

Sydney Metro City & Southwest Southwest Metro Corridor works Construction Traffic Management Plan

SMCSWSSJ-JHL-WEC-TF-PLN-000052

Document and Revision History

Document Details	
Title	SWMC works - Construction Traffic Management Plan
Client	Sydney Metro City & Southwest
Client reference no.	SMCSWSSJ-JHL-WEC-TF-PLN-000052
JHLOR JV contract no.	K44

Revisions

Revision	Date	Description	Prepared by	Reviewed by
0	19 February 2021	Issued for Review	M. Hearne	S. Power
1	23 February 2021	Issued for Review	M. McKimmie	P. Fields
2	19 March 2021	Re-issued to address TfNSW Comments	M. McKimmie	P. Fields
3	31 May 2021	Updated to Include additional TCPs	M. McKimmie	P. Fields

Management reviews

Review date	Details	Reviewed by

Controlled: NO Copy no.: Uncontrolled: YES

1. Compliance Matrix

The Project was assessed as a Critical State Significance Infrastructure (CSSI) by the Minister for Planning by virtue of clause 5 of Schedule 5 of the *State Environmental Planning Policy (State and regional Development) 2011* (NSW) and section 5.13 of the *Environmental Planning and Assessment Act 1979* (NSW). The Minister's Conditions of Approval (CoA) were granted on 12 December 2018 with conditions. A Construction Traffic Management Plan is required in accordance with the Conditions of Approval. Additionally, a number of Revised Environmental Mitigation Measures (REMMs) relating to traffic management are applicable to the Southwest Metro Early Works (SMEW) and have been referenced accordingly below.

Conditions of Approval (CoA)

Clause	Requirement	Document Reference or Response
A22	Work must not commence until an ER has been approved by the Planning Secretary and engaged by the Proponent.	Section 3.8.2
A23	The Planning Secretary's approval of an ER must be sought no later than one (1) month before the commencement of Work.	Section 3.8.2
A36	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Proponent becomes aware of an incident. The notification must identify the CSSI (including the application number and the name of the CSSI if it has one) and set out the location and nature of the incident.	Section 3.6
A37	Subsequent notification must be given, and reports submitted in accordance with the requirements set out in CoA Appendix A.	Section 3.6
E19	Work must only be undertaken during the following Construction hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; (b) 8:00am to 6:00pm Saturdays; and (c) at no time on Sundays or public holidays.	Section 3.5.1

Clause	Requirement	Document Reference or Response
E20	<p>Notwithstanding Conditions E19 and E24 Work may be undertaken outside the hours specified in the following circumstances:</p> <p>(a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or</p> <p>(b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or</p> <p>(c) where different Construction hours are permitted or required under an EPL in force in respect of the CSSI; or</p> <p>(d) Work approved under an Out-of-Hours Work Protocol for Work not subject to an EPL as required by Condition E25; or</p> <p>(e) Construction that causes $LA_{eq(15\text{ minute})}$ noise levels:</p> <p>(i) no more than 5 dB(A) above the rating background level at any residence in accordance with the <i>Interim Construction Noise Guideline</i> (DECC, 2009), and</p> <p>(ii) no more than the 'Noise affected' noise management levels specified in Table 3 of the <i>Interim Construction Noise Guideline</i> (DECC, 2009) at other sensitive land uses, and</p> <p>(iii) continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of <i>Assessing Vibration: a technical guideline</i> (DEC, 2006), and</p> <p>(iv) intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of <i>Assessing Vibration: a technical guideline</i> (DEC, 2006); or</p> <p>(f) where a negotiated agreement has been reached with a substantial majority of sensitive receivers who are within the vicinity of and may be potentially affected by the particular Construction, and the noise management levels and/or limit for ground-borne noise and vibration (human comfort) cannot be achieved. All agreements must be in writing and a copy forwarded to the Planning Secretary at least one (1) week before the commencement of activities.</p> <p><i>Note: Section 5.24(1)(e) of the EP&A Act requires that an EPL be substantially consistent with this approval.</i></p>	Section 3.5.2
E21	<p>On becoming aware of the need for emergency Work in accordance with Condition E20(b), the Proponent must notify the ER and the EPA (if a EPL applies) of the need for that Work. The Proponent must use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those Work.</p>	Section 3.5.2

Clause	Requirement	Document Reference or Response
E22	<p>Out-of-Hours Work that are regulated by an EPL as per Condition E20(c) or through the Out-of-Hours Work Protocol as per Condition E25 include:</p> <p>(a) Work which could result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 "Risk Management – Principles and Guidelines"; or</p> <p>(b) where the relevant road authority has advised the Proponent in writing that carrying out the activities could result in a high risk to road network operational performance; or</p> <p>(c) where the relevant utility service operator has advised the Proponent in writing that carrying out the activities could result in a high risk to the operation and integrity of the utility network; or</p> <p>(d) where the Transport for NSW Transport Management Centre (or other road authority) has advised the Proponent in writing that a road occupancy licence is required and will not be issued for the activities during the hours specified in Conditions E19 and E20; or</p> <p>(e) where Sydney Trains (or other rail authority) has advised the Proponent in writing that a Rail Possession is required.</p> <p><i>Note: Other Out-of-Hours Work can be undertaken with the approval of an EPL, or through the project's Out-of-Hours Work Protocol for Work not subject to an EPL.</i></p>	Section 3.5.2
E23	<p>In order to undertake Out-of-Hours Work, the Proponent must identify appropriate respite periods for the Out-of-Hours Work in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with:</p> <p>(a) a schedule of likely Out-of-Hours Work for a period no less than two (2) months;</p> <p>(b) the potential work, location and duration;</p> <p>(c) the noise characteristics and likely noise levels of the Work; and</p> <p>(d) likely mitigation and management measures.</p> <p>The outcomes of the community consultation, the identified respite periods and the scheduling of the likely Out-of-Hours Work must be provided to the EPA (if an EPL applies) and the Planning Secretary (for high risk activities after 9pm) upon request.</p>	Section 3.5.2
E46	<p>The Proponent must establish a Traffic and Transport Liaison Group(s) (TTLGs) to inform traffic and transport management measures during Construction and Operation of the CSSI. Management measures must be coordinated with the RMS following consultation with the Sydney Coordination Office the Relevant Roads Authority.</p> <p>The TTLG must comprise representatives from the Relevant Road Authority(ies), transport operators (including bus and taxi operators) and emergency services as required. The TTLG must be consulted to inform preparation of the Construction Traffic Management Plan(s).</p>	Section 7
E47	<p>Construction Traffic Management Plans (CTMPs) must be prepared for each Construction site or stage (or Low Impact Activity where required) in accordance with the CEMF and relevant Austroads, Australian Standards and RMS requirements. The CTMPs must be submitted to the RMS following engagement with the Sydney Coordination Office and before Construction commences at the relevant Construction site or stage. A copy of the Construction Traffic Management Plans must be submitted to the Planning Secretary for information.</p>	This Plan Section 1.1
E48	<p>The Proponent must prepare a Temporary Transport Management Plan in accordance with the Temporary Transport Strategy included in documents listed in Condition A1 one (1) month before the implementation of the Plan.</p>	Not applicable to SMWC in accordance with the Staging Report

