

**Bushara Gidiess**  
Traffic & Services Manager  
Eastern Region | State Transit  
MOB : 0403 073 658  
Port Botany Depot  
[Bushara\\_Gidies@sta.nsw.gov.au](mailto:Bushara_Gidies@sta.nsw.gov.au)  
[www.transport.nsw.gov.au/state-transit](http://www.transport.nsw.gov.au/state-transit)



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**From:** Sim, Mong [<mailto:Mong.Sim@sclww.com.au>]  
**Sent:** Tuesday, 17 September 2019 6:16 PM  
**To:** Bushara Gidies  
**Cc:** Orel, Helena; Tee, Wee  
**Subject:** upcoming work near bus stops at Foveaux St, Surry Hills; and Campbell St, Artarmon

Bushara,

Please note that an upcoming work for early investigation work for the Sydney Metro (Systems Connect) (similar to the work along Elizabeth St as we discussed last week) – may impact the following bus stops.

1. Bus Stop # 201039 at Foveaux St eastbound (night work)
2. Bus Stop # 206450 at Campbell St at Artarmon (night work)

Work area at Fovreaux St may encroach the flagpole of the bus stop by the traffic set ups. Proposed to relocate this bus stop approx.. 30m to the east. Start date approx. 23 Sept (subject to change). 1 shift.

Work at Campbell St should be fine as the last bus is approx.. 20:13. Work only starts after 21:00. Start date 30 Oct (subject to change). 1 shift.

Please advise if the proposed bus stop relocation is acceptable.

TCPs for the work is attached for your information.

Regards

**Mong Sim**

Project Engineer - Systems Connect  
Sydney Metro City & Southwest Line-wide Works



Levels 1 and 3 116 Miller Street, North Sydney, NSW 2060, Australia  
**T M** 0448 378 883  
**E** [Mong.Sim@sclww.com.au](mailto:Mong.Sim@sclww.com.au)

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## LWC General Correspondence

**Reference No:** SMCSWLWC-RMS-LWC-GEN-000005

**Project Title:** Sydney Metro City & Southwest - LWC, TSOM

**Contract No:** LWC - Line Wide Contracts

**Orig Ref No:**

**DLM:**

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**Date:** 27 September 2019, 03:54 PM

**From:** Quac Minh LA, Roads and Maritime Services

**To:** Susan Dai, Systems Connect

**CC:** Jo Haggerty, Sydney Metro  
Chris Berg, Sydney Metro  
Carol Shannon, Sydney Metro  
Steve Brown, Sydney Coordination Office  
Carl Mella, Roads and Maritime Services  
Anthony McMahon, Roads and Maritime Services  
JOSE ARGUETADOMINGUEZ, Sydney Metro  
Ken Hind, Sydney Metro  
Jake Coles, Sydney Coordination Office  
Vidushi Handa, Sydney Coordination Office  
Mitchell Jeanjaquet, Sydney Metro  
Shannon Souksavong, Roads and Maritime Services  
Hayden Wright, Sydney Metro  
Transmittal SM OpenAccess, Sydney Metro  
Mathew Billings, Systems Connect  
Mathew Johnston, Systems Connect  
James Logie, Systems Connect  
Nathan Hoffmeister, Sydney Metro  
Ben Armstrong, Sydney Metro  
Adam Koutsamanis, Sydney Metro  
Mark Marriott, Sydney Metro  
Jill Downing, Systems Connect  
Kirimaru Friscan, Systems Connect  
LWC Systems Connect Transfer, Systems Connect  
Joseph Cruz, Sydney Metro  
Vanessa Tavares, Systems Connect  
Kate Truscott, Systems Connect  
Wee Lee Tee, Systems Connect  
Scott Brown, Systems Connect

**Subject:** **SC Response to External Stakeholder RMS, SCO and Willoughby Council Review Comment for Traffic Management Plan - Artarmon Bulk Supply investigation - Further - RMS comments**

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Hi Susan,

In response to your transmittal SMCSWLWC-SYC-TX-000863 dated 26/09/19, RMS has no comments for the Traffic Management Plan - Artarmon Bulk Supply investigation Rev C.

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	<b>Design Series:</b>	
<b>Discipline:</b>	<b>Design Lots:</b>	<b>Location:</b>