

Sydenham Station and Junction Bankstown CTMP (Construction Traffic Management Plan)

SMCSWSSJ-JHL-WBK-TF-PLN-000001

Document and Revision History

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A	14 September 2021	Initial release	M. Hearne A. Liu A. Suriono	A. Grey A. Finlay
B	29 September 2021	Update TGS and Swept Paths for formal review	M. Hearne	A. Finlay
C	6 October 2021	Updated TGS and comments addressed	M. Hearne	A. Finlay

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1. General Information

1.1 Purpose

The purpose of this Construction Traffic Management Plan (CTMP) is to ensure the safety of the public and maintain an accessible and efficient road network for all road users during the Bankstown Works.

This document is provided as an addendum to the main report, Sydenham Station and Junction CTMP. As such, details covered in the main report will not be duplicated in this CTMP.

1.2 Objectives

The following traffic management objectives will apply to the construction of the project:

- Minimise disruption to traffic operation, road users, public transport users, bus operators, pedestrians, cyclists, and access to adjoining properties
- Maximise the safety of the workers, by isolating work areas from traffic flows, applying low exposure work methods, education and the installation of appropriate traffic control measures
- Limit obstructions and restrictions, and when required, provide alternatives to maintain access for local community, transport operators, over-size load movements and commercial developments.

Objectives are otherwise as per main CTMP.

1.3 Scope

The Bankstown Works consist of the following items:

- Set up of site compounds
- Site establishment of works
- Delivery and storage of materials
- Ongoing site management

This CTMP aims to manage and mitigate the impacts of construction traffic and road works and sets out the responsibilities and strategies involved in ensuring a safe environment is maintained for drivers, pedestrians, cyclists, and workers.

All workers, employees, subcontractors, employers and the management team, involved in the construction of the project shall adhere to this CTMP.

This CTMP will be in use for approximately 10 months in total to accommodate the overall works.

The location of the proposed work area is shown in Figure 2.

1.4 Proposed Works

1.4.1 [Works Timing](#)

The proposed timeline for the works outlined in this CTMP is shown in Table 1.

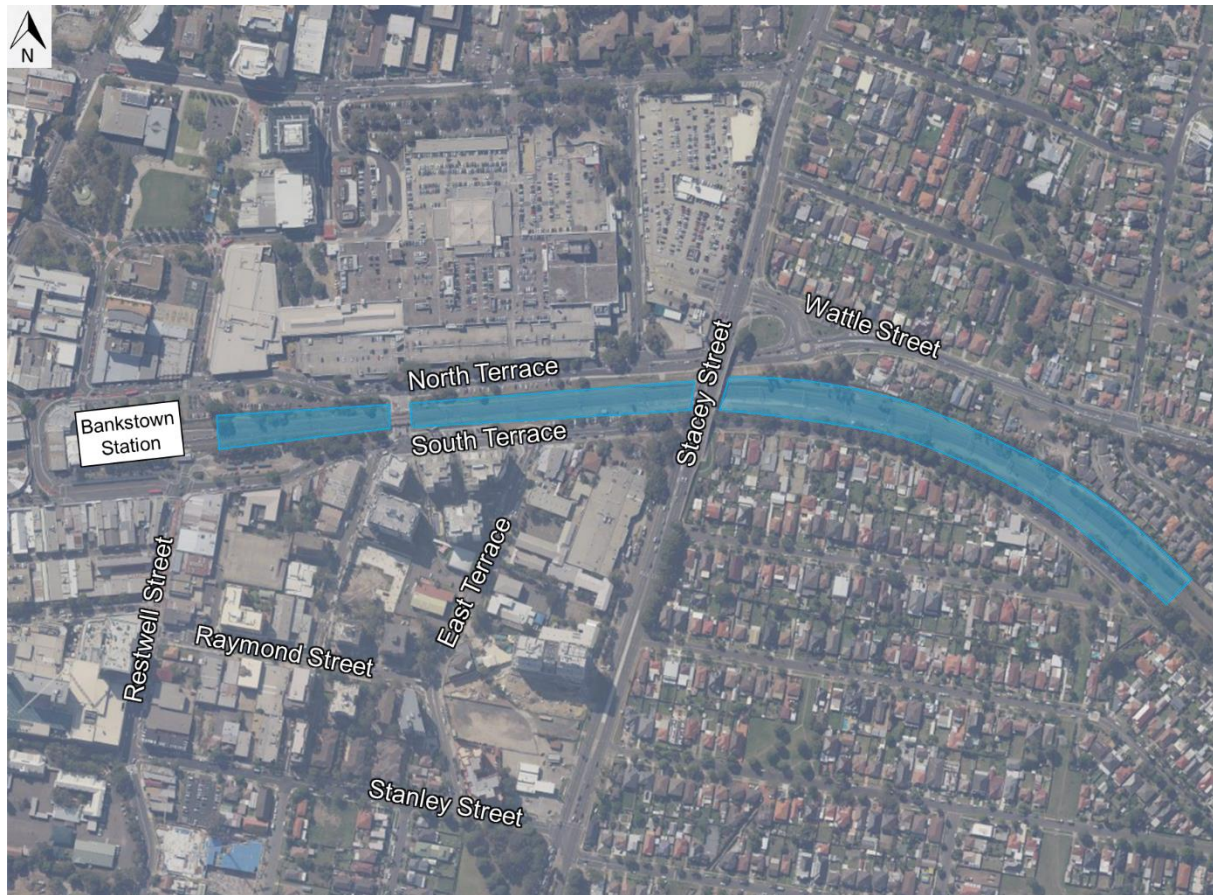
Table 1 – Works Timing

Works	Description	Duration	Start Date	End Date
Overall		10 months	Early October 2021	Mid July 2022
Main Compound	Occupying existing car park between North Terrace and the rail corridor	10 months	Early October 2021	Mid July 2022
Satellite Compound	Occupying a portion of the bus layover area, south of the rail corridor	7 months	Early December 2021	Mid-June 2022
Gate Access	Utilising existing gates for access into the rail corridor	7 months	Early October 2021	Mid-April 2022
Utility Connection	Utility connections into the new Service buildings for sewage and water connections	7 months	Early December 2021	Mid-June 2022

1.4.2 [Work Zone Areas](#)

The proposed work zone areas for the stages are shown in Figure 2.

Figure 2 –Work Zone



1.4.3 Site Plan

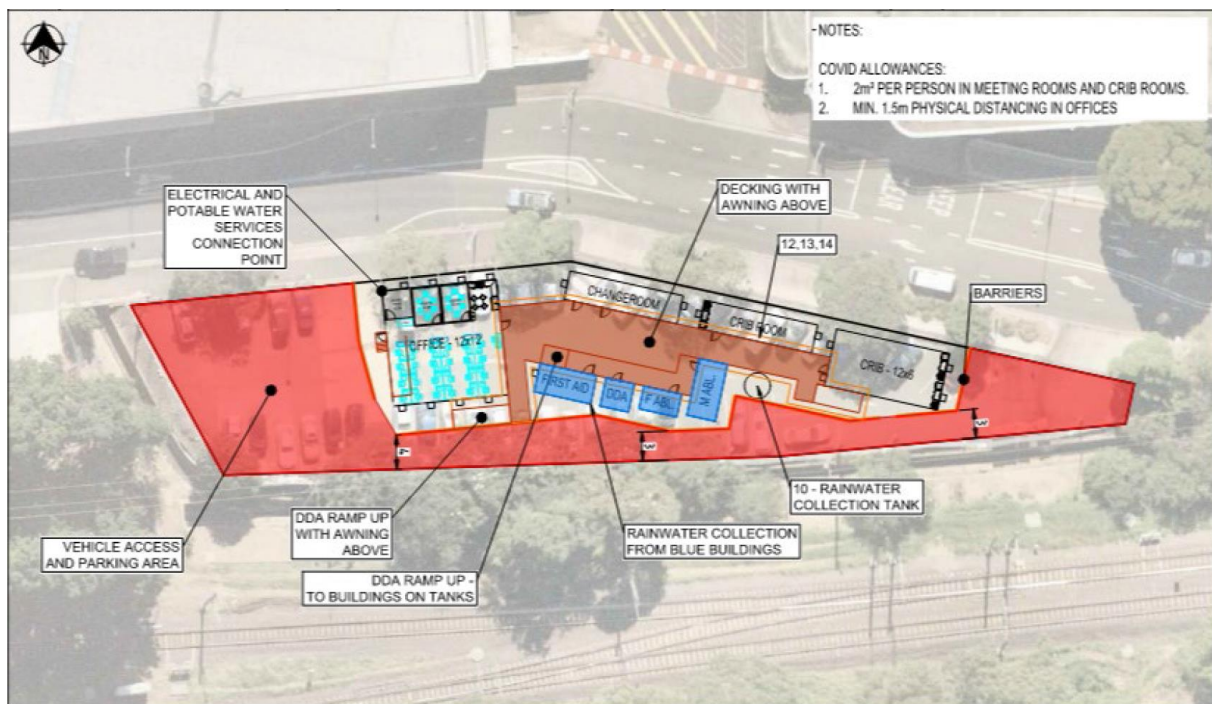
The proposed site plan of the main and satellite compound is shown in Figure 3 and Figure 4.

The main compound will be progressively established from date of occupation through approximately 3 weeks. During this period the site office and site facilities will be delivered through AV's and rigid body trucks. The deliveries will enter and exit the site compound under established traffic management as per the relevant TGS's. It is expected that 13 truck movements will complete the delivery of all site offices and facilities. Deliveries will be scheduled outside of peak traffic hours where possible. The installation will occur fully within the occupied carpark and there will be no affect on traffic on North Terrace.

The removal of the site complex is expected around July 2022 at the completion of the works. The removal process will be a similar operation to the installation process, with an estimated 13 truck movements and all works contained within the carpark.

During the occupation of the carpark, we will have limited vehicular access to light vehicles and small delivery trucks only. The daily vehicle movements are expected to be around 30 movements with a peak of about 5 per hour.

Figure 3 – Site Plan – Main Compound



The satellite compound will be progressively established from early November 2021 through to mid December 2021, in relation to the progress of the Works. Deliveries of the site office and facilities will be from rigid trucks. Deliveries into the established area will be from the bus interchange area. We will require approximately 3 truck movements to complete the delivery, these will be scheduled outside of peak hours and with consultation with the bus operators. The installation will be wholly within the established work area.

The removal of the satellite compound is expected around June 2022 at the completion of the works. The removal process will be a similar operation to the installation process, with an estimated 3 truck movements required and all works contained within the work zone.

During the progress of the Works we will have scheduled deliveries to the work zone, these will be co-ordinated with the bus operators and managed under traffic control. The daily vehicle movements are expected to be around 10 movements with a peak of about 3 per hour.

Figure 4 – Site Plan – Satellite Compound



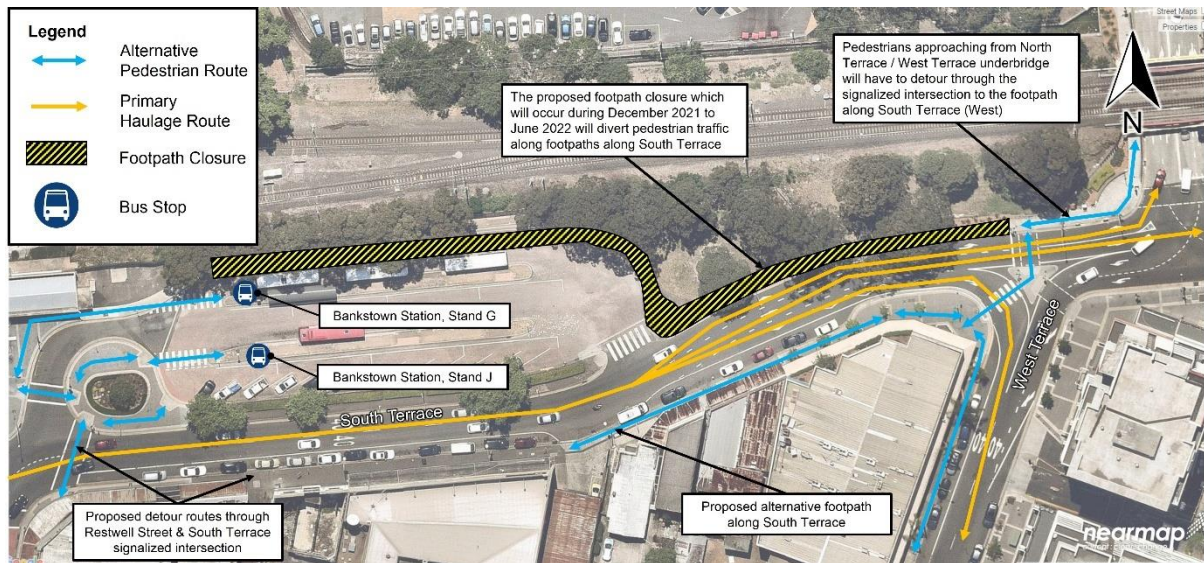
1.4.4 [Site Overview and Description of Traffic Management Measures](#)

Utility Connection

Works for the utility connection is separated into several stages. It is understood that the sewer installation works will commence once the footpath occupation on the northern side of South Terrace has been completed.

- Footpath Occupation:
 - Approximately 150 metres of footpath located on northern side of South Terrace to be closed
 - To be in operation for 7 weeks
 - Concrete barriers with gawk screen above, and water filled barriers with gawk screen above, are used to separate work site from road traffic
 - Pedestrians to be detoured to footpath on opposite side of the road and will use existing signalised crossings to reach opposite footpath.

Figure 5 – Footpath Occupation Closure



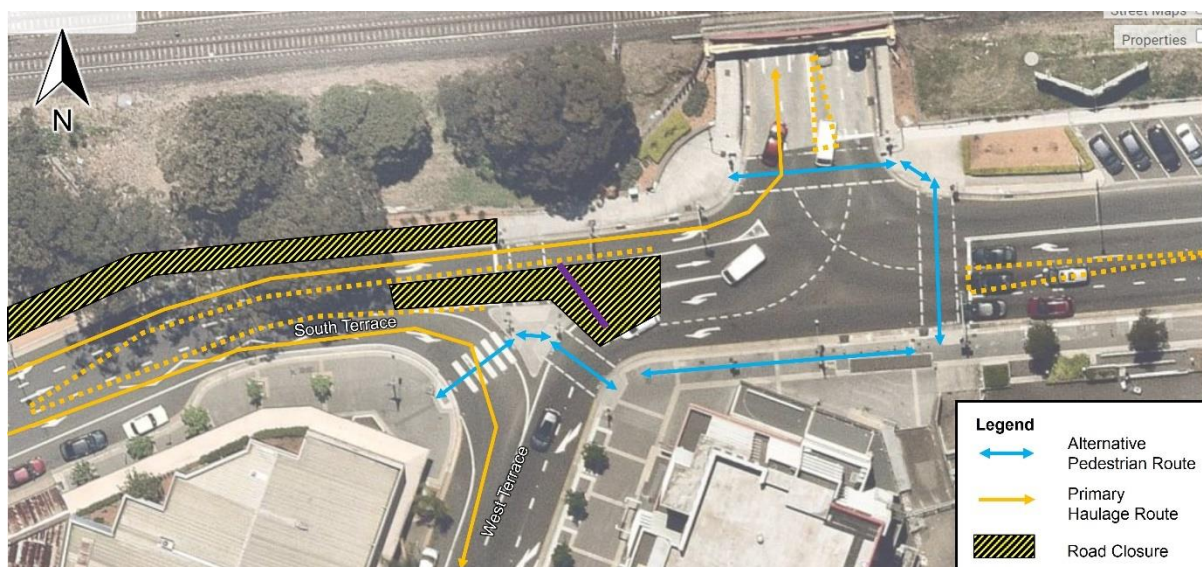
- Sewer Installation, Stage 1:
 - Approximately 17 metres lane length on eastbound left lane approach opened
 - To be in operation for 7 weeks
 - Concrete barriers with gawk screen above used to separate work site from road traffic
 - Pedestrians to be detoured to footpath on opposite side of the road and will use existing signalised crossings to reach opposite footpath
 - Lane closure will occur at night during permissible Road Occupancy Licence (ROL) hours which is assumed from 10pm to 5am. Existing traffic conditions will be reinstated for road traffic at the completion of each shift.

Figure 6 – Sewer Installation, Stage 1



- Sewer Installation, Stage 2:
 - Approximately 15 metres lane length on eastbound through approach opened
 - Lane closures for the following:
 - Southbound right turn approach lane
 - Lane 2 westbound through approach lane
 - Lane 2 westbound left turn exit lane
 - Concrete barriers with gawk screen above used to separate work site from road traffic
 - To be in operation for 7 weeks
 - Lane closure will occur at night during permissible Road Occupancy Licence (ROL) hours which is assumed from 10pm to 5am. Reinstatement of road traffic at the completion of each shift will be provided
 - Otherwise as above.

Figure 7 – Sewer Installation, Stage 2



Main Compound

AV movements out of the compound are to be undertaken using traffic control.

Satellite Compound

It is understood that heavy vehicles and truck movements will be a left in entry through South Terrace access and exit through the western signalised intersection of Restwell Street and South Terrace.

1.5 General Requirements

1.5.1 [Key Personnel](#)

Table 8 lists the key personnel involved with these works:

Table 8 – Key Personnel

Name	Position	Phone Number
Paul Dalziel	Construction Manager	0437 475 070
Brenton Holmes	Senior Project Engineer	0412 900 494
Andrew Constantin	Interface Manager	0418 650 493
Andie Pitsiatari	Community Place Manager	0429 378 336
D&D Traffic Management (staff name to be confirmed)	Traffic Controller (Blue Card)	TBC
D&D Traffic Management (staff name to be confirmed)	Implement TCPs (Yellow Card)	TBC
D&D Traffic Management (staff name to be confirmed)	Prepare a Work Zone Traffic Management Plan	TBC

2. Impacts Related to Vehicle Movements and Work Area

2.1 Swept Path Analysis

To provide a better analysis of the vehicle movements along the site extension, swept path analysis has been undertaken to assess key routes as well as access gates of the site extension.

The vehicle profiles of a 20m articulated vehicle (AV) and an 8.8m Medium-Rigid Vehicle (MRV) with 5m trailer (truck and dog) were used. The truck and dog combination was a custom-created vehicle and is an *estimate only*. The truck and dog movements should be tested, and the vehicle verified with the haulage company prior to implementation.

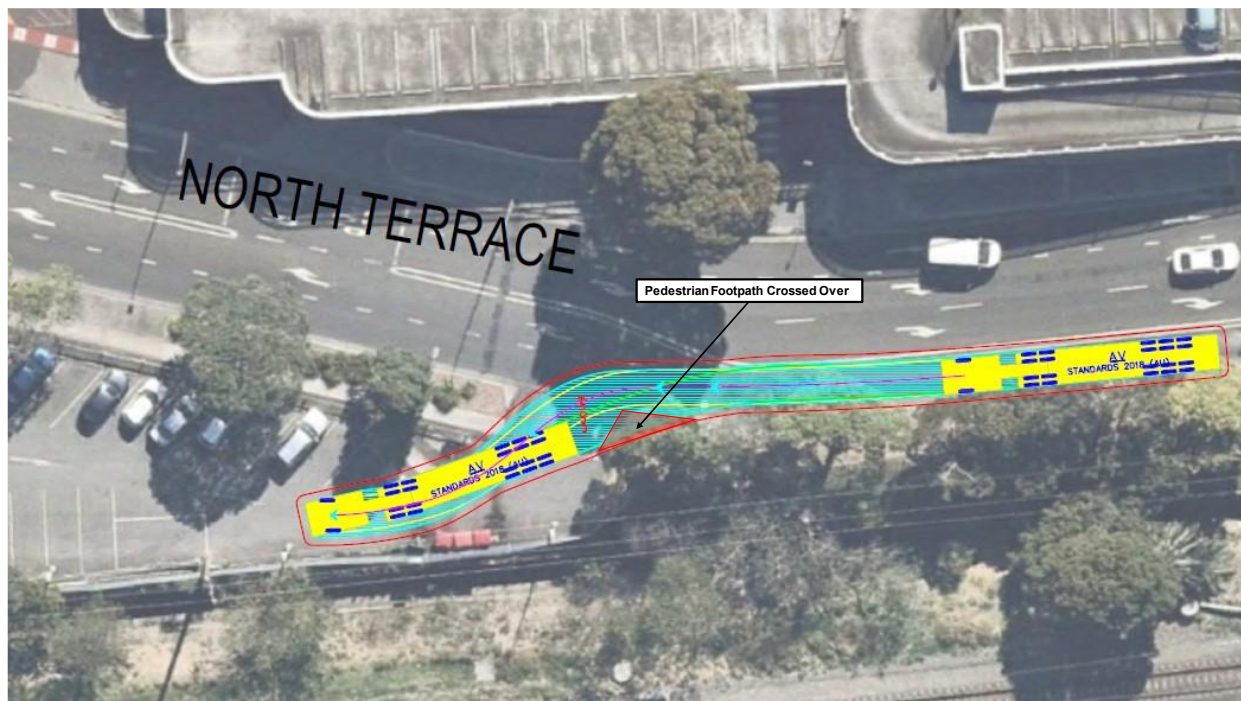
Swept paths were undertaken on scaled Nearmap images and are an estimate only of vehicle manoeuvrability. All movements should be tested and approved prior to implementation.

Refer to Appendix 2 – Swept Paths for details on the truck movement impacts.

2.1.1 Main Compound

- Left-turn Entry: AV movement crosses over pedestrian footpath. Pedestrian fences will be used to hold pedestrians during truck movement. A street pole adjacent to the driveway is not expected to be in the path of the AV.
- Right-turn Exit: Pedestrian scissor fence to hold pedestrians during movement
- Left-Turn Exit: Pedestrian scissor fence is required to hold pedestrians on footpath. One parking space removed.

Figure 9 – Main Compound: Left-turn Entry



It is understood that parking spaces impacted by the turning movements will be managed under traffic control, and removal will be temporary during deliveries via a semi-trailer (AV) to the compound. Traffic control to cone out the required car spaces and monitor during the day before the closure.

Figure 10 – Main Compound: Left-turn Exit

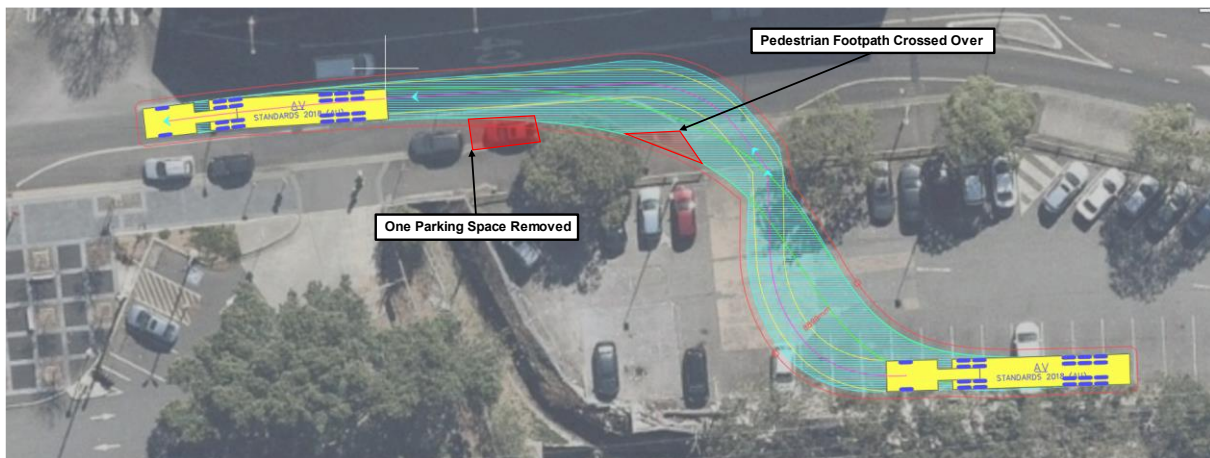
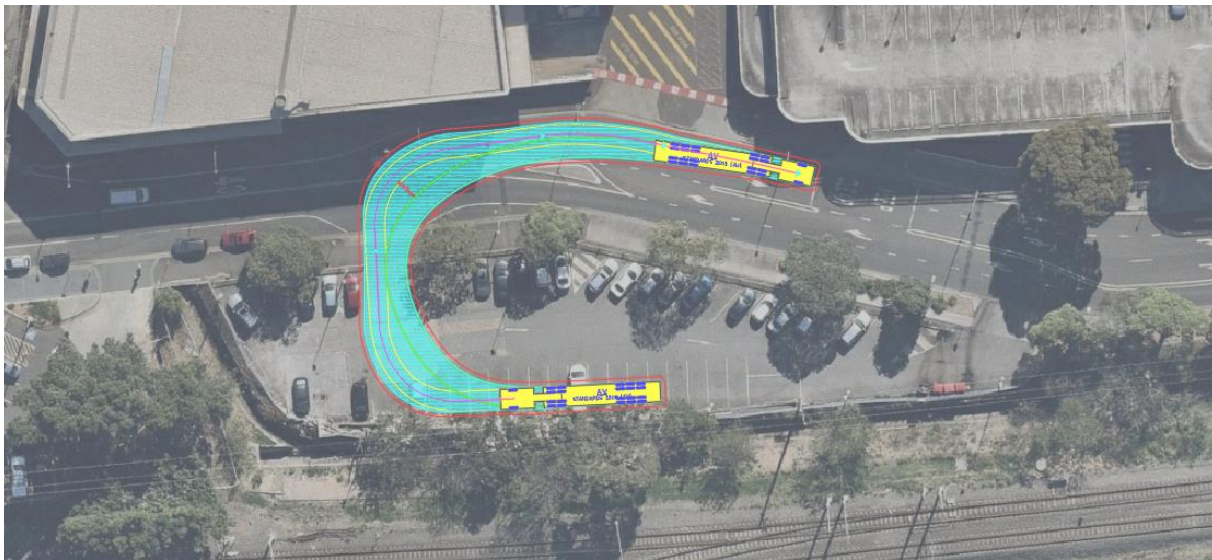
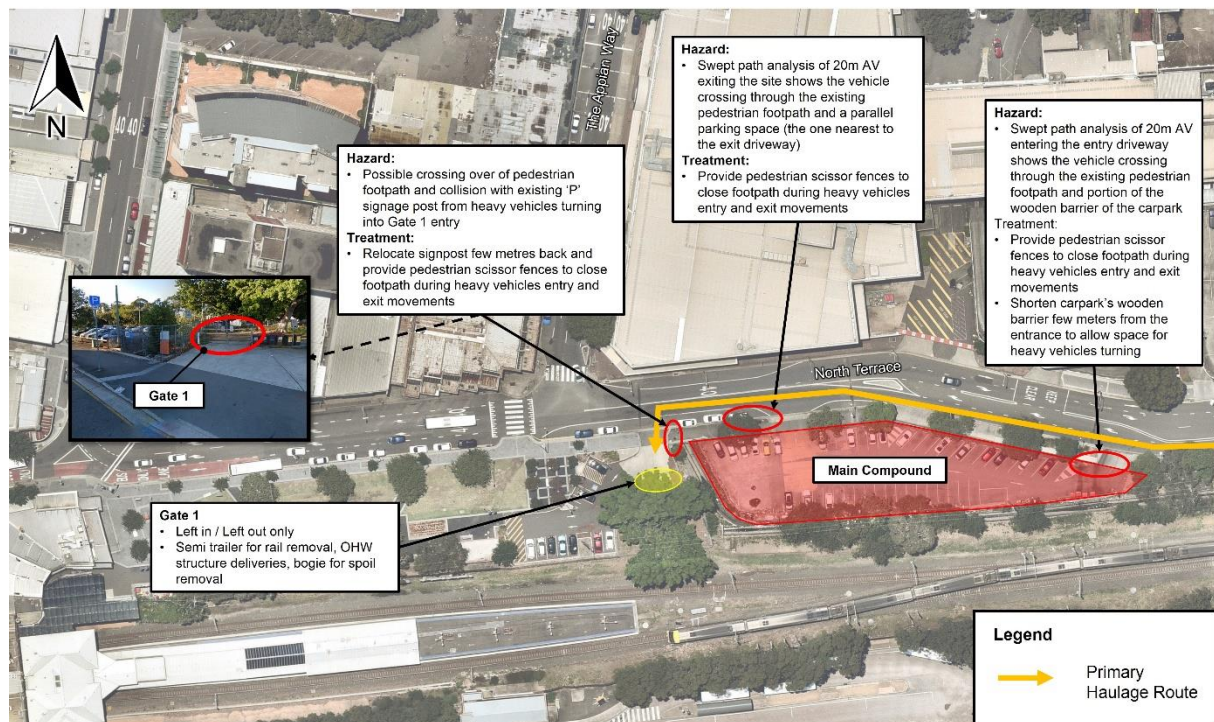


Figure 11 – Main Compound: Right-turn Exit



As shown in the right-turn exit movement from the main compound, vehicles driving eastbound North Terrace need to take extra pre-caution when trucks are manoeuvring. It is understood that traffic controllers will be allocated to facilitate safety of the turn.

Figure 12 – Main Compound: Heavy Vehicles Manoeuvring Hazards



2.1.2 Satellite Compound

- Entry Haulage Route → AV movement crosses footpath; pedestrian fences to be used.
- Exit Haulage Route → AV cannot complete movement due to crossing over footpath on both sides of the road. Truck and dog recommended as largest vehicle to be used for this gate.

Figure 13 – Satellite Compound: Left-turn Exit



Figure 14 – Satellite Compound: Left-turn Entry



2.1.3 Wattle Street Roundabout

Heavy vehicles must drive over roundabout to complete turning movements.

2.1.4 Stanley Street

- Right-turn Entry Haulage Route → One parking space closest to the pedestrian crossing ramp is to be removed to provide more space for the 20m AV turn.
- Left-turn Exit Haulage Route → The left-turn movement from Cross Street to Stanley Street crosses to the other side of the road and would require traffic control to support this movement.

It is understood that parking spaces on Stanley Street will be temporarily removed under traffic control for scheduled deliveries to the compound.

Figure 15 – Stanley Street: Right-turn Entry Haulage Route

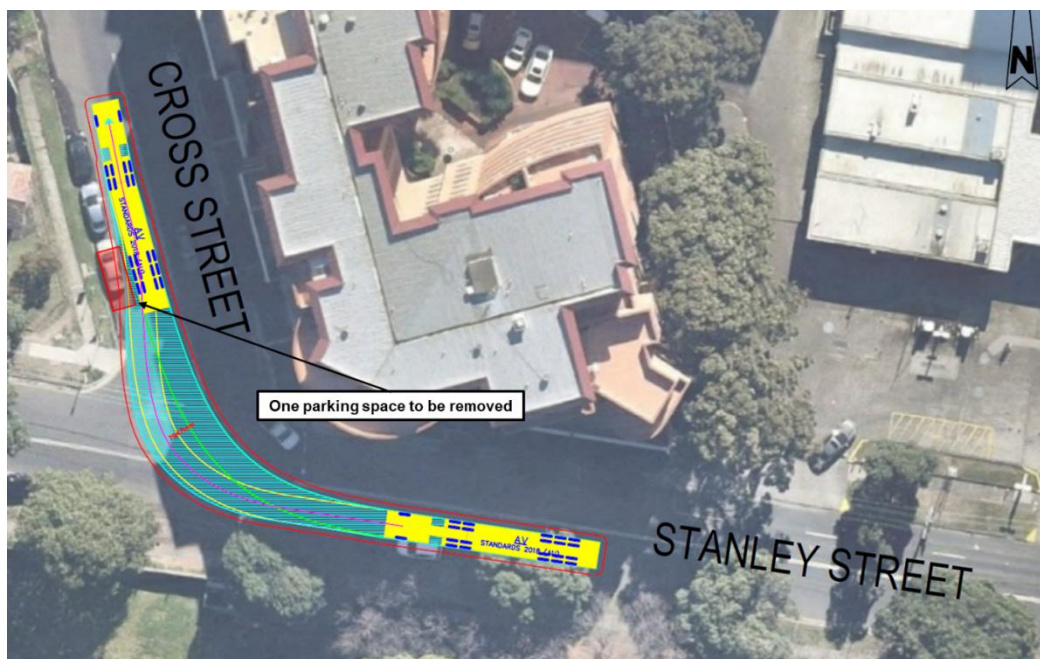
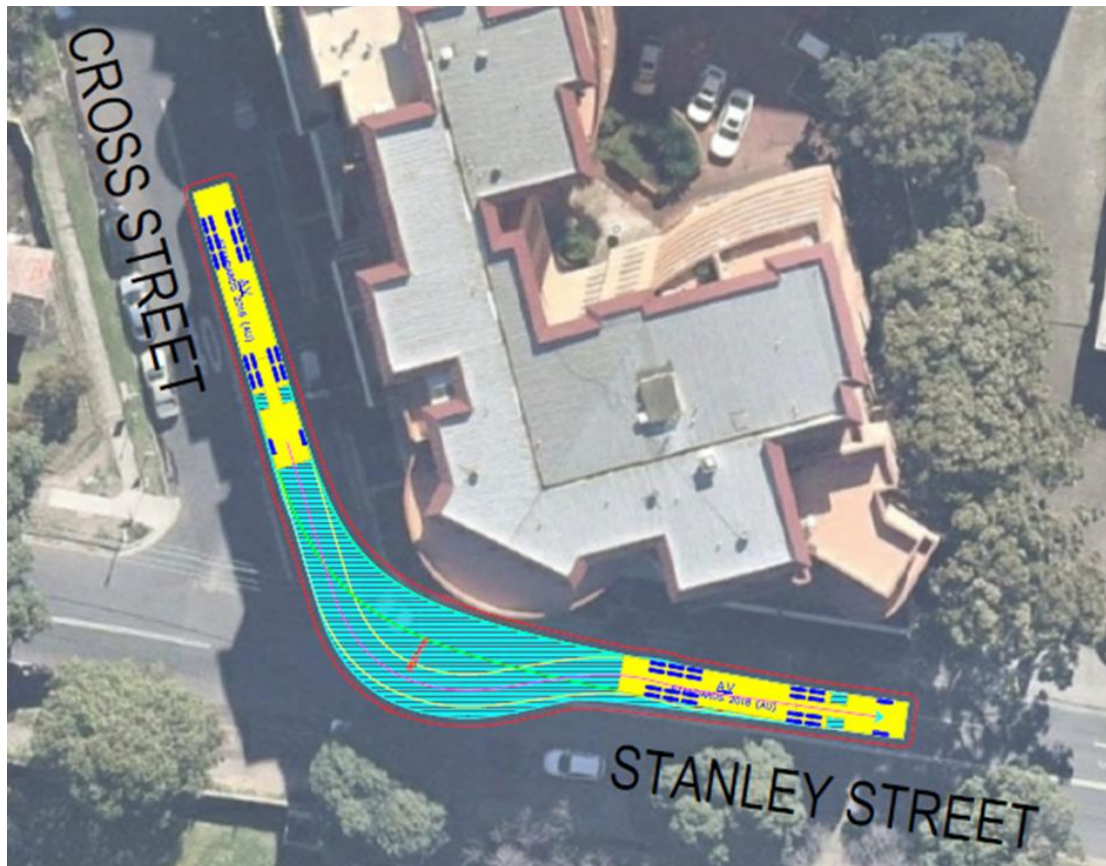


Figure 16 – Stanley Street: Left-turn Exit Haulage Route



This movement will require traffic control as it encroaches on the other side of the road.

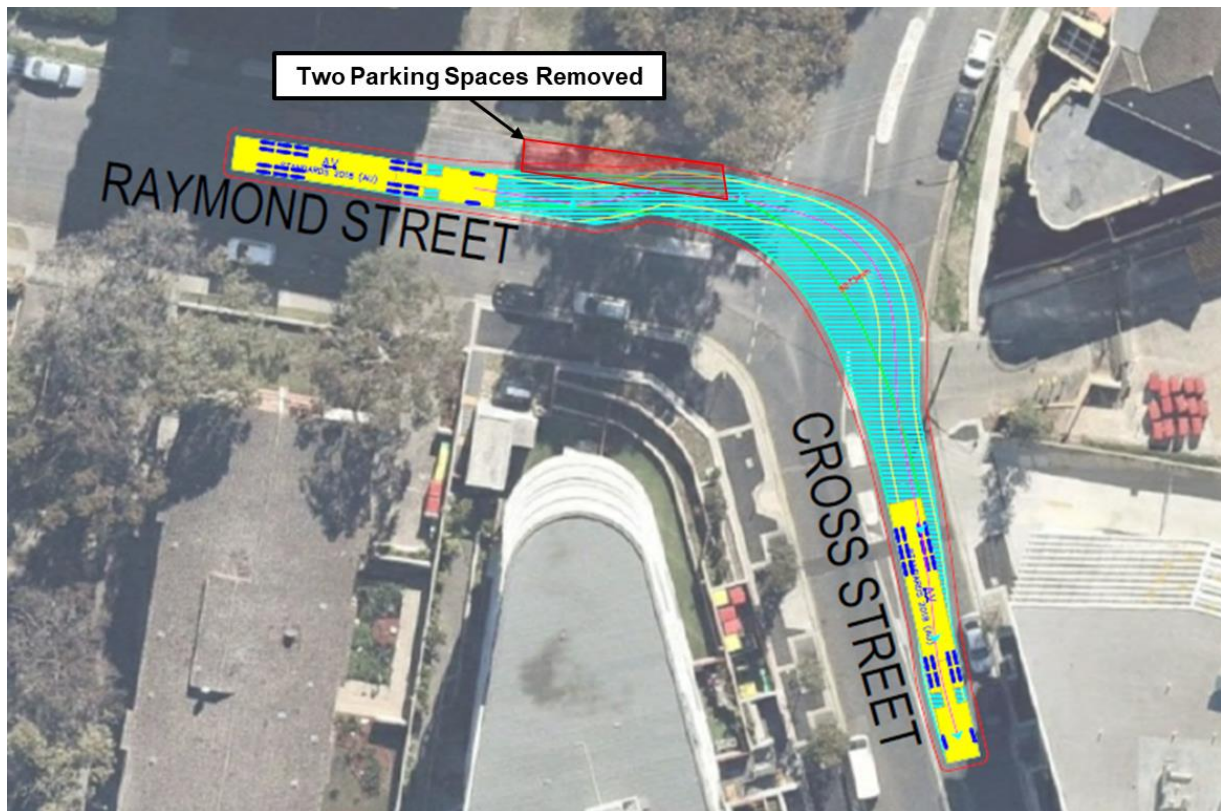
2.1.5 East Terrace / Raymond Street

Right turns from Cross Street to Raymond Street will not be undertaken due to overrunning of the median on Raymond Street.

Two parking spaces are to be removed on the northern side of Raymond Street, west of Cross Street to facilitate AV swept paths.

It is noted that medians of this nature generally have a Keep Left sign on it. Google Streetview indicates that this sign is missing from the median. This sign may need to be reinstated at the conclusion of works.

Figure 17 – Raymond Street to Cross Street Parking Removal



2.1.6 South Terrace / East Terrace

All turning movements at this intersection cross at least one pedestrian refuge. It is recommended that traffic control is utilised for these movements. Refer to Appendix 2 – Swept Paths

It is understood that the pedestrian refuges have pedestrian railings, and some kerbs are non-mountable. Validation of haulage routes using site trials through the roundabout may be required. It is understood that trials will be completed under a full traffic control setup with the required permits/applications approved prior.

Swept paths of an AV and Truck and Dog indicated that left and right turn movements from South Terrace to East Terrace could not be completed without the vehicles encroaching on the footpath and pedestrian refuges. An alternative exit route is proposed where heavy vehicles are directed through West Terrace, Raymond Street, Cross Street, and Stanley Street. This is a haulage route that was not included in the EIS.