Clause	Requirement	Document Reference or Response
E49	Before any local road is used by a heavy vehicle for the purposes of Construction of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the relevant council(s) within four (4) weeks of completion of the survey and at least two (2) weeks before the road is used by heavy vehicles associated with the Construction of the CSSI.	Section 4.11
E50	If damage to local roads occurs as a result of Construction of the CSSI, the Proponent must either: (a) compensate the relevant road authority for the damage so caused. The amount of compensation may be agreed with the relevant road authority; or (b) rectify the damage to restore the road to at least the condition it was in pre-Construction as identified in the Road Dilapidation Report(s) .	Section 4.11
E51	During Construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access must be provided, and opportunities for parking arrangements must be investigated in consultation with affected businesses/properties and implemented before the disruption. Adequate signage and directions to businesses/properties must be provided before, and for the duration of, any disruption.	Section 4.8 Section 4.6.3 Section 7
E52	Safe pedestrian and cyclist access must be maintained around Work sites during Construction. In circumstances where pedestrian and cyclist access is restricted or removed due to Construction activities, an alternate route which complies with the relevant standards must be provided and signposted.	Section 4.8

Construction Environmental Management Frameworks (CEMF)

Clause	Requirement	Document Reference or Response
3.4	<p>Construction Environmental Management Sub-Plans</p> <p>a. Subject to Section 3.3(b) and Section 3.2(b) the Principal Contractor will prepare issue-specific environmental sub plans to the CEMP and SMP which address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub plans will include:</p> <ul style="list-style-type: none"> i. Soil management; ii. Groundwater management; iii. Traffic and transport management; iv. Noise and vibration management; v. Heritage management; vi. Flora and fauna management; vii. Visual amenity management; viii. Carbon and energy management; ix. Materials management; x. Soil and water management; xi. Air quality management; and xii. Waste management and recycling. <p>b. Additional detail on the minimum requirements for these sub plans is provided in Sections 6-17 of the CEMF</p>	It is noted that in accordance with the Sydney Metro City and Southwest Sydenham to Bankstown Staging Report, the CTMP is not a sub-plan of the Construction Environment Management Plan, it is a standalone Plan in accordance with CoA-E47

Clause	Requirement	Document Reference or Response
3.7	<p>Condition Surveys</p> <p>a. Prior to the commencement of construction the Principal Contractors will offer Pre-construction Building Condition Surveys, in writing, to the owners of buildings where there is a potential for construction activities to cause cosmetic or structural damage. If accepted, the Principal Contractor will produce a comprehensive written and photographic condition report produced by an appropriate professional prior to relevant works commencing.</p> <p>b. Prior to the commencement of construction the Principal Contractor will prepare a Road Dilapidation Report for all local public roads proposed to be used by heavy vehicles.</p>	<u>Section 4.11</u>
3.8	<p>Register of Hold Points</p> <p>a. Principal Contractors will identify hold points, beyond which approval is required to proceed with a certain activity. Example activities include vegetation removal and water discharge. Hold points will be documented in relevant CEMPs.</p> <p>b. CEMF Table 1.4 provides the structure for the register of hold points as well as a preliminary list of hold points which will be implemented:</p> <ul style="list-style-type: none"> i. Hold Point: use of local roads by heavy vehicles ii. Release of hold point: Road Dilapidation Report iii. By Who: Appropriate Professional nominated by Principal Contractor 	<u>Section 4.11</u>

Clause	Requirement	Document Reference or Response
3.9	<p>Training, Awareness and Competence</p> <p>a. Principal Contractors will be responsible for determining the training needs of their personnel. As a minimum this will include site induction, regular toolbox talks and topic specific environmental training as follows:</p> <ul style="list-style-type: none"> i. The site induction will be provided to all site personnel and will include, as a minimum: <ul style="list-style-type: none"> ▪ Training purpose, objectives and key issues; ▪ Contractor’s environmental policy and key performance indicators; ▪ Due diligence, duty of care and responsibilities; ▪ Relevant conditions of any environmental licence and/or the relevant conditions of approval; ▪ Site specific issues and controls including those described in the environmental procedures; ▪ Reporting procedure for environmental hazards and incidents; and ▪ Communication protocols. ii. Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring environmental issues; and iii. Topic specific environmental training should be based upon, but is not limited to, Issue specific subplans required under Section 3.4 (a) (i-xi). <p>b. Principal Contractors will conduct a Training Needs Analysis which:</p> <ul style="list-style-type: none"> i. Identifies that all staff are to receive an environmental induction and undertake environmental incident management training; ii. Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans; iii. Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements; and iv. Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events, provides mechanisms to notify staff of their training requirements, and identifies staff who do not attend scheduled training events or who have overdue training requirements. 	<p><u>Section 3.8.3</u></p>

Clause	Requirement	Document Reference or Response
3.12	<p>Roles and Responsibilities</p> <p>a. In relation to Roles and Responsibilities the CEMP will:</p> <ol style="list-style-type: none"> i. Describe the relationship between the Principal Contractor, TfNSW, key regulatory stakeholders, the independent environmental representative and the independent certifier; ii. For each role that has environmental accountabilities or responsibilities, including key personnel, provide a tabulated description of the authority and roles of key personnel, lines of responsibility and communication, minimum skill level requirements and their interface with the overall project organisation structure; iii. Provide details of each specialist environment, sustainability or planning consultant who is employed by the Principal Contractor including the scope of their work; iv. Provide an overview of the role and responsibilities of the Independent Environmental Representative, the Independent Certifier and other regulatory stakeholders. <p>b. All sub-contractors engaged by the Principal Contractor will be required to operate within the EMS documentation of that Principal Contractor.</p>	<u>Section 3.8</u>
3.13	<p>Environmental Monitor, Inspections and Auditing</p> <p>a. Issue specific environmental monitoring will be undertaken as required or as additionally required by any approval, permit or licence conditions.</p> <p>b. The results of any monitoring undertaken as a requirement of the EPL will be published on the Principal Contractor's, or a project specific, website within 14 days of obtaining the results.</p> <p>c. Environmental inspections will include:</p> <ol style="list-style-type: none"> i. Surveillance of environmental mitigation measures by the Site Foreman; and ii. Periodic inspections by the Principal Contractor's Environmental Manager (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record. <p>d. Regular site inspections by the ERs and TfNSW representatives at a frequency to be agreed with the Principal Contractor.</p> <p>e. Principal Contractors must undertake internal environmental audits. The scope will include:</p> <ol style="list-style-type: none"> i. Compliance with any approval, permit or licence conditions; ii. Compliance with the E&SMS, CEMP, SMP, sub-plans and procedures; iii. Community consultation and complaint response; iv. Environmental training records; and v. Environmental monitoring and inspection results. <p>f. TfNSW (or an independent environmental auditor) will also undertake periodic audits of the Principal Contractor's E&SMS and compliance with the environmental aspects of contract documentation, including this Construction Environmental Management Framework.</p>	<u>Section 3.8</u>

Clause	Requirement	Document Reference or Response
3.14	<p>Environmental Non-compliances</p> <p>Principal Contractors will document and detail any non-compliances arising out of the above monitoring, inspections and audits. TfNSW will be made aware of all non-compliances in a timely manner;</p> <p>Principal Contractors will develop and implement corrective actions to rectify the non-compliances and preventative actions in order to prevent a re-occurrence of the non-compliance. Contractors will also maintain a register of non compliances, corrective actions and preventative actions;</p> <p>TfNSW or the Environmental Representative may raise non-compliances against environmental requirements.</p>	<p><u>Section 3.8</u></p>
3.15	<ul style="list-style-type: none"> ▪ Principal Contractors will maintain appropriate records of the following: <ul style="list-style-type: none"> i. Site inspections, audits, monitoring, reviews or remedial actions; ii. Documentation as required by performance conditions, approvals, licences and legislation; iii. Modifications to site environmental documentation (eg CEMP, sub-plans and procedures); and iv. Other records as required by this Construction Environmental Management Framework. <p>Records will be retained onsite for the duration of works.</p> <p>Additionally, records will be retained by the Principal Contractor for a period of no less than 7 years. Records will be made available in a timely manner to TfNSW (or their representative) upon request.</p> <p>Compliance reports detailing the outcome of any environmental surveillance activity including internal and external audits (refer to Section 3.13) will be produced by the Principal Contractors Environmental Manager or delegate. These reports will be submitted to TfNSW at an agreed frequency.</p>	<p><u>Section 3.8</u></p>
3.16	<p>Review and Improvement of E&SMS.</p> <ul style="list-style-type: none"> ▪ Principal Contractors will ensure the continual review and improvement of the E&SMS. This will generally occur in response to: <ul style="list-style-type: none"> i. Issues raised during environmental surveillance and monitoring; ii. Expanded scope of works; iii. Environmental incidents; and iv. Environmental non-conformances <p>A formal review of the E&SMS by the Principal Contractor’s Senior Management Team will also occur on an annual basis, as a minimum. This review shall generate actions for the continual improvement of the E&SMS and supporting management plans.</p>	<p><u>Section 3.8</u></p>

Clause	Requirement	Document Reference or Response
5.1	<p>Working Hours</p> <ul style="list-style-type: none"> ▪ Standard working hours are between 7am – 6pm on weekdays and 8am – 1pm on Saturdays. ▪ Works which can be undertaken outside of standard construction hours without any further approval include: <ul style="list-style-type: none"> i. Those which have been described in respective environmental assessments as being required to take place 24/7. For example, tunnelling and underground excavations and supporting activities will be required 24/7; ii. Works which are determined to comply with the relevant Noise Management Level at sensitive receivers; iii. The delivery of materials outside of approved hours as required by the Police or other authorities (including RMS) for safety reasons; iv. Where it is required to avoid the loss of lives, property and / or to prevent environmental harm in an emergency; and v. Where written agreement is reached with all affected receivers. <p>Principal Contractors may apply for EPA approval to undertake works outside of normal working hours under their respective Environment Protection Licences.</p>	<p><u>Section 3.7</u></p>
5.2	<ul style="list-style-type: none"> ▪ Principal Contractors will consider the following in the layout of construction sites: <ul style="list-style-type: none"> i. The location of noise intensive works and 24 hour activities in relation to noise sensitive receivers; ii. The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day; iii. The use of site buildings to shield noisy activities from receivers; iv. The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and v. Aim to minimise the requirement for reversing, especially of heavy vehicles. 	<p><u>Section 3.8</u></p>

8.1

Construction Traffic Management Objectives

- Construction traffic management will be managed using the following documentation, where relevant:
 - i. Construction Traffic Management Plan;
 - ii. Traffic Management Plan (For each work site)
 - iii. Traffic Staging Plan (for road works);
 - iv. Traffic Control Plan (for road works);
 - v. Vehicle Movement Plan (internal to construction site);
 - vi. Pedestrian Management Plan (around construction sites); and
 - vii. Parking Management Plan (loss of parking).
- Principal Contractors will develop and implement a Construction Traffic Management Plan for their scope of works. The Construction Traffic Management Plan will as a minimum:
 - i. Implement the traffic and transport mitigation measures as detailed in the environmental approval documentation;
 - ii. Be developed in consultation with the relevant road authority, CBD Coordinator General (CCO) and / or transport operator;
 - iii. Set out the overall traffic management resources, processes and procedures for the management of traffic and transport during construction of the Project Works and Temporary Works.
 - iv. Identify types and volumes of construction vehicles and associated route and time restrictions;
 - v. Identify traffic generation from other major infrastructure developments, impact from construction traffic and haulage routes; and
 - vi. Identify potential activities that could result in the disruption to traffic and transport networks, including pedestrian, cyclist and public transport networks and during special events.

This document is the Construction Traffic Management Plan and also includes: Appendix B – Traffic Control Plans Parking Management Plan: Section 4.6

The individual construction traffic plans listed in (a) are to comply with and address the requirements of RMS Traffic Control at Worksites Manual AS 1742.3, Manual of uniform traffic control devices Part 3: Traffic control for works on roads, relevant Austroads Guides, and RMS Supplements to Austroads and Australian Standards s and during special events.

The process for the development of Traffic Management Plans (TMP) including the minimum requirements as detailed in Specification G10 and as required by the relevant road authorities.

The process for the development of Traffic Staging Plans (TSP) including the minimum requirements for these TSP including road design drawings showing traffic lane configurations for traffic passing through the site during various construction stages, including details of road alignment and geometry, intersection layouts, provision for buses and cyclists, work areas and pedestrian areas, drainage, signs and pavement

The process for the development of Traffic Control Plans (TCP). The TCPs will set out the specific traffic and transport management arrangements to be implemented at specific locations during the construction of the Project Works and Temporary Works.

The process for the development of Vehicle Movement Plan (VMP). The content of a VMP will include:

- i. A diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP may be combined with or superimposed on a TCP; and
- ii. The vehicle entry and exit points into the work area, and indicate clearly that these are the only points where interface with through traffic is permitted.

The process for the development of a Pedestrian Movement Plan (PMP). The content of the PMP will include:

Clause	Requirement	Document Reference or Response
	<ul style="list-style-type: none"> i. A diagram showing the allocated travel paths for workers or pedestrian around or through a worksite. A PMP may be combined or superimposed on a TCP; and ii. A diagram showing all signs and devices used to guide the workers or pedestrians. <p>The process for the development of a Parking Management Plan (PkMP). The PkMP will identify:</p> <ul style="list-style-type: none"> i. Parking requirements and on and offsite parking arrangements and associated impacts; ii. Remote parking arrangements and associated access between sites and public transport nodes; iii. Communication and parking management measures; and iv. Proposals for relocation of impacted users for any Sydney CBD kerbside use impacts during the construction period. <p>TfNSW and its Contractors will undertake liaison with agencies and the community regarding traffic management. This may involve:</p> <ul style="list-style-type: none"> i. Establishment of a Traffic and Transport Liaison Group which could consist of representatives from Sydney Metro Contractors, TfNSW, CCO, WestConnex, RMS, TMC, NSW Police, relevant councils, emergency services, and bus operators. The group would review and provide feedback on: <ul style="list-style-type: none"> ▪ Road Occupancy Licence (ROL) applications to monitor potential cumulative impacts from multiple ROLs operating concurrently in one area; ▪ Be consulted on the preparation of Construction Traffic Management Plans and supporting plans; and ▪ Consultation with the CCO, RMS, TMC and others in relation to the approval of Construction Traffic Management Plans, supporting Plans, or related licences for works within and external to the CBD. 	
8.3	<p>Construction Traffic Management</p> <ul style="list-style-type: none"> ▪ Examples of traffic mitigation measures include: <ul style="list-style-type: none"> i. Minimising heavy vehicle movements during peak traffic times; ii. Avoidance of local roads for heavy vehicle routes, where feasible; iii. Providing for safe pedestrian and cyclist movements around the worksites; and iv. Where feasible and reasonable, contractors will provide its workforce with satellite car parking and buses to transport them to the worksites. 	Section 4

Revised Environmental Mitigation Measures (REMMs)