Figure 18 – South Terrace / East Terrace Roundabout Alternative Route



Figure 19 – East Terrace/Raymond Street Intersection: Right-turn Entry Haulage Route from East Terrace

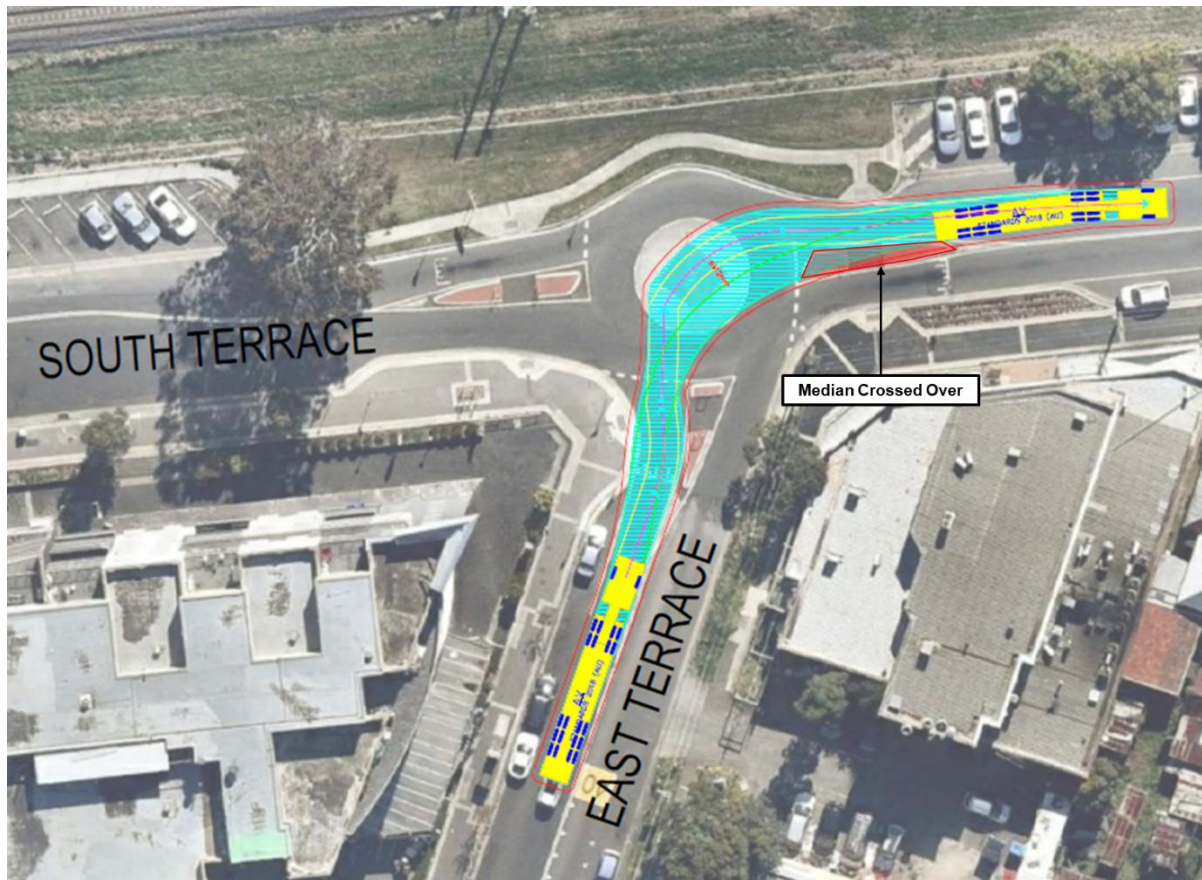


Figure 20 – Right-turn Entry Haulage Route from East Terrace to South Terrace

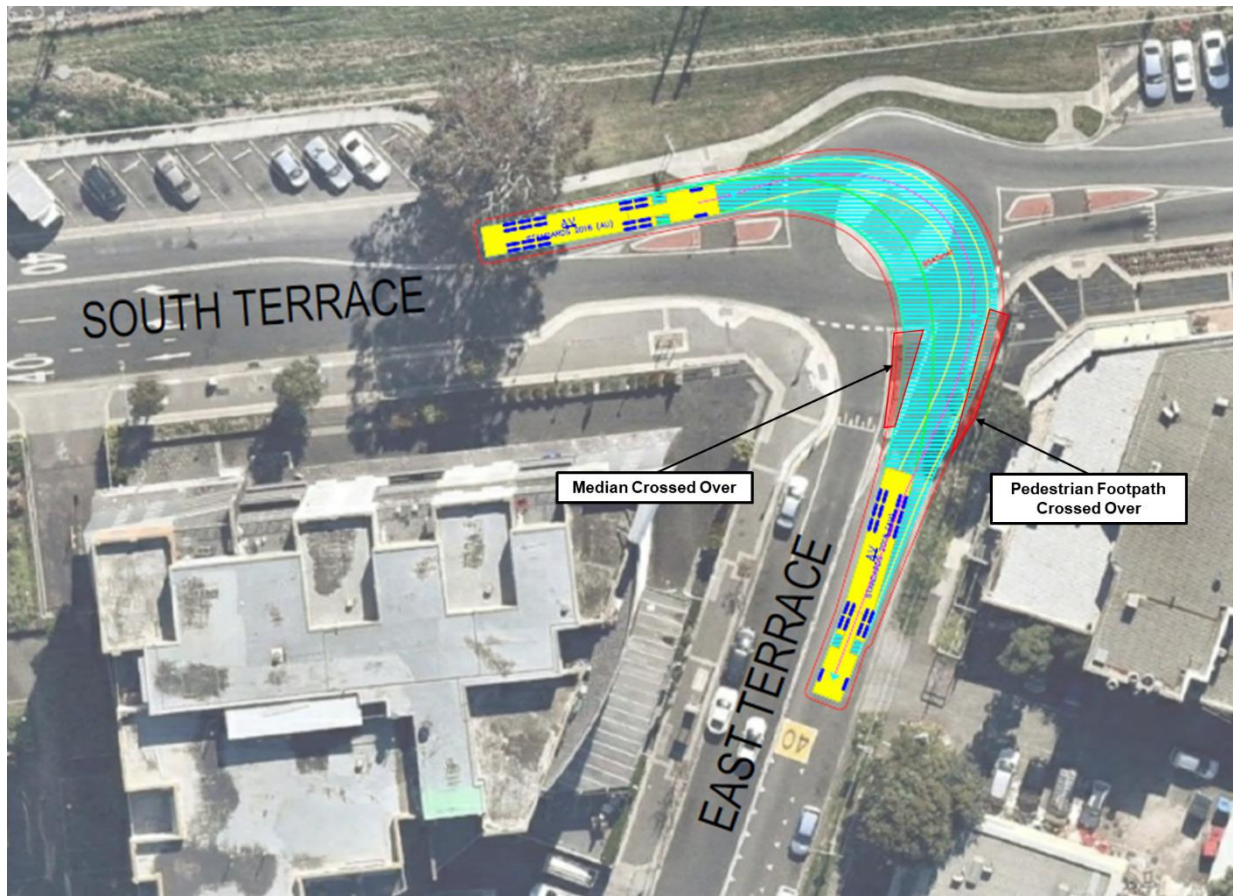
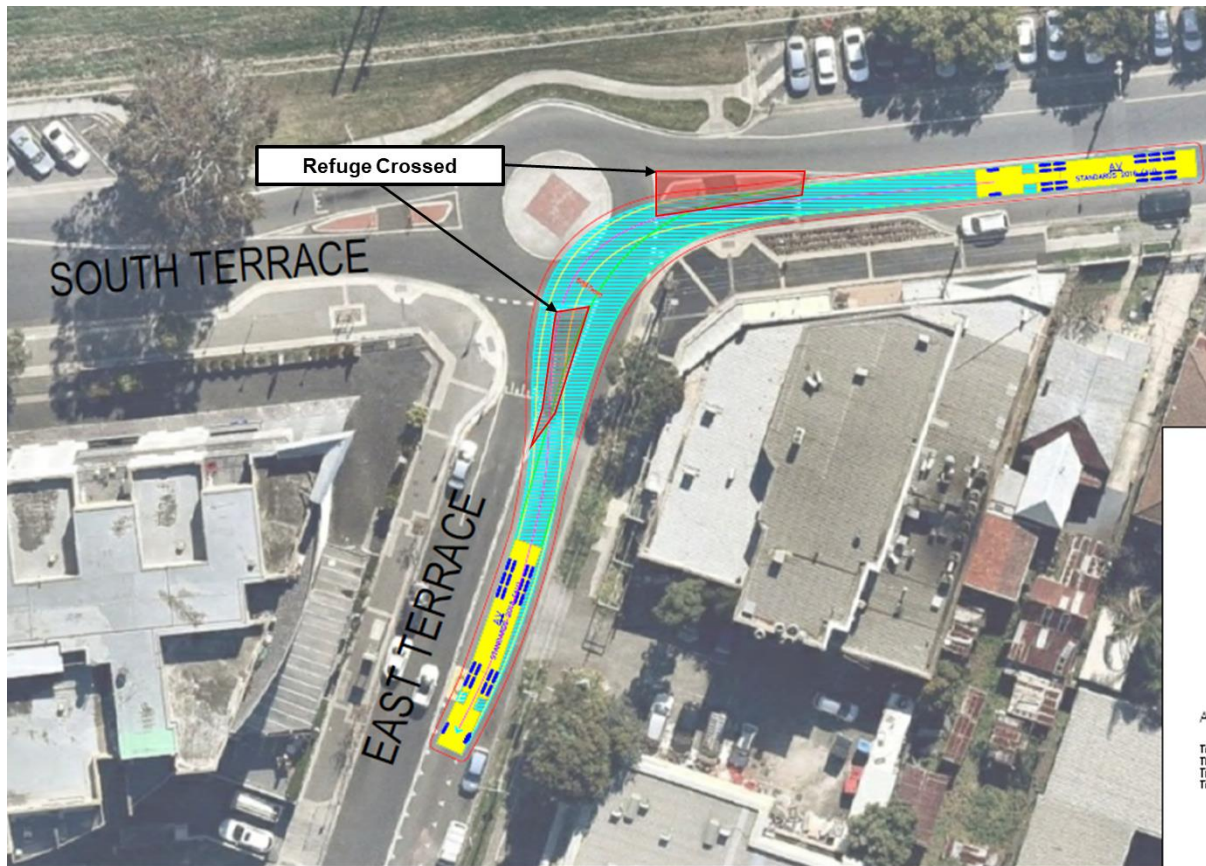


Figure 21 – Right-turn Exit Haulage Route from South Terrace to East Terrace



2.1.7 South Terrace / West Terrace

Updated haulage routes will be from South Terrace, turning south onto West Terrace.

Both AV turning movements will require traffic control. TGS for these movements are provided in Appendix 1 – Traffic Guidance Schemes.

Figure 22 – South Terrace Right to West Terrace

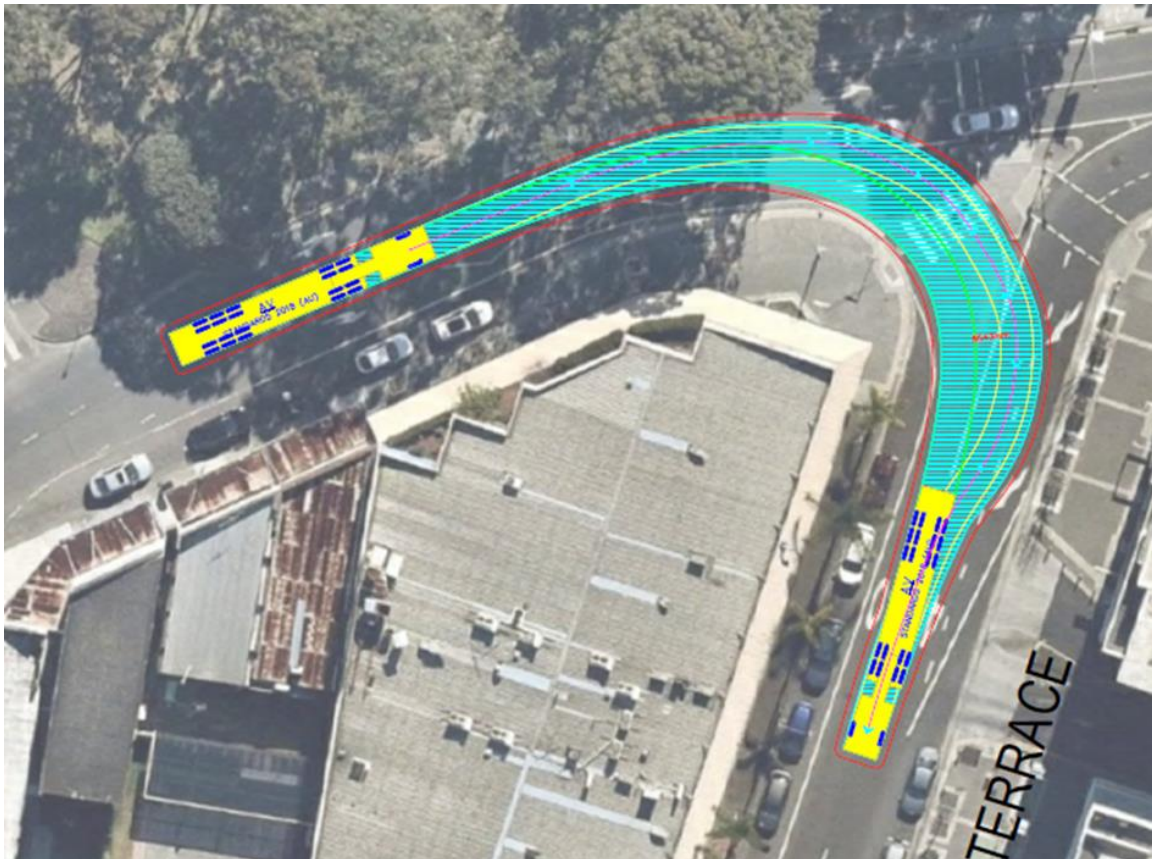
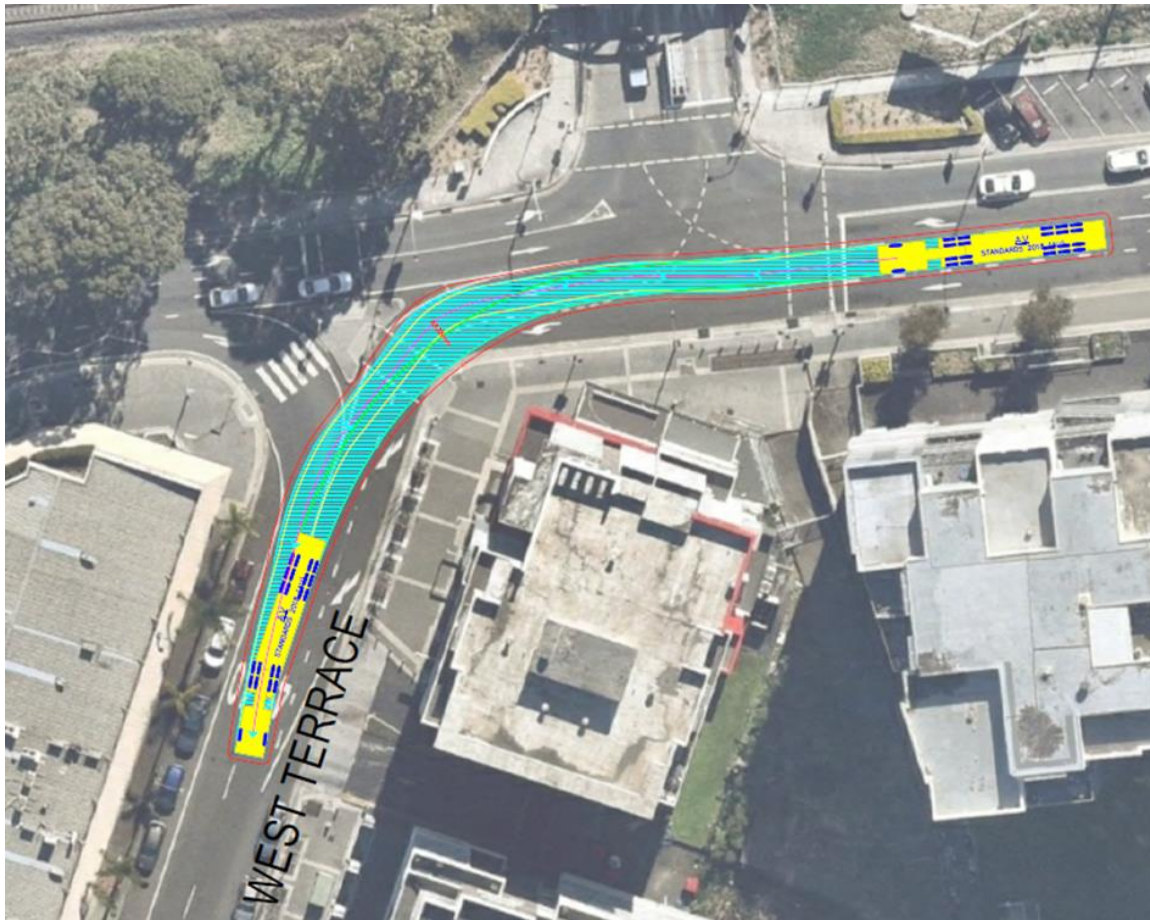


Figure 23 – South Terrace Left to West Terrace



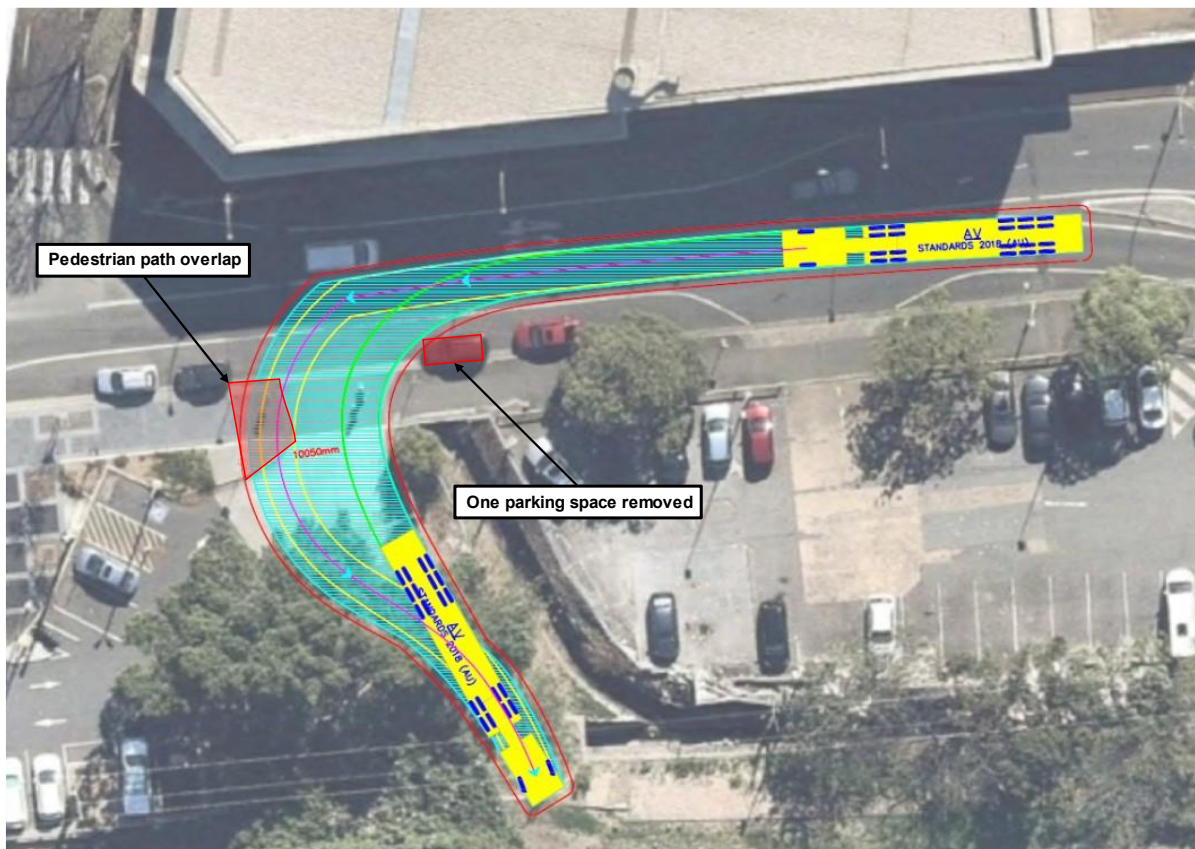
2.1.8 [Access Gates](#)

Gate 1

- Entry and exit movements: Pedestrian footpath crossed; pedestrian gates to be used to hold pedestrians.

Parking spaces impacted by these turning movements will be managed under traffic control, and removal will be temporary during deliveries via a semi-trailer (AV) to the compound. These will be limited to possessions.

Figure 24 – Gate 1 Access: Left-turn Entry Haulage Route



Gate 2

- Movements into and out of the gate by the AV may be impacted by vegetation/trees. Gate widening may also be necessary.

Gate 3

- Movements into and out of the gate by the AV may be impacted by vegetation/trees. Gate widening may also be necessary.

Gate 4

Movements into and out of the gate by the AV may be impacted by vegetation/trees. Gate widening may also be necessary.

- Vehicle movements will cross over a pedestrian footpath. Pedestrian fences will be used to hold pedestrians during vehicle movements.

Gate 5

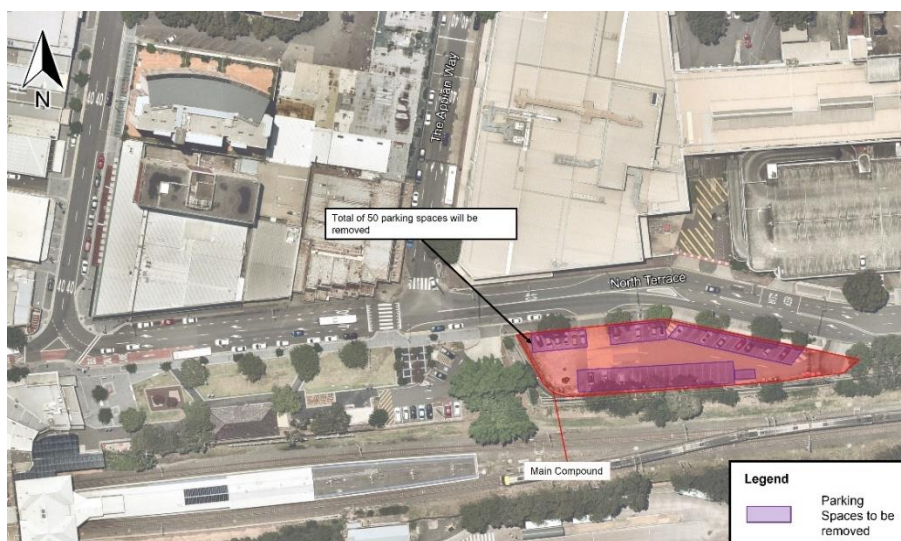
- Gate currently not suitable for AV or truck and dog movements. Gate and driveway widening required for use.
- Vehicle movements will cross over a pedestrian footpath. Pedestrian fences will be used to hold pedestrians during vehicle movements.
- Due to the median on North Terrace, construction vehicles may need to turn around using Main Compound.

2.2 Parking Spaces

2.2.1 Main Compound

As shown in the figure below, the proposed work area at the main compound site will remove parking spaces which are currently available for the public. Sydney Metro are undertaking ongoing consultation with City of Canterbury Bankstown to find alternative parking arrangements.

Figure 25 – Main Compound: Parking Spaces Lost



3. Traffic Management

3.1 Site Access

3.1.1 Access Requirements

To provide a safe entry and exit to the work zone JHLORJV will:

- Ensure that at least one travel lane in each direction on South Terrace is retained for vehicle movements
- Ensure heavy vehicles do not queue on residential streets. Trucks will layover within the worksite boundary only.
- Ensure that vehicles will enter and exit the work area in a forward direction. Should reversing movements be deemed necessary, a traffic control plan must be used.

Pedestrians will be directed to the opposite side of the road via signalised crossings during the two stages.

Cyclists are affected in the same manner as light vehicles.

3.1.2 Hoarding and Site Boundaries

No permanent fencing will be used for these works.

3.2 Traffic Impacts

The main impact to traffic from the works is potential for increased delays due to one lane of vehicle movements, instead of the usual two, on South Terrace. This will occur outside of peak hours and is expected to have negligible effects on traffic flow.

3.2.1 Holding of Traffic

Holding of traffic is necessary for the haulage manoeuvres to and from Bankstown works sites in the following instances:

- When a truck is accessing the site via gate access, the following traffic is to be held for the duration of the manoeuvre:
 - Both traffic directions on North Terrace at Wattle Street / North Terrace roundabout
 - When exiting, both traffic directions on North Terrace and South Terrace

Traffic controllers are to be used in these instances.

3.3 Detours

No vehicle detours are required for the proposed works.

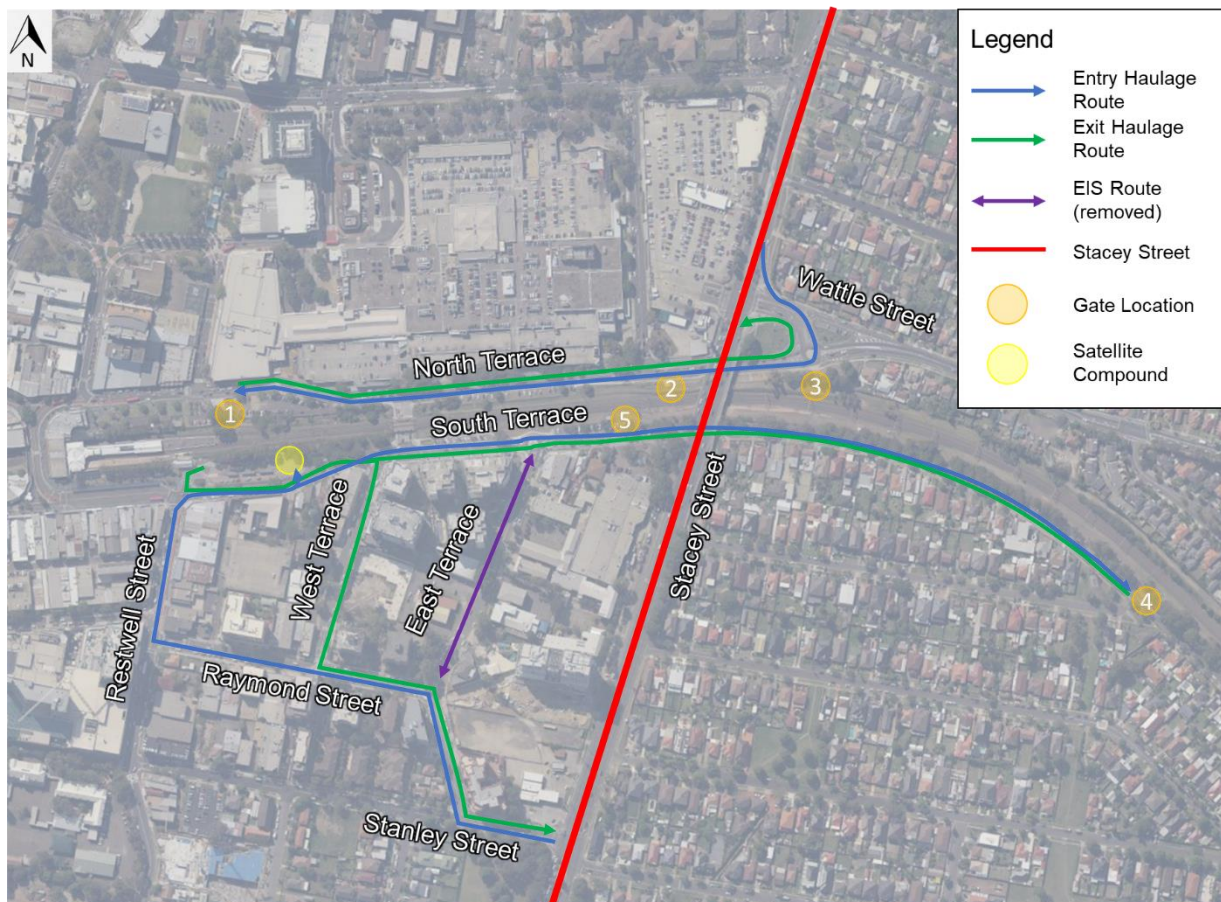
Pedestrian detours to the opposite footpath will be in place for the duration of works. Pedestrians can use signalised intersections to safely cross to the opposite footpath.

4. Traffic Routing

4.1.1 Truck Haulage Routes

Figure 26 illustrates the entry and exit truck haulage routes to the gate locations from Stacey Street.

Figure 26 –Truck Haulage Routes



The EIS haulage routes had an exit route from South Terrace to East Terrace. Swept path analysis on a scaled aerial image found that this route could not be completed without significant traffic control and removal of pedestrian infrastructure such as refuges and bollards. An alternative proposed route is via West Terrace. For a 20m AV, this will require traffic control at the West Terrace / Raymond Street intersection.

4.1.2 Truck Volumes and Hours of Operation

There will be different peak truck movements through each gate and site, which are listed below. Where possible, these movements are to occur outside of peak hours to minimise impact on the road network.

4.1.2.1 Main Compound:

- Peak movements at 3 trucks/hour during site establishment (first 3 weeks of October)
- Sporadic deliveries at any time.

4.1.2.2 Satellite Compound:

- Peak movements at 4 trucks/hour for site establishment. Peak period up to 3-4 hours. to occur approximately 3 times/week
- The peak truck movements will occur from December 2021 to March 2022 during pouring of ground beams and slabs, along with structural and precast panels deliveries.

4.1.2.3 Gate 1:

- Low truck volumes, at most 2 trucks/hour. Primarily during possessions

4.1.2.4 Gate 2-5 Access:

- Low truck volumes, estimated at 4 trucks/hour with 15-min cycle time.
- Peak occurs during load out of spoil
- Peak is estimated to be only once per week, and only 1 fortnight each month
- Aside from loading out spoil, there will be 1-2 trucks/hour as a peak
- Sporadic deliveries will happen anytime.

4.1.3 Approvals

A Road Occupancy Licence is required for the lane closures.

An application will be submitted by JHLOR JV prior to implementing any closure.

4.1.4 Traffic Guidance Schemes

Traffic Guidance Schemes (TGSs) will set out the specific traffic management arrangements to be implemented during the construction phase.

TGSs will be created for these works and will be available in Appendix 1 – Traffic Guidance Schemes.

Existing speed limits of 40km/h may need to be extended during some traffic control operations.

TGSs are to be created in line with the requirements of TfNSW Traffic Control at Worksites Manual Version 6.

TGSs must be signed off and approved by a person who holds a valid TfNSW “Prepare a Work Zone Traffic Management Plan” qualification.

TGSs must be approved by the relevant authorities before they are used in the project.

Additional TGSs will be created as required and as the project scope is developed in further detail.

4.2 Pedestrian Management

4.2.1 Pedestrian Movement Plans

Pedestrian Movement Plans (PMPs) are required for each instance where changes to pedestrian routes are required, such as closing footpaths. PMPs are to be developed in accordance with TfNSW Traffic Control at Worksites Manual Version 6, and CEMF Clause 8.1. Pedestrian management measures are shown in Appendix 1 – Traffic Guidance Schemes.

PMPs have been overlayed on the corresponding Traffic Guidance Schemes for the site.

4.2.2 Pedestrian Considerations

The lane closures on South Terrace at South Terrace / West Terrace will also close the adjacent northern footpath for the duration of the utility connection works. Pedestrians will be detoured to the opposite footpath via signalised crossing at South Terrace / West Terrace.

During the duration of the satellite compound, the northern footpath along South Terrace, between West Terrace and the bus terminal, will be occupied. Pedestrians will be detoured to the opposite footpath via signalised crossings at South Terrace / West Terrace and South Terrace / Restwell Street/ Bankstown City Plaza.

TGSs will be developed for these works and will include PMPs

4.3 Cyclist Management

There are not expected to be any cyclist-specific impacts due to the works. Cyclists will experience the same impacts to their routes as light vehicles.

4.4 Traffic Modelling

Traffic modelling has not been undertaken and is not deemed necessary as the nature of the impacts and volumes of traffic movements is already understood by the approval authorities.

4.5 Temporary Removal of Car Parking Spaces

The off-street car parking area between North Terrace and the rail corridor will be occupied by the main compound resulting in temporary removal of public parking. It is expected that the nearby Bankstown Council car park building will be able to accommodate the loss of parking spaces for the duration of the main compound. Refer to Appendix 2 – Swept Paths for parking space impacts.

4.6 Public Transport and Bus Operators

The Works require a work zone to be established in the northern portion of the bus interchange area. This will reduce the available space within the bus interchange and impact on the efficiency of the existing operations. This impact has been discussed with the bus operators and contingency measure are being planned.

The occupation of the northern portion of the bus interchange will be limited to the minimal duration possible, it is proposed to only occupy the northern footpath until mid November 2021 during the early stages of construction. Once scheduled construction activities commence in mid November, the work zone will be expanded into the northern portion of the bus interchange area to provide the required construction space. This work zone will remain in place until the Works have been completed to the extent where a reduction of the bus interchange area can be accommodated. This is expected to occur during the second quarter of 2022.

The bus interchange is significantly important during rail possessions as the rail replacement services use this interchange area in addition to regular services. It has been agreed that the capacity of the bus interchange will not be impacted during the Christmas Shutdown period and we will remove the works zone to allow the full operation of the bus interchange during this possession. For possessions outside of the Christmas Shutdown 21/22 there are negotiations with Council for additional bus layover areas in the surrounding precinct.

Aside from the occupation of the bus interchange area, there are no foreseen impacts to public transport from the proposed works. The existing lane widths utilised by public transport services will not be narrowed from what is existing.

5. Traffic Signage and Control

As per main CTMP.

6. Delineation at Work Site – Travel Paths

As per main CTMP.

7. Traffic Controllers

As per main CTMP.

8. Work on Footpaths

8.1 Pedestrian Safety Points

As per main CTMP.

9. Road Safety Audit

A Road Safety Audit (RSA) was undertaken on 24/09/2021. The RSA has been included in Appendix 2 – Responses to the RSAs are also provided in this Appendix.

Any RSAs undertaken will be shared with relevant stakeholders (including SCO/TMC).

10. Reference Documentation

- SM ES-ST-214: G10 Traffic and Transport Management
- SM PS-ST-221: Sydney Metro Principal Contractor Health and Safety Standard
- TfNSW Traffic Control at Worksites Manual. Version 6
- Sydenham To Bankstown Environmental Impact Statement: Technical Paper 1 – Traffic, Transport and Access Assessment
- Relevant Austroads Guides
- TfNSW Supplements to Austroads and Australian Standards
- AS 1742.3 Manual of uniform traffic control devices Part3: Traffic control devices for works on roads
- Minister's Conditions of Approval
- Revised Environmental Mitigation Measures
- Construction Environmental management Framework
- Staging Report - Sydney Metro City and Southwest.

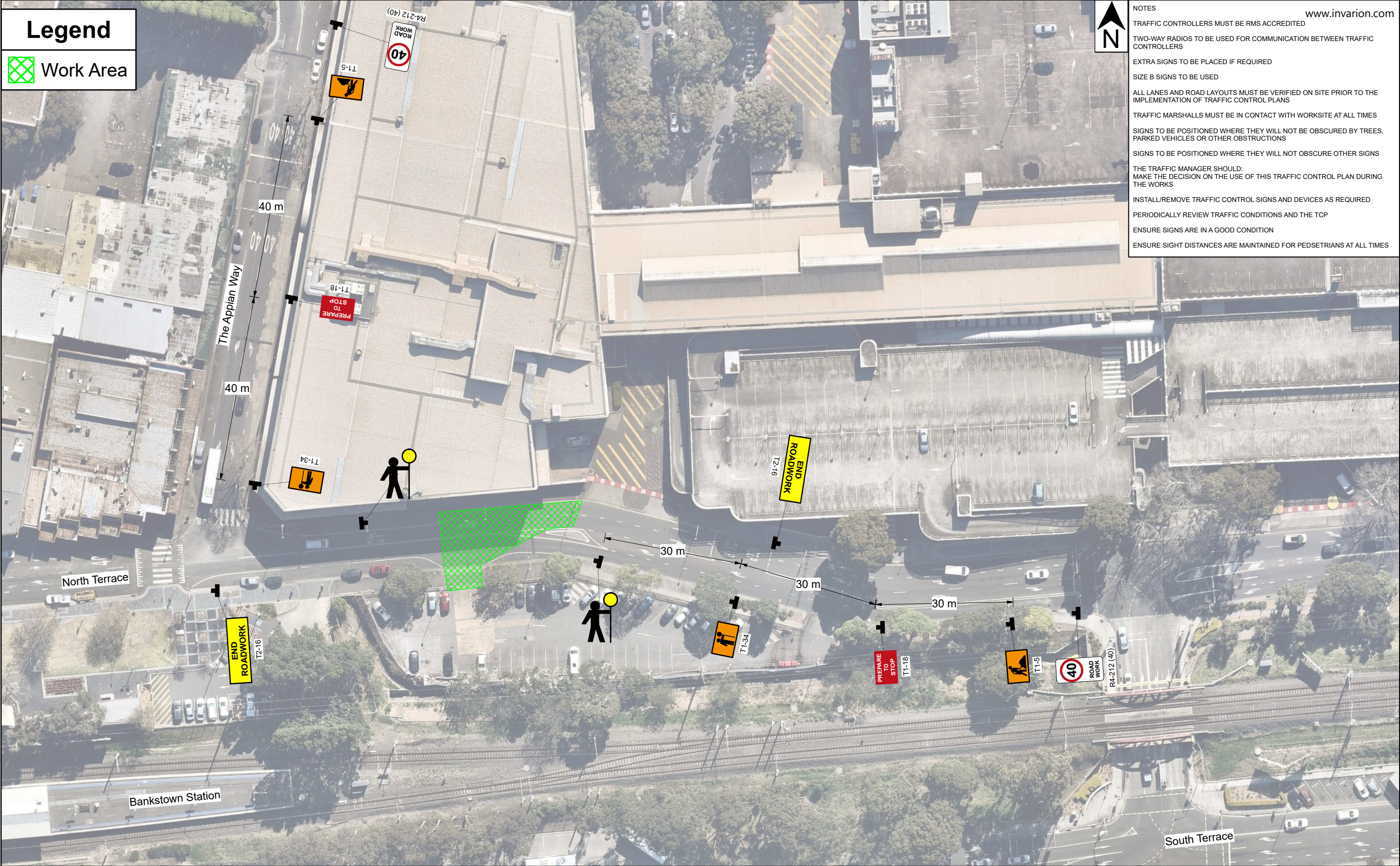
11. Appendices

11.1 Appendix 1 – Traffic Guidance Schemes

The following Traffic Guidance Schemes (TGSs) are provided. These will be updated with the Traffic Control Supplier if necessary, as the works progress and resubmitted if changed, for approval.

Table 27 – Traffic Guidance Schemes

TCP Number	Location	Description of Control
1.	Main Compound	TGS for semi-trailer deliveries to Main Compound, however light vehicle and small trucks with single rear axle do not require a TGS
2.	Bus Layover Area, near South Terrace	WE16: TGS for Weekend 16 configuration of the bus layover area
3.	South Terrace	Pedestrian Footpath Closure on northern side of South Terrace
4.	South Terrace / West Terrace	TGS for Stage 1 of Sewer Works
5.	South Terrace / West Terrace	TGS for Stage 2 of Sewer Works
6.	South Terrace / West Terrace	TGS for AV left turn from South Terrace to West Terrace
7.	South Terrace / West Terrace	TGS for AV right turn from South Terrace to West Terrace
8.	West Terrace / Raymond Street	TGS for AV left turn from West Terrace to Raymond Street
9.	South Terrace	TGS for heavy vehicle exit movement from gate on South Terrace (near number 218 South Terrace)



Legend

Work Area

- NOTES
- www.invarion.com
- TRAFFIC CONTROLLERS MUST BE RMS ACCREDITED
- TWO-WAY RADIOS TO BE USED FOR COMMUNICATION BETWEEN TRAFFIC CONTROLLERS
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- ENSURE SIGNS ARE IN A GOOD CONDITION
- ENSURE SIGHT DISTANCES ARE MAINTAINED FOR PEDSETRIANS AT ALL TIMES

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Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	17/09/21

APPROVED
ALEX GREY
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 0051873071
EXPIRY 30/11/2021

Project	BANKSTOWN STATION CTMP	Design	M.H	Drawn	M.H	Checked	A.G
Title	MAIN COMPOUND AV ACCESS	FOR CONSTRUCTION		Date	17/09/2021		
		Project Number	Sheet Number	Issue			
		P3519	1	001			

Legend

Bus Layover (Not During WE16)

Bus Layover (WE16)

Cone

NOTES

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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	17/09/21
002	UPDATE TO INCLUDE BUS LAYOVER AREAS	M.H	06/10/21

APPROVED

ALEX GREY
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 0051873071
EXPIRY 30/11/2021

Alex Grey

Project	BANKSTOWN STATION CTMP		
Title	WE16 LANE CLOSURE AND PEDESTRIAN DETOUR		

Design	M.H	Drawn	M.H	Checked	A.G
FOR CONSTRUCTION				Date	06/10/2021
Project Number	P3519	Sheet Number	2	Issue	002

Legend



- NOTES
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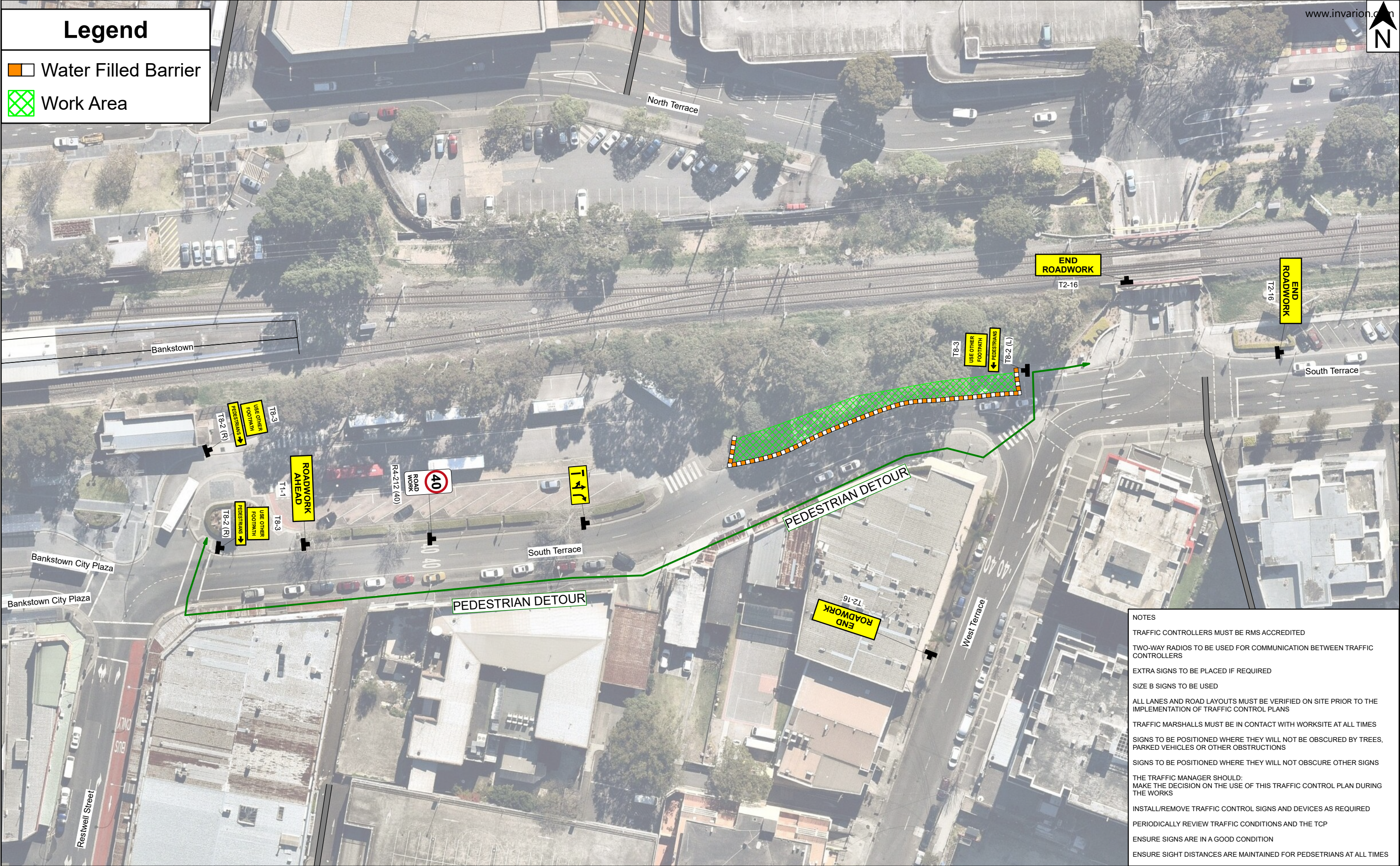
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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	17/09/21

APPROVED
ALEX GREY
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 0051873071
EXPIRY 30/11/2021

Alex Grey

Project	BANKSTOWN STATION CTMP		
Title	Design	Drawn	Checked
	M.H	M.H	A.G
PEDESTRIAN DETOUR	FOR CONSTRUCTION		
	Project Number	Sheet Number	Issue
	P3519	3	001