Clause	Requirement	Document Reference or Response	Responsible Party
TC1 Applies to: All stations	<p>Temporary transport arrangements</p> <p>Guided by the Temporary Transport Strategy, detailed temporary transport plan/s would be developed prior to construction to manage the movement of people along the T3 Bankstown Line during possession periods. The plans would be developed in consultation with key stakeholders (including the Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, Sydney Trains, local councils, emergency services, and bus operators), and would address the requirements specified by the Temporary Transport Strategy. The development of each plan would consider, as a minimum:</p> <ul style="list-style-type: none"> ▪ a review of the road network constraints along any proposed rail replacement bus route ▪ further traffic analysis of key intersections used by rail replacement buses ▪ potential impacts to local road networks affected by rail passengers diverting to cars to reach their destinations ▪ the design of temporary facilities at bus stop locations in consultation with the relevant road authority ▪ expected changes to parking demand at other stations, displacement of existing parking, and any upgrades that may be required. 	<p>Not applicable to SWMC in accordance with the Staging Report</p> <p>Temporary transport strategies would be created once the scope of the rail corridor possessions is further developed. The temporary transport strategies would complement the CTMP.</p>	N/A
TC2 Applies to: All stations	<p>Sydney Metro would consult with Transport for NSW, Roads and Maritime Services, the State Transit Authority, the Inner West and Canterbury-Bankstown councils, and bus operators, to identify opportunities to minimise impacts to bus layovers and existing bus stops during operation of rail replacement buses.</p>	<p>Not applicable to SWMC in accordance with the Staging Report</p> <p>Specific modifications to bus operations would be discussed at a future date when further project details are developed.</p>	N/A
TC3 Applies to: Bridge Works	<p>The impacts on the surrounding road network of lane closures resulting from bridge works across the rail corridor would be assessed in detail, to identify the suite of management measures to be implemented for each closure required. This would be undertaken in consultation with Transport for NSW, Roads and Maritime Services, the Sydney Coordination Office, the Inner West and Canterbury-Bankstown councils, emergency services, and relevant bus operators. Planning for partial bridge closures would consider bus rerouting and timetabling, with the intention of minimising impacts to bus customers and bus operators.</p>	<p>The requirements pertaining to each bridge closure would be determined once more project details are available. The CTMP would be updated to reflect the bridge closures. Section 3.2</p>	Principal Contractor

Clause	Requirement	Document Reference or Response	Responsible Party
TC4 Applies to: All stations	Parking Impacts during construction Opportunities to reduce the loss of existing on and off street car parking (including the amount of spaces reduced and the time associated with this reduction) would be reviewed during detailed design and construction planning.	Section 4.6	Principal Contractor
TC5 Applies to: All stations	Where parking spaces are lost or access is impeded, particularly for extended periods, alternative parking would be provided wherever feasible and reasonable. This would include consideration of other privately owned (or vacant) land within close proximity to affected stations.	Section 4.6	Principal Contractor
TC6: Applies to: All project works	Impacts of intersection performance Further consideration of the need for intersection modifications would be undertaken, to improve intersection performance at locations most affected by the addition of construction heavy vehicles and rail replacement buses. This would be undertaken in consultation with Transport for NSW, Roads and Maritime Services, the Sydney Coordination Office, and the relevant road authority. The improvements considered would include: <ul style="list-style-type: none"> ▪ modification to the existing traffic signal phasing ▪ lane priority changes ▪ changing lane designations (line markings and signage) ▪ kerbside changes (such as removing on street parking or implementing no standing zones at peak times to increase lane capacity) ▪ physical geometric changes (such as minor kerb cut-backs to enable large vehicles to safely move through intersections) ▪ restricting turning movements where traffic demand is low. 	Not applicable to SWMC in accordance with the Staging Report	N/A
TC7 Applies to: All stations	Changes to cyclist facilities during construction Where existing cycle facilities (e.g. bike parking) would be temporarily unavailable at a station, suitable replacement facilities would be provided while the facility is unavailable.	Section 4.9	Principal Contractor
TC8 Applies to: All project works	Management of traffic, transport and access A construction traffic management plan would be prepared and implemented prior to construction. The plan would be prepared in accordance with the Construction Environmental Management Framework, and would detail, as a minimum: <ul style="list-style-type: none"> ▪ how traffic would be managed when construction works are being carried out ▪ the activities proposed and their impact on the road network and on road users ▪ how these impacts would be addressed. The plan would be prepared in consultation with the Traffic and Transport Liaison Group, and would be approved by the relevant authority before construction commences.	The CTMP is this document.	Principal Contractor TTLG

Clause	Requirement	Document Reference or Response	Responsible Party
TC9 Applies to: All stations	Changes to public transport services and alternative transport arrangements Modification of existing bus stops, or implementation of new stops and alterations to service patterns, would be carried out by Sydney Metro in consultation with the Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and bus operators.	Not applicable to SWMC in accordance with the Staging Report	N/A
TC10 Applies to: All stations	Sydney Metro would undertake an extensive community awareness and information campaign before changes to public transport services are implemented. This would include a range of communication activities such as: <ul style="list-style-type: none"> ▪ information at stations ▪ wayfinding signage ▪ clearly marked bus stop locations ▪ letter box drops ▪ web based information and transport 'app' where changes to travel are found in a single place ▪ information via 131 500 ▪ advertising in local papers ▪ email information bulletins. 	Not applicable to SWMC in accordance with the Staging Report Under the Sydney Metro Overarching Community Communication Strategy, a project specific Community Communication Strategy is to be developed.	N/A
TC11 Applies to: All project works	Impacts on special events Consideration of special events would be undertaken as part of construction work programming. For special events that require specific traffic and pedestrian management, measures would be developed and implemented in consultation with Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and the organisers of the event.	Section 7.4	Principal Contractor
TC12 Applies to: All project works	Impacts of construction compounds and work sites Vehicle access to and from construction sites would be managed to ensure pedestrian, cyclist, and motorist safety. Depending on the location, this may require manual supervision, barrier placement, temporary traffic signals, modifications to existing traffic signals, or police assistance.	Section 4.6 Section 4.8 Section 4.9	Principal Contractor
TC13 Applies to: All project works	Construction Vehicles Construction vehicles (including contractor staff vehicles) would be managed to: <ul style="list-style-type: none"> ▪ minimise parking or queuing on public roads ▪ minimise use of residential streets to gain access to work sites or compounds ▪ minimise vehicle movements near schools, particularly during school start and finish times. 	Section 3.7	Principal Contractor Vehicle Operators

Clause	Requirement	Document Reference or Response	Responsible Party
TC14 Applies to: All project works	Signage Directional signage and line marking would be used to direct and guide drivers, pedestrians, and other road users past construction compounds and work sites, and on the surrounding road network. This may be supplemented by variable message signs to advise drivers of potential delays, traffic diversions, speed restrictions, or alternate routes.	Section 4 Appendix C – Traffic Control Plans	Principal Contractor Traffic Controllers
TC15 Applies to: All project works	Construction parking impacts Construction sites would be managed to minimise construction worker parking on surrounding streets. A worker car parking strategy would be developed in consultation with the relevant local council to identify measures to reduce the impact on the availability of on street and off street parking. The strategy would identify potential mitigation measures including alternative parking locations. The strategy would encourage contractor staff to: <ul style="list-style-type: none"> ▪ use public transport ▪ car share ▪ park in a designated off site area and access construction sites via shuttle bus. 	Section 4.6	Principal Contractor
TC16 Applies to: All project works	Traffic incidents In the event of a traffic related incident, co-ordination would be carried out with the Sydney Coordination Office and Transport Management Centre's Operations Manager.	Section 3.6	Principal Contractor Sydney Coordination Office Transport Management Centre's Operations Manager
TC17 Applies to: All project works	Changes to road, pedestrian and cyclist networks The community would be notified in advance of proposed road and pedestrian network changes through appropriate forms of community notification.	Section 7.2	Principal Contractor
TC18 Applies to: All project works	Impacts on pedestrian or cyclist paths A condition survey would be undertaken to confirm changes to routes proposed to be used by pedestrians and/or cyclists are suitable (e.g. suitably paved and lit), with identified modification requirements discussed with the Inner West and/or Canterbury-Bankstown councils and implemented prior to use of the routes.	Section 4.8 Section 4.9	Principal Contractor