- NOTES
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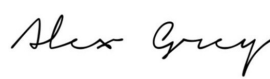
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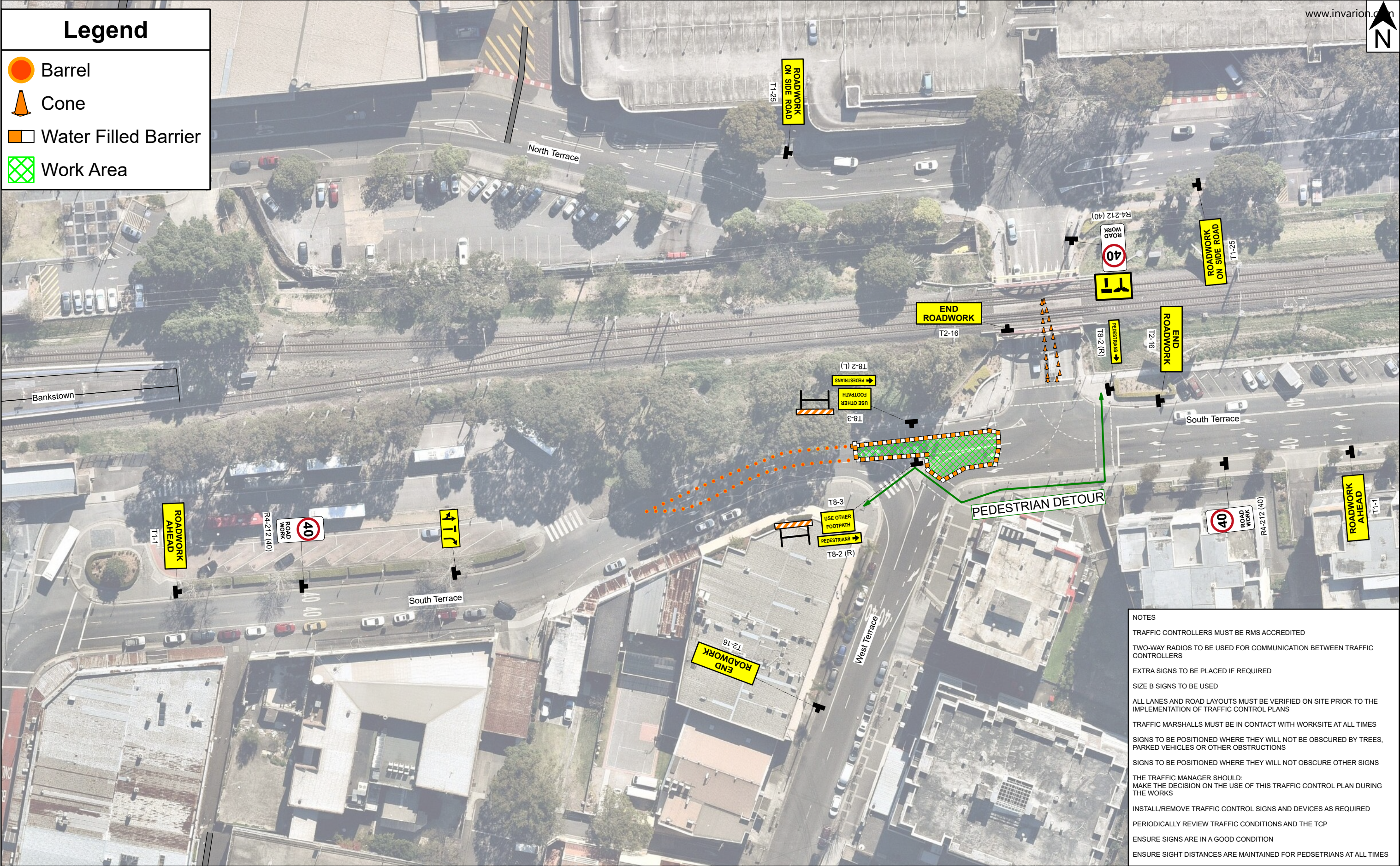
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	27/09/21

APPROVED

ALEX GREY
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 0051873071
EXPIRY 30/11/2021



Project	BANKSTOWN STATION CTMP		
Design	M.H	Drawn	M.H
Checked	A.G		
Title		SEWER WORKS - STAGE 1	
Project Number	P3519	Sheet Number	4
Issue	001		



Legend

Barrel

Cone

Water Filled Barrier

Work Area

NOTES

TRAFFIC CONTROLLERS MUST BE RMS ACCREDITED

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REVISIONS		Drawn	Date
Issue	Revisions/Descriptions	M.H	
001	INITIAL TCP		27/09/21

APPROVED

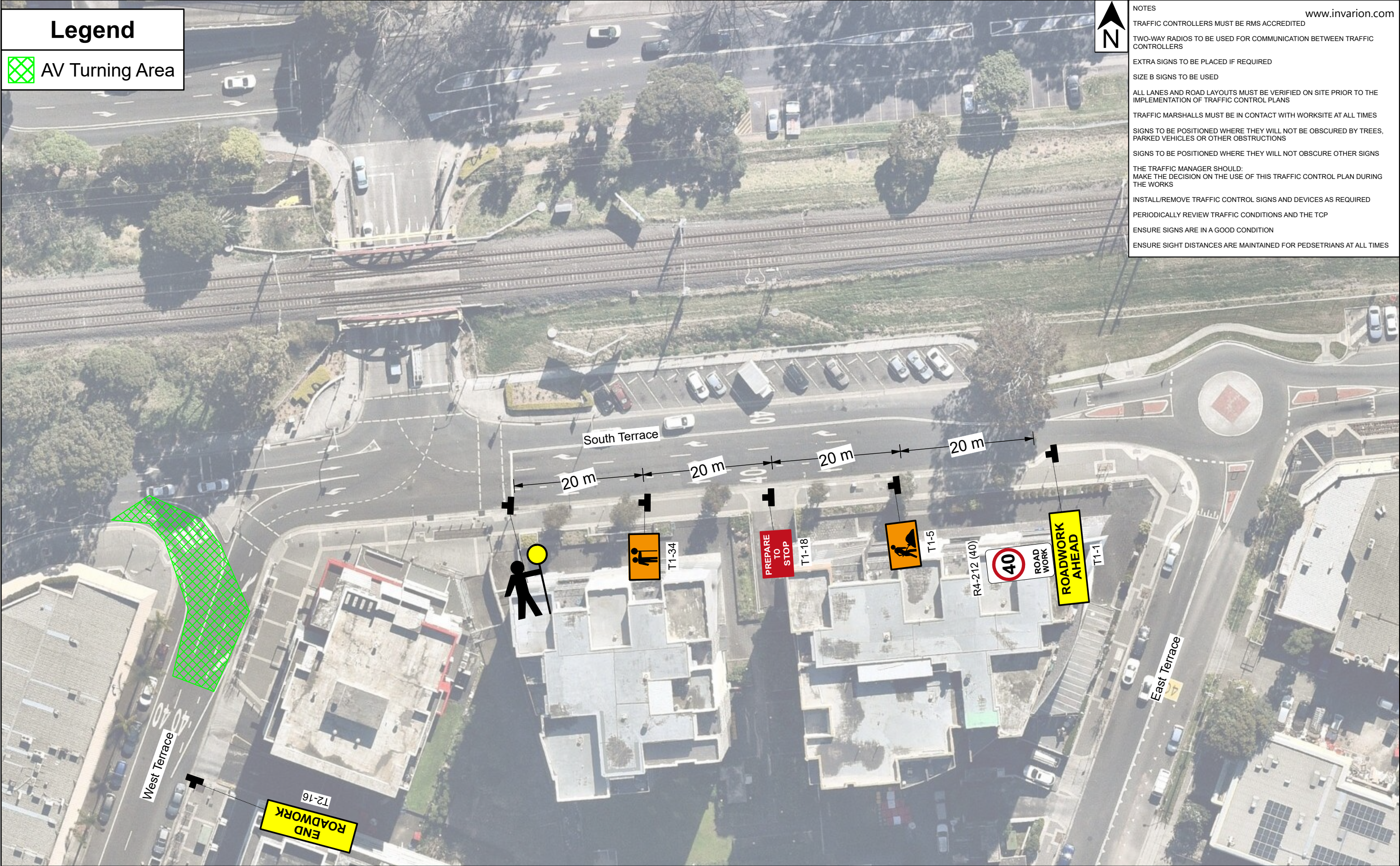
ALEX GREY

PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN

CARD NO. 0051873071

EXPIRY 30/11/2021

Project	BANKSTOWN STATION CTMP	Design	M.H	Drawn	M.H	Checked	A.G
Title	SEWER WORKS - STAGE 2	FOR CONSTRUCTION				Date	27/09/2021
		Project Number	P3519	Sheet Number	5	Issue	001



Legend

AV Turning Area

- NOTES
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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	27/09/21

APPROVED

ALEX GREY

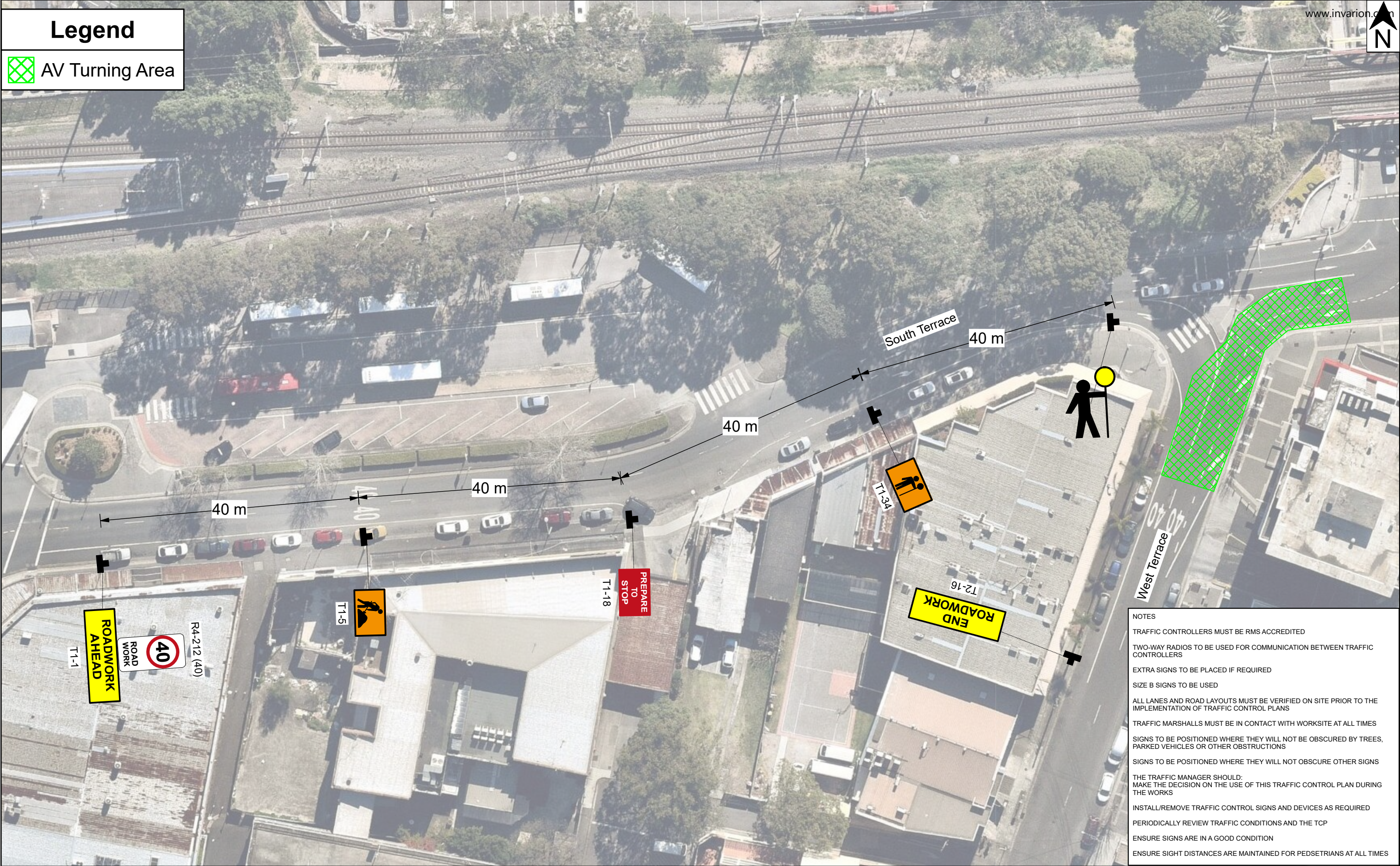
PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN

CARD NO. 0051873071

EXPIRY 30/11/2021

Project	BANKSTOWN STATION CTMP		
Title	SOUTH TERRACE / WEST TERRACE TC EASTERN SIDE		

Design	M.H	Drawn	M.H	Checked	A.G	
FOR CONSTRUCTION					Date	27/09/2021
Project Number	P3519	Sheet Number	6	Issue	001	



Legend

AV Turning Area

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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	27/09/21

APPROVED

ALEX GREY

PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN

CARD NO. 0051873071

EXPIRY 30/11/2021

Project	BANKSTOWN STATION CTMP		
Title	SOUTH TERRACE / WEST TERRACE TC WESTERN SIDE		
	Design	Drawn	Checked
M.H		M.H	A.G
FOR CONSTRUCTION		Date	27/09/2021
Project Number	Sheet Number	Issue	
P3519	7	001	



Legend

Work Area

- NOTES
- www.invarion.com
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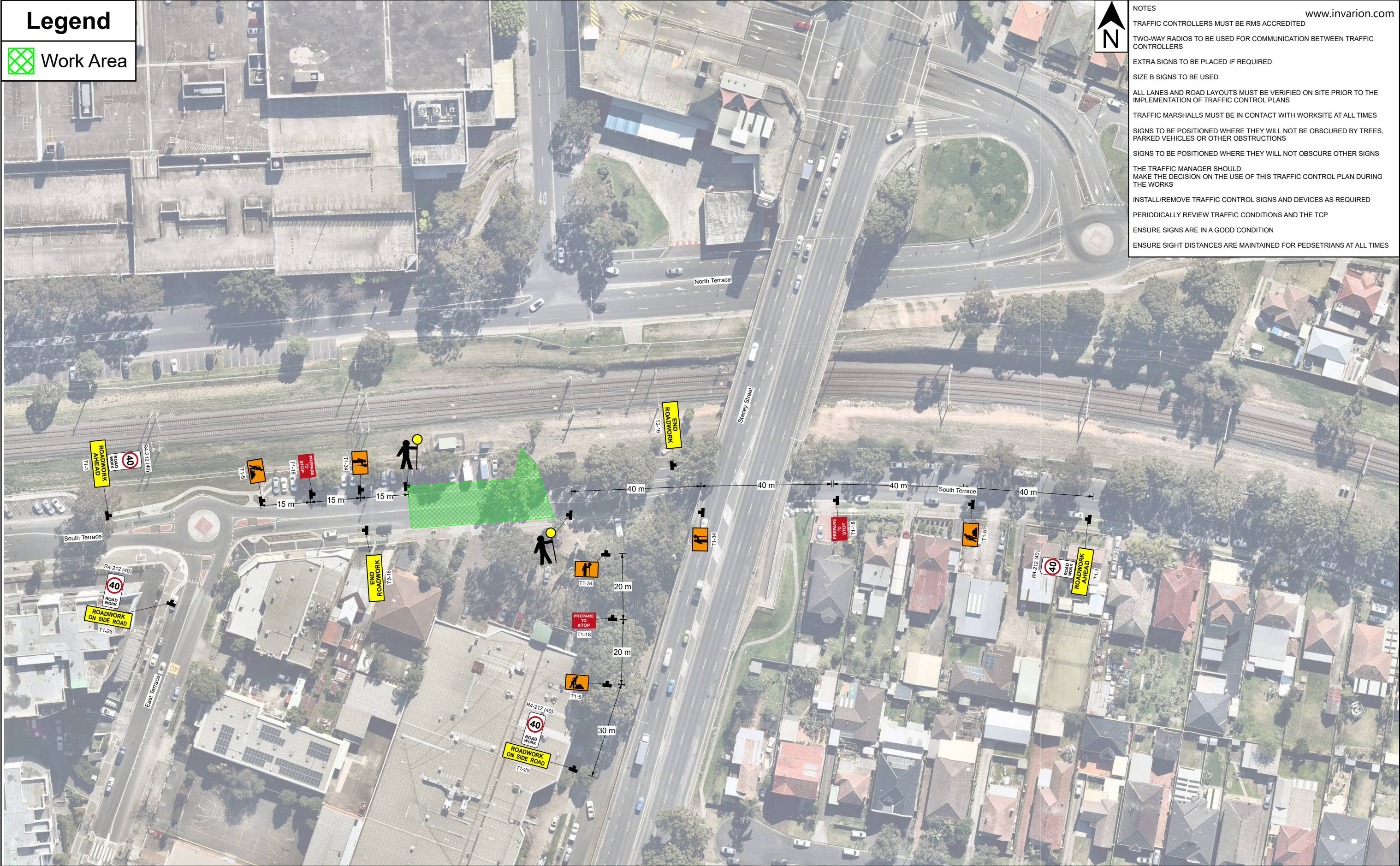
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Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL TCP	M.H	27/09/21

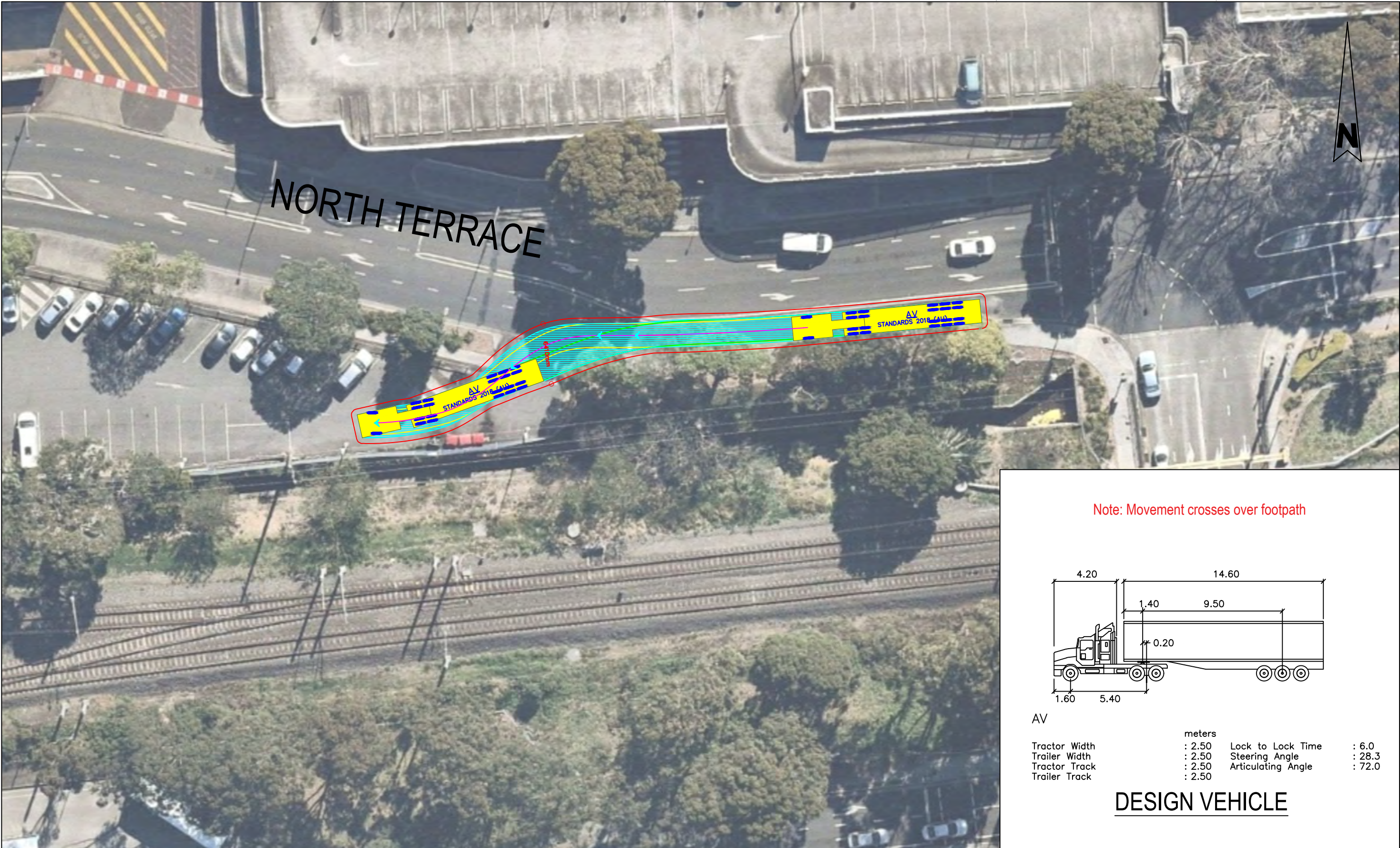
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PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
CARD NO. 0051873071
EXPIRY 30/11/2021

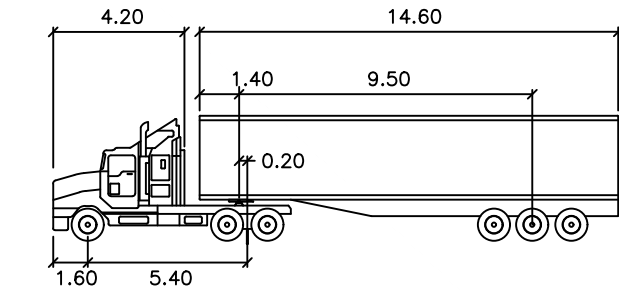
Project	BANKSTOWN STATION CTMP	Design	M.H	Drawn	M.H	Checked	A.G
Title	RAYMOND STREET / WEST TERRACE TC	FOR CONSTRUCTION		Date	27/09/2021		
		Project Number	Sheet Number	Issue			
		P3519	8	001			



11.2 Appendix 2 – Swept Paths



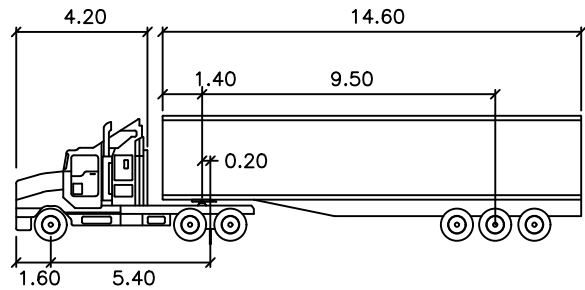
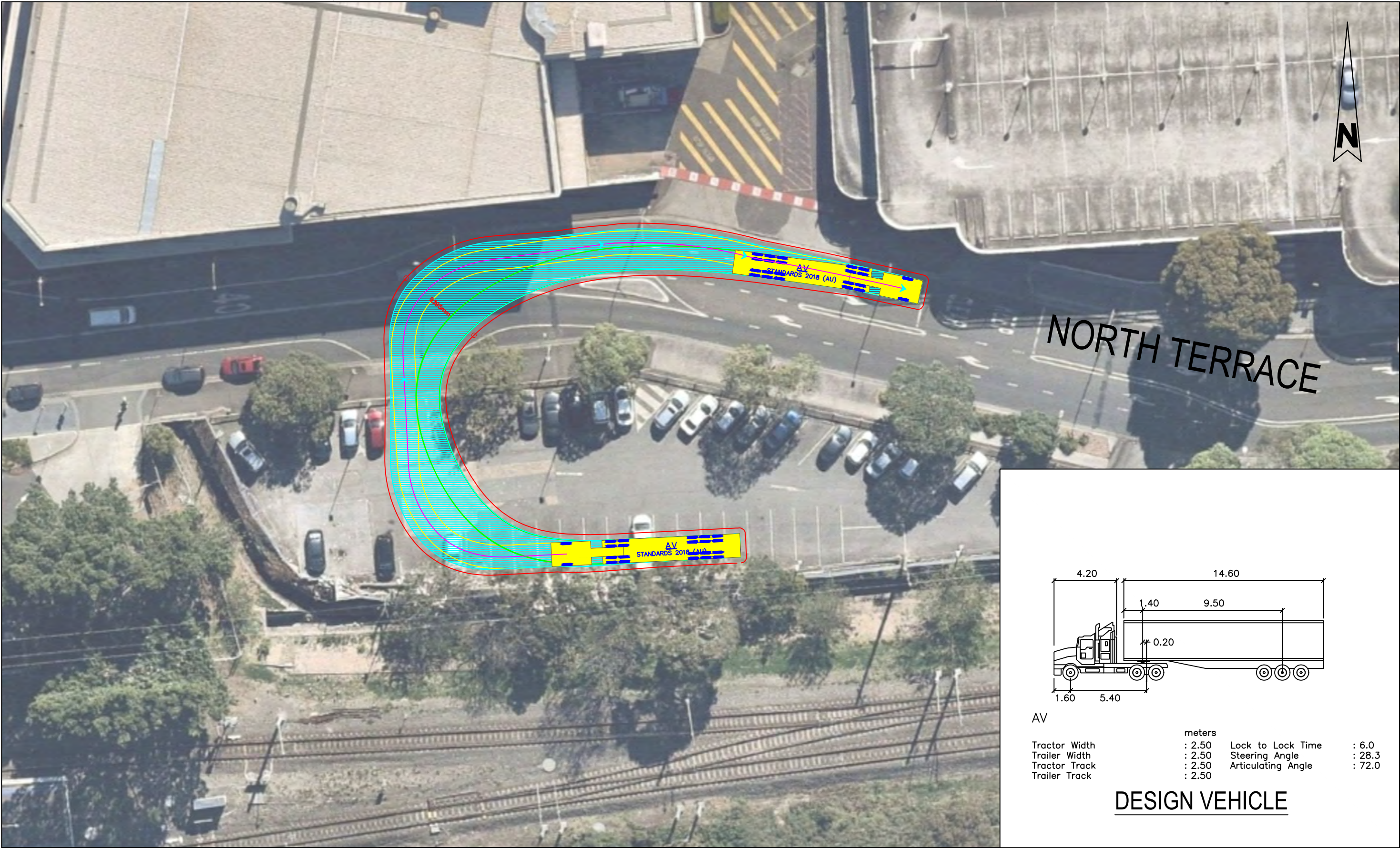
Note: Movement crosses over footpath



AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

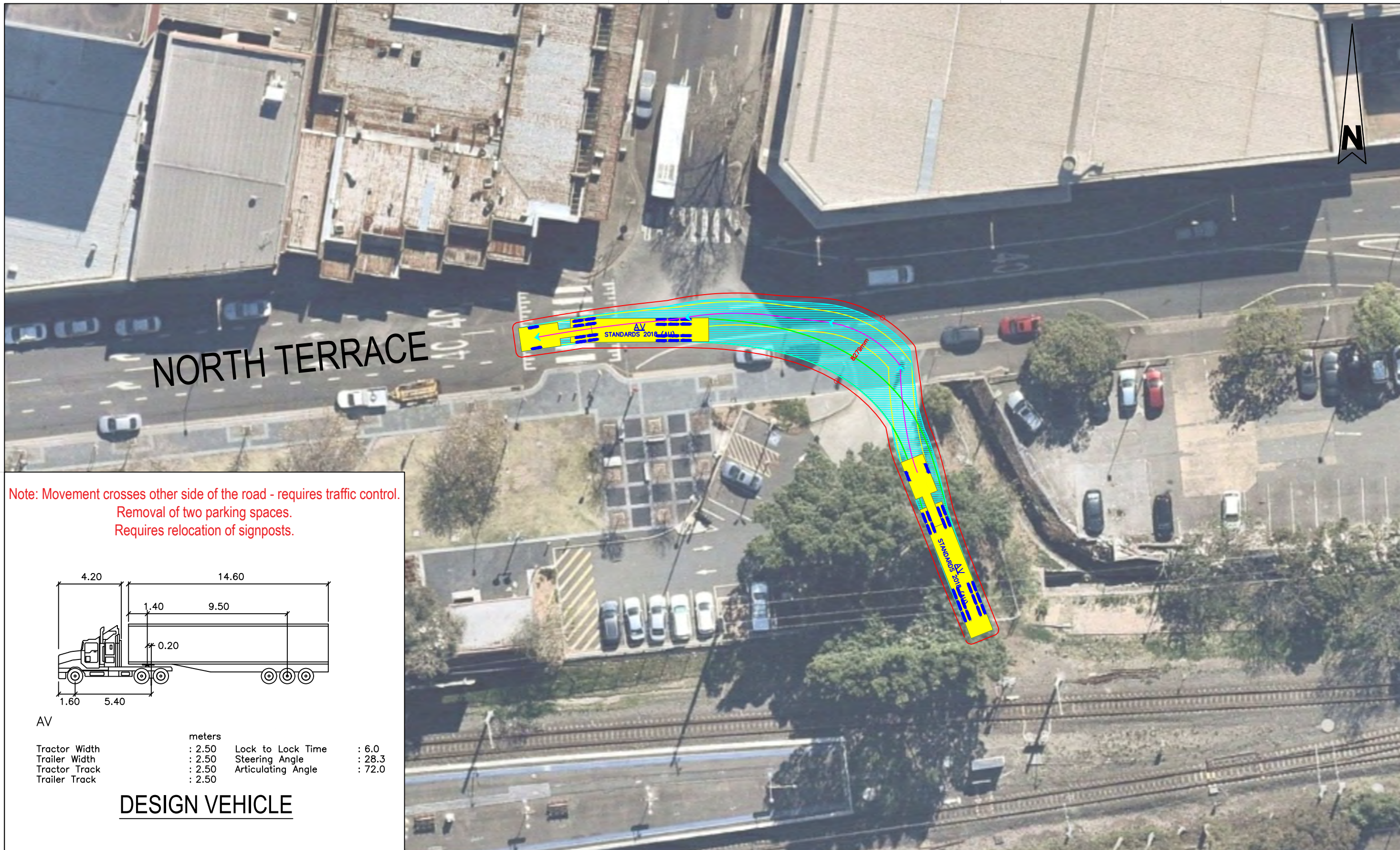
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		Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
		001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
		002	UPDATED SWEPT PATH	M.H	23.09.2021				
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021	Title ENTRY MOVEMENT	Date	28.09.2021	
							Project Number	Sheet Number	Issue
							P3519	1	003



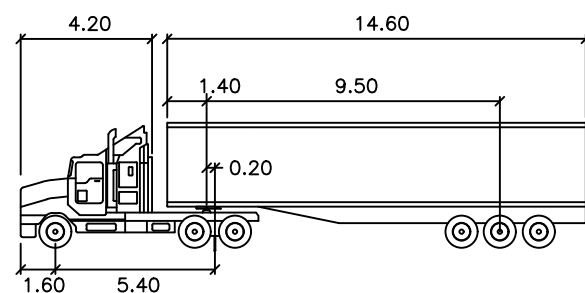
AV			
meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked
	Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
	001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
	002	UPDATED SWEPT PATH	M.H	23.09.2021				
	003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021	Title EXIT MOVEMENT - RIGHT	Date	28.09.2021	
						Project Number	Sheet Number	Issue
						P3519	2	003



Note: Movement crosses other side of the road - requires traffic control.
Removal of two parking spaces.
Requires relocation of signposts.



AV

	Tractor Width	Trailer Width	Tractor Track	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
meters	: 2.50	: 2.50	: 2.50	: 2.50	: 6.0	: 28.3	: 72.0

DESIGN VEHICLE

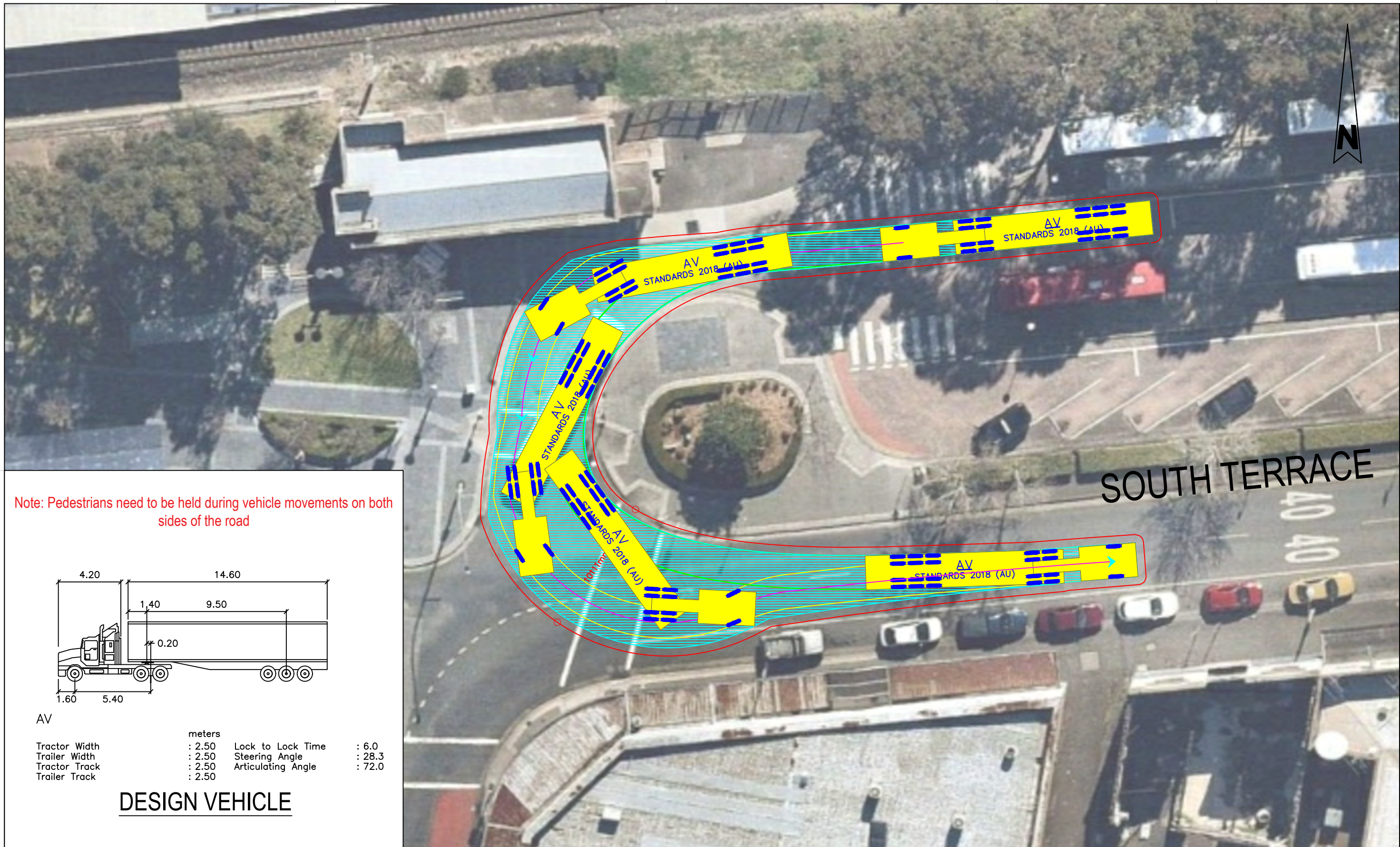


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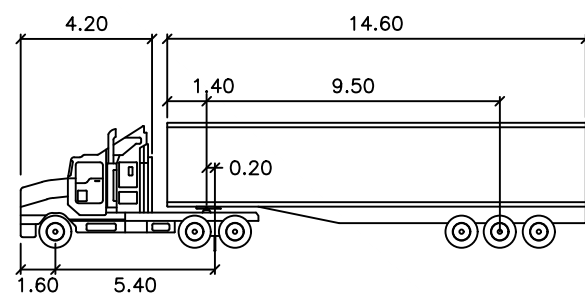
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	02.09.2021
002	UPDATED SWEPT PATH	M.H	23.09.2021
003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN
Title	20m AV Gate 1 Left Turn Exit to North Terrace

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					Date
					28.09.2021
Project Number	P3519	Sheet Number	6	Issue	003



Note: Pedestrians need to be held during vehicle movements on both sides of the road



AV

	meters	
Tractor Width	: 2.50	Lock to Lock Time : 6.0
Tractor Track	: 2.50	Steering Angle : 28.3
Tractor Wheelbase	: 2.50	Articulating Angle : 72.0
Trailer Width	: 2.50	
Trailer Track	: 2.50	

DESIGN VEHICLE

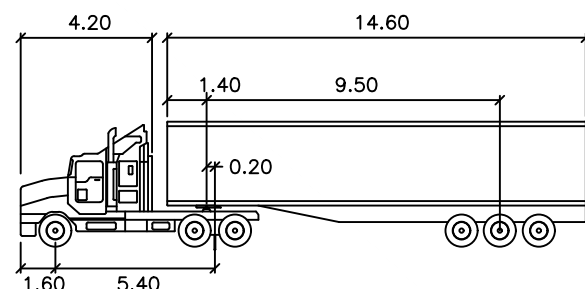


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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN
Title	8.8m MRV Concrete Truck - Left Turn Exit from Satellite Compound

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					Date
					28.09.2021
Project Number	P3519	Sheet Number	8	Issue	003



AV	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

SOUTH TERRACE



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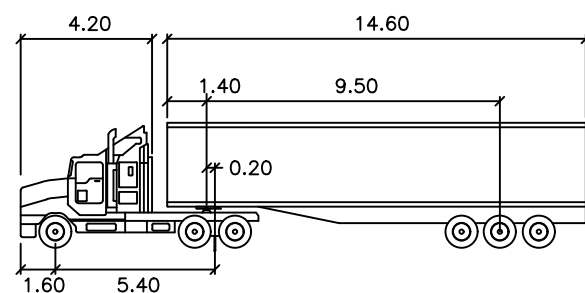
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001	INITIAL SWEPT PATH	M.H	02.09.2021
002	UPDATED SWEPT PATH	M.H	23.09.2021
003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		
Title	20m AV Gate 2 Left Turn Entry from South Terrace		

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					Date
					28.09.2021
Project Number	P3519	Sheet Number	9	Issue	003



Note: Movement requires substantial gate widening



AV

	Tractor Width	Trailer Width	Tractor Track	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
AV	4.20	14.60	1.40	9.50	0.20	1.60	5.40

DESIGN VEHICLE

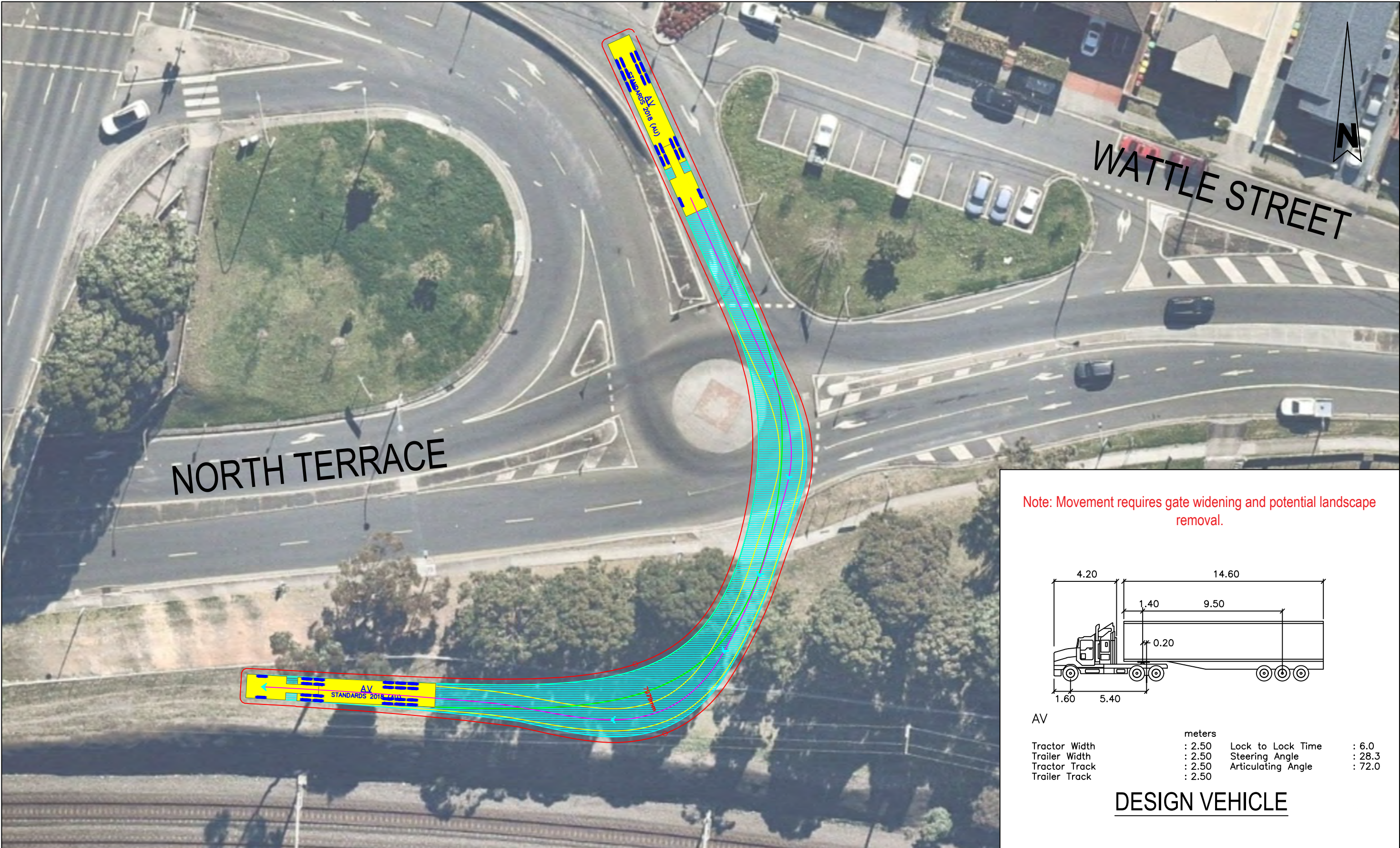


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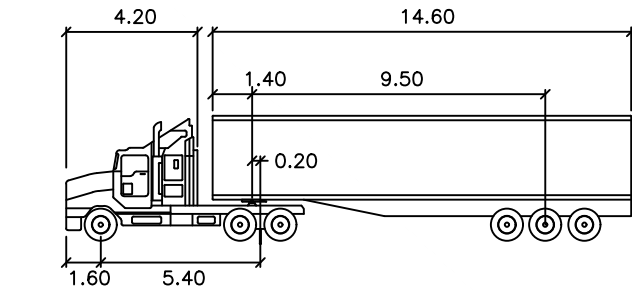
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
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002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN
Title	20m AV Gate 3 Right Turn Exit to South Terrace

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					Date
Project Number					28.09.2021
P3519					Issue
Sheet Number					003
11					



Note: Movement requires gate widening and potential landscape removal.

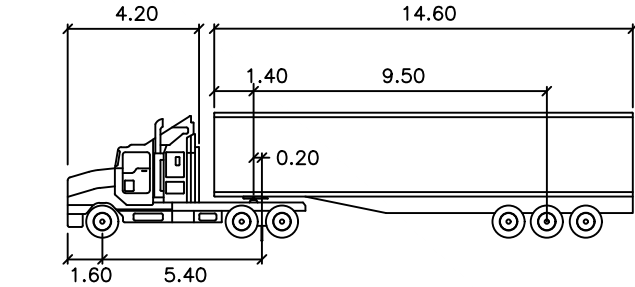


AV			
	Tractor Width	Tractor Track	Trailer Track
	Tractor Width	Tractor Track	Trailer Track
	Tractor Width	Tractor Track	Trailer Track
	Tractor Width	Tractor Track	Trailer Track

DESIGN VEHICLE

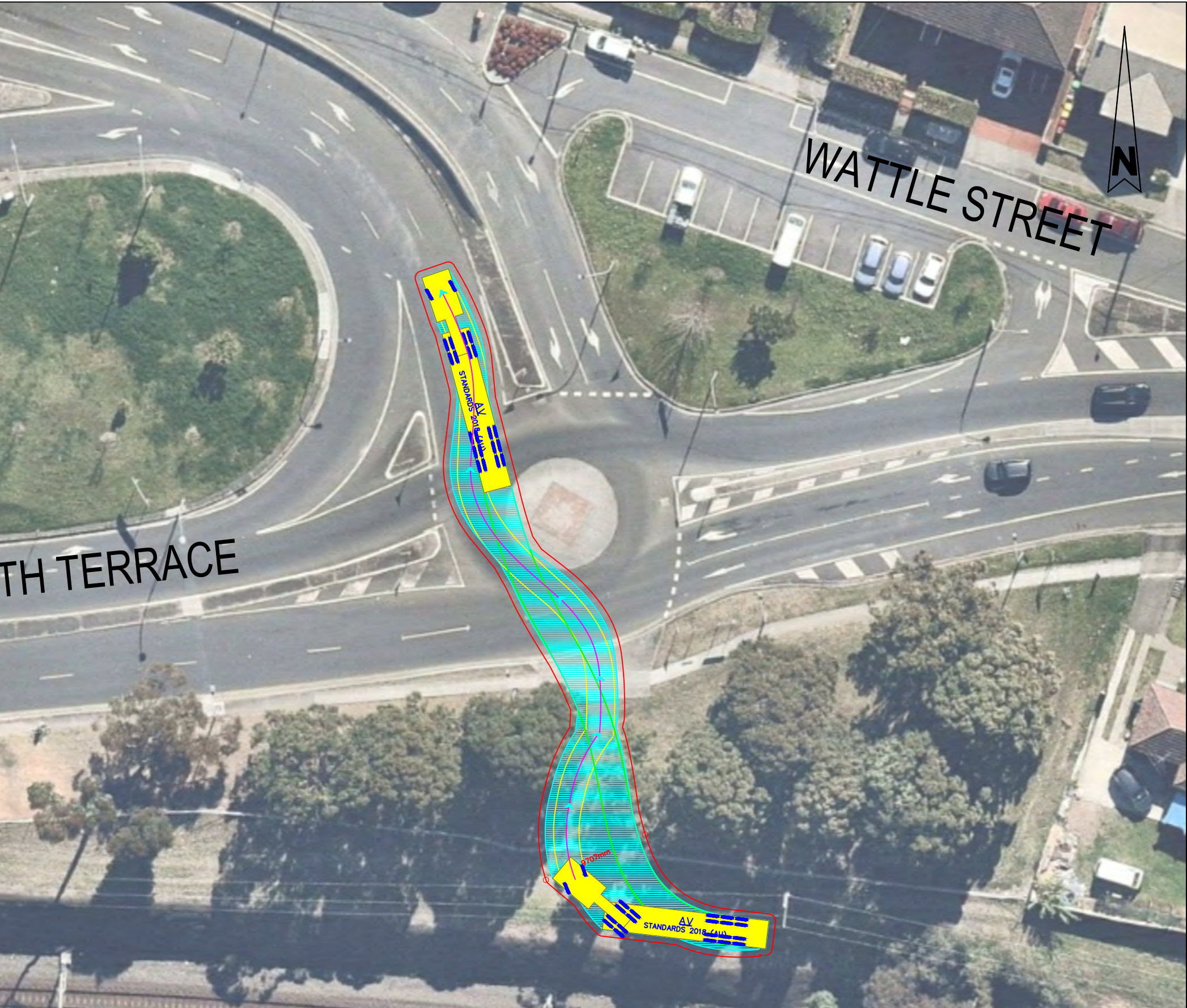
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	REVISIONS				Project	Design	Drawn	Checked
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	Issue	Revisions/Descriptions	Drawn	Date	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	M.H	M.H	A.G
		001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY	Date 28.09.2021	
		002	UPDATED SWEPT PATH	M.H	23.09.2021				
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021				
					Title	Project Number	Sheet Number	Issue	
					20m Av Gate 4 Right Turn Entry through Roundabout from Wattle Street	P3519	12	003	

Note: Movement requires gate widening and potential landscape removal..



AV	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

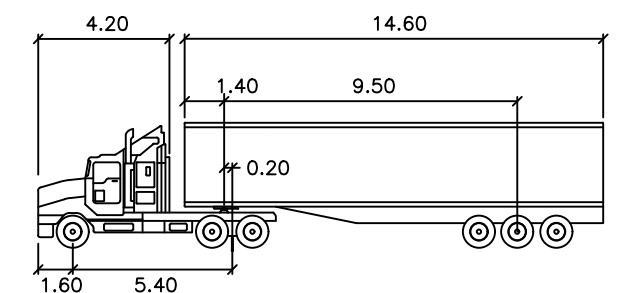
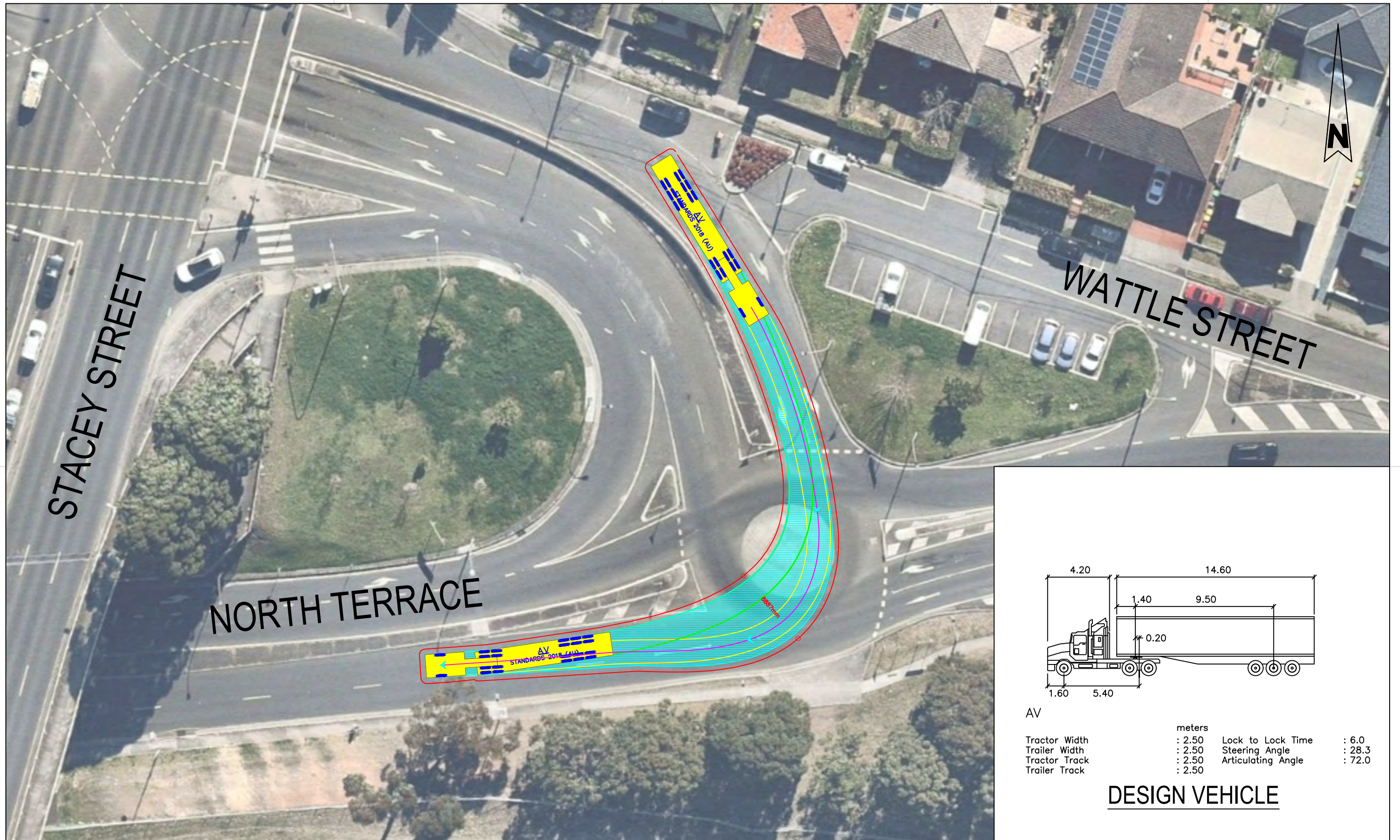


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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN
Title	20m AV Gate 4 Roundabout Through Exit to Wattle Street

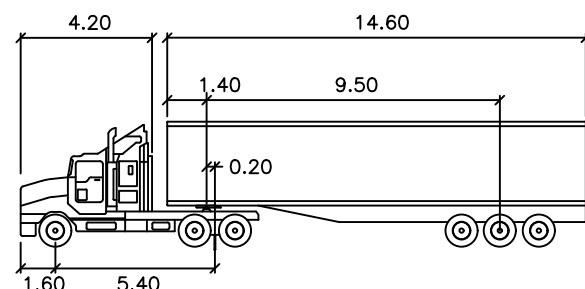
Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					Date
					28.09.2021
Project Number	P3519	Sheet Number	13	Issue	003



AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

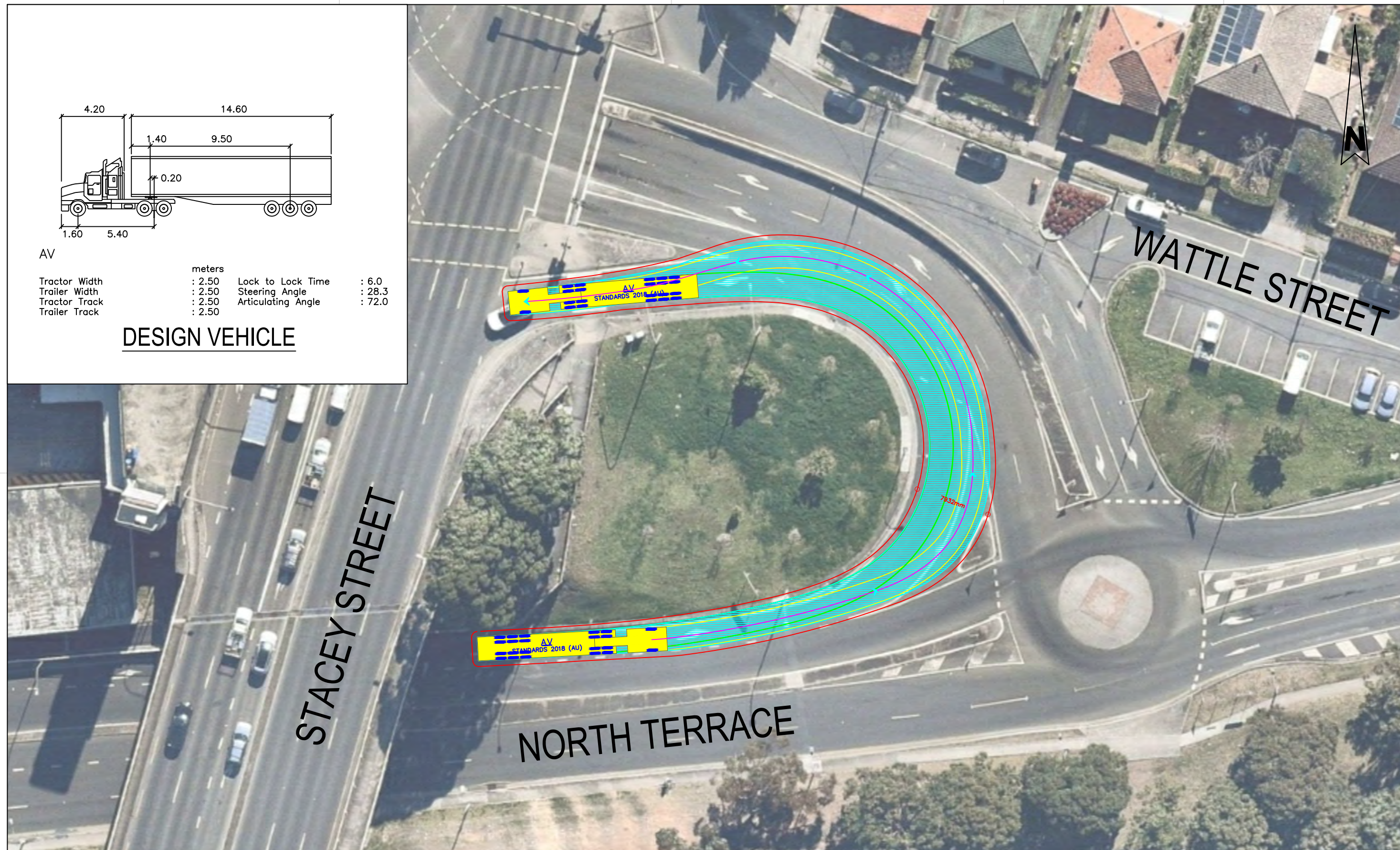
DESIGN VEHICLE

 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	Issue	Revisions/Descriptions	Drawn	Date		Date 28.09.2021		
	001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
	002	UPDATED SWEPT PATH	M.H	23.09.2021		Project Number P3519	Sheet Number 14	Issue 003
003 UPDATED SWEPT PATH POST RSA AND REVIEW					Title 20m AV Turns in Corners - Right Turn Entry Haulage Route (Wattle Street Roundabout)			



AV		
Tractor Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.50	Steering Angle : 28.3
Tractor Track	: 2.50	Articulating Angle : 72.0
Trailer Track	: 2.50	

DESIGN VEHICLE

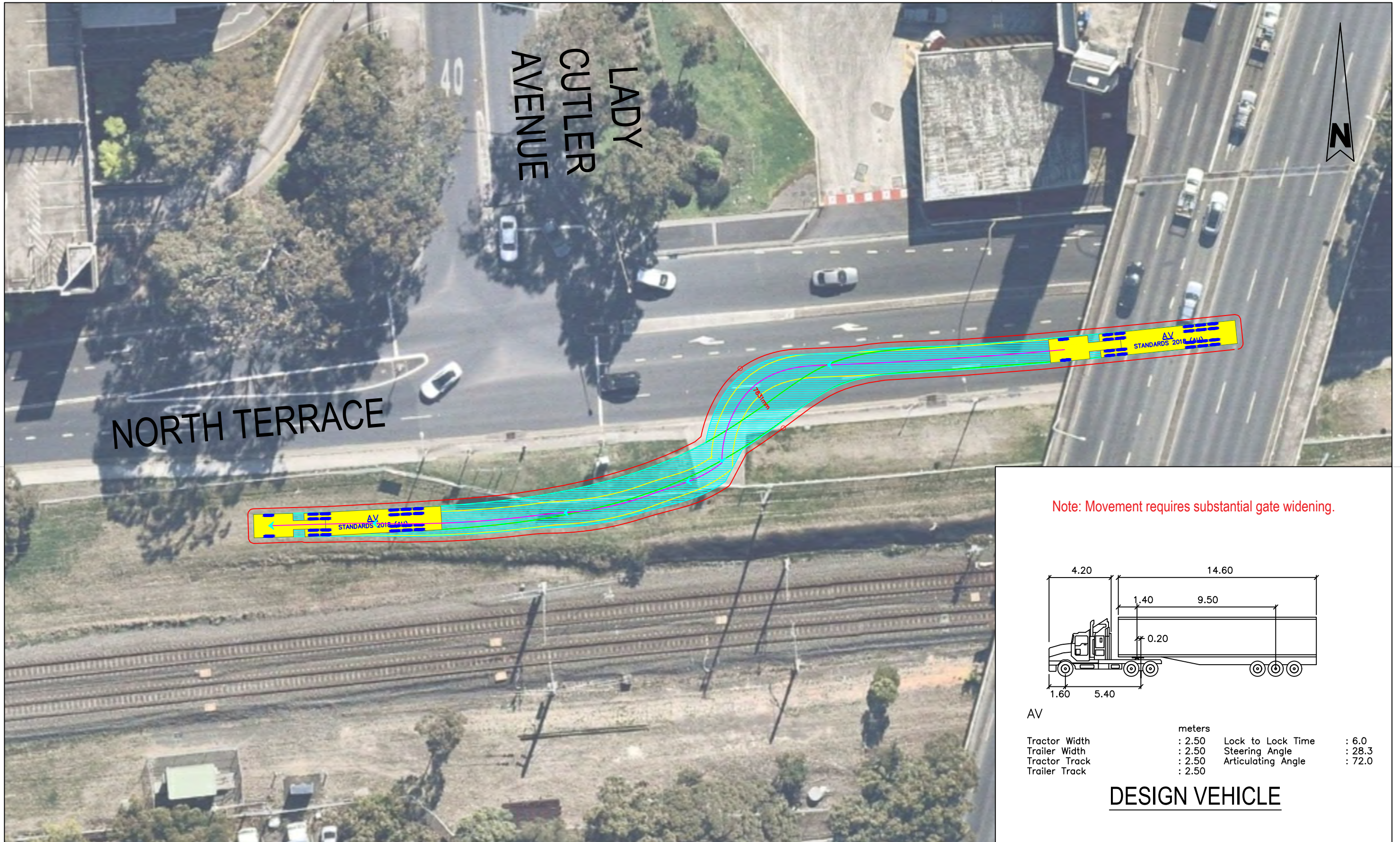


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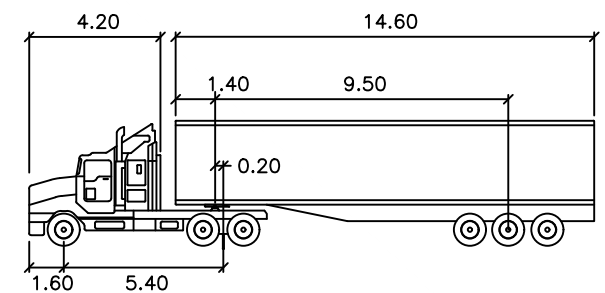
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002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		
Title	20m AV Turns in Corners - Left Turn Exit Haulage Route to Stacey Street (Wattle Street Roundabout)		

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY					
Project Number	P3519	Sheet Number	15	Date	28.09.2021
				Issue	003



Note: Movement requires substantial gate widening.



AV

	Tractor Width	Trailer Width	Tractor Track	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
AV	4.20	14.60	1.60	5.40	6.0	28.3	72.0

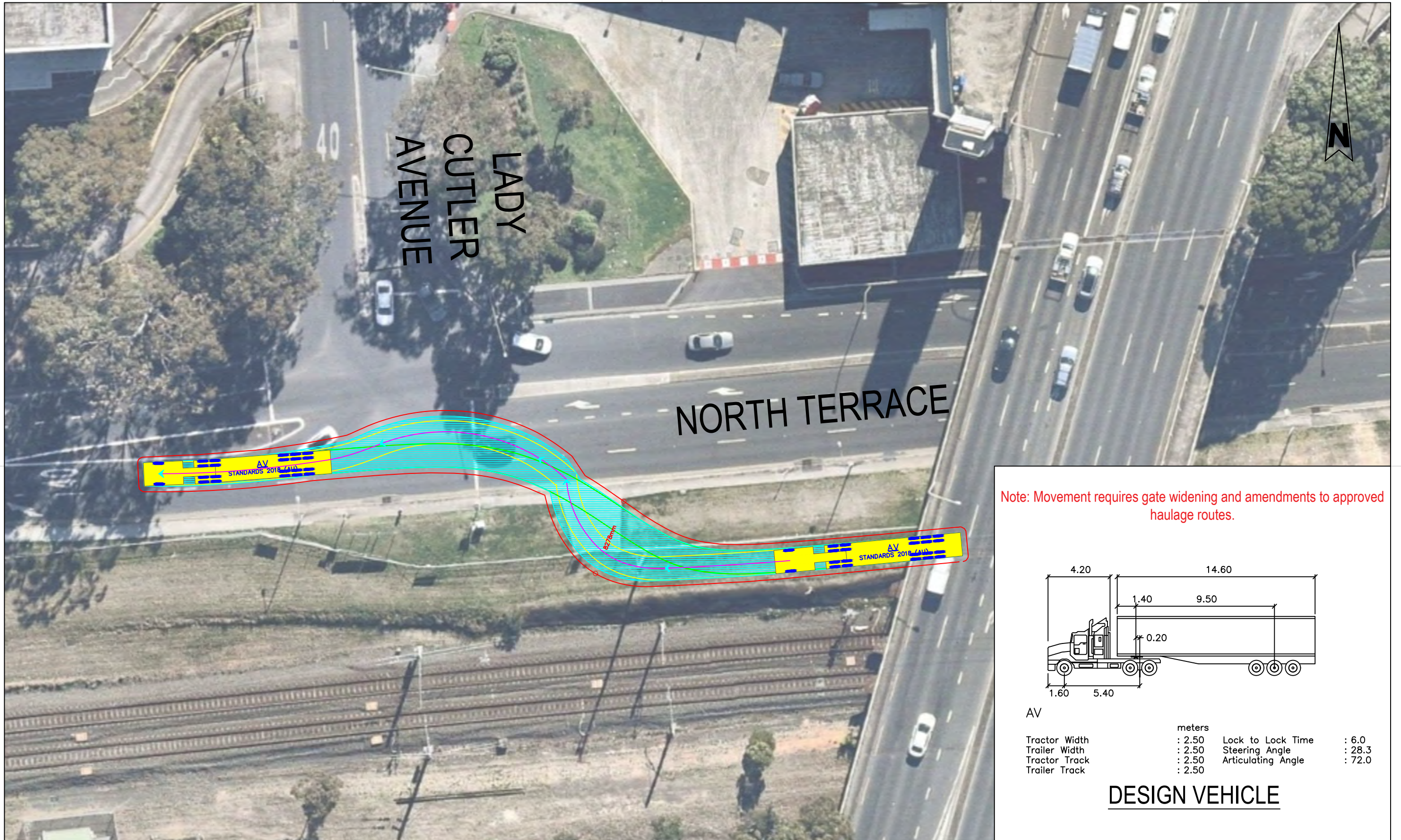
DESIGN VEHICLE



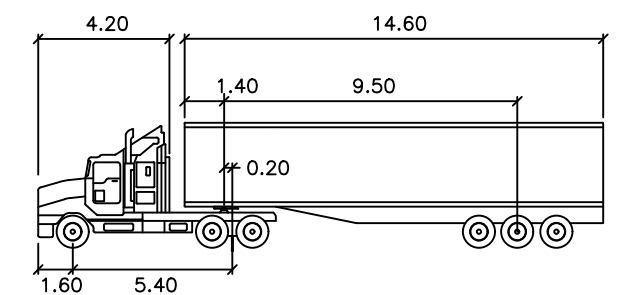
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Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	FOR INFORMATION ONLY		
Title 20m AV Gate 5 Left Turn Entry from North Terrace	Project Number P3519	Sheet Number 16	Date 28.09.2021 Issue 003



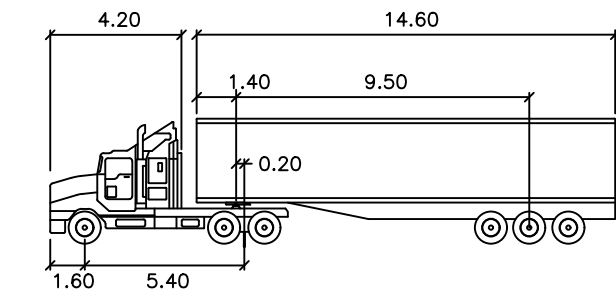
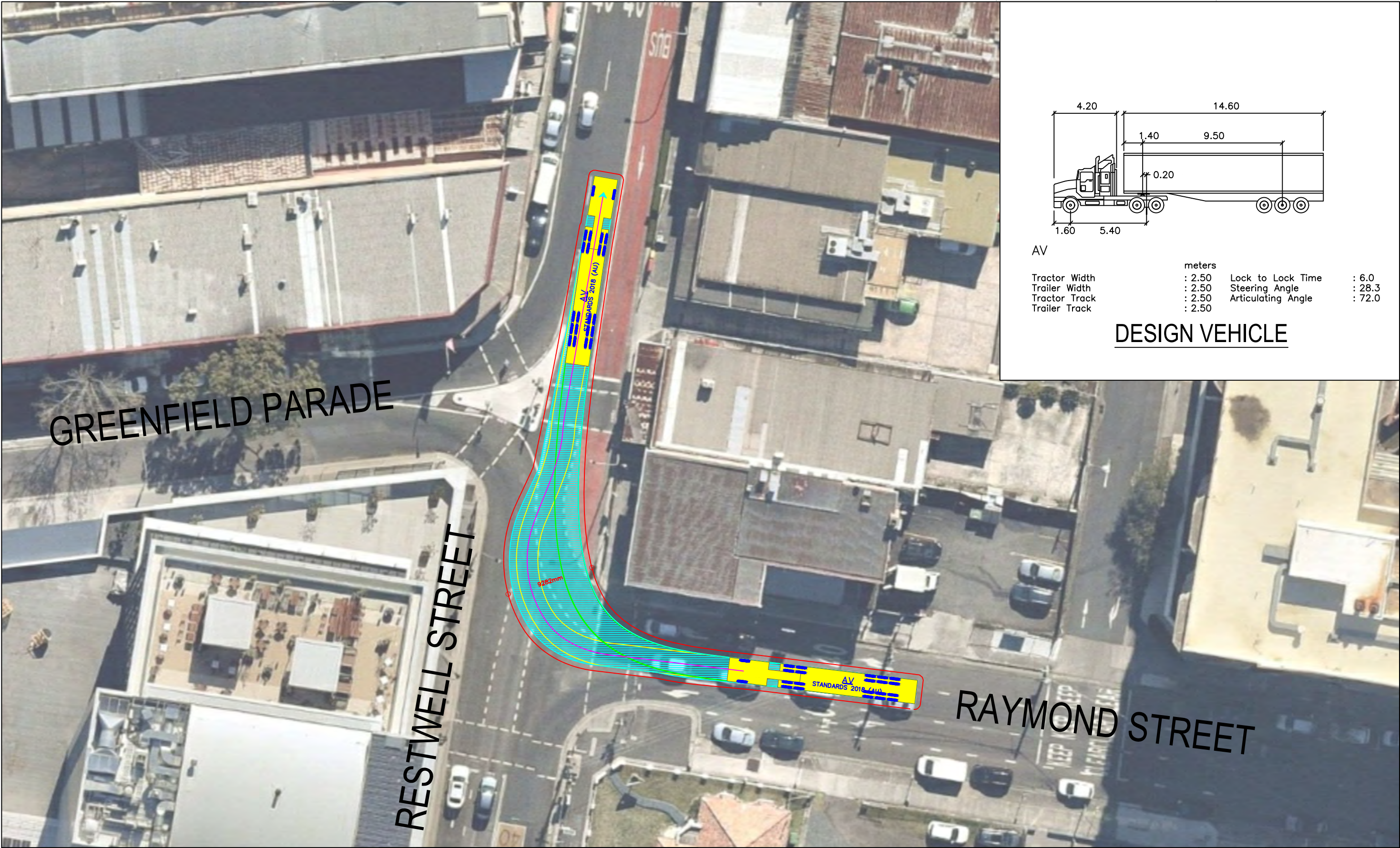
Note: Movement requires gate widening and amendments to approved haulage routes.



AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

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		Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G	
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		002	UPDATED SWEPT PATH	M.H	23.09.2021					
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 20m AV Gate 5 Right Turn Exit to North Terrace	Project Number		Sheet Number	Issue
							P3519	17	003	



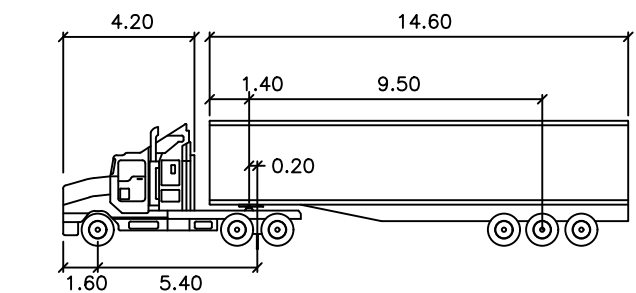
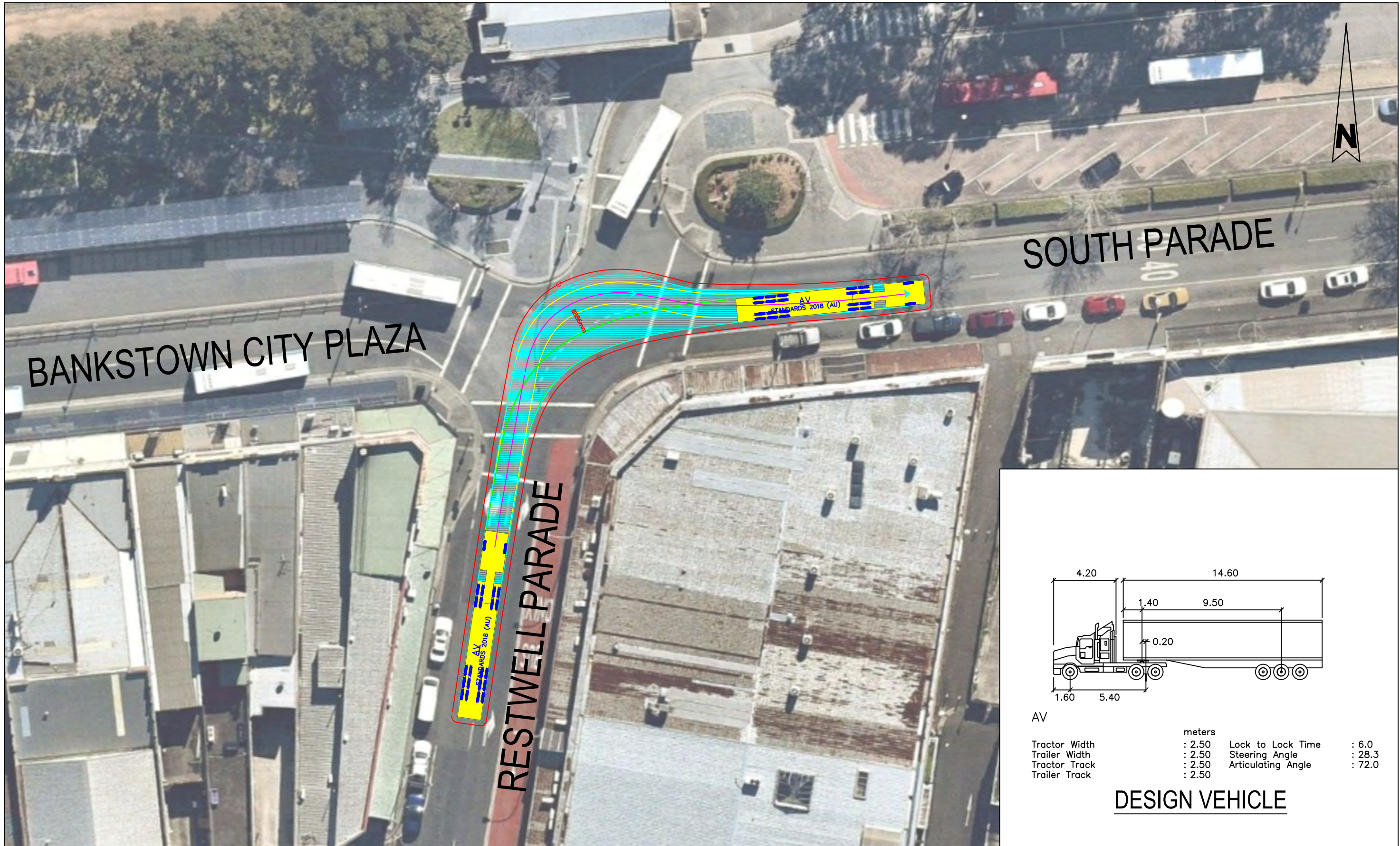
AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

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	Issue	Revisions/Descriptions	Drawn	Date																																													
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	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																																													
Title 20m AV Turns in Corners - Right Turn Entry Haulage Route (Restwell Street)		FOR INFORMATION ONLY		Date 28.09.2021																																													
		Project Number P3519		Sheet Number 18	Issue 003																																												

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
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002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

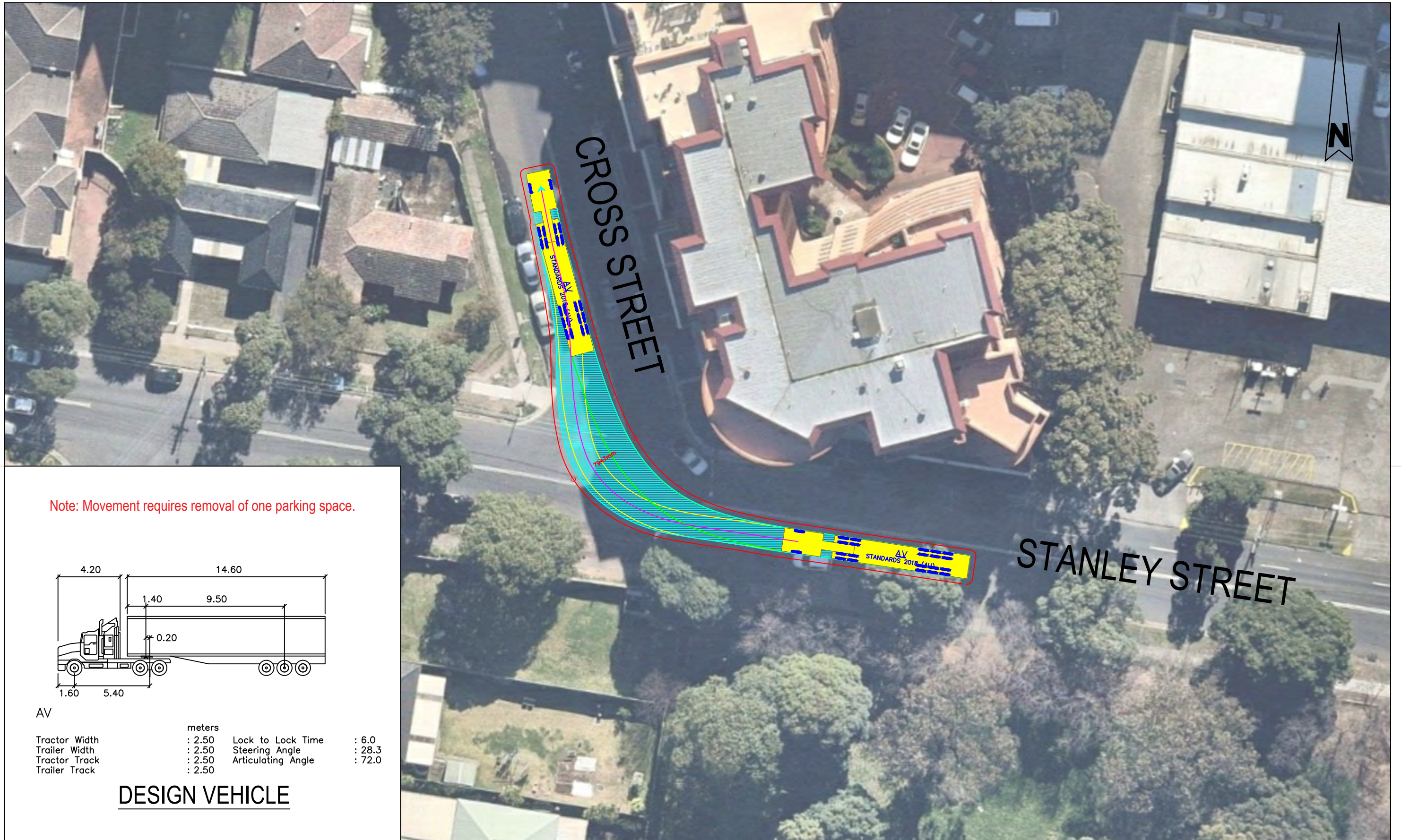
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20m AV Turns in Corners - Right Turn Entry Haulage Route (Restwell Street)	



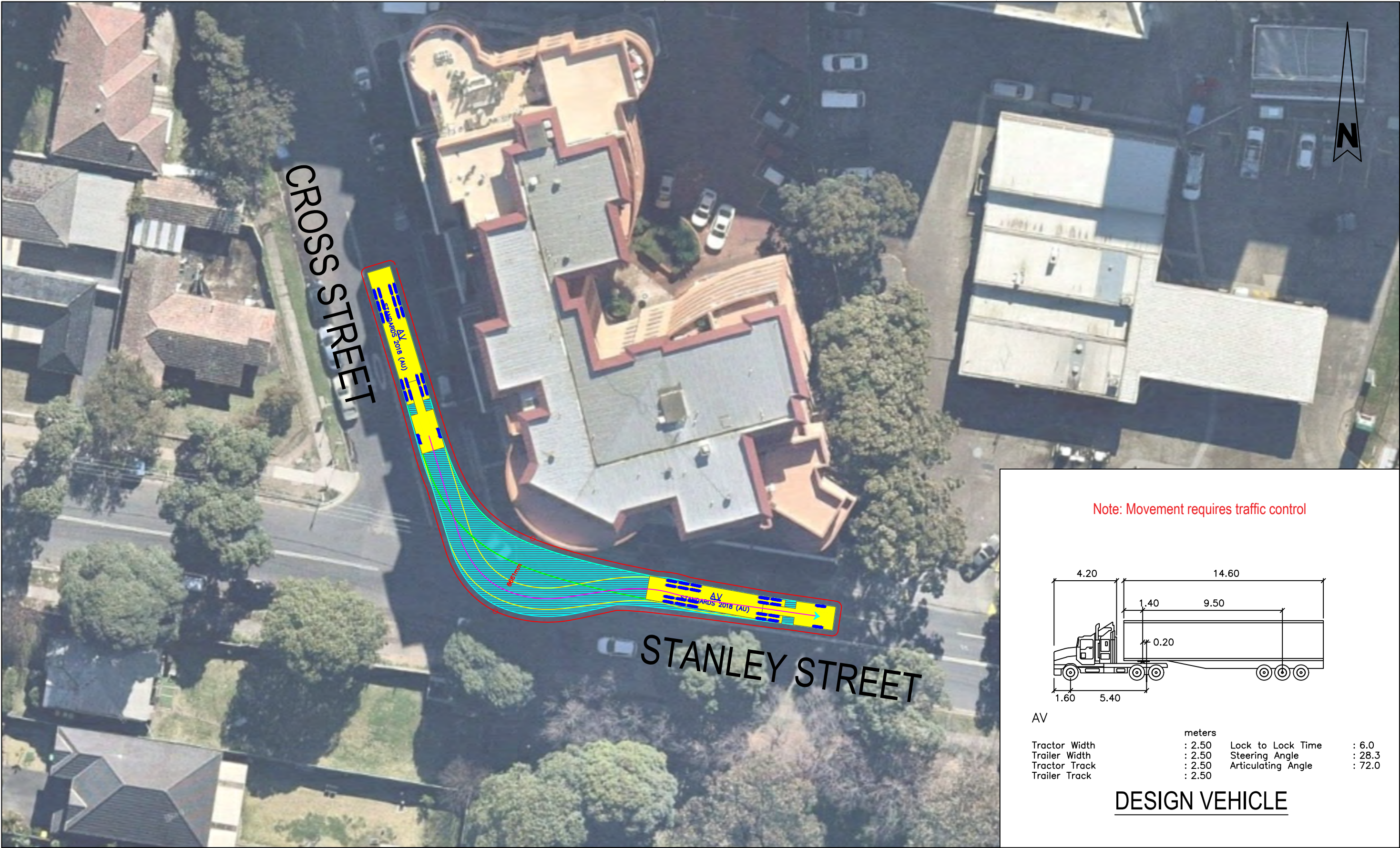
AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

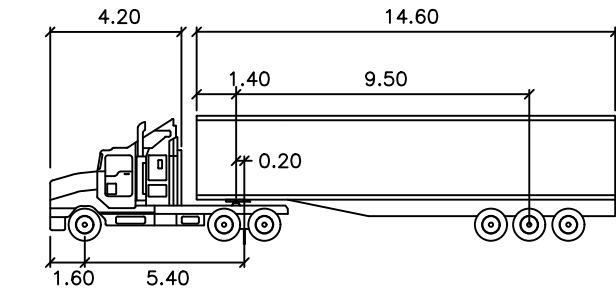
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	<table><thead><tr><th colspan="2">REVISIONS</th><th>Drawn</th><th>Date</th></tr><tr><th>Issue</th><th>Revisions/Descriptions</th><th></th><th></th></tr></thead><tbody><tr><td>001</td><td>INITIAL SWEPT PATH</td><td>M.H</td><td>02.09.2021</td></tr><tr><td>002</td><td>UPDATED SWEPT PATH</td><td>M.H</td><td>23.09.2021</td></tr><tr><td>003</td><td>UPDATED SWEPT PATH POST RSA AND REVIEW</td><td>M.H</td><td>28.09.2021</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	REVISIONS		Drawn	Date	Issue	Revisions/Descriptions			001	INITIAL SWEPT PATH	M.H	02.09.2021	002	UPDATED SWEPT PATH	M.H	23.09.2021	003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021																					<table><tr><td rowspan="3">Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN</td><td>Design M.H</td><td>Drawn M.H</td><td>Checked A.G</td></tr><tr><td colspan="2">FOR INFORMATION ONLY</td><td>Date 28.09.2021</td></tr><tr><td>Project Number P3519</td><td>Sheet Number 19</td><td>Issue 003</td></tr></table>	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G	FOR INFORMATION ONLY		Date 28.09.2021	Project Number P3519	Sheet Number 19	Issue 003
	REVISIONS		Drawn	Date																																																	
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		Issue	Revisions/Descriptions	Drawn	Date	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		M.H	M.H	A.G
		001	INITIAL SWEEP PATH	M.H	02.09.2021	Title 20m AV Turns in Corners - Right Turn Entry Haulage Route (Stanley Street)		FOR INFORMATION ONLY		Date
		002	UPDATED SWEEP PATH	M.H	23.09.2021					28.09.2021
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021			Project Number	Sheet Number	Issue
								P3519	20	003