Clause	Requirement	Document Reference or Response	Responsible Party
TC19 Applies to: All project works	<p>Pedestrian, cyclist and motorist safety</p> <p>Pedestrian, cyclist, and motorist safety in the vicinity of the construction sites would be addressed during construction planning and development of the construction traffic management plan. Measures that may be implemented to assist in multi modal traffic management include:</p> <ul style="list-style-type: none"> ▪ speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers ▪ a community engagement program to provide road safety education and awareness to road users about sharing the road safely with heavy vehicles ▪ heavy vehicle training for drivers to understand route constraints, safety issues, and limiting the use of compression braking ▪ safety technology and equipment installed on heavy vehicles to enhance vehicle visibility, eliminate vehicles' blind spots, and monitor vehicle location, speeding compliance, and driver behaviour. 	Section 4.8 Section 4.6	Principal Contractor Vehicle Operators
TC20 Applies to: All project works	<p>Impacts to access</p> <p>Access for residents, businesses, and community infrastructure would be maintained. Where disruption to access cannot be avoided, consultation would be undertaken with the owners and occupants of affected properties, to confirm their access requirements and to discuss alternatives.</p>	Section 3.7 Section 7	Principal Contractor
TC21 Applies to: All project works	<p>Access to stations and surrounding properties for emergency vehicles would be provided at all times. Emergency service providers (i.e. police and ambulance) would be consulted throughout construction to ensure they are aware of station closures, changes to access, including bridge lane closures, and changes to station or rail corridor access.</p>	Section 4.1	Principal Contractor
TC22 Applies to: All project works	<p>Co-ordination of cumulative traffic effects</p> <p>The potential cumulative effects of construction traffic from multiple construction sites within the project would be further considered during development of the construction traffic management plan. Where there is potential for cumulative impacts across the project, these issues would be addressed with the assistance of the Traffic and Transport Liaison Group.</p>	Noted. Cumulative traffic effects would be addressed with TTLG.	Principal Contractor TTLG
NVC15 Applies to: All project works	<p>The routes for construction haulage vehicles and bus services associated with the Temporary Transport Strategy would be selected on the basis of compliance with the relevant road traffic noise criteria, where reasonable and feasible. Where compliance with the noise criteria is not possible, reasonable and feasible noise mitigation would be implemented.</p>	Section 3.2 Construction Noise and Vibration Management Plan	Principal Contractor

Table of Contents

1. Compliance Matrix2

Conditions of Approval (CoA)2

Construction Environmental Management Frameworks (CEMF)5

Revised Environmental Mitigation Measures (REMMs).....13

2. Introduction20

3. General Information20

3.1 Purpose.....20

3.2 Objectives20

3.3 Scope20

3.4 Review and Update21

3.5 Proposed Works / Justification for Road Closures.....21

3.6 Incidents.....24

3.7 General Requirements24

3.8 Responsibilities25

4. Traffic Management30

4.1 Traffic management Requirements.....30

4.2 Traffic Control Plans31

4.3 Road Occupancy Licences.....32

4.4 Construction Vehicles and Plant33

4.5 Emergency Vehicles33

4.6 Site Access35

4.7 Traffic Routing.....59

4.8 Pedestrian Management63

4.9 Cyclist Management68

4.10 Traffic Modelling.....68

4.11 Dilapidation Report68

4.12 Public Transport.....69

4.13 Road Safety Audit.....69

5. Traffic Controllers69

5.1 Traffic Controllers.....69

6. Footpaths70

6.1 Pedestrian Considerations70

6.2 Pedestrian Safety Points70

7. Consultation with Stakeholders71

7.1 Notifications.....71

7.2 Community.....71

7.3 Businesses.....73

7.4 Special Events73

Appendix A – Site Plan.....74

Appendix B – Heavy Vehicle Routes75

Haulage Route Maps82

Appendix C – Traffic Control Plan Register and Plans 106

Traffic Control Plan Register 107

Traffic Control Plans..... 113

Appendix D – Swept Path Analysis 166

2. Introduction

3. General Information

3.1 Purpose

The purpose of this Construction Traffic Management document is to ensure the safety of the public and maintain an accessible and efficient road network for all road users.

This document has been prepared to assist John Holland Laing O'Rourke Joint Venture (JHLORJV) staff to implement traffic and pedestrian/passenger management measures when carrying out pre-construction and related work located at the Southwest Metro Corridor works. This project forms part of the Sydney Metro City & Southwest.

This document summarises the traffic management aspects of the construction work being undertaken in the interim period prior to the main construction phase. The traffic related aspects include any traffic impacts of vehicle movements and plant movements, and requirements around the vehicle access points.

This Construction Traffic Management Plan (CTMP) has been prepared as a sub-plan to the Construction Environmental Management Plan (CEMP). Proposed Construction Activities

The proposed pre-construction work for the site consists of:

- Site surveys & Service Searching
- Construction of Retaining Wall Structures
- Installation of Fencing
- Construction of Combined Services Routes
- Construction of OHW Structures & Footings
- Refurbishment of Existing Bridges
- Installation of New Track Infrastructure

3.2 Objectives

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

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

3.3 Scope

This document includes use of 82 gates, of which 31 gates have not previously been assessed throughout the SSJ project.

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

The location of the gates to be used in this project are shown in Appendix A – Site Plan.

3.4 Review and Update

This CTMP will be submitted to Transport for NSW (TfNSW) following engagement with the Sydney Coordination Office and before Construction commences at the relevant Construction site or stage. A copy of the Construction Traffic Management Plan will be submitted to the Planning Secretary for information

3.5 Proposed Works / Justification for Road Closures

Currently no road closures are proposed for this work. Any closures will be assessed once identified as being necessary

3.5.1 Works Timing and Hours

In accordance CoA-E19 vehicle movements associated with Construction works will occur within Approved working hours, which are as follows:

- 7:00am to 6:00pm Mondays to Fridays, inclusive;
- 8:00am to 6:00pm Saturdays; and
- at no time on Sundays or public holidays.

It is noted that works within the rail corridor are to be undertaken in accordance with Condition O5.1 of Sydney Trains EPL 12208;

- 7:00am to 6:00pm Mondays to Fridays, inclusive;
- 8:00am to 6:00pm Saturdays; and
- at no time on Sundays or public holidays.

During possession periods, works may be undertaken 24 hours per day, and involve working both during and outside the recommended standard hours. During these periods, the use of highly noise intensive equipment would generally be limited to daytime and evening periods (between 7am and 10pm), unless technical constraints exist such as:

- Works requiring a rail shut down
- Requirements of relevant road authorities, emergency services or the Sydney Coordination Office.

Timing of works relating to Road Closures (including partial/full as noted in Section 3.2.4) may occur outside of standard working hours. This will be agreed in consultation with the relevant council as part of the road closure approval.

JHLORJV will endeavour to schedule HV movements to occur outside the following periods, however this will not be feasible in all instances:

- Weekday peak periods - morning (6am - 10am) and afternoon (3pm - 7pm)
- School Zone operating times (8am - 9:30am & 2:30 - 4pm).