Note: Movement requires traffic control



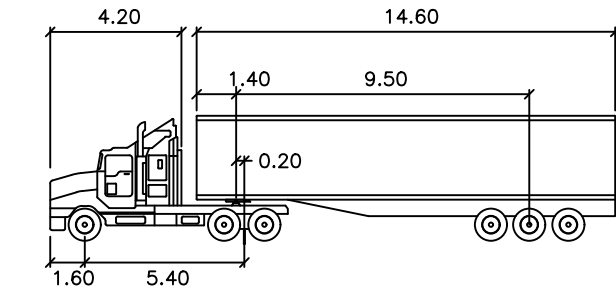
AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

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Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au				Title 20m AV Turns in Corners - Left Turn Exit Haulage Route (Stanley Street)				FOR INFORMATION ONLY		Date 28.09.2021																																													
Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202										Project Number P3519	Sheet Number 21	Issue 003																																											



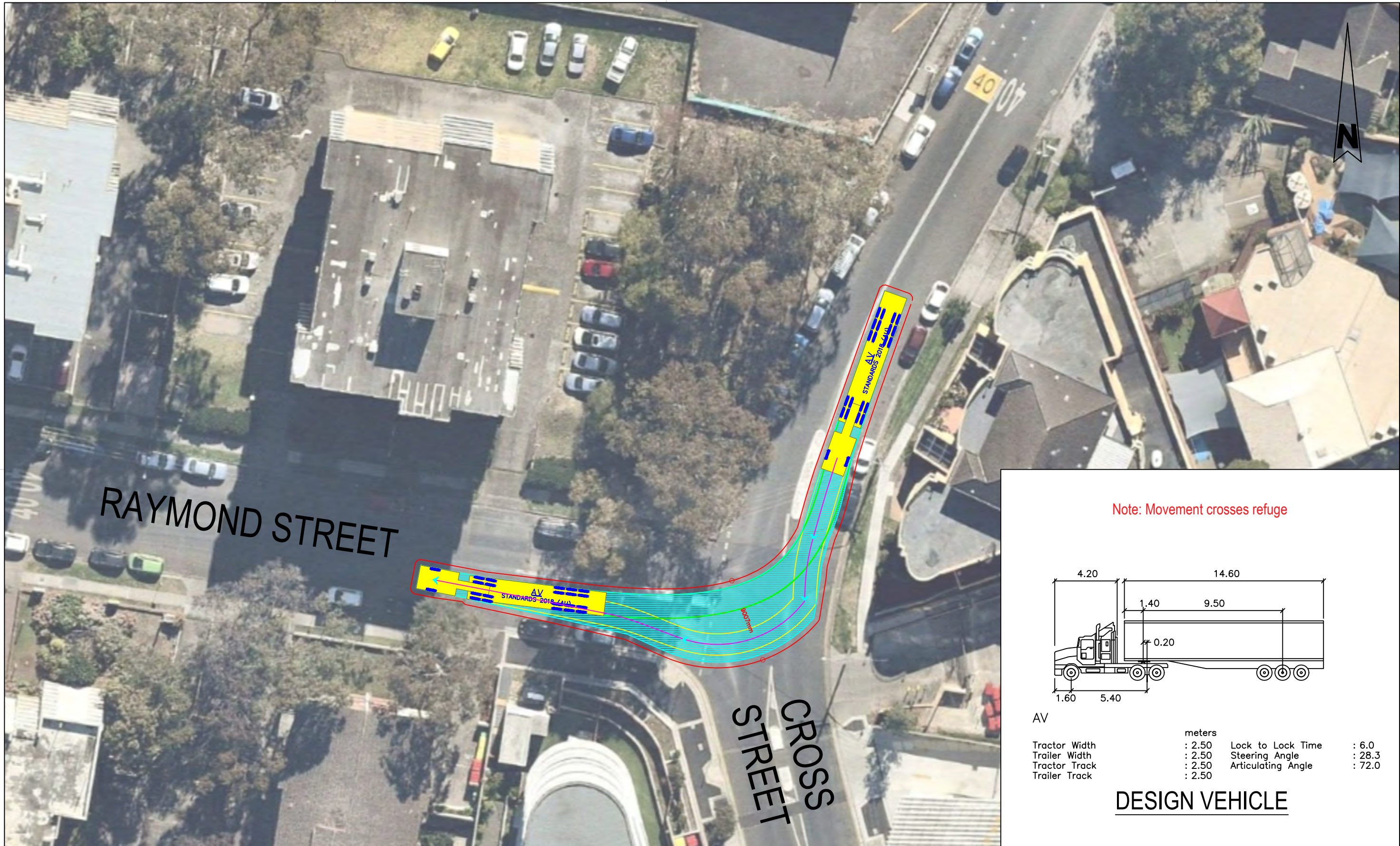
Note: Movement crosses refuge.
Requires removal of one parking space



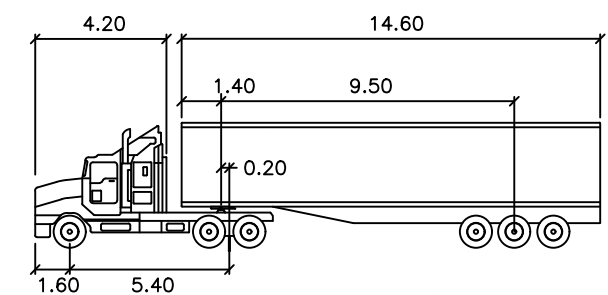
AV			
	Tractor Width	4.20	
	Tractor Track	1.60	
	Tractor Width	5.40	
	Trailer Width	14.60	
	Trailer Track	9.50	
	Trailer Width	0.20	

DESIGN VEHICLE

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	Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
	001	INITIAL SWEEP PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
	002	UPDATED SWEEP PATH	M.H	23.09.2021				
Title 20m AV Turns in Corners - Left Turn Entry Haulage Route from South (East Terrace / Raymond Street)	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021	Project Number P3519	Sheet Number 22	Issue 003	Date 28.09.2021



Note: Movement crosses refuge

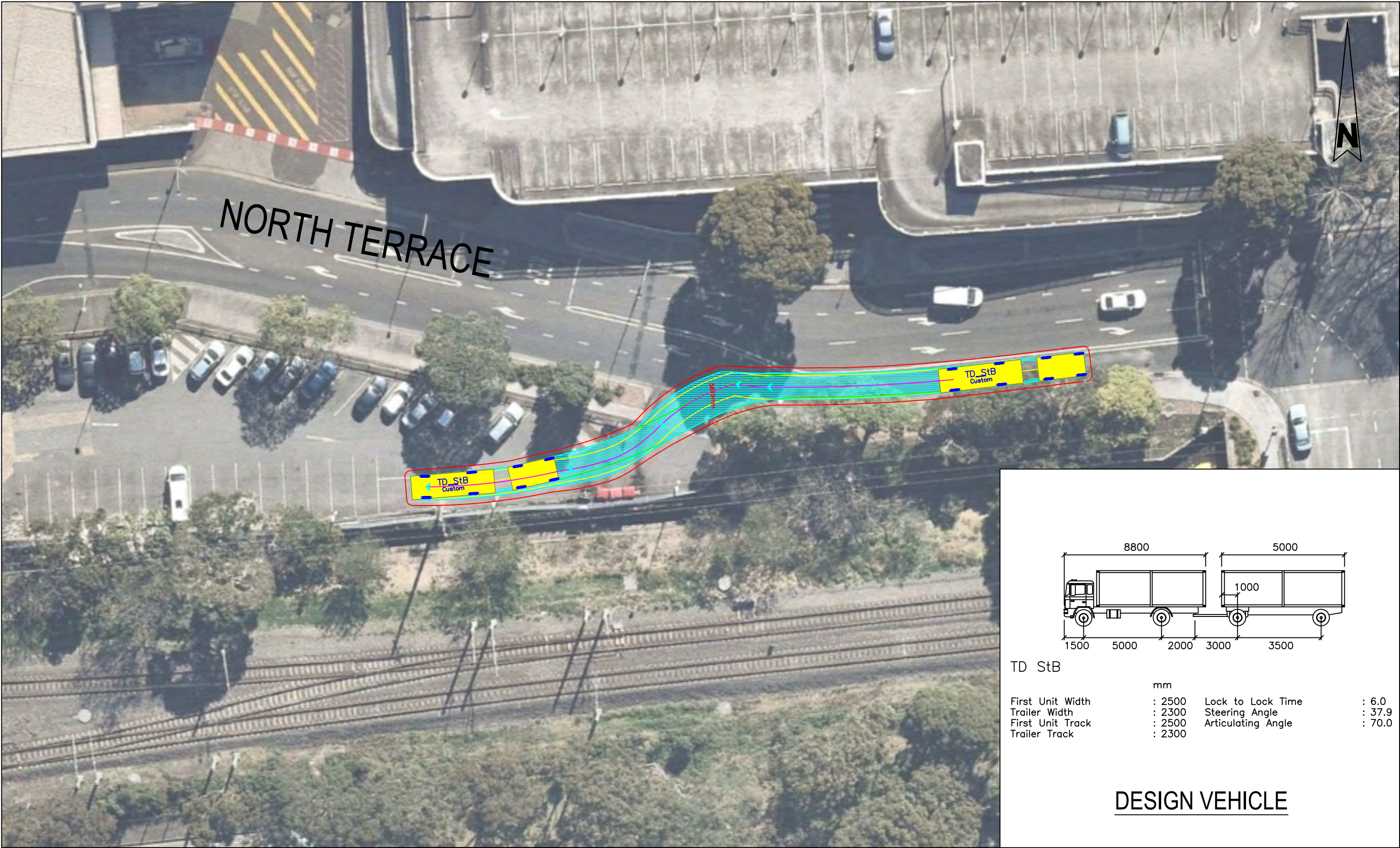


AV

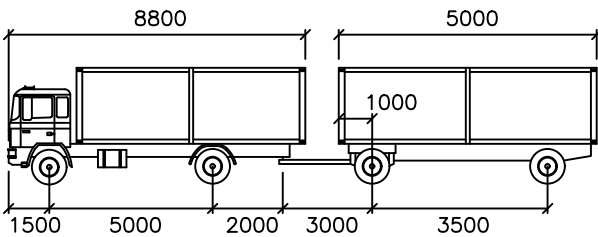
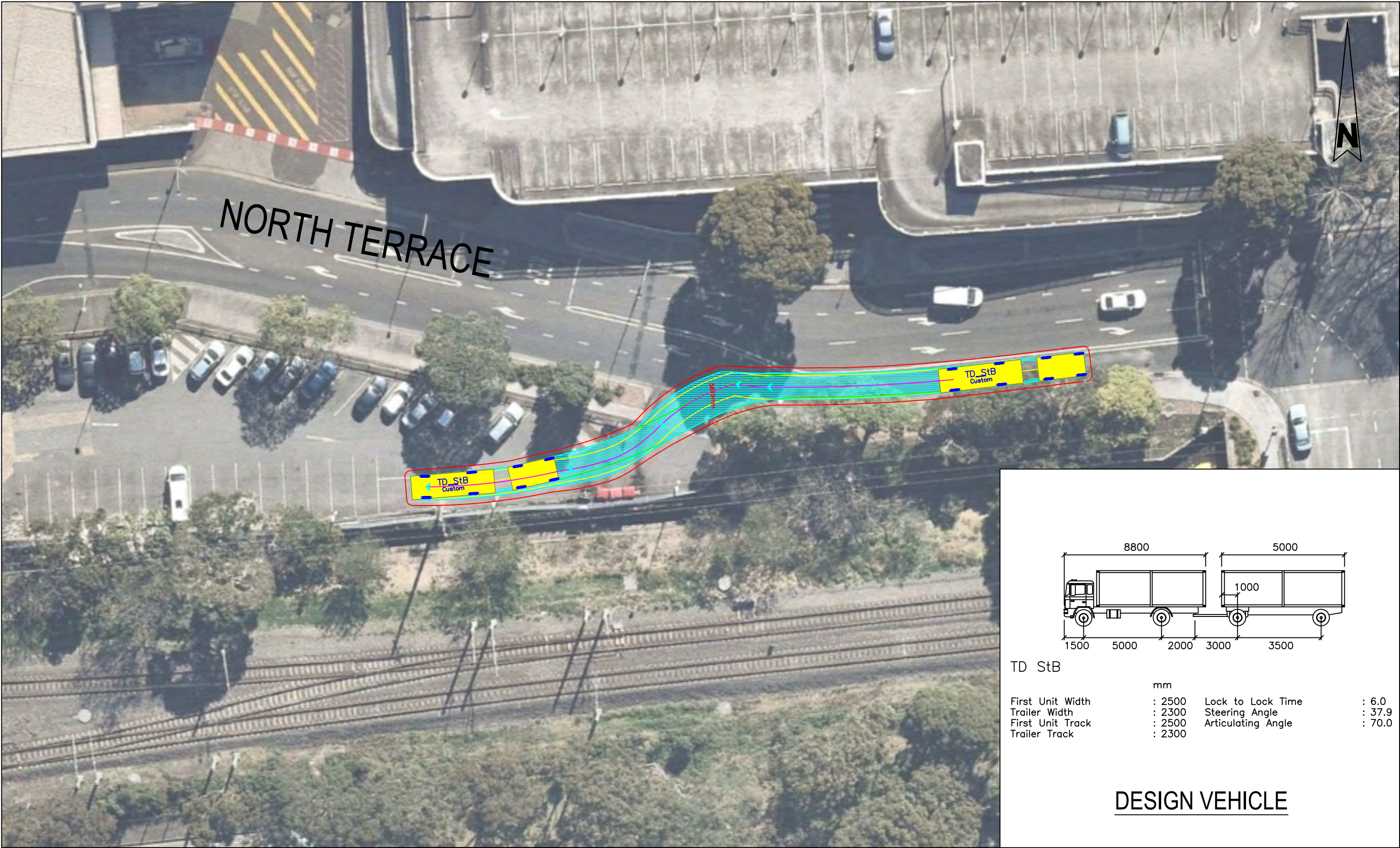
	Tractor Width	Trailer Width	Tractor Track	Trailer Track	Lock to Lock Time	Steering Angle	Articulating Angle
AV	4.20	14.60	1.60	5.40	6.0	28.3	72.0

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked
		Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
		001	INITIAL SWEEP PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
		002	UPDATED SWEEP PATH	M.H	23.09.2021				
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 20m AV Turns in Corners - Right Turn Entry Haulage Route from North (East Terrace / Raymond Street)	Project Number	Sheet Number	Date
							P3519	23	28.09.2021
									Issue
								003	



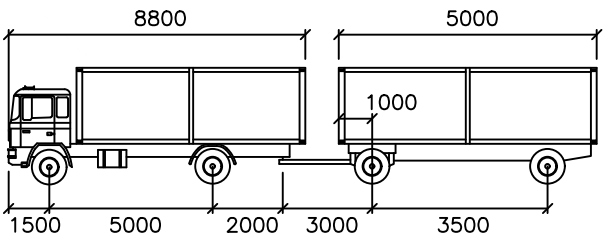
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	Revisions/Descriptions	Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked			
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au	001	INITIAL SWEEP PATH	M.H		02.09.2021	M.H	M.H	A.G		
	Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	002	UPDATED SWEEP PATH	M.H		23.09.2021	FOR INFORMATION ONLY				
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H		28.09.2021				Date	28.09.2021
						</					



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

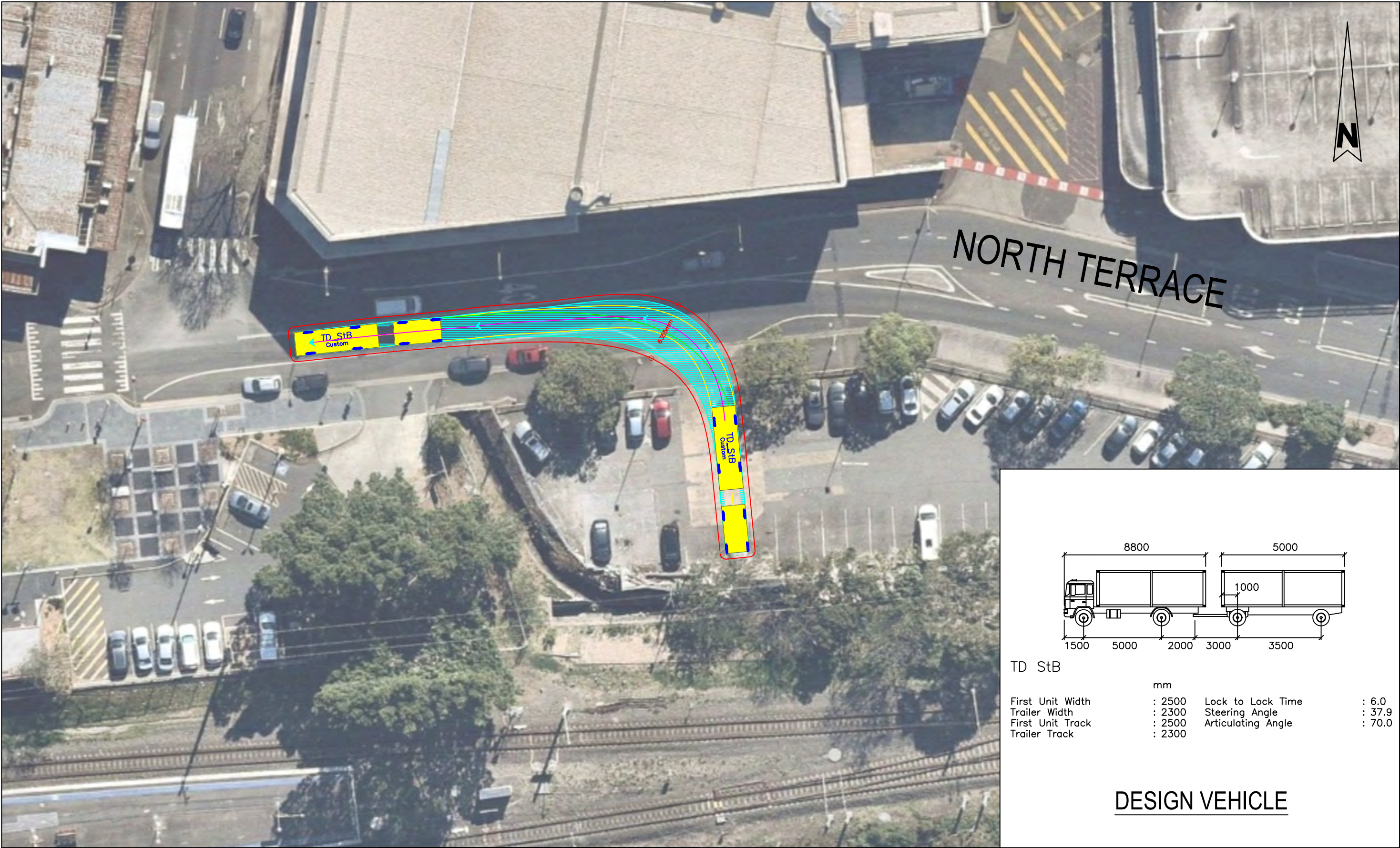
 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked
	Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
	001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
	002	UPDATED SWEPT PATH	M.H	23.09.2021				
	003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 15.5m T&D Main Compound - Left Turn Entry	Project Number	Sheet Number	Issue
						P3519	28	003



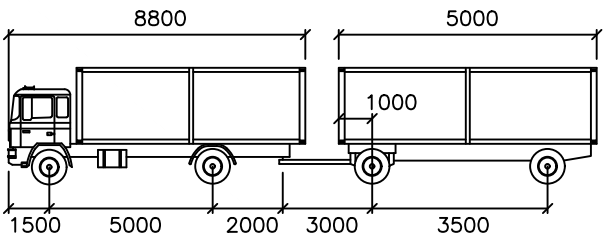
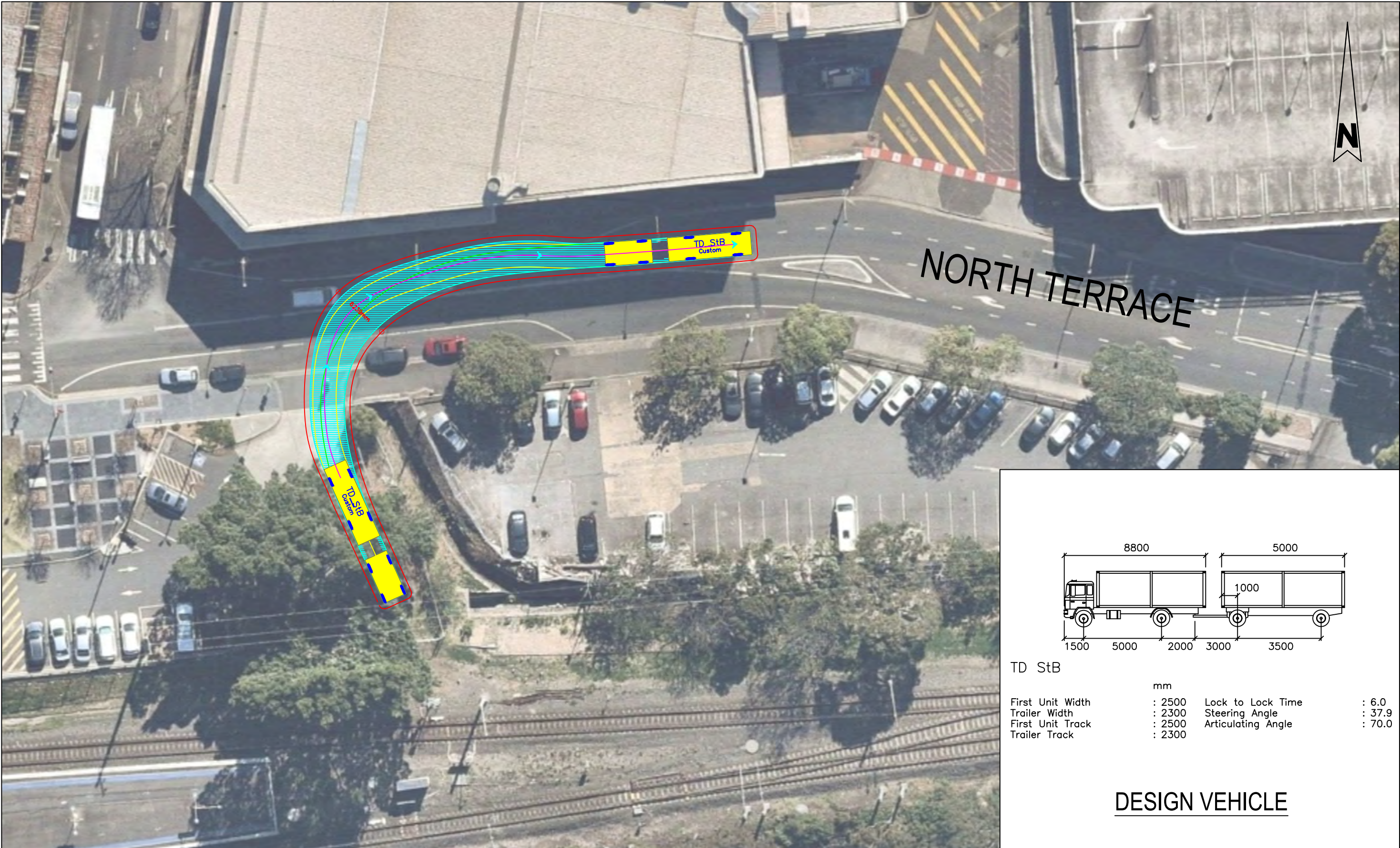
TD StB			
mm			
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	Revisions/Descriptions	Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked			
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au	001	INITIAL SWEEP PATH	M.H		02.09.2021	M.H	M.H	A.G		
	Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	002	UPDATED SWEEP PATH	M.H		23.09.2021	FOR INFORMATION ONLY				
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H		28.09.2021				Date	28.09.2021



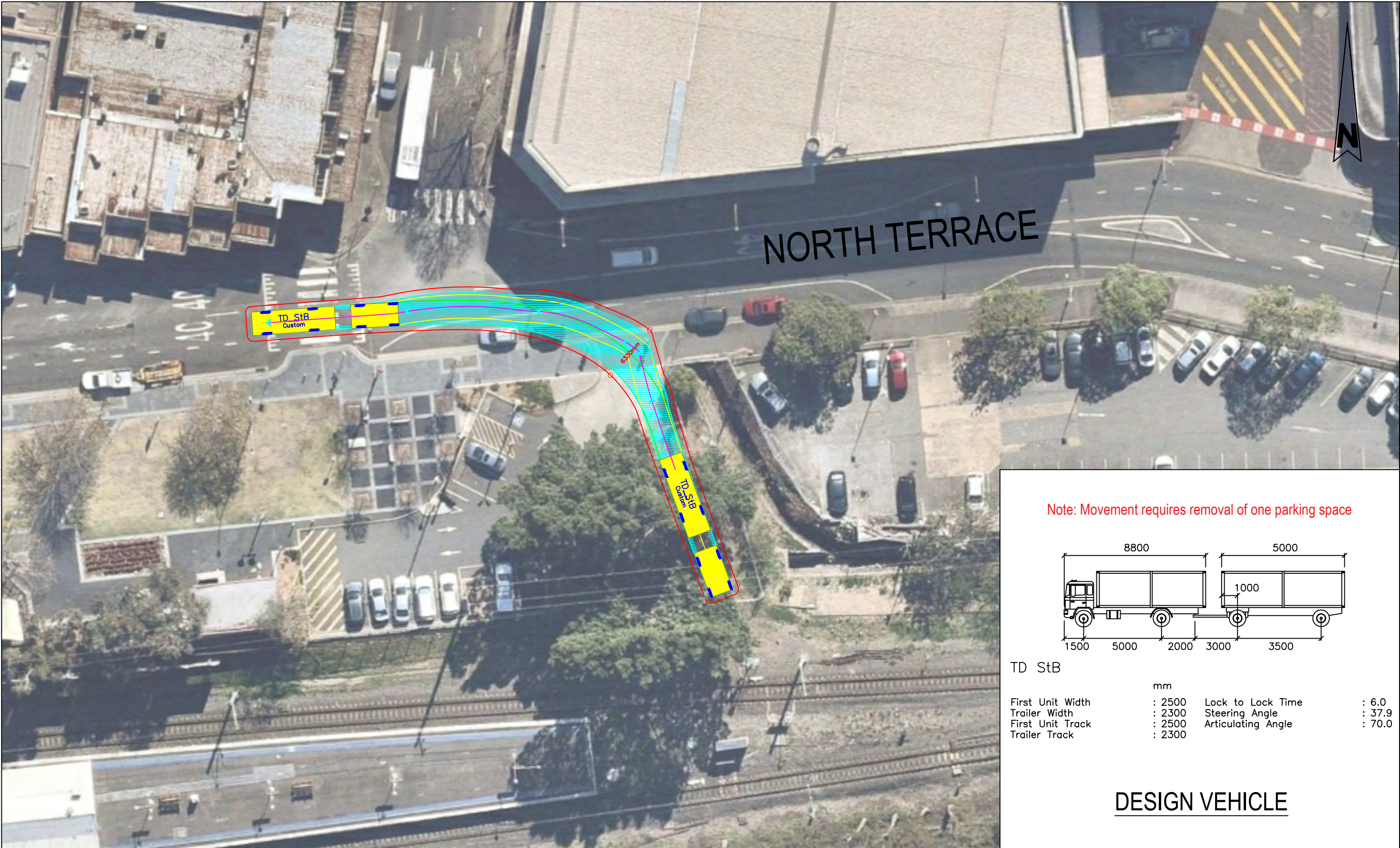
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	<table><tr><th colspan="2">REVISIONS</th><th>Drawn</th><th>Date</th></tr><tr><td>Issue</td><td>Revisions/Descriptions</td><td></td><td></td></tr><tr><td>001</td><td>INITIAL SWEPT PATH</td><td>M.H</td><td>02.09.2021</td></tr><tr><td>002</td><td>UPDATED SWEPT PATH</td><td>M.H</td><td>23.09.2021</td></tr><tr><td>003</td><td>UPDATED SWEPT PATH POST RSA AND REVIEW</td><td>M.H</td><td>28.09.2021</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	REVISIONS		Drawn	Date	Issue	Revisions/Descriptions			001	INITIAL SWEPT PATH	M.H	02.09.2021	002	UPDATED SWEPT PATH	M.H	23.09.2021	003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021																					<table><tr><td>Project</td><td>BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN</td></tr><tr><td>Title</td><td>15.5m T&D Main Compound - Left Turn Exit</td></tr></table>	Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Title	15.5m T&D Main Compound - Left Turn Exit	<table><tr><td>Design</td><td>M.H</td></tr><tr><td>Drawn</td><td>M.H</td></tr><tr><td>Checked</td><td>A.G</td></tr></table>	Design	M.H	Drawn	M.H	Checked	A.G	<table><tr><td colspan="2">FOR INFORMATION ONLY</td><td>Date</td><td>28.09.2021</td></tr><tr><td>Project Number</td><td>P3519</td><td>Sheet Number</td><td>30</td></tr><tr><td colspan="2"></td><td>Issue</td><td>003</td></tr></table>	FOR INFORMATION ONLY		Date	28.09.2021	Project Number	P3519	Sheet Number	30			Issue	003																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Project Number	P3519	Sheet Number	30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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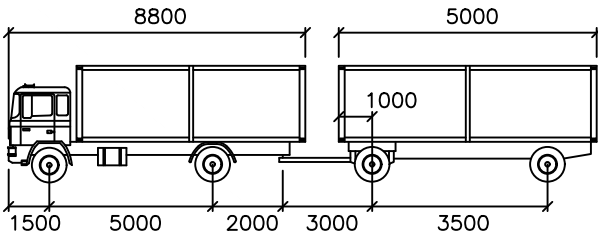
TD StB			
mm			
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	REVISIONS				Project	Design	Drawn	Checked
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	Issue	Revisions/Descriptions	Drawn	Date	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	M.H	M.H	A.G
		001	INITIAL SWEPT PATH	M.H	02.09.2021				
		002	UPDATED SWEPT PATH	M.H	23.09.2021				
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021				



Note: Movement requires removal of one parking space



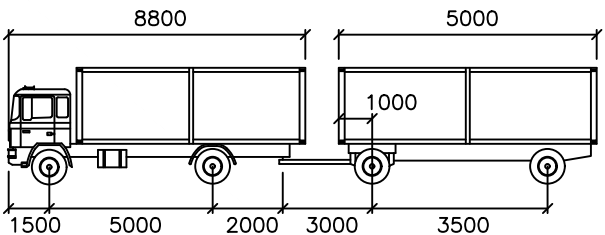
TD StB			
mm			
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		Design M.H	Drawn M.H	Checked A.G
					Title 15.5m T&D Gate 1 Access - Left Turn Exit		FOR INFORMATION ONLY		
							Project Number P3519	Sheet Number 33	Date 28.09.2021
								Issue 003	

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	02.09.2021
002	UPDATED SWEPT PATH	M.H	23.09.2021
003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021

SOUTH TERRACE



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

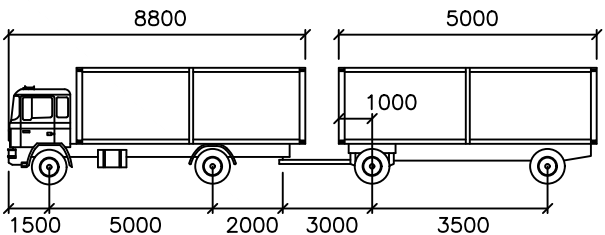
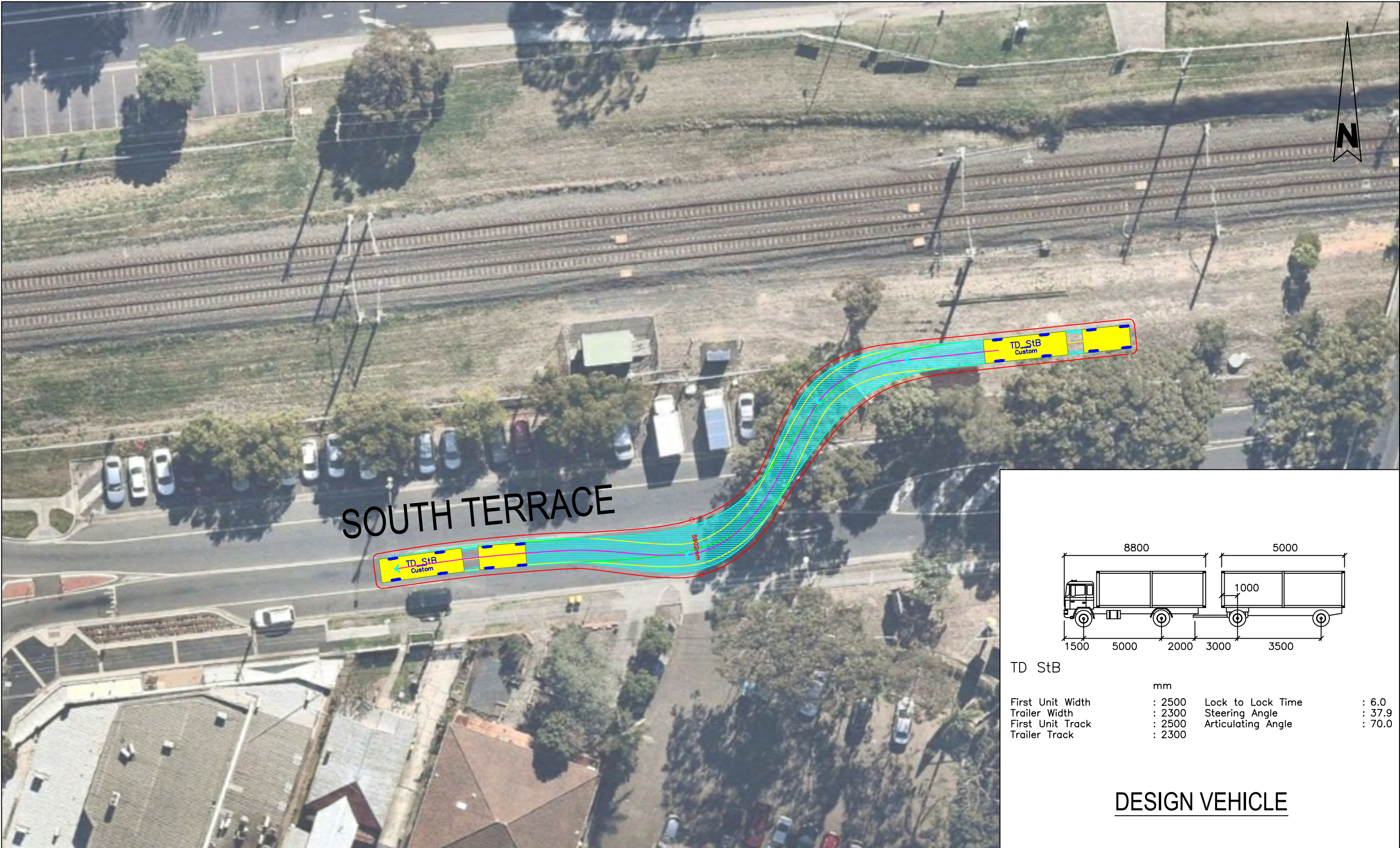
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	FOR INFORMATION ONLY		
Title 15.5m T&D Gate 2 Access - Left Turn Entry	Project Number P3519	Sheet Number 34	Date 28.09.2021 Issue 003



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Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

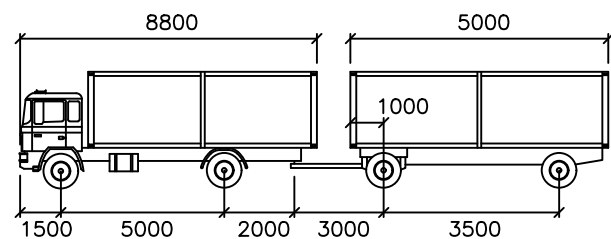


TD StB		mm	
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		Design M.H	Drawn M.H	Checked A.G
					Title 15.5m T&D Gate 2 Access - Right Turn Exit		FOR INFORMATION ONLY		
							Project Number P3519	Sheet Number 35	Date 28.09.2021
									Issue 003

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	02.09.2021
002	UPDATED SWEPT PATH	M.H	23.09.2021
003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

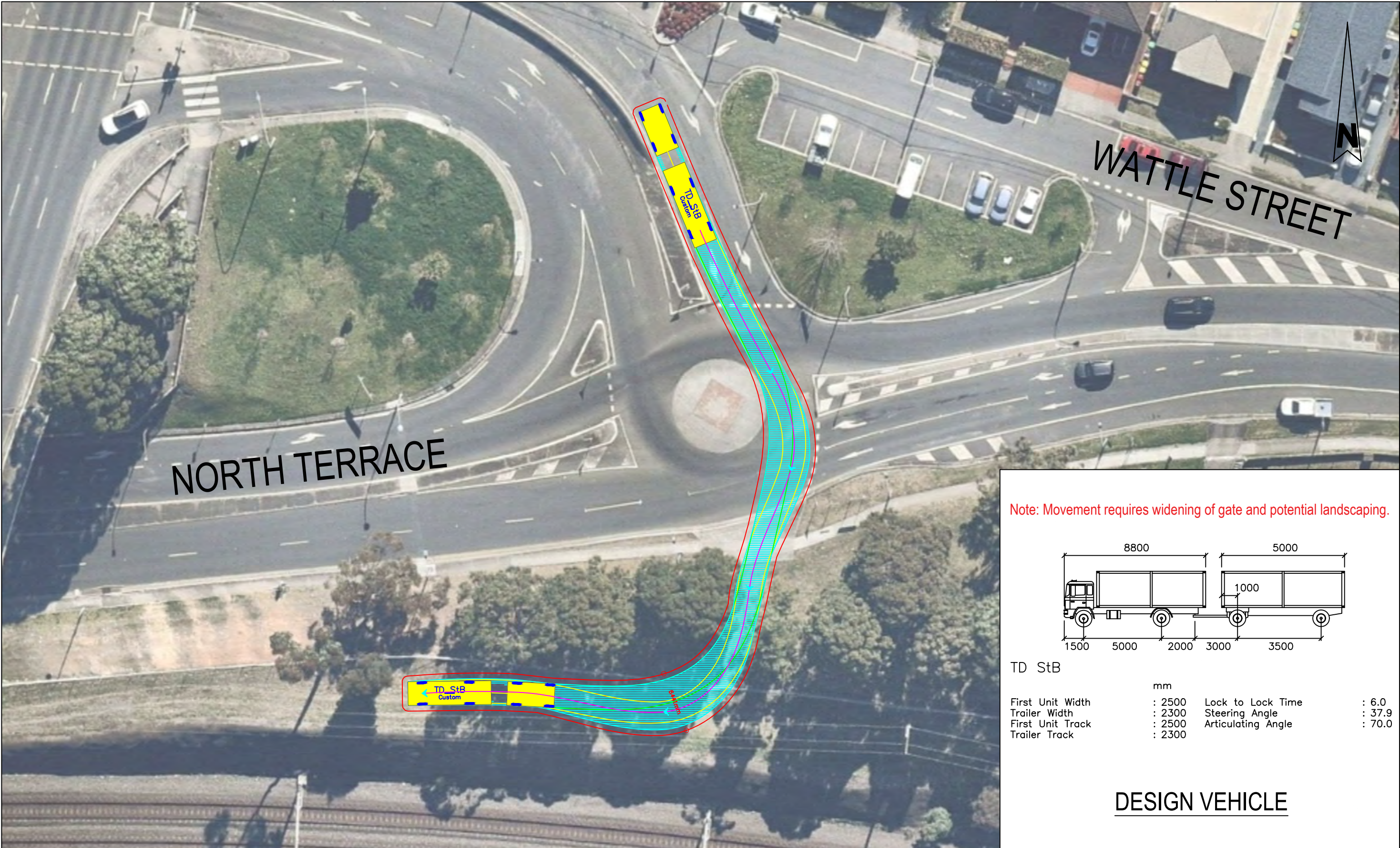


Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
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P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

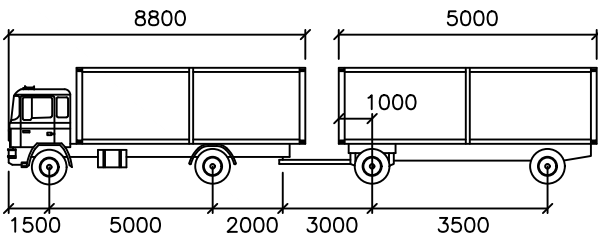
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN
Title	15.5m T&D Gate 3 Access - Right Turn Exit

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY				Date	28.09.2021
Project Number	P3519	Sheet Number	36	Issue	003



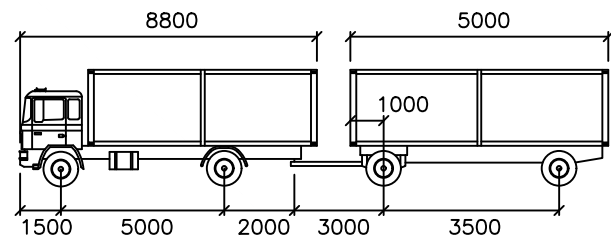
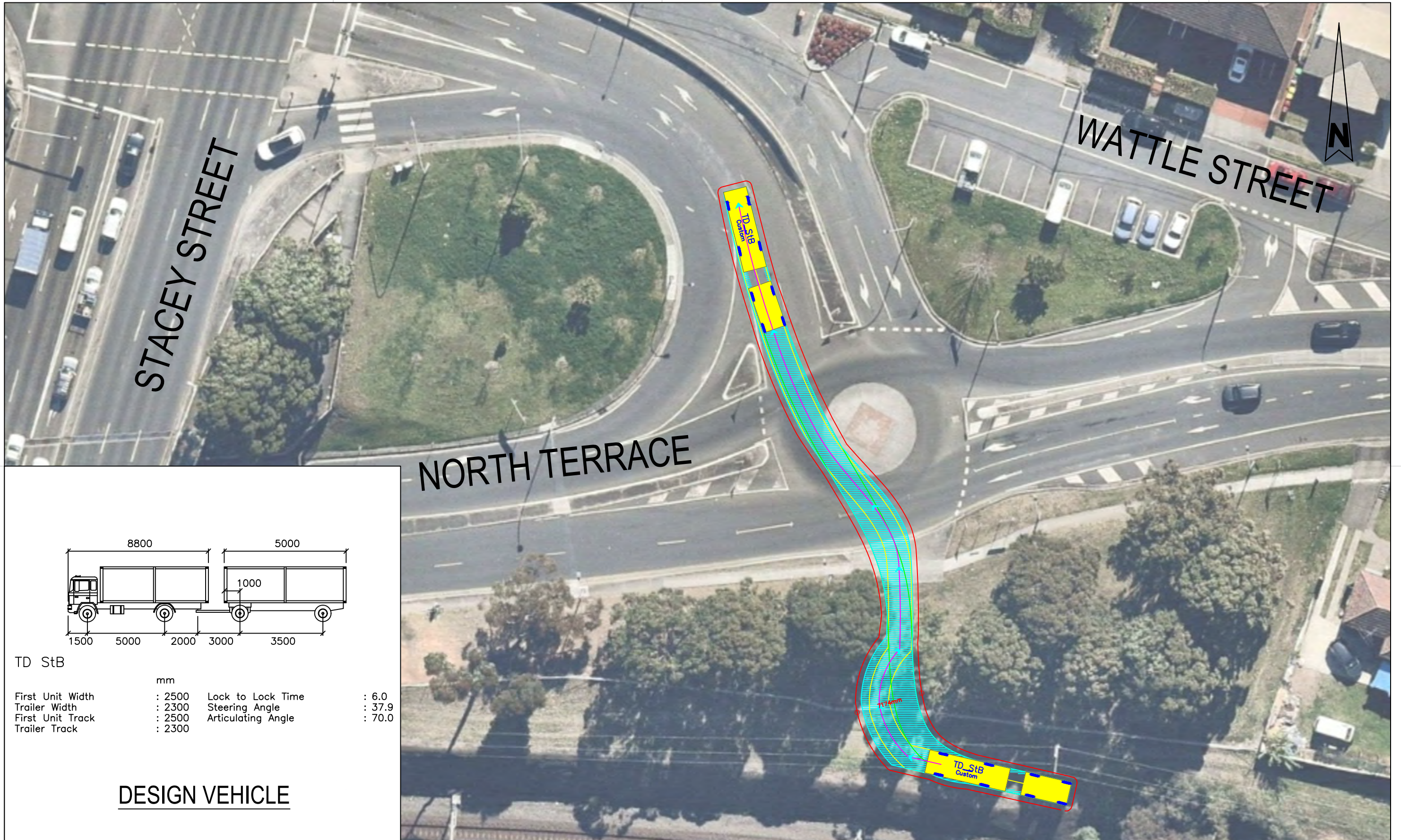
Note: Movement requires widening of gate and potential landscaping.



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	REVISIONS Revisions/Descriptions	Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G		
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	001	INITIAL SWEEP PATH	M.H					02.09.2021	
		002	UPDATED SWEEP PATH	M.H					23.09.2021	
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H					28.09.2021	
					Title 15.5m T&D Gate 4 Access - Right Lane Through Entry	FOR INFORMATION ONLY	Date 28.09.2021			
								Project Number P3519	Sheet Number 37	Issue 003



TD StB

mm

First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

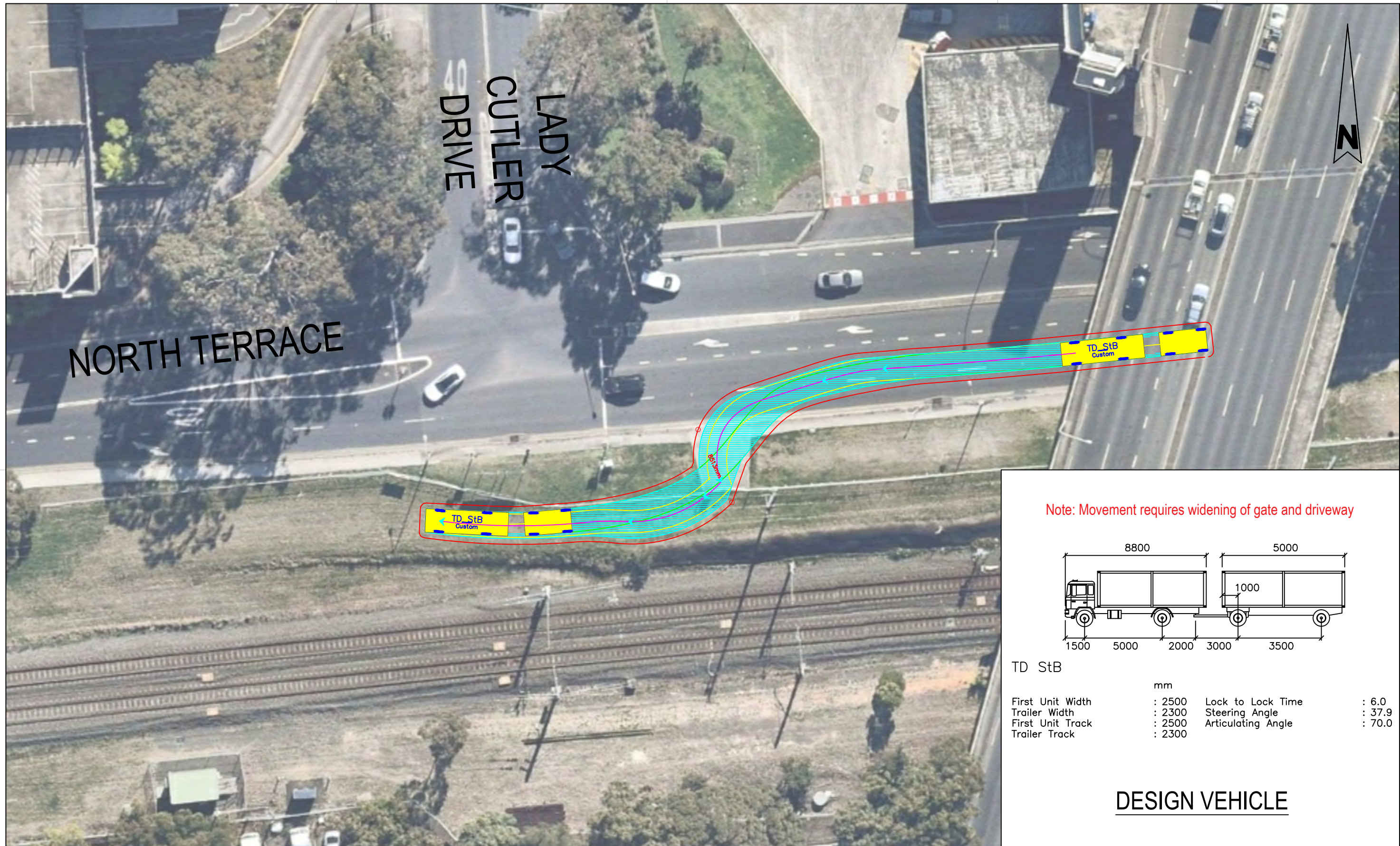


Gold Coast
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P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

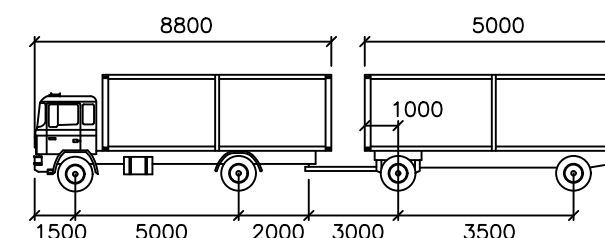
REVISIONS			
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002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		
Title	15.5m T&D Gate 4 Access - Left Turn Through Exit to Wattle Street		

Design	M.H	Drawn	M.H	Checked	A.G
FOR INFORMATION ONLY				Date	28.09.2021
Project Number	P3519	Sheet Number	38	Issue	003



Note: Movement requires widening of gate and driveway

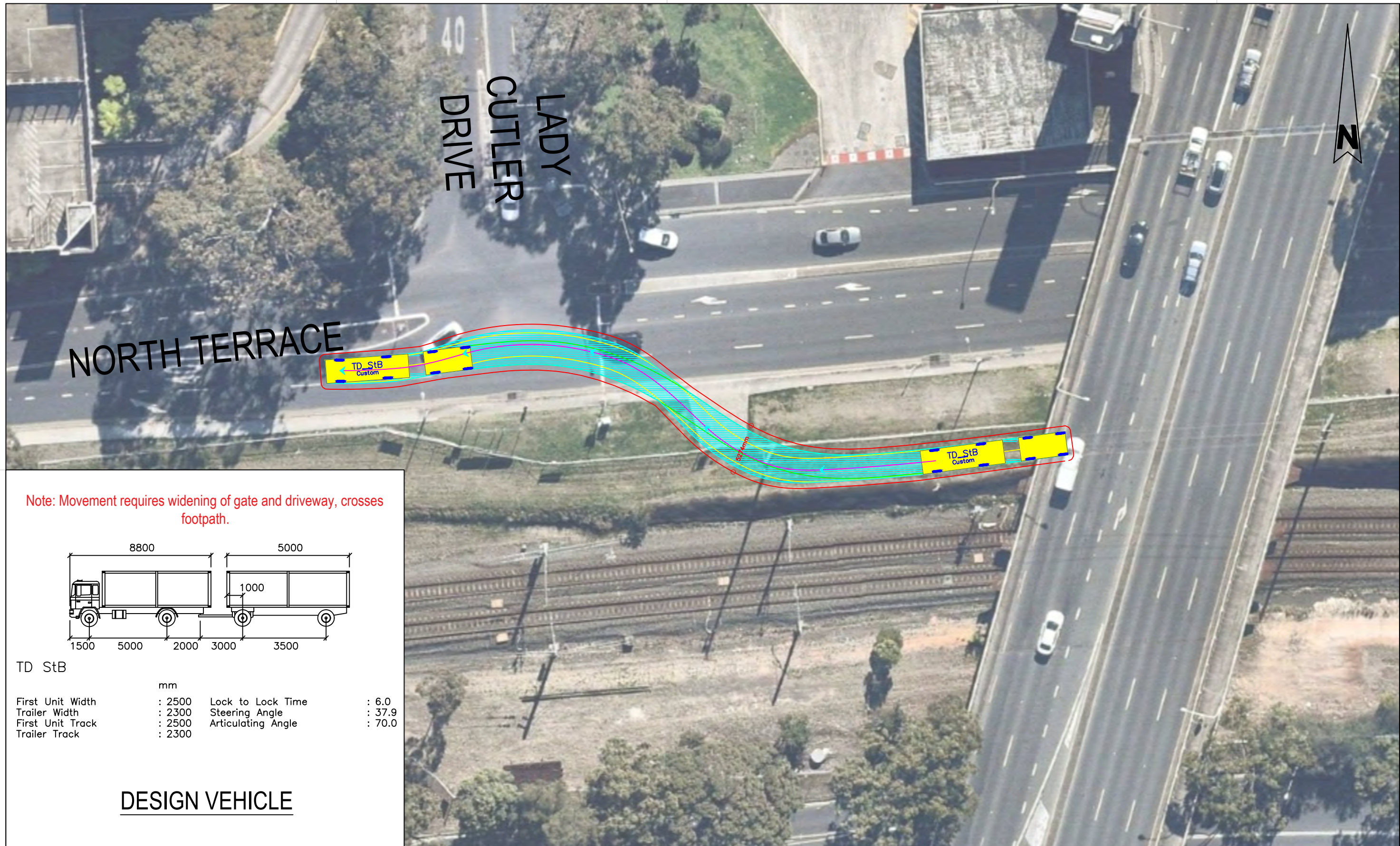


TD StB

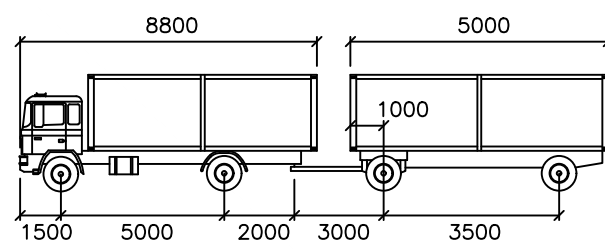
	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	REVISIONS Revisions/Descriptions			Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au	001	INITIAL SWEPT PATH	M.H	02.09.2021					
		002	UPDATED SWEPT PATH	M.H	23.09.2021					
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021					
	Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202						Title 15.5m T&D Gate 5 Access - Left Entry from North Terrace	FOR INFORMATION ONLY	Date 28.09.2021	
						Project Number P3519	Sheet Number 39	Issue 003		



Note: Movement requires widening of gate and driveway, crosses footpath.



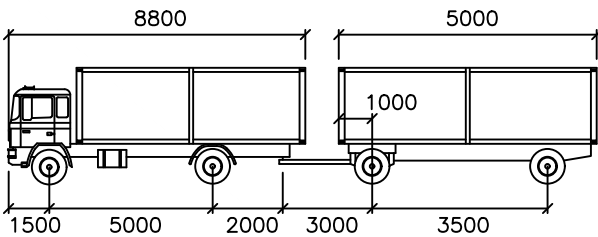
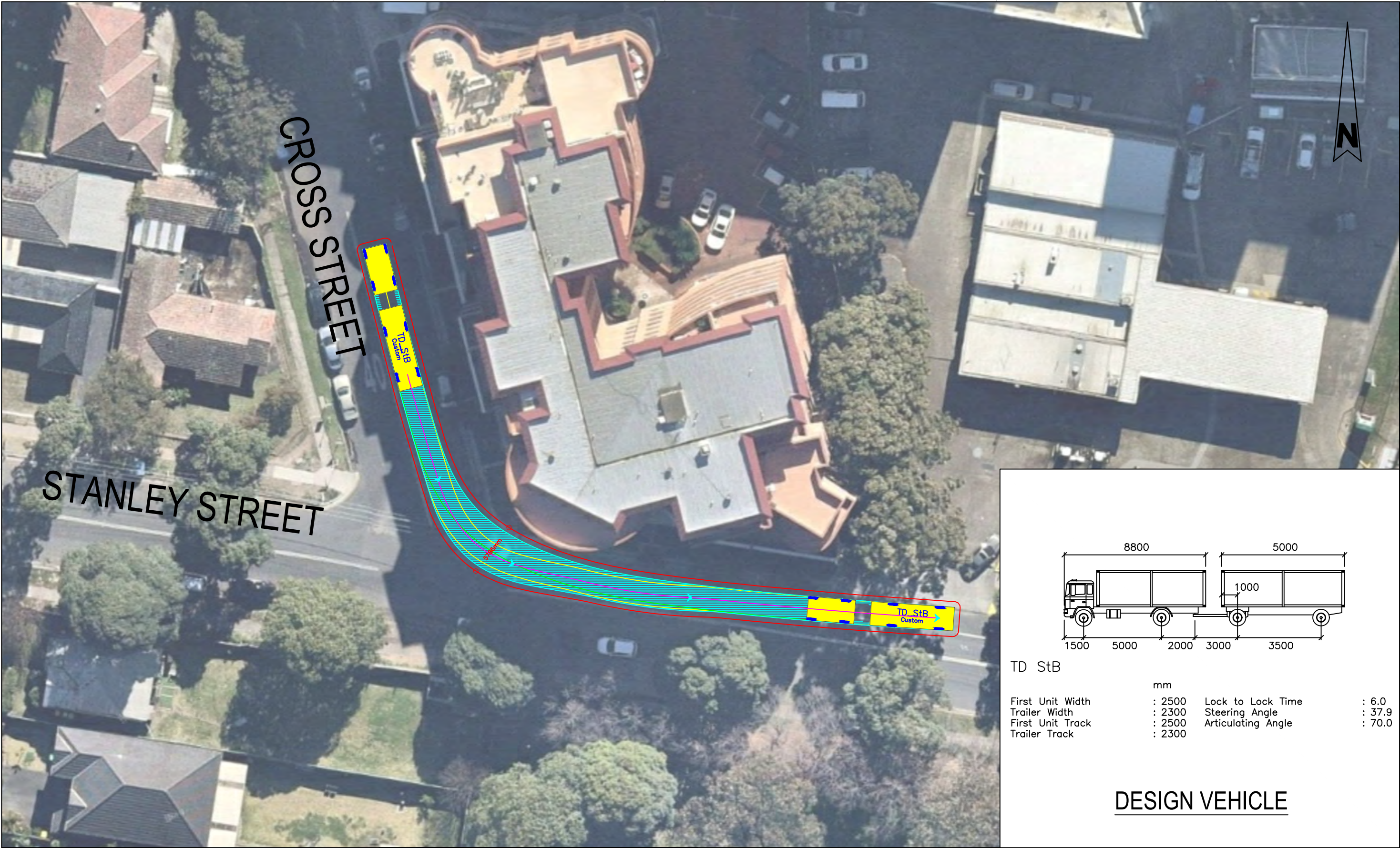
TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE



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E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

REVISIONS				Project	Design	Drawn	Checked
Issue	Revisions/Descriptions	Drawn	Date				
001	INITIAL SWEEP PATH	M.H	02.09.2021	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	M.H	M.H	A.G
002	UPDATED SWEEP PATH	M.H	23.09.2021				
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021				
				15.5m T&D Gate 5 Access - Left Turn Exit to North Terrace (Westbound)	FOR INFORMATION ONLY	Date	28.09.2021
					Project Number	Sheet Number	Issue
					P3519	40	003

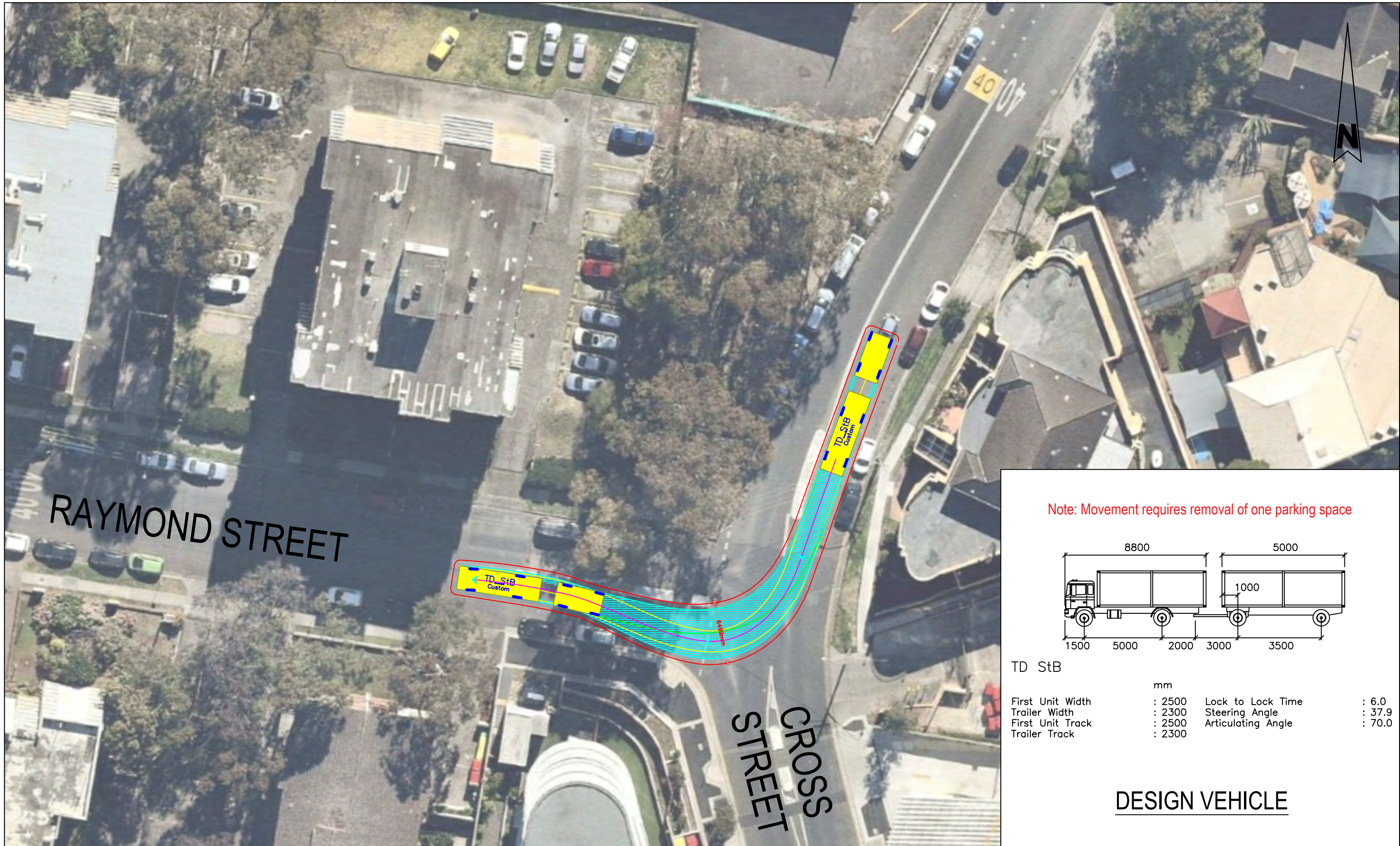


TD StB			
mm			
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

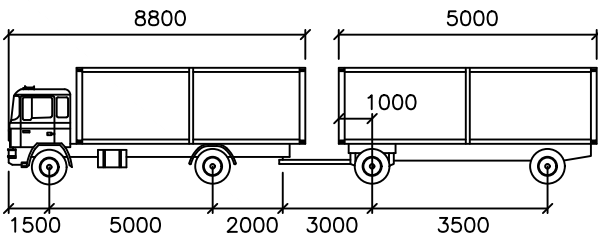
DESIGN VEHICLE

 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISONS <table><thead><tr><th>Issue</th><th>Revisions/Descriptions</th><th>Drawn</th><th>Date</th></tr></thead><tbody><tr><td>001</td><td>INITIAL SWEEP PATH</td><td>M.H</td><td>02.09.2021</td></tr><tr><td>002</td><td>UPDATED SWEEP PATH</td><td>M.H</td><td>23.09.2021</td></tr><tr><td>003</td><td>UPDATED SWEEP PATH POST RSA AND REVIEW</td><td>M.H</td><td>28.09.2021</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>				Issue	Revisions/Descriptions	Drawn	Date	001	INITIAL SWEEP PATH	M.H	02.09.2021	002	UPDATED SWEEP PATH	M.H	23.09.2021	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		Design M.H	Drawn M.H	Checked A.G
	Issue	Revisions/Descriptions	Drawn	Date																																					
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	002	UPDATED SWEEP PATH	M.H	23.09.2021																																					
	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																																					
Title 15.5m T&D Turns in Corners (Stanley Street) - Left Turn Exit Haulage Route from Cross Street		FOR INFORMATION ONLY		Date 28.09.2021																																					
		Project Number P3519	Sheet Number 42	Issue 003																																					

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	02.09.2021
002	UPDATED SWEPT PATH	M.H	23.09.2021
003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021



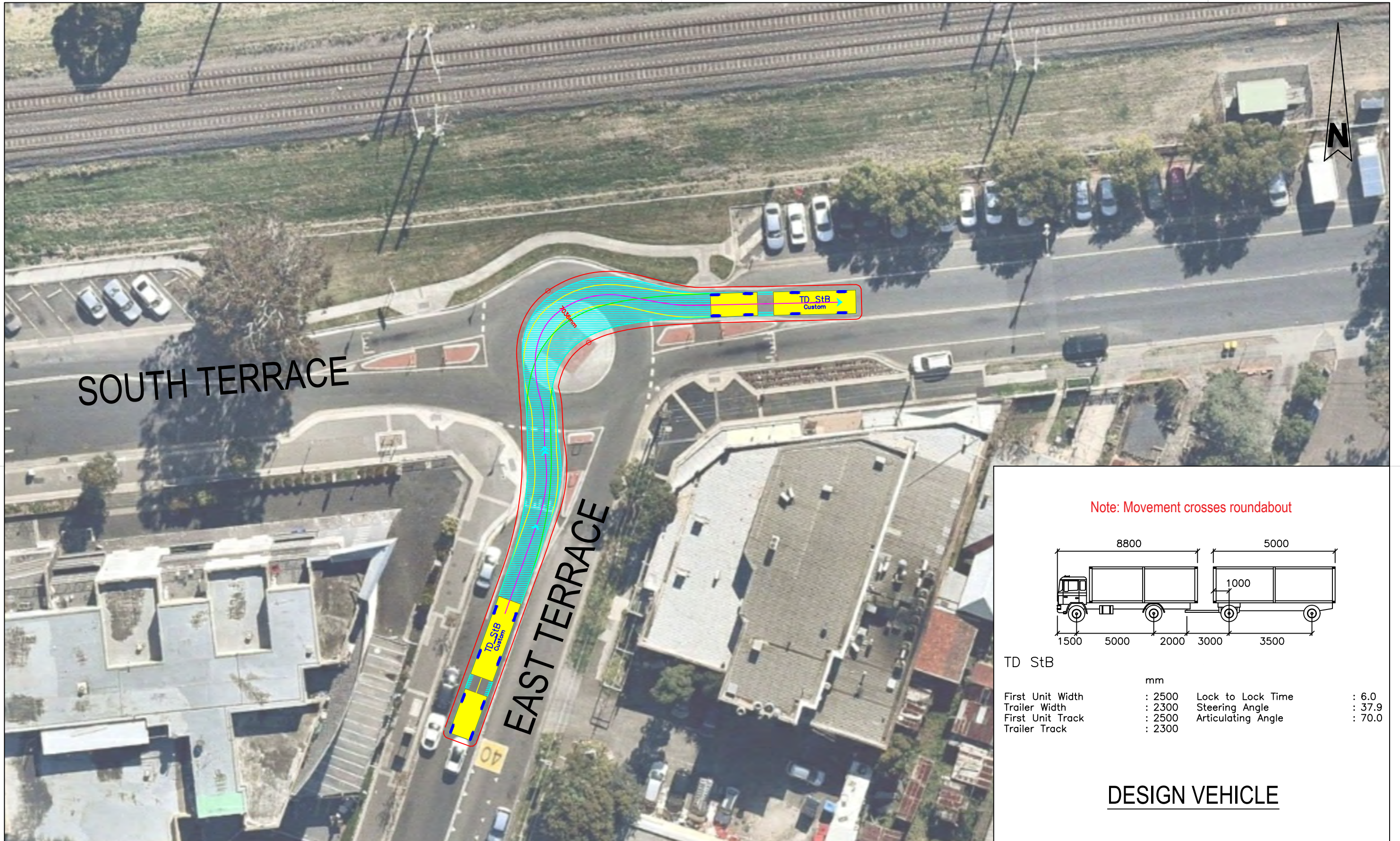
Note: Movement requires removal of one parking space



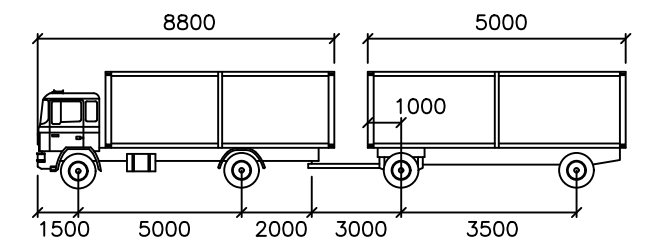
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Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au		Revisions Revisions/Descriptions		Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au		001	INITIAL SWEEP PATH	M.H	02.09.2021				
	Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202		002	UPDATED SWEEP PATH	M.H	23.09.2021				
			003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021				
					</					



Note: Movement crosses roundabout

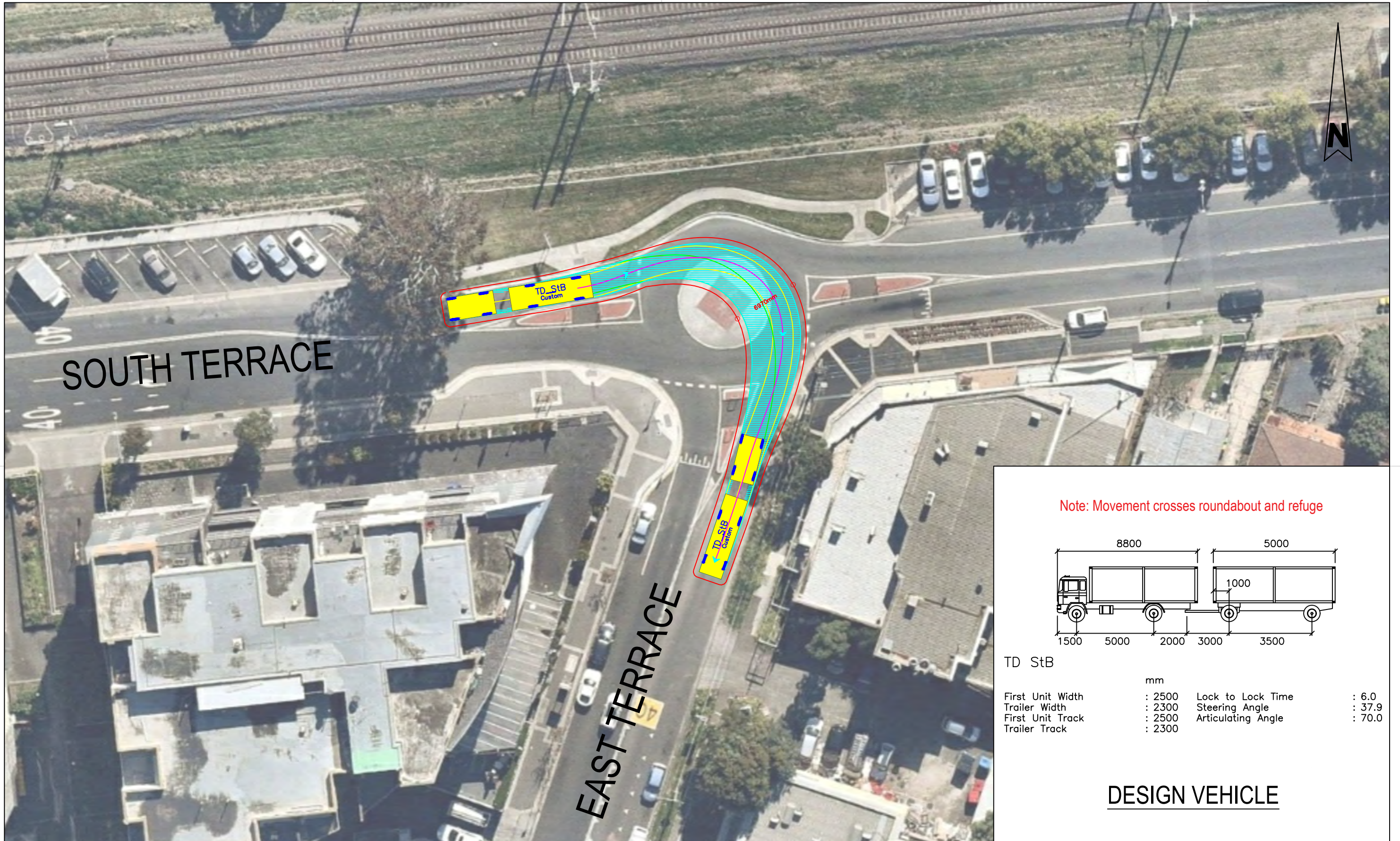


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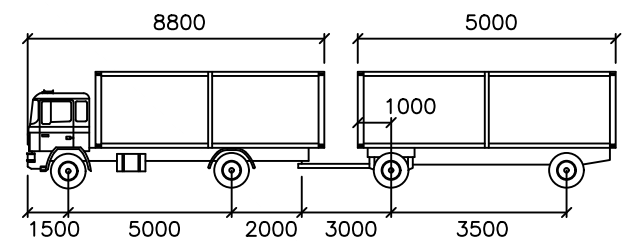
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First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202				REVISIONS Revisions/Descriptions		Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	001	INITIAL SWEEP PATH	M.H	02.09.2021						FOR INFORMATION ONLY		Date 28.09.2021
	002	UPDATED SWEEP PATH	M.H	23.09.2021								
	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021						Project Number P3519	Sheet Number 45	Issue 003
									Title 15.5m T&D - Right Turn Entry Haulage Route to South terrace via East Terrace/South Terrace Roundabout			



Note: Movement crosses roundabout and refuge

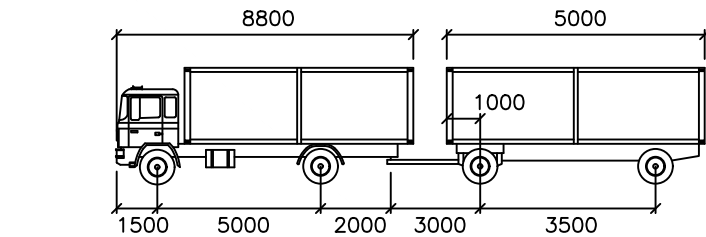
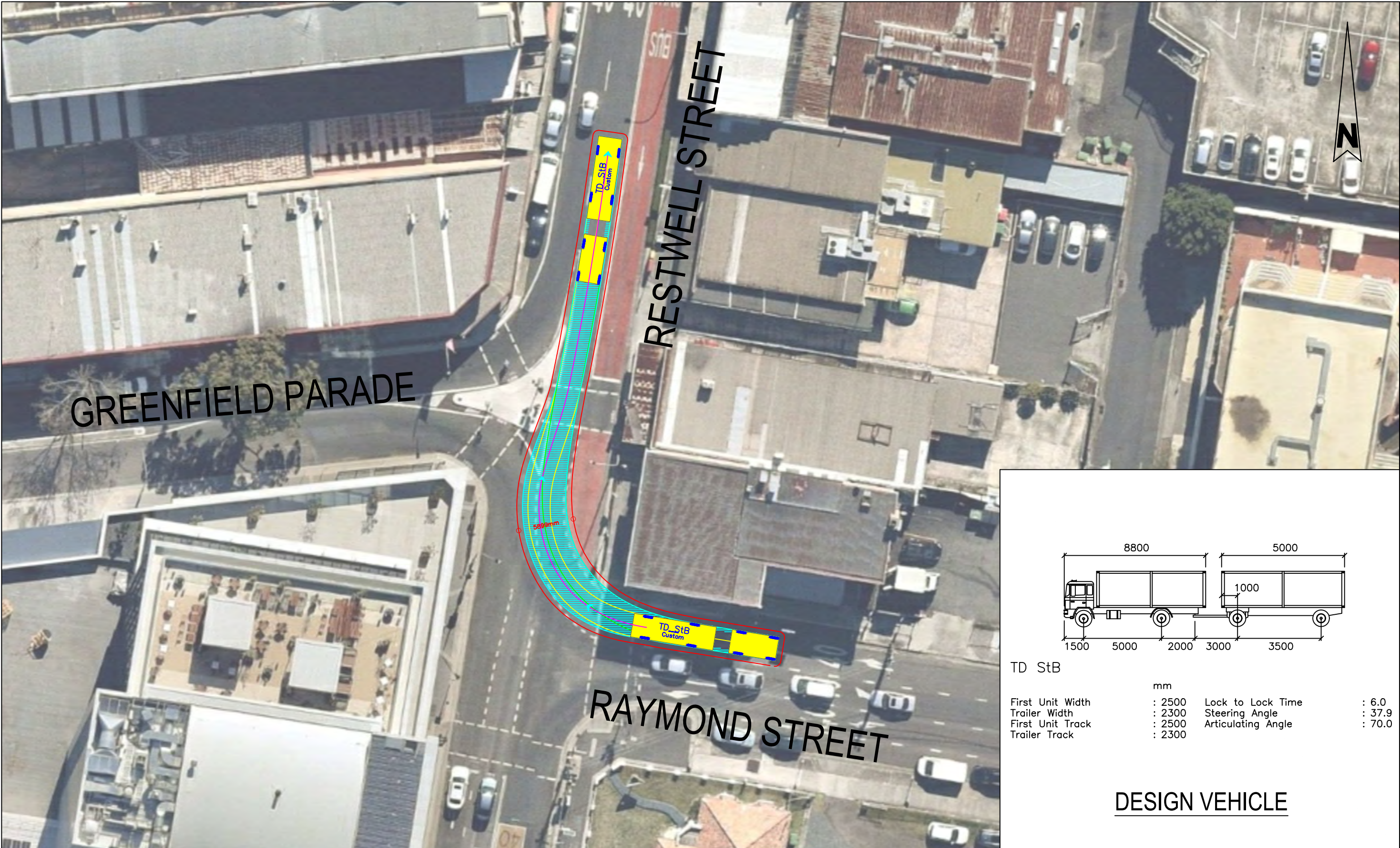


TD StB

	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

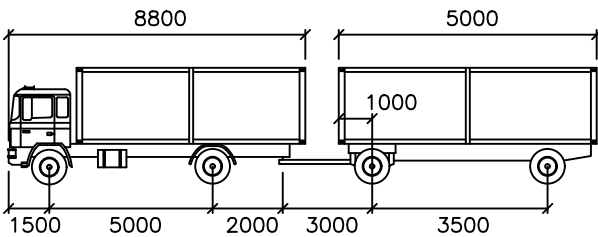
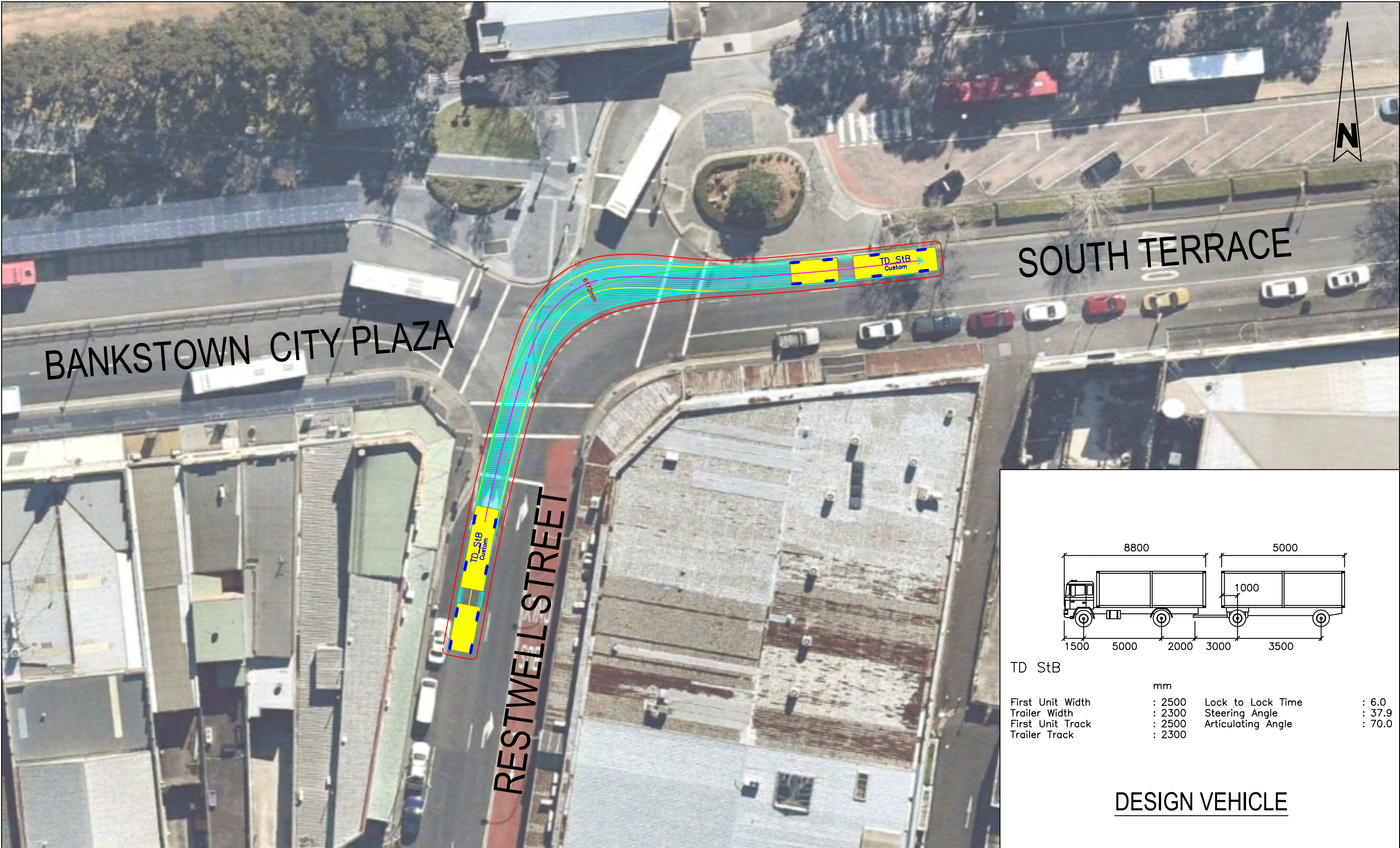
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au	REVISIONS Revisions/Descriptions				Drawn	Date	Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design M.H	Drawn M.H	Checked A.G
	Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	001	INITIAL SWEEP PATH	M.H	02.09.2021	FOR INFORMATION ONLY	Date 28.09.2021				
		002	UPDATED SWEEP PATH	M.H	23.09.2021						
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021						