3.5.2 Out-of-Hours or Emergency Works

CEMF Requirement:

Works which can be undertaken outside of standard construction hours without any further approval include:

- Those which have been described in respective environmental assessments as being required to take place 24/7. For example, tunnelling and underground excavations and supporting activities will be required 24/7;
- Works which are determined to comply with the relevant Noise Management Level at sensitive receivers;
- The delivery of materials outside of approved hours as required by the Police or other authorities (including RMS) for safety reasons;
- Where it is required to avoid the loss of lives, property and/or to prevent environmental harm in an emergency; and
- Where written agreement is reached with all affected receivers.

Principal Contractors may apply for EPA approval to undertake works outside of normal working hours under their respective Environment Protection Licences.

CoA Requirement:

Work may be undertaken outside the above hours under the following conditions:

- for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
- where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
- where different Construction hours are permitted or required under an EPL in force in respect of the CSSI; or
- Work approved under an Out-of-Hours Work Protocol for Work not subject to an EPL as required by Condition E25; or
- Construction that causes LAeq(15 minute) noise levels:
 - no more than 5 dB(A) above the rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), and
 - no more than the 'Noise affected' noise management levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses, and
 - continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of *Assessing Vibration: a technical guideline* (DEC, 2006), and
 - intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of *Assessing Vibration: a technical guideline* (DEC, 2006); or
- where a negotiated agreement has been reached with a substantial majority of sensitive receivers who are within the vicinity of and may be potentially affected by the particular Construction, and the noise management levels and/or limit for ground-borne noise and vibration (human comfort) cannot be achieved. All agreements must be in writing and a copy forwarded to the Planning Secretary at least one (1) week before the commencement of activities.

Note: Section 5.24(1)(e) of the EP&A Act requires that an EPL be substantially consistent with the CoA.

On becoming aware of the need for emergency Work in accordance with CoA Condition E20(b), the Proponent must notify the ER and the EPA (if an EPL applies) of the need for that Work. The Proponent must use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those Work.

Out-of-Hours Work that are regulated by an EPL as per Condition E20(c) or through the Out-of-Hours Work Protocol as per Condition E25 include:

- Work which could result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 “Risk Management – Principles and Guidelines”; or
- where the relevant road authority has advised the Proponent in writing that carrying out the activities could result in a high risk to road network operational performance; or
- where the relevant utility service operator has advised the Proponent in writing that carrying out the activities could result in a high risk to the operation and integrity of the utility network; or
- where the Transport for NSW Transport Management Centre (or other road authority) has advised the Proponent in writing that a road occupancy licence is required and will not be issued for the activities during the hours specified in Conditions E19 and E20; or
- where Sydney Trains (or other rail authority) has advised the Proponent in writing that a Rail Possession is required.

Note: Other Out-of-Hours Work can be undertaken with the approval of an EPL, or through the project’s Out-of-Hours Work Protocol for Work not subject to an EPL.

In order to undertake Out-of-Hours Work, the Proponent must identify appropriate respite periods for the Out-of-Hours Work in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with:

- a schedule of likely Out-of-Hours Work for a period no less than two (2) months;
- the potential work, location and duration;
- the noise characteristics and likely noise levels of the Work; and
- likely mitigation and management measures.

The outcomes of the community consultation, the identified respite periods and the scheduling of the likely Out-of-Hours Work must be provided to the EPA (if an EPL applies) and the Planning Secretary (for high risk activities after 9pm) upon request.

3.5.3 [Council Jurisdictions](#)

All project works fall into the jurisdictions of two councils:

- All areas city-side of Garnett Street are under the jurisdiction of Inner West Council (IWC). This relates to project work from Sydenham through to Dulwich Hill (Rail Access Gates SY1 to DU7).
- All areas country-side of Garnett Street are under the jurisdiction of City of Canterbury and Bankstown Council (CoBC). This relates to project work from Hurlstone Park to Bankstown (Rail Access Gates DU8 to BA2).

3.6 Incidents

The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Proponent becomes aware of an incident. The notification must identify the CSSI (including the application number and the name of the CSSI if it has one) and set out the location and nature of the incident.

Subsequent notification must be given, and reports submitted in accordance with the requirements set out in CoA Appendix A, which is available in this CTMP as Section 11.8: Appendix H – Conditions of Approval: Written Incident Notification and Reporting Requirements.

In the event of a traffic related incident, co-ordination would be carried out with the Sydney Coordination Office and Transport Management Centre's Operations Manager.

3.7 General Requirements

- Due to the residential nature of some of the surrounding streets, queuing and idling of heavy vehicles will not be permitted. This shall be managed by engaging trusted suppliers and scheduling heavy vehicle movements. Vehicles may only wait inside the worksite.
- Vehicles are to be managed to minimise use of residential streets to gain access to work sites or compounds, and to minimise vehicle movements near schools, particularly during start and finish times.
- Access for residents, businesses, and community infrastructure is to be maintained. If this is not possible, consultation is to be undertaken with the affected owners and occupants in line with the Community Communication Strategy (see Section 7).

JHLORJV utilise Voyager Control software to manage site deliveries and Chain of Responsibility obligations. Voyager Control is a cloud based logistics platform for scheduling deliveries to a construction site. The system is designed to bring transparency to the delivery scheduling process and allow for more reliable delivery timeslots. The platform streamlines communication between the delivering company and the general contractor through one platform.

3.8 Responsibilities

3.8.1 Key Personnel

Table 3.1 Key Personnel

Name	Position	Phone Number
Paul Fields	Project Manager	0438 792 797
Tony Waters	Construction Manager	0417 593 979
Yuga Balakrishna	Construction Manager - Rail	0438 656 587
Matthew McKimmie	Interface Manager	0499 075 555
James Moran	Site Superintendent	0447 606 356
Traffic Group Australia (staff name to be confirmed)	Traffic Controller (Blue Card)	TBC
Traffic Group Australia (staff name to be confirmed)	Implement TCPs (Yellow Card)	TBC
Traffic Group Australia (staff name to be confirmed)	Prepare a Work Zone Traffic Management Plan	TBC

3.8.2 Environmental Representative

The Planning Secretary's approval of an ER must be sought no later than one (1) month before the commencement of Work.

Work must not commence until an ER has been approved by the Planning Secretary and engaged by the Proponent.

Regular site inspections by the ERs and TfNSW representatives are to be undertaken at a frequency to be agreed with the Principal Contractor.

TfNSW or the Environmental Representative may raise non-compliances against environmental requirements

3.8.3 Principal Contractor

Principal Contractors will consider the following in the layout of construction sites:

- The location of noise intensive works and 24-hour activities in relation to noise sensitive receivers;
- The location of site access and egress points in relation to noise and light sensitive receivers, especially for sites proposed to be utilised 24 hours per day;
- The use of site buildings to shield noisy activities from receivers;
- The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and
- Aim to minimise the requirement for reversing, especially of heavy vehicles

3.8.3.1 Training Needs and Requirements

The Principal Contractor is responsible for training needs and requirements of their personnel. The minimum requirements are:

- Site induction • Regular Toolbox Talks
- Topic specific environment training

The site induction is to be provided to all site personnel. This must include, as a minimum:

- Training purpose, objectives and key issues;
- Contractor's environmental policy and key performance indicators;
- Due diligence, duty of care and responsibilities;
- Relevant conditions of any environmental licence and/or the relevant conditions of approval;
- Site specific issues and controls including those described in the environmental procedures;
- Reporting procedure for environmental hazards and incidents; and
- Communication protocols.

Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring environmental issues.

Topic specific environmental training should be based upon, but is not limited to, Issue specific subplans required under CEMF Section 3.4 (a) (i-xi).

Principal Contractors will conduct a Training Needs Analysis which:

- Identifies that all staff are to receive an environmental induction and undertake environmental incident management training;
- Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans;
- Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements; and
- Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events, provides mechanisms to notify staff of their training requirements, and identifies staff who do not attend scheduled training events or who have overdue training requirements.