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

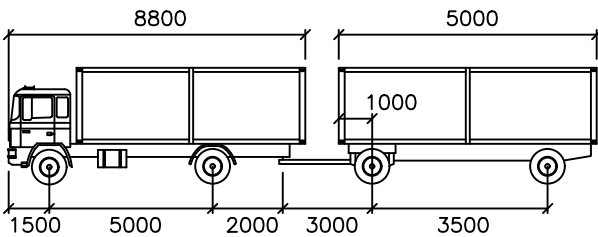
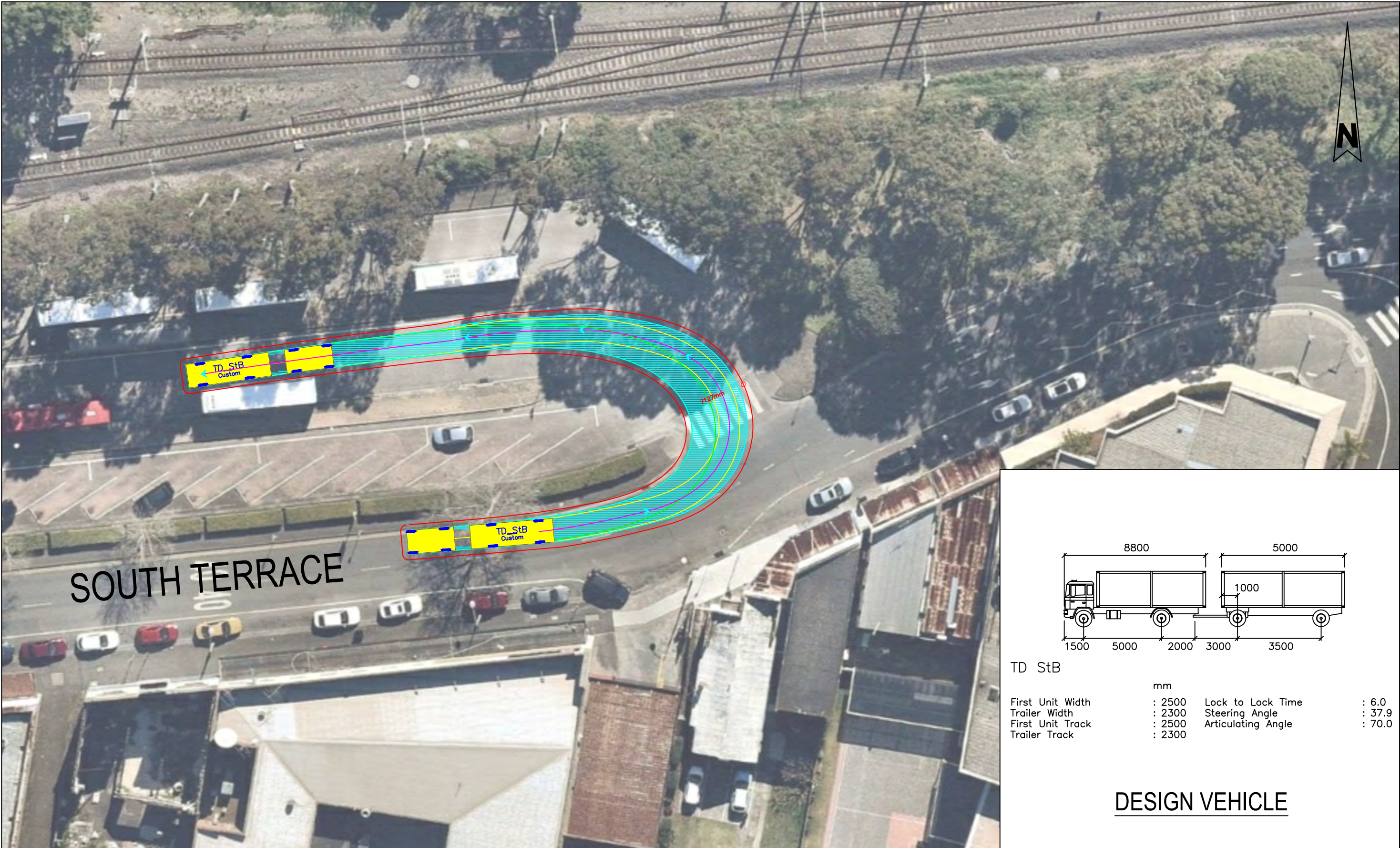
 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked
	Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G
	001	INITIAL SWEEP PATH	M.H	02.09.2021		FOR INFORMATION ONLY		
	002	UPDATED SWEEP PATH	M.H	23.09.2021				
	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 15.5m T&D - Right Turn Entry Haulage Route to Restwell Street	Project Number	Sheet Number	Issue
						P3519	48	003



TD StB	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

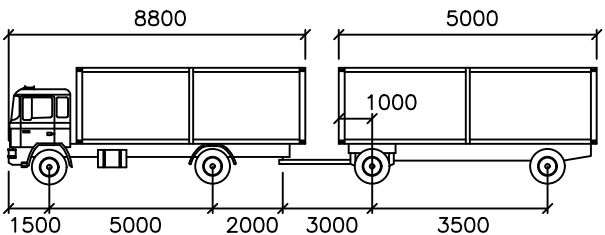
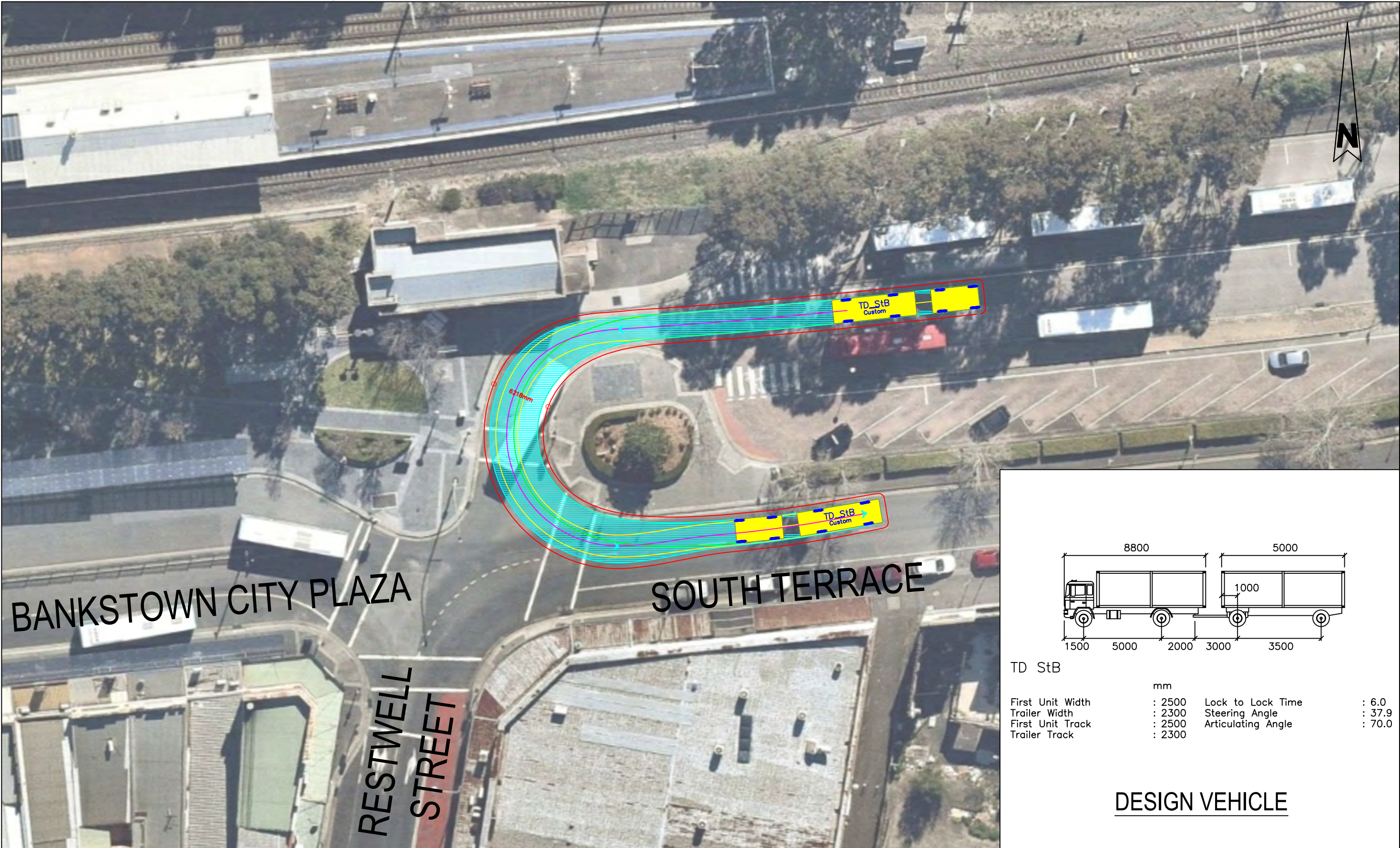
 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	<table><tr><th colspan="2">REVISIONS</th><th rowspan="2">Drawn</th><th rowspan="2">Date</th></tr><tr><th>Issue</th><th>Revisions/Descriptions</th></tr><tr><td>001</td><td>INITIAL SWEEP PATH</td><td>M.H</td><td>02.09.2021</td></tr><tr><td>002</td><td>UPDATED SWEEP PATH</td><td>M.H</td><td>23.09.2021</td></tr><tr><td>003</td><td>UPDATED SWEEP PATH POST RSA AND REVIEW</td><td>M.H</td><td>28.09.2021</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	001	INITIAL SWEEP PATH	M.H	02.09.2021	002	UPDATED SWEEP PATH	M.H	23.09.2021	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																					Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		Design M.H	Drawn M.H	Checked A.G
	REVISIONS		Drawn	Date																																											
	Issue	Revisions/Descriptions																																													
	001	INITIAL SWEEP PATH	M.H	02.09.2021																																											
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	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																																											
						FOR INFORMATION ONLY		Date 28.09.2021																																							
					Title 15.5m T&D - Right Turn Entry Haulage Route to South Terrace from Restwell Street	Project Number P3519	Sheet Number 49	Issue 003																																							



TD StB			
	mm		
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

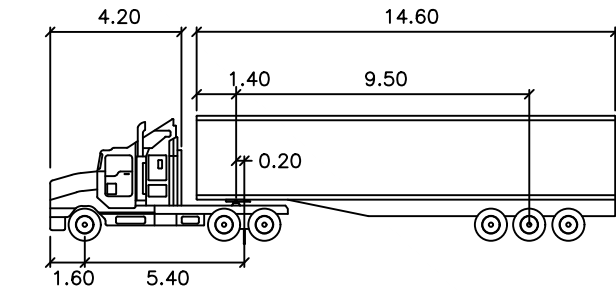
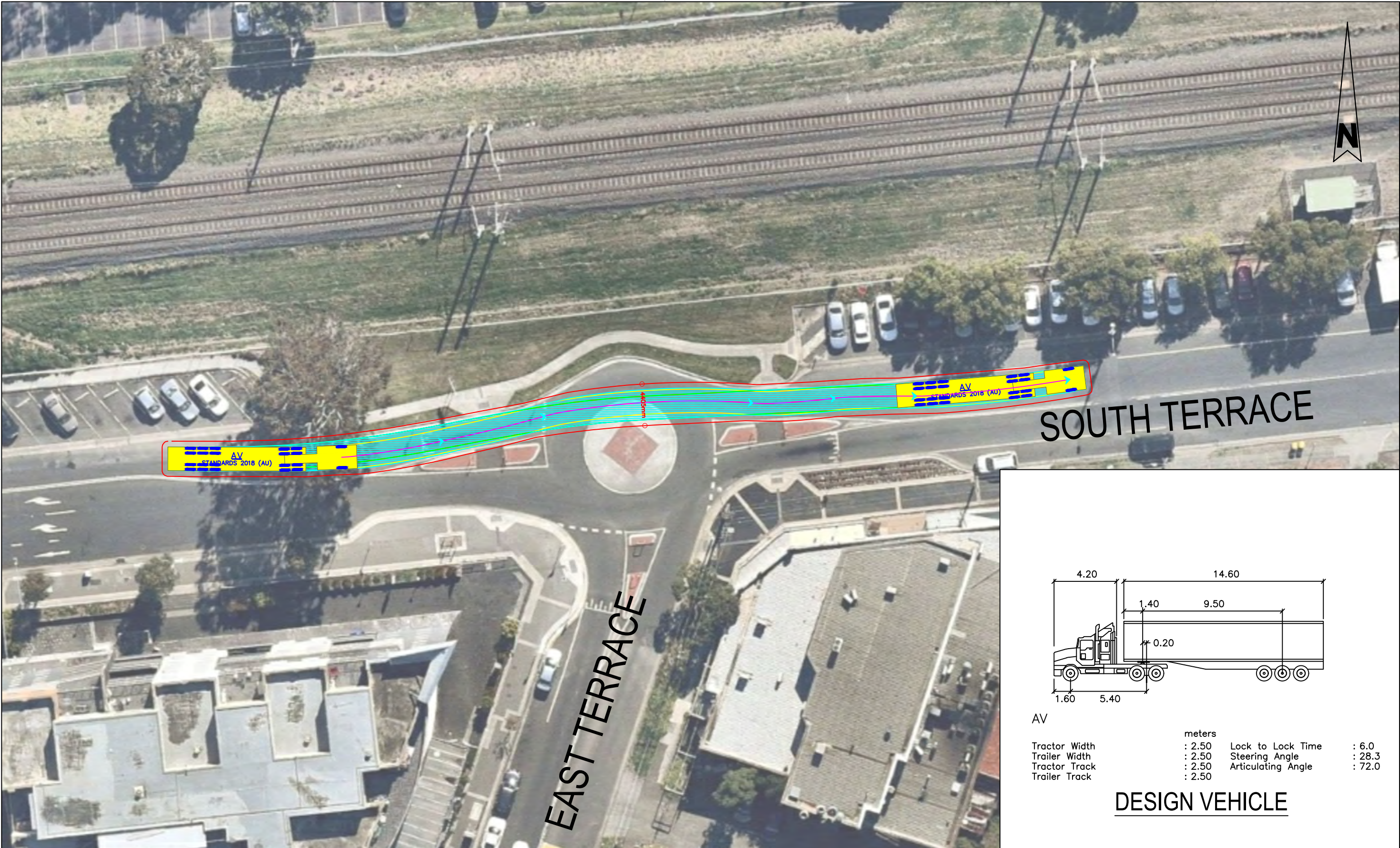
 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked	
	Issue	Revisions/Descriptions	Drawn	Date		M.H	M.H	A.G	
	001	INITIAL SWEPT PATH	M.H	02.09.2021		FOR INFORMATION ONLY			
	002	UPDATED SWEPT PATH	M.H	23.09.2021					
	003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021		Title 15.5m T&D Satellite Compound - Left Turn Entry Haulage Route	Project Number	Sheet Number	Date
							P3519	52	28.09.2021
								Issue	



TD StB		mm	
First Unit Width	: 2500	Lock to Lock Time	: 6.0
Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

DESIGN VEHICLE

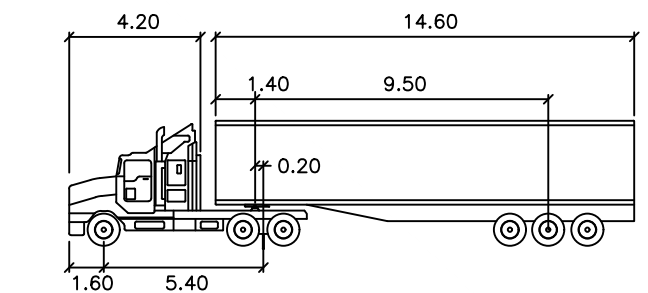
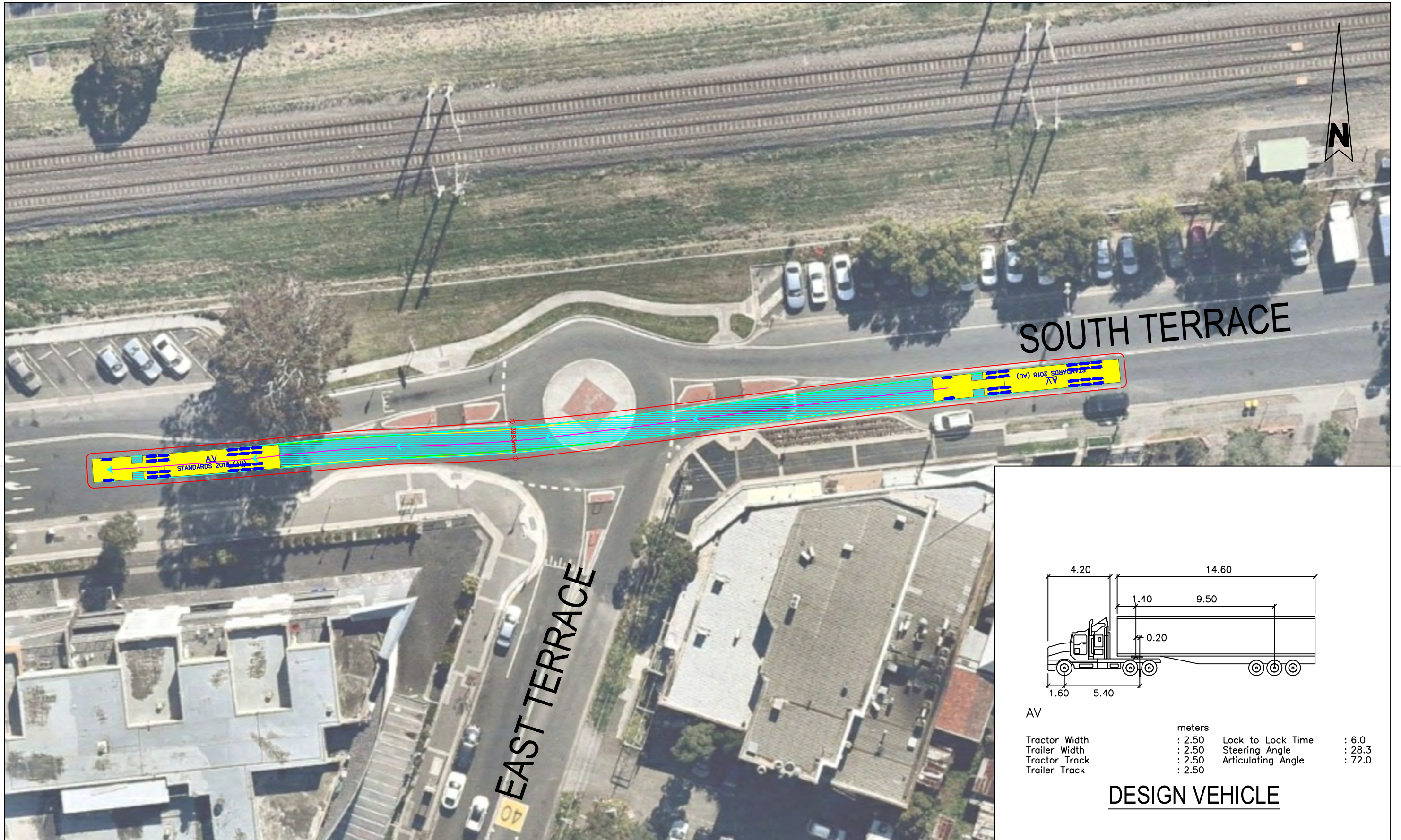
 Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	<table><tr><th colspan="2">REVISIONS</th><th rowspan="2">Drawn</th><th rowspan="2">Date</th></tr><tr><th>Issue</th><th>Revisions/Descriptions</th></tr><tr><td>001</td><td>INITIAL SWEEP PATH</td><td>M.H</td><td>02.09.2021</td></tr><tr><td>002</td><td>UPDATED SWEEP PATH</td><td>M.H</td><td>23.09.2021</td></tr><tr><td>003</td><td>UPDATED SWEEP PATH POST RSA AND REVIEW</td><td>M.H</td><td>28.09.2021</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>				REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	001	INITIAL SWEEP PATH	M.H	02.09.2021	002	UPDATED SWEEP PATH	M.H	23.09.2021	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																					Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		Design M.H	Drawn M.H	Checked A.G
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	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021																																											
				Title 15.5m T&D Satellite Compound - Left Turn Exit Haulage Route		FOR INFORMATION ONLY		Date 28.09.2021																																							
						Project Number P3519	Sheet Number 53	Issue 003																																							



AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
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Trailer Track	: 2.50		

DESIGN VEHICLE

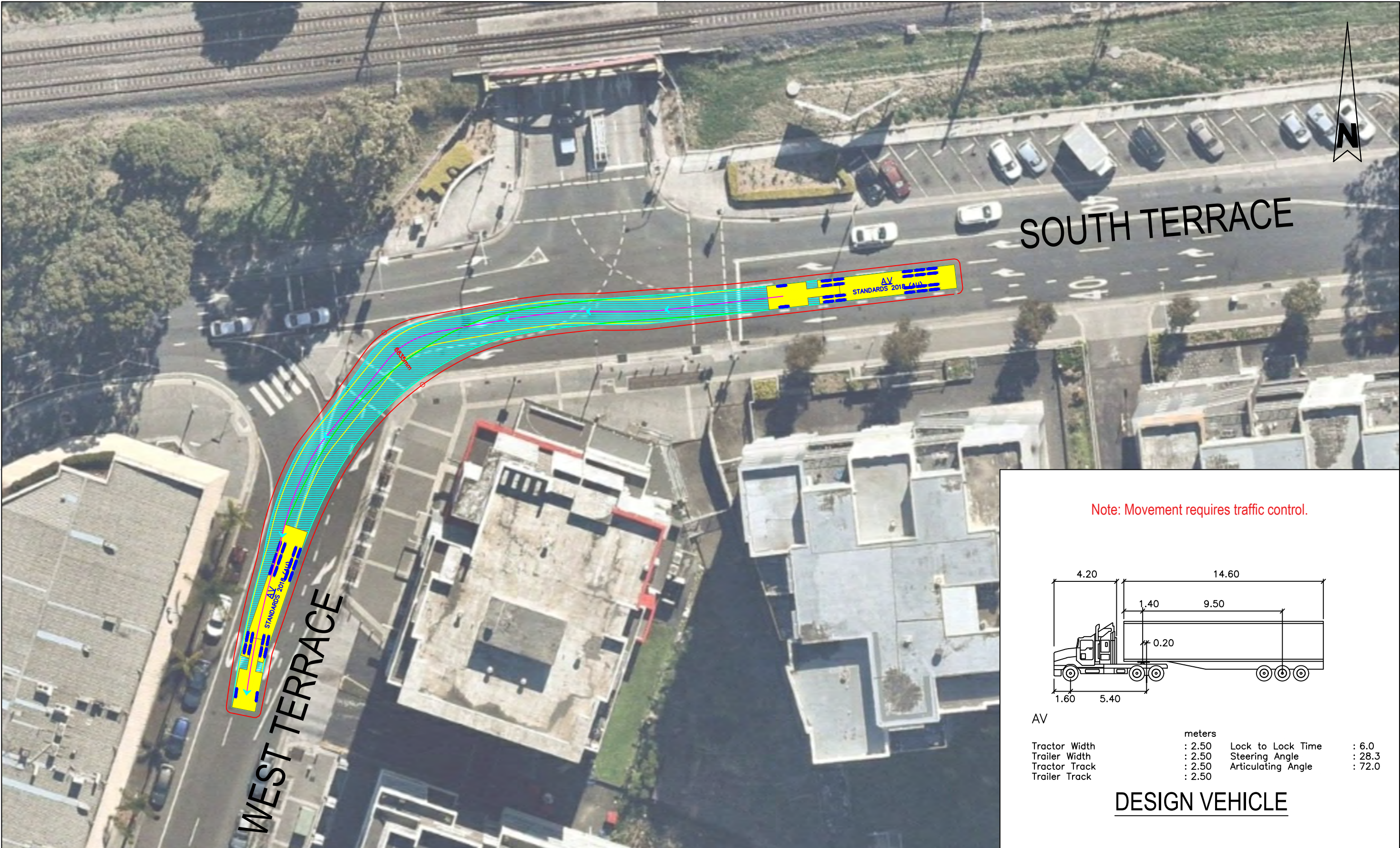
	Gold Coast Suite 26, 58 Riverwalk Avenue, Robina QLD 4226 P: (07) 5562-5377 W: www.bitziosconsulting.com.au Brisbane Level 2, 428 Upper Edward Street, Spring Hill 4000 P: (07) 3831-4442 E: admin@bitziosconsulting.com.au Sydney Studio 203, 3 Gladstone Street, Newtown NSW 2042 P: (02) 9557 6202	REVISIONS				Project BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Design	Drawn	Checked
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		002	UPDATED SWEPT PATH	M.H	23.09.2021				
		003	UPDATED SWEPT PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 20m AV (Through Movement) - South Terrace Eastbound Through Roundabout	Project Number	Sheet Number	Date
							P3519	54	28.09.2021
							Issue		



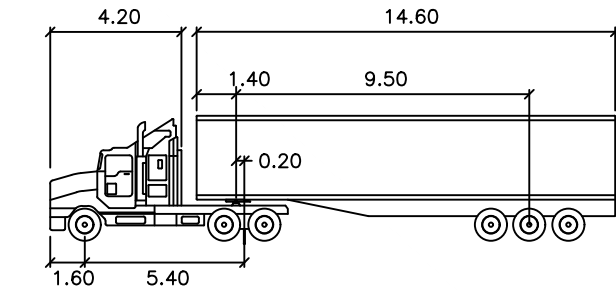
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Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

DESIGN VEHICLE

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		Issue	Revisions/Descriptions	Drawn	Date	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		M.H	M.H	A.F
		001	INITIAL SWEEP PATH	M.H	02.09.2021			FOR INFORMATION ONLY		Date 28.09.2021
		002	UPDATED SWEEP PATH	M.H	23.09.2021					
		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021					
						Title 20m AV (Through Movement) - South Terrace Westbound Through Roundabout		Project Number	Sheet Number	Issue
								P3519	55	003



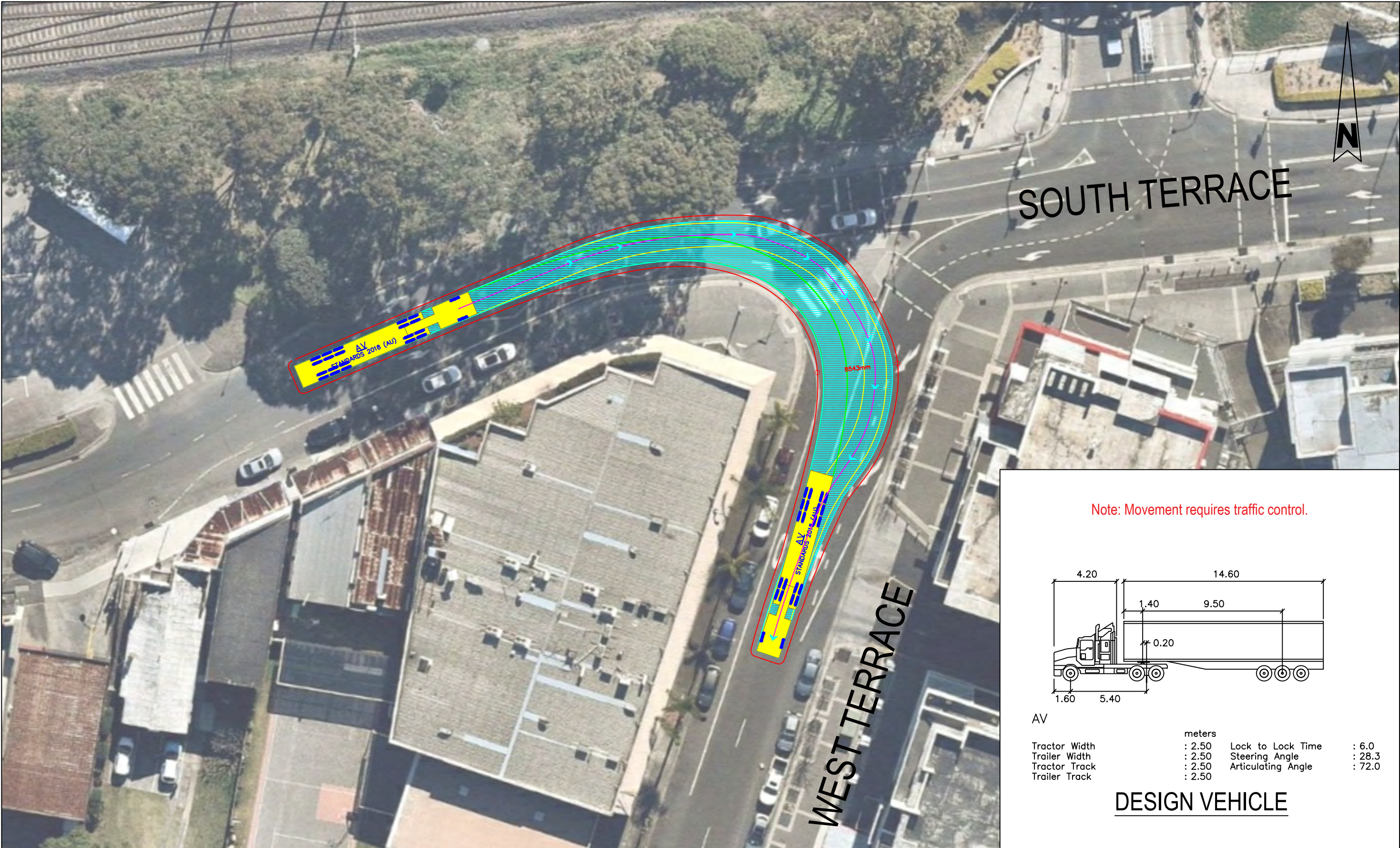
Note: Movement requires traffic control.



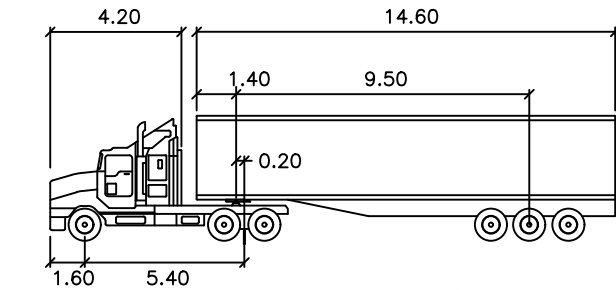
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	Trailer Track	5.40	
	Tractor Height	1.40	
	Trailer Height	9.50	
	Trailer Clearance	0.20	

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	Issue	Revisions/Descriptions	Drawn	Date	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Title 20m AV (Left Turn Movement) South Terrace / West Terrace - South Terrace Left Turn to West Terrace	M.H	M.H	A.F	
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	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021				Project Number	Sheet Number	Issue
								P3519	56	003



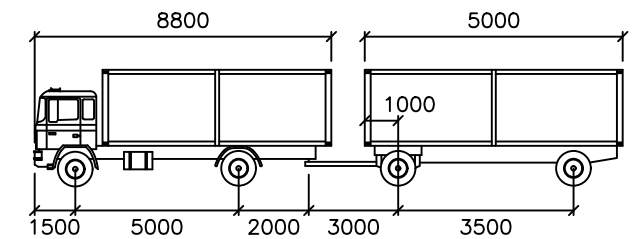
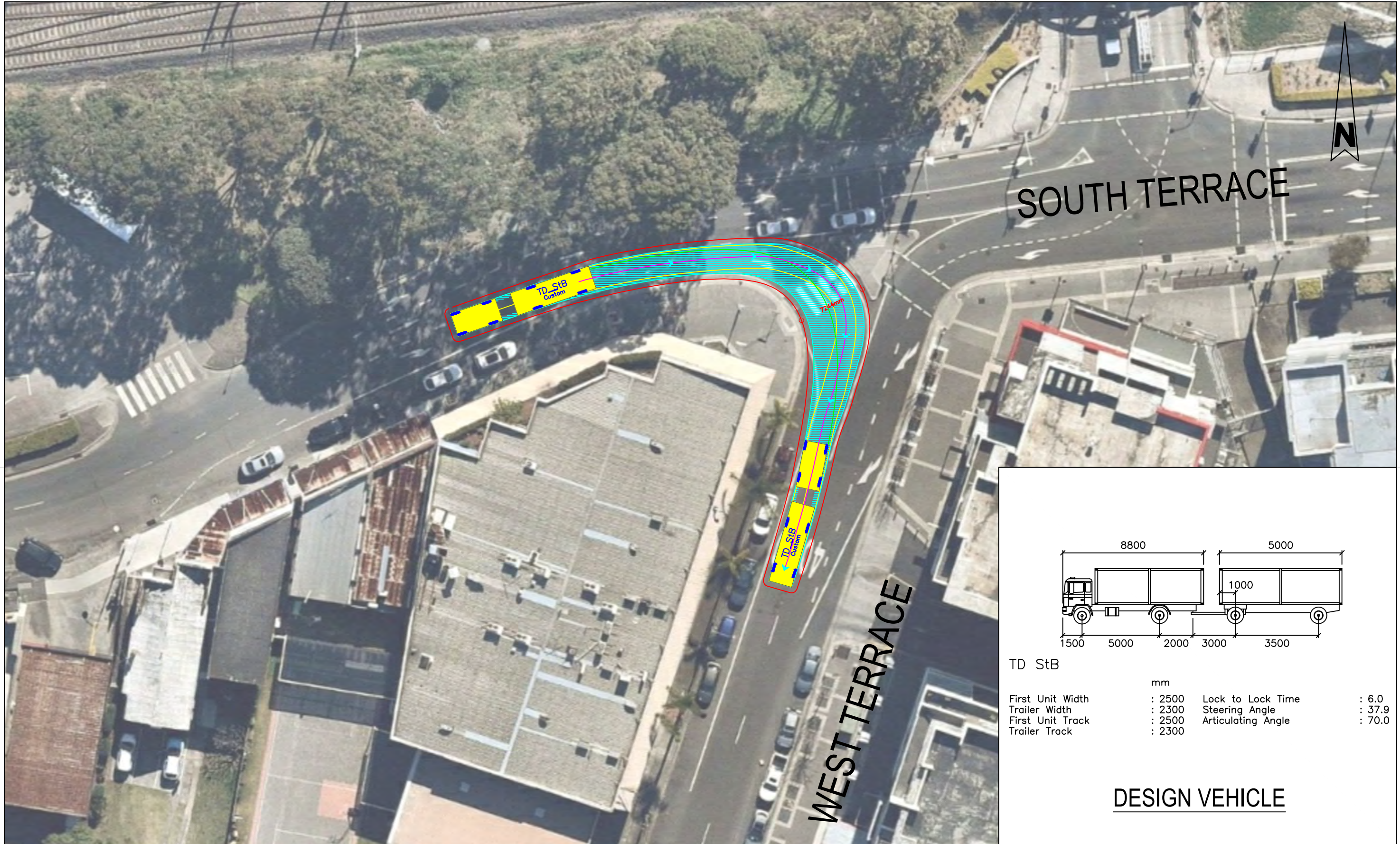
Note: Movement requires traffic control.



AV			
	Tractor Width	4.20	
	Tractor Track	1.60	
	Tractor Wheelbase	5.40	
	Trailer Width	14.60	
	Trailer Track	9.50	
	Trailer Wheelbase	1.40	
	Trailer Height	0.20	

DESIGN VEHICLE

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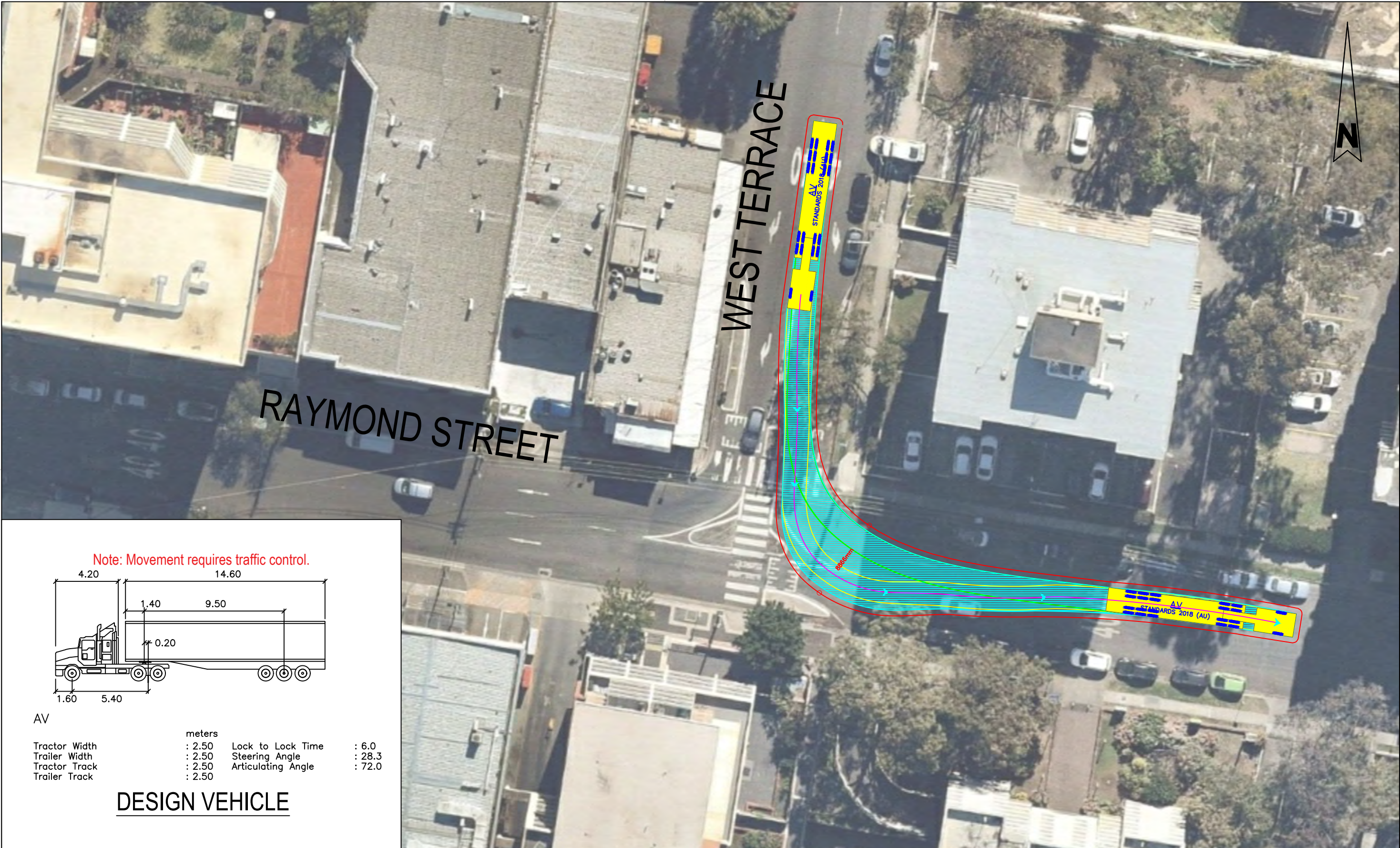


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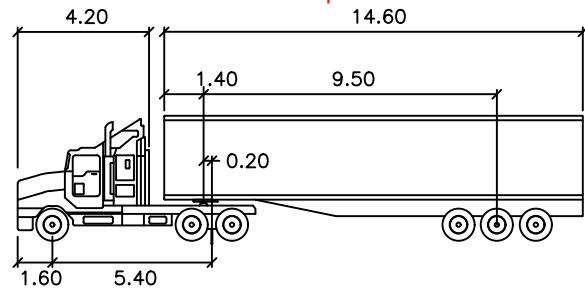
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Trailer Width	: 2300	Steering Angle	: 37.9
First Unit Track	: 2500	Articulating Angle	: 70.0
Trailer Track	: 2300		

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Note: Movement requires traffic control.



AV	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
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DESIGN VEHICLE

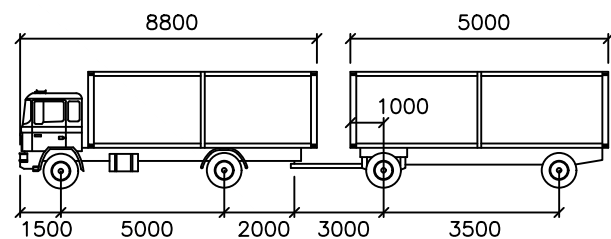
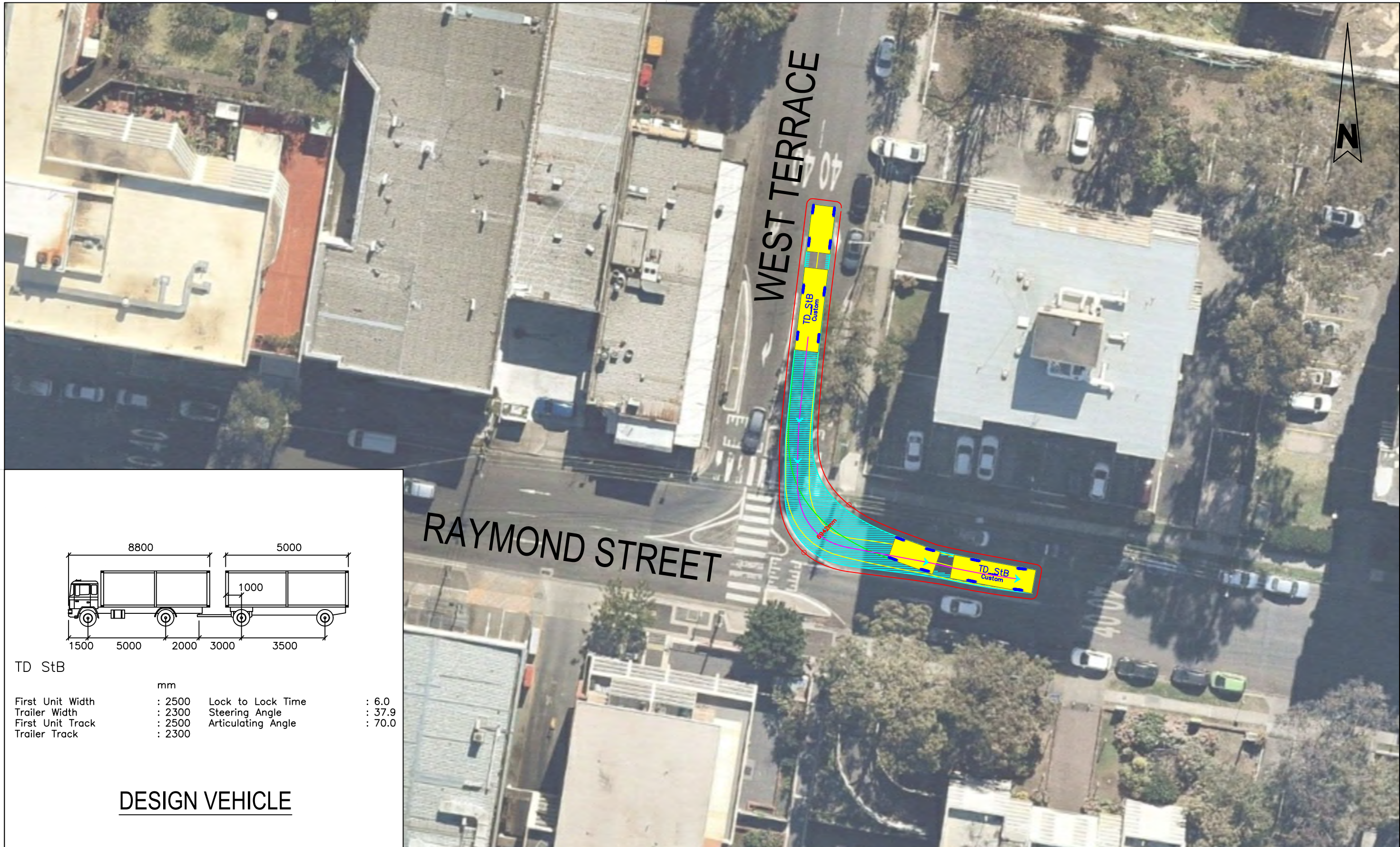


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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	02.09.2021
002	UPDATED SWEEP PATH	M.H	23.09.2021
003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021

Project	BANKSTOWN STATION CONSTRUCTION TRAFFIC MANAGEMENT PLAN		
Title	20m AV (Left Turn Movement) West Terrace / Raymond Street - West Terrace Left Turn to Raymond Street		

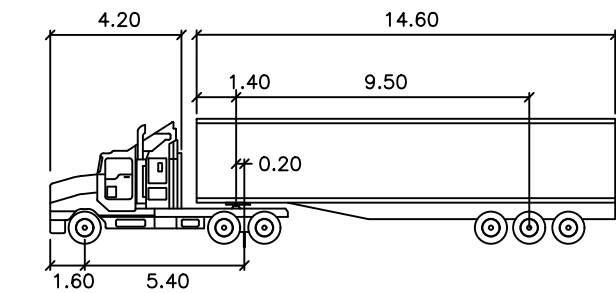
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FOR INFORMATION ONLY				Date	28.09.2021
Project Number	P3519	Sheet Number	58	Issue	003



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DESIGN VEHICLE

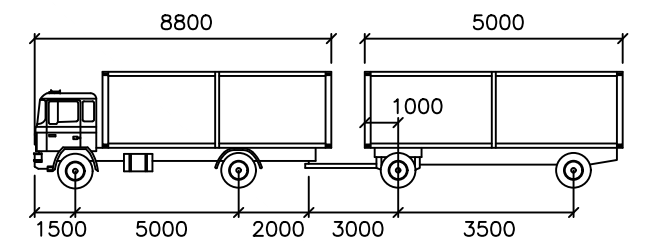
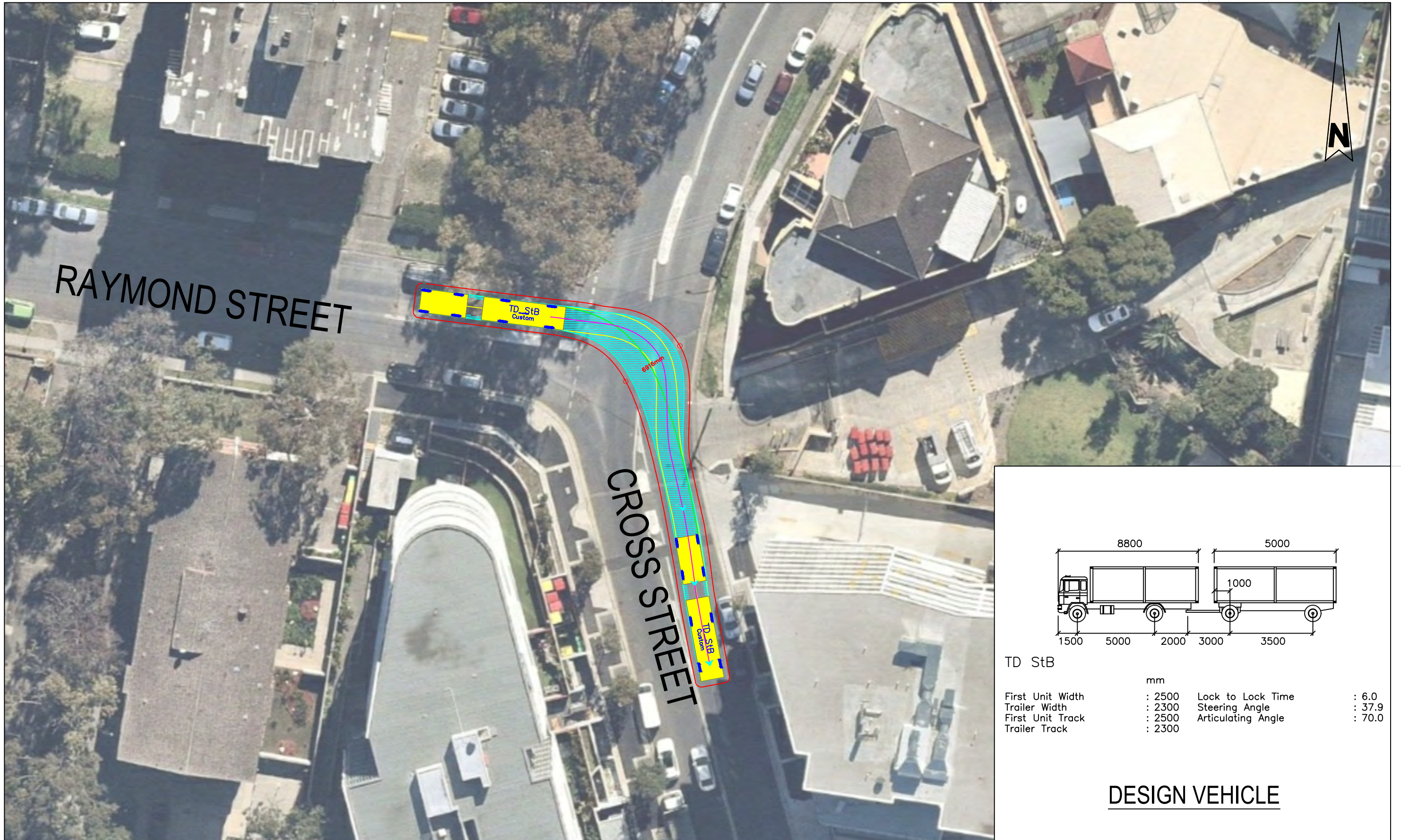
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		Issue 001	Revisions/Descriptions INITIAL SWEEP PATH	Drawn M.H	Date 02.09.2021			FOR INFORMATION ONLY		Date 28.09.2021
		002	UPDATED SWEEP PATH	M.H	23.09.2021					
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AV			
	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
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	Issue	Revisions/Descriptions	Drawn	Date	Title 20m AV (Right Turn Movement) - Raymond Street right turn to Cross Street	FOR INFORMATION ONLY	Project Number P3519	Sheet Number 60	Issue 003
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	002	UPDATED SWEEP PATH	M.H	23.09.2021					
	003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021					



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Trailer Width	: 2300	Steering Angle	: 37.9
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		003	UPDATED SWEEP PATH POST RSA AND REVIEW	M.H	28.09.2021	Title 15.5m T&D (Right Turn Movement) - Raymond Street right turn to Cross Street	Date	28.09.2021	
							Project Number	Sheet Number	Issue

11.3 Appendix 3 – Road Safety Audit

No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
1.	For the construction vehicle exit from Gate 2 onto South Terrace westbound, a driver would need to look back over their left shoulder to sight approaching westbound vehicles along South Terrace, which is undesirable. Moreover, an exiting vehicle needs to cross a double-barrier centre-line, which is sub-standard.	High	Crossing over a centre-line is permitted when entering a roadway. A TGS will be prepared to assist heavy vehicles exiting the site .		
2.	For the pedestrian detour along South Terrace (crossing from the northern to the southern side and back), there is an absence of any pedestrian detour information at the changes of direction (on the southern side of the crossing areas) and an absence of any pedestrian detour reassurance signage along the southern side of South Terrace.	Low-Medium	Additional advisory signage to show pedestrian detour route from proposed pedestrian route closure has been provided on the TGS.		
3.	The issue of sun-glare during certain periods of the year at sunrise and sunset may be applicable to east-west alignments along the surrounding road network, eg. along South Terrace and North Terrace. Consequently, the temporary traffic conditions including signage and traffic control devices may be difficult to sight due to sun glare.	Low-Medium	Noted. Traffic Controllers are responsible for ensuring that signs are placed in a position where sun glare will be mitigated.		
4.	The use of delineation cones (proposed for the South Terrace eastbound lane closure near the satellite compound) is generally undesirable because the cones can fall over and/or be struck by passing vehicles into the travel paths of the adjacent lanes, which create a hazard on the road.	Low	The short-term nature of the works makes cones a viable option. Workers are to regularly inspect the cones to ensure they have not been displaced or knocked over.		

No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
5.	There are a number of swept turning paths where longer vehicles cross contra-flow traffic lanes or need to turn from adjacent lanes, eg. AV left-turn from South Terrace eastbound into the satellite compound area, AV left-turn from West Terrace southbound into Raymond Street eastbound. It is understood that these swept path conflicts will be tested and approved prior to implementation and if necessary, specific TCPs will be developed to manage the vehicle path conflicts. Similarly, for vehicles that may need to reverse into or out of site access points.	Medium	Heavy vehicle movements will not cross the opposite side of the road unless under traffic control. Heavy vehicles are permitted to straddle multiple lanes to complete turning movements under NSW Road Rules. Vehicles reversing out of site will be avoided unless a last resort, and will be completed under traffic control.		
6.	It is assumed that there will be appropriate night delineation along the subject road network including (where necessary) reflectors on safety barriers and RRPMS along lane lines, edge-lines, centrelines, etc.		Cones, water-filled barriers, and other traffic control measures will have reflective components to ensure visibility at night.		
7.	The gate access numbers in <i>Figure 16 (page 20 of CTMP)</i> do not match the gate numbers in the swept path assessment diagrams, eg. <i>Sheets 39 and 40</i> of the swept path assessment show Gate 5 instead of Gate 2 (as per <i>Figure 16</i>), <i>Sheets 37 and 38</i> show Gate 4 instead of Gate 3, <i>Sheet 36</i> shows Gate 3 instead of Gate 4 and <i>Sheets 34 and 35</i> show Gate 2 instead of Gate 5.		Gate access numbers figures have been updated.		
8.	<i>Sheet 40</i> of the swept path assessment (left-turn exit from Gate 5 to North Terrace westbound) does not show any swept path diagrams.		Swept path movement sheet of left-turn exit from Gate 5 to North Terrace westbound has been included.		

No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
9.	Sheet 28 of the swept path assessment (left-turn entry into the main compound off North Terrace westbound) appears to be the same as Sheet 27.		Swept path movement sheet of left-turn exit from Gate 1 to North Terrace westbound has been included.		



Sydenham Station and Junction – Bankstown CTMP

CTMP Road Safety Audit Report

September 2021



Samsa Consulting Pty Ltd

Transport Planning & Traffic Engineering

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EXECUTIVE SUMMARY

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4. Formal Audit Statement.....	14

EXECUTIVE SUMMARY

This report details an independently undertaken road safety audit for the Bankstown works CTMP of the Sydenham Station and Junction project.

While a number of minor risk road safety issues were identified, the principal concerns of the audit team relate to the following issues:

- For the construction vehicle exit from Gate 2 onto South Terrace westbound, a driver would need to look back over their left shoulder to sight approaching westbound vehicles along South Terrace as well as crossing a double-barrier centre-line, which is undesirable and sub-standard.
- For construction vehicles exiting the main compound onto North Terrace it is non-standard and inappropriate that the approaching North Terrace westbound traffic would need to give priority to exiting construction traffic.
- During the Stage 2 sewer works, there is only a single, left-turn travel lane into West Terrace southbound, which would appear to restrict the swept turning path of any longer vehicles, including construction vehicles.
- For eastbound travel along South Terrace during the Stage 2 sewer works, through and left-turn movements will approach the West Terrace signalised intersection in the left lane, which has left-turn arrow pavement markings and a painted delineation island within the intersection area.

1. Introduction

1.1 Background

The Bankstown works portion of the Sydenham Station and Junction project consist of the following components:

- Main site compound off the southern side of North Terrace (opposite Bankstown Centro shopping centre) within an existing car park area.
- Satellite site compound off the northern side of South Terrace, at the eastern end of a bus interchange area.
- Utility connection (water and sewerage connections) along the northern side of South Terrace including footpath occupation.

As part of the works design process, *Bitzios Consulting* (Bitzios) are preparing the traffic guidance schemes (TGSs) and undertaking swept path analysis for the construction traffic management plan (CTMP) and subject works.

The Bankstown works will include the following construction tasks:

- Set-up of site compounds.
- Site establishment of works.
- Delivery and storage of materials.
- Ongoing site management.

The following traffic management objectives apply to the construction of the project:

- Minimise disruption to traffic operation, road users, public transport users, bus operators, pedestrians, cyclists, and access to adjoining properties.
- Maximise the safety of the workers, by isolating work areas from traffic flows, applying low exposure work methods, education and the installation of appropriate traffic control measures.
- Limit obstructions and restrictions, and when required, provide alternatives to maintain access for local community, transport operators, over-size load movements and commercial developments.

The CTMP aims to manage and mitigate the impacts of construction traffic and road works and sets out the responsibilities and strategies involved in ensuring a safe environment is maintained for drivers, pedestrians, cyclists, and workers.

The CTMP will be in use for approximately 10 months in total with the proposed timeline shown following.

Works	Description	Duration	Start Date	End Date
Overall		10 months	Early October 2021	Mid July 2022
Main Compound	Occupying existing car park between North Terrace and the rail corridor	10 months	Early October 2021	Mid July 2022
Satellite Compound	Occupying a portion of the bus layover area, south of the rail corridor	7 months	Early December 2021	Mid-June 2022
Gate Access	Utilising existing gates for access into the rail corridor	7 months	Early October 2021	Mid-April 2022
Utility Connection	Utility connections into the new Service buildings for sewage and water connections	7 months	Early December 2021	Mid-June 2022

This road safety audit report details an independently undertaken road safety audit of the CTMP for the Bankstown works portion of Sydenham Station and Junction project. The road safety audit was undertaken by *Samsa Consulting Pty Ltd*, Transport Planning & Traffic Engineering Consultants.

The location of the audit (including the extent of the surrounding road network swept path analysis) is shown in *Figure 1* following.



Figure 1: Project Audit Extent and Location

1.2 Report Structure

The remainder of this report is presented as follows:

Chapter 2 describes details of the audit undertaken including the methodology, administration and documentation audited.

Chapter 3 details the safety issues identified and audit findings.

Chapter 4 provides a formal audit statement.

2. Audit Details

2.1 Audit Methodology

A road safety audit is “... a formal examination of a future road or traffic project or an existing road, in which an independent, qualified team reports on the project's crash potential and safety performance” (Austroads 2009).

This audit followed a standard practice in identifying safety related issues of a project CTMP. It involved a desktop assessment of the proposed traffic management and guidance schemes, as well as identification of any background issues on site during day inspections.

The road safety audit focussed on safety issues such as temporary warning signage and linemarking, delineation, speed zoning, temporary pedestrian facilities and bus stops, safety barriers and proximity between travel lanes and work zones, sight distances, appropriateness of TGSs for the predicted traffic volumes, and overall road legibility adjacent and through work zones (amongst other issues).

The scope of the audit is in accordance with the requirements in Austroads’ “Guide to Road Safety, Part 6 / Part 6A” and is structured around a standard checklist provided in the Part 6A manual as well as RTA’s “Accident Reduction Guide – Part 2: Road Safety Audits”.

The site inspections were undertaken on Friday 24 September 2021. An audit exit meeting was held at the completion of the road safety audit report.

2.2 Audit Administration

Bitzios Consulting Project Manager: Matthew Hearne

Road Safety Auditors: Carolyn Samsa (*RMS Accredited Level 3 Lead Road Safety Auditor*)
(Auditor ID: RSA-02-0585)

Alan Samsa (*RMS Accredited Level 3 Lead Road Safety Auditor*)
(Auditor ID: RSA-02-0056)

2.3 References & Documentation Audited

- Austroads “Guide to Road Design Part 3: Geometric Design (Edition 3.3)”, April 2020
- Austroads “Guide to Road Design Part 4: Intersections and Crossings – General”, 2017
- Austroads “Guide to Road Design Part 4A: Unsignalised and Signalised Intersections”, October 2017
- Austroads “Guide to Road Safety, Part 6: Managing Road Safety Audits”, February 2019
- Austroads “Guide to Road Safety, Part 6A: Implementing Road Safety Audits”, February 2019
- Bitzios Consulting “Bankstown Station CTMP: Main Compound AV Access”, 17/09/2021
- Bitzios Consulting “Bankstown Station CTMP: WE16 Lane Closure and Pedestrian Detour”, 17/09/2021
- Bitzios Consulting “Bankstown Station CTMP: Pedestrian Detour”, 17/09/2021
- Bitzios Consulting “Bankstown Station CTMP: Sewer Works – Stage 1”, 27/09/2021

- Bitzios Consulting “*Bankstown Station CTMP: Sewer Works – Stage 2*”, 27/09/2021
- Bitzios Consulting “*Bankstown Station CTMP: Raymond Street / West Terrace TC*”, 27/09/2021
- JHLOR JV “*Sydenham Station and Junction: Bankstown CTMP (Construction Traffic Management Plan)*, (Document no. SMCSWSSJ-JHL-WBK-TF-PLN-005768)”, 23/09/2021
- RTA “*Accident Reduction Guide – Part 2: Road Safety Audits*”, 2005
- RTA “*Road Safety Audit Technical Direction TD2003/RS03, Version 2*”, August 2005
- RTA “*Delineation Guidelines: Parts 1 to 19 & Appendices A & B*”, assorted dates
- RTA “*Guidelines for Road Safety Audit Practices – Part 1: Road Safety Audit*”, July 2011
- Standards Australia “*AS 1742.1 – 2003: Manual of uniform traffic control devices, Part 1: General introduction and index of signs*”, 2003
- Standards Australia “*AS 1742.3 – 2009: Manual of uniform traffic control devices, Part 3: Traffic control for works on roads*”, 2009
- Transport for NSW “*Traffic Control at Work Sites, Technical Manual – Issue 6.0*”, 14 September 2020

3. Identified Safety Issues

The audit of the CTMP focussed on providing an independent identification of potential safety hazards, regardless of current practices, standards and operations, to allow Bitzios to identify remedial measures as part of its CTMP design preparation.

In categorising and prioritising identified safety issues, a risk assessment process was adopted. Risk assessment is the overall process of risk identification, analysis and evaluation. Preliminary risk ratings for each identified issue are assessed based on subjective professional judgement by the Road Safety Audit team with guidance from Section 4.8 C of Austroads "Guide to Road Safety, Part 6A: Implementing Road Safety Audits". The Austroads' document provides an indication of the level of risk and what response may be appropriate. The identified road safety issue is first categorised based on its likely frequency of occurrence and severity ('likelihood' and 'consequence' of crash potential) – refer to Figures 3.1 and 3.2 below (extracted from the Austroads' document).

Crash frequency	Description
Frequent (F)	Once or more per week
Probable (P)	Once or more per year but less than once per week
Occasional (O)	Once every five to ten years
Improbable (I)	Less than once every ten years

Figure 3.1: Likely Frequency of Issue

Severity	Description	Examples
Catastrophic (C)	Likely multiple deaths	- High-speed, multi-vehicle crash on a freeway - Car runs into crowded bus stop - Bus and petrol tanker collide - Collapse of a bridge or tunnel
Serious (S)	Likely death or serious injury	- High or medium-speed vehicle / vehicle collision - High or medium-speed collision with a fixed roadside object - Pedestrian struck at high speed - Cyclist is hit by a car
Minor (M)	Likely minor injury	- Some low-speed vehicle collisions - Cyclist falls from bicycle at low speed - Left-turn rear-end crash in a slip lane
Limited (L)	Likely trivial injury or property damage only	- Some low speed collisions - Pedestrian walks into object (no head injury) - Car reverses into post

Figure 3.2: Likely Severity of Issue

An appropriate risk rating is then selected from the risk categories in the risk matrix with a preferred treatment approach for each risk rating (refer to Figures 3.3 and 3.4 below, both extracted from Austroads).

	Frequent (F)	Probable (P)	Occasional (O)	Improbable (I)
Catastrophic (C)	Intolerable (I)	Intolerable (I)	Intolerable (I)	High (H)
Serious (S)	Intolerable (I)	Intolerable (I)	High (H)	Medium (M)
Minor (M)	Intolerable (I)	High (H)	Medium (M)	Low (L)
Limited (L)	High (H)	Medium (M)	Low (L)	Low (L)

Figure 3.3: Risk Matrix

Risk	Suggested treatment approach
Intolerable (I)	Must be corrected
High (H)	Should be corrected or the risk significantly reduced, even if the treatment cost is high
Medium (M)	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
Low (L)	Should be corrected or the risk reduced, if the treatment cost is low

Figure 3.4: Treatment Approach

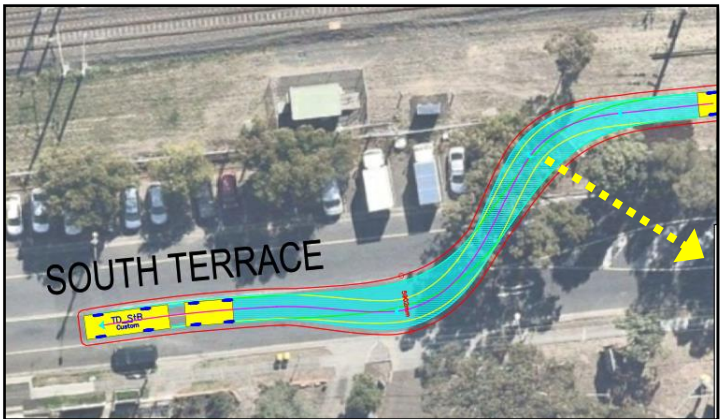
This report may provide recommendations about possible remedial measures in response to identified deficiencies. Any remedial actions recommended are based on current standards and practices. However, it should be noted that it is ultimately the responsibility of Bitzios to determine how to respond to each identified safety deficiency.

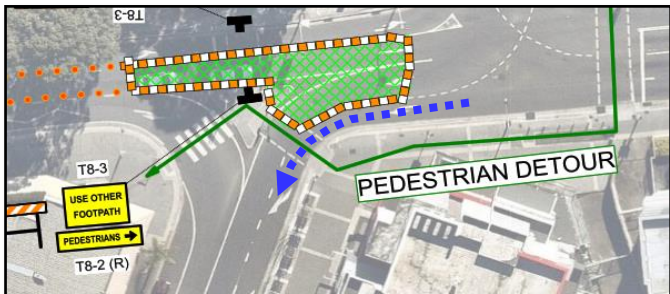
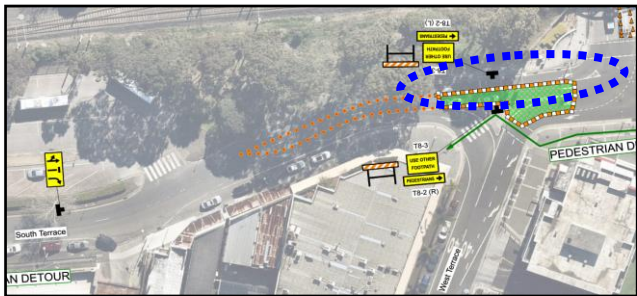
The audit of the project CTMP identified a number of potential road safety issues. The safety audit process requires that the safety issues identified during an audit be acknowledged by the Audit Team and accordingly responded to by Bitzios. The issues are characterised according to their risk, and detailed in *Table 3.1* following.

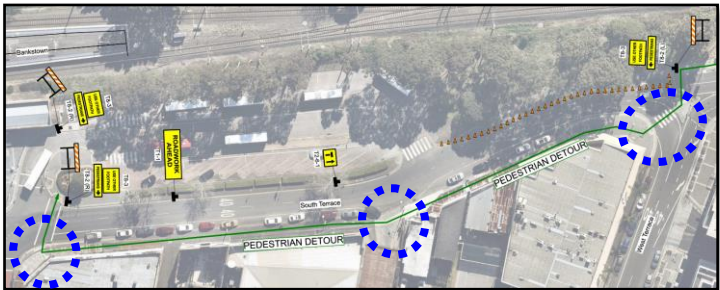
It should be noted that not all road safety issues identified may necessarily be within the scope of the project CTMP area. This is because while the scope of the audit is generally within the project area described earlier, to complete a full audit of the project, the approaches and transitions to the project area were also audited to identify potential safety issues that may affect road safety within the project area. Therefore, some safety issues that are outside the project area may be the responsibility of the relevant controlling road authority.

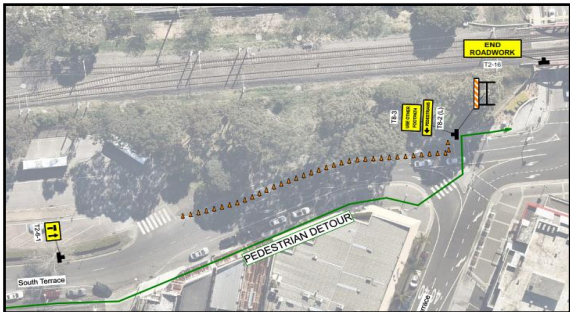
Also note that while this audit focussed on identifying road safety issues related to the project CTMP and not the background existing conditions, some existing road conditions may have been recorded where they were deemed notable.

Table 3.1: Identified Safety Issues

No.	Description of Road Safety Issue	Risk Rating	For completion by Bitzios		
			Response	Action by	Close-Out Date
1.	For the construction vehicle exit from Gate 2 onto South Terrace westbound, a driver would need to look back over their left shoulder to sight approaching westbound vehicles along South Terrace, which is undesirable. Moreover, an exiting vehicle needs to cross a double-barrier centre-line, which is sub-standard. 	Medium			
2.	For construction vehicles exiting the main compound onto North Terrace it is non-standard and inappropriate that the approaching North Terrace westbound traffic would need to give priority to exiting construction traffic, as discussed in <i>Section 2.1.1 (page 9)</i> of the CTMP.	Medium			

			For completion by Bitzios		
No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
3.	During the Stage 2 sewer works, there is only a single, left-turn travel lane into West Terrace southbound, which would appear to restrict the swept turning path of any longer vehicles, including construction vehicles. 	Medium			
4.	For eastbound travel along South Terrace during the Stage 2 sewer works, through and left-turn movements will approach the West Terrace signalised intersection in the left lane, which has left-turn arrow pavement markings and a painted delineation island within the intersection area. 	Medium			

			For completion by Bitzios		
No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
5.	For all site access gates off North Terrace and South Terrace, there is no warning or advisory signage to warn general traffic of construction traffic turning and to advise approaching construction traffic of site access points.	Low - Medium			
6.	The issue of sun-glare during certain periods of the year at sunrise and sunset may be applicable to east-west alignments along the surrounding road network, eg. along South Terrace and North Terrace. Consequently, the temporary traffic conditions including signage and traffic control devices may be difficult to sight due to sun glare.	Low - Medium			
7.	For the pedestrian detour along South Terrace (crossing from the northern to the southern side and back), there is an absence of any pedestrian detour information at the changes of direction (on the southern side of the crossing areas) and an absence of any pedestrian detour reassurance signage along the southern side of South Terrace. 	Low - Medium			

			For completion by Bitzios		
No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
8.	The use of delineation cones (proposed for the South Terrace eastbound lane closure near the satellite compound) is generally undesirable because the cones can fall over and/or be struck by passing vehicles into the travel paths of the adjacent lanes, which create a hazard on the road. 	Low - Medium			
9.	For westbound travel along Raymond Street, when exiting the roadworks (TCP) area at West Terrace, there is an absence of 'End Roadworks' advisory or speed reinstatement signage. 	Low			

			For completion by Bitzios		
No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
10.	There are a number of swept turning paths where longer vehicles cross contra-flow traffic lanes or need to turn from adjacent lanes, eg. AV left-turn from South Terrace eastbound into the satellite compound area, AV left-turn from West Terrace southbound into Raymond Street eastbound. It is understood that these swept path conflicts will be tested and approved prior to implementation and if necessary, specific TCPs will be developed to manage the vehicle path conflicts. Similarly, for construction vehicles that may need to reverse into or out of site access points, it is understood that specific TCPs will be developed and approved prior to implementation.	Note only			
11.	It is assumed that there will be appropriate night delineation along the subject road network including (where necessary) reflectors on safety barriers and RRPMS along lane lines, edge-lines, centrelines, etc.	Note only			
12.	The gate access numbers in <i>Figure 16 (page 20 of CTMP)</i> do not match the gate numbers in the swept path assessment diagrams, eg. <i>Sheets 39 and 40</i> of the swept path assessment show Gate 5 instead of Gate 2 (as per <i>Figure 16</i>), <i>Sheets 37 and 38</i> show Gate 4 instead of Gate 3, <i>Sheet 36</i> shows Gate 3 instead of Gate 4 and <i>Sheets 34 and 35</i> show Gate 2 instead of Gate 5.	Note only			
13.	<i>Sheet 40</i> of the swept path assessment (left-turn exit from Gate 5 to North Terrace westbound) does not show any swept path diagrams.	Note only			

			<i>For completion by Bitzios</i>		
No.	Description of Road Safety Issue	Risk Rating	Response	Action by	Close-Out Date
14.	Sheet 28 of the swept path assessment (left-turn entry into the main compound off North Terrace westbound) appears to be the same as Sheet 27.	Note only			
15.	Only TGSs for the main compound, satellite compound and South Terrace sewer works were provided as well as a TCP for the Raymond Street traffic control – no TGSs were provided for the other gate locations.	Note only			
16.	No pedestrian movement plans (PMPs) were provided as per Section 4.2.1 (page 21) of the CTMP.	Note only			

4. Formal Audit Statement

This road safety audit has been undertaken by *Samsa Consulting Pty Ltd*, using the references and documentation detailed previously and site inspections of the subject project area during daylight conditions.

While the road safety audit may provide recommendations about possible remedial measures in response to identified road safety issues, it is ultimately the responsibility of Bitzios to determine how best to respond to each identified safety issue.

The audit has been undertaken for the sole purpose of identifying any safety-deficient features and road safety risks of the subject project CTMP. Every effort was made to ensure that all relevant safety issues were considered and the findings are the opinion and judgement of the audit team.



27 September 2021

CAROLYN SAMSA

*RMS Accredited Road Safety Auditor: Level 3 Lead Auditor
(Auditor ID: RSA-02-0585)*



27 September 2021

ALAN SAMSA

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11.4 Appendix 4 – Comments Register

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
SMCSWSSJ-JHL-WBK-TF-PLN-005768	Bankstown Early Works - Construction Traffic Management Plan	B.01	RVW	01	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	General	NA	CTMP appears to be half complete and is missing significant detail and analysis. Please provide all required info and analysis prior to submitting for approval. This cannot be endorsed from a road safety perspective until this data is provided.	Observation	Y
				01.01	29/09/2021	JHL	MMATKOVICH				CTMP should now include all Appendices.	Observation	Y
				01.01.01	30/09/2021	TFN	LWILBY				All requested detail provided, comment closed.	Observation	Y
				02	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2.1 Swept path analysis	NA	Please confirm exact vehicle sizes to be used and the routes they will take as a number of the swept path diagrams show vehicles mounting footpaths and refuges and presents significant risk to pedestrians.	Observation	Y
				02.01	29/09/2021	JHL	MMATKOVICH				AS2890 20M Articulated vehicle (semi-trailer) and truck-and-dog are primary vehicles used. Swept paths showing vehicles driving over kerbs are refuges will generally be avoided. If required, they will be undertaken under traffic control. Pedestrians are to be held by workers using scissor gates on either side of the gate during vehicle entry and exit movements.	Observation	Y
				02.01.01	30/09/2021	TFN	LWILBY				Response noted. Document updated, comment closed.	Observation	Y
				03	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2.1.1 Main compound	NA	The text refers to car parking spaces being managed under traffic control during the movements - what if these spaces are already occupied prior to the traffic controller being on site?	Observation	Y
				03.01	29/09/2021	JHL	MMATKOVICH				Car space to be occupied in advance of AV movement taking place to ensure it is empty during exit manoeuvre.	Observation	Y
				03.01.01	30/09/2021	TFN	LWILBY				Response noted, comment closed.	Observation	Y
				04	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Figure 9	NA	Heading appears incorrect for this figure - refers to a right turn but showing a left turn.	Observation	Y
				04.01	29/09/2021	JHL	MMATKOVICH				CTMP Updated.	Observation	Y
				04.01.01	30/09/2021	TFN	LWILBY				Document updated, comment closed.	Observation	Y
				05	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2.1.6 South Terrace / East Terrace	NA	Any on site trial would need to be conducted under full traffic control and approved by TfNSW before being carried out, as these manoeuvres pose significant risk to pedestrians as indicated by the swept paths provided.	Observation	Y
				05.01	29/09/2021	JHL	MMATKOVICH				Noted.	Observation	Y
				06	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	4.2.1 Pedestrian movement plans	NA	Text refers to PMPs being overlaid on the TCPs, however no TCPs have been provided.	Observation	Y
				06.01	29/09/2021	JHL	MMATKOVICH				TGS are provided in the Appendices	Observation	Y
				06.01.01	30/09/2021	TFN	LWILBY				TCPs provided including overlaid pedestrian paths. Comment closed.	Observation	Y
				07	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	8.2 Road safety audit	10.2.3	Road safety audits need to be completed and submitted with the CTMP before approval can be granted. Please complete road safety audit and append to document.	Actual Non-Compliance	Y
				07.01	29/09/2021	JHL	MMATKOVICH				RSA has been completed for the CTMP, TGSs, and Swept Paths and has been included in the CTMP.	Actual Non-Compliance	Y

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				07.01.01	30/09/2021	TFN	LWILBY				RSA included, comment closed.	Actual Non-Compliance	Y
				08	17/09/2021	TFN	LWILBY	SMCSWSSJ-JHL-WBK-TF-PLN-005768	10.1 Appendix 1 - Traffic Guidance Schemes	G10, CTMF	Please provide TCPs so that signage, pedestrian routes and location of Traffic controllers around the worksite can be assessed from a road safety perspective.	Actual Non-Compliance	Y
				08.01	29/09/2021	JHL	MMATKOVICH				TGS have been included in the CTMP.	Actual Non-Compliance	Y
				08.01.01	30/09/2021	TFN	LWILBY				Documents included, comment closed.	Actual Non-Compliance	Y
				09	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	1.4.3	NA	More information is required regarding the site compounds,for example; details how will the offices be delivered, installed and removed, how many parking spaces will be provided, types of vehicles accessing these compounds.	Observation	Y
				09.01	29/09/2021	JHL	MMATKOVICH				JHLOR JV to update.Updated in CTMP. Note, responsibility for alternative parking rests with Sydney Metro not JHLOR, Sydney Metro have had discussions with Council regarding this issue and JHLOR understand the parties have reached agreement on the quantity and lcoation of alternative parking.	Observation	Y
				10	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	1.4.4	NA	What analysis of the impact of the footpath closure has been undertaken? Provide a drawing showing the extent of of the closure and how it would be managed.	Observation	N
				10.01	29/09/2021	JHL	MMATKOVICH				Figures have been applied to the CTMP	Observation	N
				10.01.01	30/09/2021	SCO	JCOLES				Please indicate where the analysis of the impact of the footpath closures is located within the document.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				The footpath closures and temporary detour routes are drawn on the TGS's found in Appendix 1. The detour routes will be managed b pedestrian signage and traffic controllers (where neccessary). The TGS's with temporary pedestiran detour routes have also been reviewed as part of the Road Safety Audit (refer to item 2 on the table included Appendix 3).	Observation	N
				11	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	1.4.4	NA	Please provide TGS' of the lane closures proposed for the sewer installation works.	Observation	N
				11.01	29/09/2021	JHL	MMATKOVICH				TGS have been provided for the sewer works, in two Stages.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				12	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	1.4.4	NA	Provide information in this section regarding the main compound.	Observation	Y
				12.01	29/09/2021	JHL	MMATKOVICH				Information included	Observation	Y
				13	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2.1.1	NA	"Westbound travelling drivers need to take extra caution in giving priority to heavy vehicles exiting the site."Drivers travelling on the public road have right of way over vehicles entering from a compound or property, this statement should be removed from the CTMP.	Observation	Y
				13.01	29/09/2021	JHL	MMATKOVICH				Statement removed	Observation	Y
				14	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2.1.1	NA	A number of the turning paths show that vehciles would mount of the kerb and impact footpaths. How will this be managed, has Canterbury-Bankstown Council accepted this impact to their asset?	Observation	Y
				14.01	29/09/2021	JHL	MMATKOVICH				Swept paths shown to cross footpaths and kerbs will generally not be undertaken.If required, it will be undertaken in consultation with Canterbury-Bankstown Council.	Observation	Y

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				15	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	2	NA	Where traffic control is required to allow vehicles to access/egress from gates and compounds TGS' should be provided.	Observation	N
				15.01	29/09/2021	JHL	MMATKOVICH				TGS has been provided for gates where vehicles cannot easily exit.	Observation	N
				15.02	30/09/2021	SCO	JCOLES				TGS are not included in the document, TCPs should be included in the document, not as an attachment to the transmittal.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				Appendix 1 has been combined with the main CTMP document (Rev C). All TGS's now included.	Observation	N
				16	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	4.6	NA	This CTMP proposes a compound located in and accessed via a bus interchange, suggest updating this section to detail how this compound and its operation impacts the operation of the interchange.	Observation	Y
				16.01	29/09/2021	JHL	MMATKOVICH				Impacts to bus area are expected ot be negligible. Use of the bus area is being undertaken in consultation with bus operators to ensure impacts to public transport services are minimised.	Observation	Y
				17	23/09/2021	SCO	JCOLES	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Appendices	NA	Appendices for this document are largely incomplete.	Observation	N
				17.01	29/09/2021	JHL	MMATKOVICH				Appendices have been included.	Observation	N
				17.01.01	30/09/2021	SCO	JCOLES				They appear to be still largely incomplete.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				All Appendices have been combined with the main CTMP document (Rev C).	Observation	N
				18	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	-	-	The proposed main compound is completely within the RailCorp land. No permits from Infrastructure Services Unit is required for this occupation. However, this land is leased by Council for commuter parking. Therefore this occupation needs to be covered by a special agreement. This occupation replaces about 50 commuter parking spaces and prior to COVID locked down this area was fully utilised. Removal of this parking for a period of 10 months will have a major impact. There are some unrestricted parking in multi-storey parking stations within the CBD. However, They need to demonstrate how the impacts are mitigated (i.e. any spare capacity in those).	Observation	N
				18.01	29/09/2021	JHL	MMATKOVICH				Sydney Metro are undertaking ongoing consultation with City of Canterbury Bankstown to find alternate parking arrangements.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				19	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Figure 4	-	Satellite Compound on the south side shows encroachment on to the footpath. It is not clear what is proposed here. At the initial meeting, they have indicated that they need to close this footpath. Also, under "Utility Connection", the document states closure of 150m of footpath on the north side of South Terrace. A detail plan of the proposed occupation with an application is required to provide the permit for this.	Observation	N
				19.01	29/09/2021	JHL	MMATKOVICH				TGS have been included for the Sewer works in the CTMP, which show pedestrian management and pedestrian detour routes.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				20	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	-	-	Road/lane closure in South Terrace for installation of sewer during the night requires road opening permits from Roads Operations (Public Domain Team	Observation	N
				20.01	29/09/2021	JHL	MMATKOVICH				Noted. JHLOR JV to obtain permits as required.	Observation	N

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					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				21	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	-	-	· Truck Movements o Main compound -Left turn in - According to turning paths provided the existing vehicular crossing is not wide enough to accommodate the AVs. This will cause damage to the Kerb and the footpaving. Also there is a street light pole nearby. It is unclear whether the street light is impacted. -Left turn out – Again the existing vehicular crossing is not wide enough to accommodate the AVs. This will cause damage to the Kerb and the footpaving. Street signs may also need removal. Arrangements should be made to remove when required and replace after the truck movements to maintain the on-street parking restrictions. It is unclear where the AV travels after this movement and the details are to be provided. According to Figure 15 – Haulage Routes, AVs should turn right when they exit and no turning paths for right turn have been provided.	Observation	N
				21.01	29/09/2021	JHL	MMATKOVICH				All obstructions to swept paths to be confirmed by JHLOR JV prior to vehicle movements taking place.Entry movement is not expected to conflict with light pole. Any impacts to be covered in dilapidation report.Left turn out movement will not be undertaken and is provided for information only.Turning paths for right turn are included in the CTMP and will be undertaken under traffic control.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				22	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Sec 2.1.2	-	· Satellite compound -In Sec 2.1.2, it states that no AVs are used to access this compound and truck and dog combination is used. But no turning paths are provided.	Observation	N
				22.01	29/09/2021	JHL	MMATKOVICH				Swept path movement of truck and dog added	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				23	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	-	-	· Haulage Routes -Dilapidation report covering all local roads and associated traffic facilities along the haulage route needs to be submitted prior to any work commencing. It is noted that proposed large vehicle movements cannot be accommodated within the existing carriageways. This will result in damage to the road structures. § Any parking loss to accommodate vehicle movements needs to be communicated to the affected businesses/residents in advance.	Observation	N
				23.01	29/09/2021	JHL	MMATKOVICH				JHLOR JV to address.Gap analysis undertaken on roads previously inspected for road dilapidations, the roads on the identified haulage routes that are missing have had road dilapidations undertaken recently (week commencing 209th Sept 2021) and reports issued to Council.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				24	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Sec 2.1.7 - Figure 15	-	· Access Gate 1 -Left turn in - According to turning paths provided the existing vehicular crossing is not wide enough to accommodate the AVs. This will cause damage to the Kerb and the footpaving. Street signs may also need removal. -Gate numbering in the Sec 2.1.7 does not match with the gate numbering used in Figure 15. It is not possible to comment on this until it is corrected.	Observation	N
				24.01	29/09/2021	JHL	MMATKOVICH				Section 2.1.7 covers the Gate 1 movements. AV movements to be confirmed prior to commencement. Impacts to kerb and footpaths to be covered in dilapidation report.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N

DOCUMENT NO.	TITLE	VER	STATUS	NO.	DATE	COMPANY	RAISED BY	REVIEW DOC. NO.*	DOCUMENT REF*	DEED REF*	COMMENTS / RESPONSE	COMMENT CATEGORY*	CLOSED OUT
				25	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Sec 3.2	-	· Sec 3.2 – Traffic impacts -It states that limiting traffic to one lane in South Terrace instead of usual two. It only has one lane in each direction. South Terrace has very high traffic volume most of the daylight times. Restricting traffic to one lane under traffic control could cause major traffic impact within the CBD. More details on this proposal is required. Any proposed lane closure requires approval from Council.	Observation	N
				25.01	29/09/2021	JHL	MMATKOVICH				JHLOR JV to comment - if this is happening only outside peak hours and covered with road plates during peaks it might be ok. Otherwise they might request modelling?Lane closure will only occur outside of peak hours, generally from 10pm through to 5am, the lane will be re-opened to traffic outside of these hours with suitable trench shoring and road plates - temporary works design for these works will be approved through internal temprary works approval process.	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				26	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Sec 4.1.2	-	· Sec 4.1.2 - Truck movements and hours of operation -It is strongly advised to limit truck movements outside the peak hours and plan the deliveries in the night time.	Observation	N
				26.01	29/09/2021	JHL	MMATKOVICH				Truck movements to be limited to off-peak hours where possible	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N
				27	23/09/2021	CBC	JMAGSIPOC	SMCSWSSJ-JHL-WBK-TF-PLN-005768	Sec 4.6	-	· Sec 4.6 – Public transport and bus operations -Currently busses use the area next to the proposed satellite compound for bus layover and as a nightrider bus terminal. What are the impacts on these and how they are managed?	Observation	N
				27.01	29/09/2021	JHL	MMATKOVICH				Impacts to the bus area are to be discussed with bus operators to minimise impacts	Observation	N
					6/10/2021	JHLORJV	ACONSTANTIN				This item was responded to on 29/9/21. No further actions by JHLORJV.	Observation	N