3.8.3.2 Environmental Issues

Issue specific environmental monitoring will be undertaken as required or as additionally required by any approval, permit or licence conditions.

The results of any monitoring undertaken as a requirement of the EPL will be published on the Principal Contractor's, or a project specific, website within 14 days of obtaining the results.

Periodic inspections by the Principal Contractor's Environmental Manager (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record.

Principal Contractors must undertake internal environmental audits. The scope will include:

- Compliance with any approval, permit or licence conditions;
- Compliance with the E&SMS, CEMP, SMP, sub-plans and procedures;
- Community consultation and complaint response;

- Environmental training records; and
- Environmental monitoring and inspection results.

TfNSW (or an independent environmental auditor) will also undertake periodic audits of the Principal Contractor's E&SMS and compliance with the environmental aspects of contract documentation, including the Construction Environmental Management Framework.

Principal Contractors will document and detail any non-compliances arising out of the above monitoring, inspections and audits. TfNSW will be made aware of all non-compliances in a timely manner.

Principal Contractors will develop and implement corrective actions to rectify the non-compliances and preventative actions in order to prevent a re-occurrence of the non-compliance. Contractors will also maintain a register of non-compliances, corrective actions and preventative actions.

Principal Contractors will ensure the continual review and improvement of the Environmental & Sustainability Management System (E&SMS). This will generally occur in response to:

- Issues raised during environmental surveillance and monitoring;
- Expanded scope of works;
- Environmental incidents; and
- Environmental non-conformances.

A formal review of the E&SMS by the Principal Contractor's Senior Management Team will also occur on an annual basis, as a minimum. This review shall generate actions for the continual improvement of the E&SMS and supporting management plans.

3.8.3.3 Records

Principal Contractors will maintain appropriate records of the following:

- Site inspections, audits, monitoring, reviews or remedial actions;
- Documentation as required by performance conditions, approvals, licences and legislation;
- Modifications to site environmental documentation (e.g. CEMP, sub-plans and procedures); and
- Other records as required by this Construction Environmental Management Framework.

Records will be retained onsite for the duration of works.

Additionally, records will be retained by the Principal Contractor for a period of no less than 7 years. Records will be made available in a timely manner to TfNSW (or their representative) upon request.

Compliance reports detailing the outcome of any environmental surveillance activity including internal and external audits (refer to Section 3.13 of the CEMF) will be produced by the Principal Contractors Environmental Manager or delegate. These reports will be submitted to TfNSW at an agreed frequency.

3.8.4 Site Foreman

JHLOR JV Foremen have responsibilities for two areas of traffic management, the Work Area (anywhere where works are being undertaken), including areas covered by Traffic Control Plans (TCPs) and Employees under their control.

For any long-term works (longer than a shift) the JHLOR JV Site Supervisor will continually conduct traffic management inspections to ensure safe movement of traffic and the protection of persons and property through and/or around the worksite. The Site supervisor will ensure all traffic control measures will be installed in accordance with approved TCPs as advised by an authorised "Yellow Card" holder.

JHLOR JV Site Supervisor shall ensure the following for each area of responsibility:

Work Area

- A documented traffic management risk assessment is completed by relevant Traffic Management Subcontractor engaged by JHLOR JV and the procedures and control measures implemented on site.
- Approval is obtained from the relevant authority before any work in a road reserve (public areas on and surrounding the road) is commenced by JHLOR JV or a person working on the JHLOR JV's behalf.
- Road users, pedestrians and JHLOR JV staff can continue with their respective undertakings in relative safety and with the minimum of inconvenience.
- All site related works are correctly barricaded and sign-posted using the relevant approved signs.
- All signs and devices used are in good condition and are removed at the completion of the work.
- All site related works do not start until all signage is in place, even in an emergency it is essential that safety is observed for both staff and road/footpath users.
- All lamps are:
 - Switched off during daylight hours.
 - Checked at night time to confirm they are working and correctly aligned.
- The Construction Traffic Management Plan is reviewed regularly to ensure it is still suitable.
- Incidents are to be managed in accordance with the CEMP.
- In the event of a traffic related incident, co-ordination would be carried out with the CBD Coordination Office and/or the Transport Management Centre's Operations Manager.

Employees

The JHLOR JV Site Supervisor shall ensure the following for each area of responsibility:

- Workers are competent to work on or near the roadways.
- Workers have a general awareness of traffic safety, accessibility, and efficient movement issues.
- Workers are informed of the public relations aspect of their work and instructed they should not allow themselves to be provoked by members of the public. Workers will be provided with cards detailing the correct number to call in the event of a public inquiry.
- Workers are to provide appropriate notification of deliveries to nominated Site Contact
- All workers have access to and will use the following safety equipment and PPE:
 - High visibility vest or shirt.
 - UV protection eyewear and sunscreen (SPF 30 standard or better).
 - Wide brimmed hat/safety helmet.
 - Steel cap safety footwear.
 - Appropriate clothing to protect against UV radiation.
 - Gloves.
 - Hearing protection (where appropriate).
 - Eye protection (where appropriate).
- Ensure workers associated with the site will not occupy public on-street parking spaces.

Controls will be reviewed when there is an incident, non-conformance, legislative change, annual review of plan, complaint.

The site foreman is to undertake surveillance of environmental mitigation measures.

3.8.5 [All Other Persons](#)

All other persons carrying out work activities on or immediately adjacent to the site shall:

- Always take reasonable care for their safety and that of those around them.
- Follow the applicable requirements contained in this document.
- Prior to proceeding with any work, contact their supervisor or a JHLORJV Site Management Team member for clarification of any requirement applicable in this document, and any other relevant permits, plans or approvals.
- Provide appropriate notification of deliveries to the nominated Site Contact.
- Wear high visibility vest or shirt where required under this document.
- Always obey the applicable road rules for pedestrians, riders, and drivers.
- Always follow safe driving practices, including using the correct thoroughfare in accordance with any posted speed limits and safety requirements in a manner that does not put at risk their safety or that of any other persons (e.g. passengers, fellow workers, or members of the public).
- Always avoid creating any form of safety hazard or unreasonable delays when parking or parked. Any workers associated with the site must park their vehicles wholly within the site boundaries. Workers associated with the site will not occupy public on-street parking spaces.

4. Traffic Management

4.1 Traffic management Requirements

When JHLOR JV Site Management Team members, subcontractors or their workers conduct work on the road or footpath it creates an abnormal situation that requires the provision of suitable signage, barricading, guarding, etc. for users including vehicles, bicycles, and pedestrians.

Regardless of the nature of the works, the complexity or how long it shall take, the purpose of this CTMP is to ensure the safety of the Site Management Team, subcontractors, their workers, members of the public, other users of the road and pathways/footpaths, and to minimise the inconvenience (loss of accessibility, increased delays) to all parties.

The basic communication requirements of the Construction Traffic Management Plan and TCPs are to provide:

- Advance warning of a change in traffic conditions in time for the users to adjust.
- Information and guidance as to where to go to safely negotiate the work site. That is, delineation of travel path and its separation from the work site and any necessary barricading.
- Appropriately advise the nominated site contact in advance to arrange deliveries.

In the event of a traffic related incident, coordination will be carried out with the Transport Management Centre's Operations Manager.

4.1.1 [Site Access](#)

To provide a safe entry and exit to the work site from safe access points or gates JHLORJV will:

- Monitor the number of access points in use (from the rail corridor access points listed above)
- Ensure the access points nominated can accommodate the turning movement of the largest vehicles that will be accessing the site as required. Swept path analysis shows that all access gates are suitable for heavy vehicle access with some restrictions on route, as discussed in Section 3.2 below. Refer to Appendix A – Heavy Vehicle Access Route Details for swept paths
- Ensure all access points are clearly visible to approaching traffic and signposted accordingly
- Ensure heavy vehicles do not queue on residential streets but enter through the access gates as soon as possible after arriving. Vehicle arrivals will be managed to avoid any waiting outside the worksite
- Ensure that vehicles will enter the access sites in a forward in, forward out movement, except for at the following gates:
 - Access MA3 (Randall Street) which will be reverse in under traffic control from Livingstone Road and forward out
 - Access MA4 (Kays Avenue East) which will be reverse in after a turnaround on Kays Avenue East (larger trucks only) under traffic control and forward out
 - Access HP2 (Floss Street) which will be reverse in and forward out under traffic control
 - Access CB5 (Cooks River Path) which will be reverse in and forward out under traffic control
 - Access CB6 (South Parade) which will be reverse in and forward out under traffic control.
 - Access CB3 (Broughton Street) which will be reverse in and forward out under traffic control.

Segregation of pedestrians and cyclists from site access points will not be feasible. Traffic control will be utilised to manage this interface. Where required, pedestrians and cyclists will be held briefly to allow safe vehicle movements as per the TCPs (where required).

The access points are existing railway access gates via existing driveways and easements and will not need to be modified.

4.1.2 Hoardings and Site Boundaries

Project boundaries and hoardings will be developed on a per-access basis as the project progresses. Details are currently being confirmed and will be available in Revision 4.

The use of hoardings for project areas on Council land/roads will require approval from RMS and/or IWC or CoCB, alongside consultation through TCG/TTLG

Hoarding and fencing would be required in and around construction areas of high pedestrian usage as well as to manage pedestrians around work sites and past work site access points.

Primary locations where temporary fencing/hoarding will be used to segregate work areas from the public will be available in Revision 4.

Note that in all cases, Council is to be approached by the construction team to arrange all necessary approvals

4.2 Traffic Control Plans

Traffic Control Plans (TCP) are required to provide advance warning of a change in traffic conditions in time for the users to adjust. They provide information and guidance about where to go to safely negotiate the work site. That is, delineation of travel path and its separation from the work site and any necessary barricading.

Traffic Control Plans (TCP) will be generated by the relevant Traffic Control Subcontractor in reference to SM ES-ST-214: G10 – Traffic and Transport Management, Australian Standard AS1742.3 and Traffic Control at Worksites Manual (RMS).

TCPs must be approved by the relevant authority before undertaking any works

The TCP will be used to indicate the worksite arrangements.

The TCP shall be prepared by the designated traffic control subcontractor, and should be developed based on construction layout drawings, Traffic Control at Works Sites manual (TCWS) and works programs supplied by JHLOR JV and prepared by RMS accredited personnel with the appropriate and current qualification as outlined RMS G10 clause 1.5.3.

For any proposed adjustment of the speed limit, an application must be made to RMS for a roadwork speed limit zone. Proposed Sydenham Metro upgrade works do not include any permanent speed limit adjustments

Due diligence should be exercised when erecting traffic control signs within the vicinity of potential obstructions, such as nearby roadside objects or parked vehicles on-street. Traffic Controllers to position signs that are clearly visible for road users providing adequate information.

Several TCPs have been created for this project. The following are available in Appendix C Traffic Control Plans.

Since non-possession work is low impact type inspection activities, TCPs for non-possession work will be produced on a case-by-case basis and submitted for approval as needed.

All new TCP's, together with any TCP updates, will be captured within revisions to this CTMP.

- Construction Vehicles and Plant Truck and dogs are proposed to be used in the project. The access points that truck and dogs will be accessing has yet to be determined. Haulage routes, swept paths, and traffic volumes will be updated when more details have been established.
- Heavy vehicles are to be equipped with safety technology and equipment to improve vehicle safety, visibility and the detection of vulnerable road users.
- Construction vehicles shall only be granted access if they comply with the site requirements of flashing light, reversing alarm and reversing camera, personal vehicles will not be permitted onto the worksite.
- All trucks would enter and exit construction sites in a forward gear, where feasible and reasonable, specific TCP's will be undertaken where this condition cannot be met.

Additionally, it is required that:

- The engines of all on-site vehicles and plant would be switched off when not in use for an extended period.
- Plant would be well maintained and serviced to minimise emissions. Emissions from plant would be considered as part of pre-acceptance checks.
- Construction site layout and placement of plant would consider air quality impacts to nearby receivers.
- Hard surfaces would be installed on long term haul routes and regularly cleaned.
- All vehicles carrying loose or potentially dusty material to or from the site would be fully covered.

4.3 Road Occupancy Licences

Road Occupancy Licences (ROL) will be required to undertake traffic control restricting flow . This will be applied for before works starting using TfNSW Online Planned Incident System (OPLINC) for State Roads and local roads within 100m of traffic signals. Applications for local roads will be through City of Canterbury Bankstown Council & Inner West Council, respectively, with consideration to the following:

- ROLs are to be approved by the Transport Management Centre with endorsement by the Sydney Coordination Office, in addition to permits/applications required by Council.
- ROLs must be approved before undertaking any works.
- ROLs on state roads and within 100m of traffic signals are to be issued by the Transport Management Centre
- The ROL must be applied in conjunction with the approved TCP
- The ROL must be in accordance with SM ES-ST-214: G10 – Traffic and Transport Management
- A ROL register of traffic incidents and crashes at worksites must be maintained by the contractor. This register is to be tabled, upon request, at TCG meetings. If action is considered necessary to address the matters of complaint, an appropriate recommendation will be forwarded to the Principal.
- ROLs must be submitted at least 10 business days before the intended works start date.
- The project name is to be clearly stated on all ROL applications to allow for accurate assessment by the relevant authorities.
- Minimum lane width of 3.2m for buses will need to be maintained when applying for ROLs on a road with a bus route. This width is increased to 3.5m where the road curves.

- All works associated with the ROL should be conducted in accordance with the approval conditions, for example;
 - Do not obstruct driveways, and access to, nearby properties
 - A minimum clearance of 3.0 metres for the clear lane must be ensured at all times for traffic
 - Traffic controllers are to conduct slow/stop procedures to help with vehicle movements
 - Traffic controllers are to help pedestrians around the work areaAll partial / full road and / or footpath closures proposed will be submitted to council as per their approval process.

4.4 Construction Vehicles and Plant

Each gate has been assessed to determine the maximum vehicle size that can enter each gate with using the existing dimensions.

Vehicle sizes assessed are in line with AS2890 and include:

- Articulated Vehicle (semi-trailer) – 20.0m
- Heavy Rigid Vehicle – 12.5m
- Medium Rigid Vehicle – 8.8m
- Small Rigid Vehicle – 6.4m.

4.5 Emergency Vehicles

Emergency vehicle access is not expected to be affected by these works.

Any future works that affect emergency vehicle access and routes will be assessed when identified, with emergency service providers (i.e. police, fire, and ambulance) being consulted throughout construction to ensure they are aware of station closures, changes to access, including lane closures, and changes to station or rail corridor access.

It is expected with existing, project works would have negligible impact on emergency services.

The nearest emergency services are located at the following areas:

Police Stations near the works zone are:

- Campsie Police Station – 58 Campsie St, Campsie NSW 2194
- Lakemba Police Station – 59 Gillies And Quigg Streets, Lakemba NSW 2195

A map of these police stations is shown in Figure 4.1 below.

Figure 4.1 – Police Station Maps

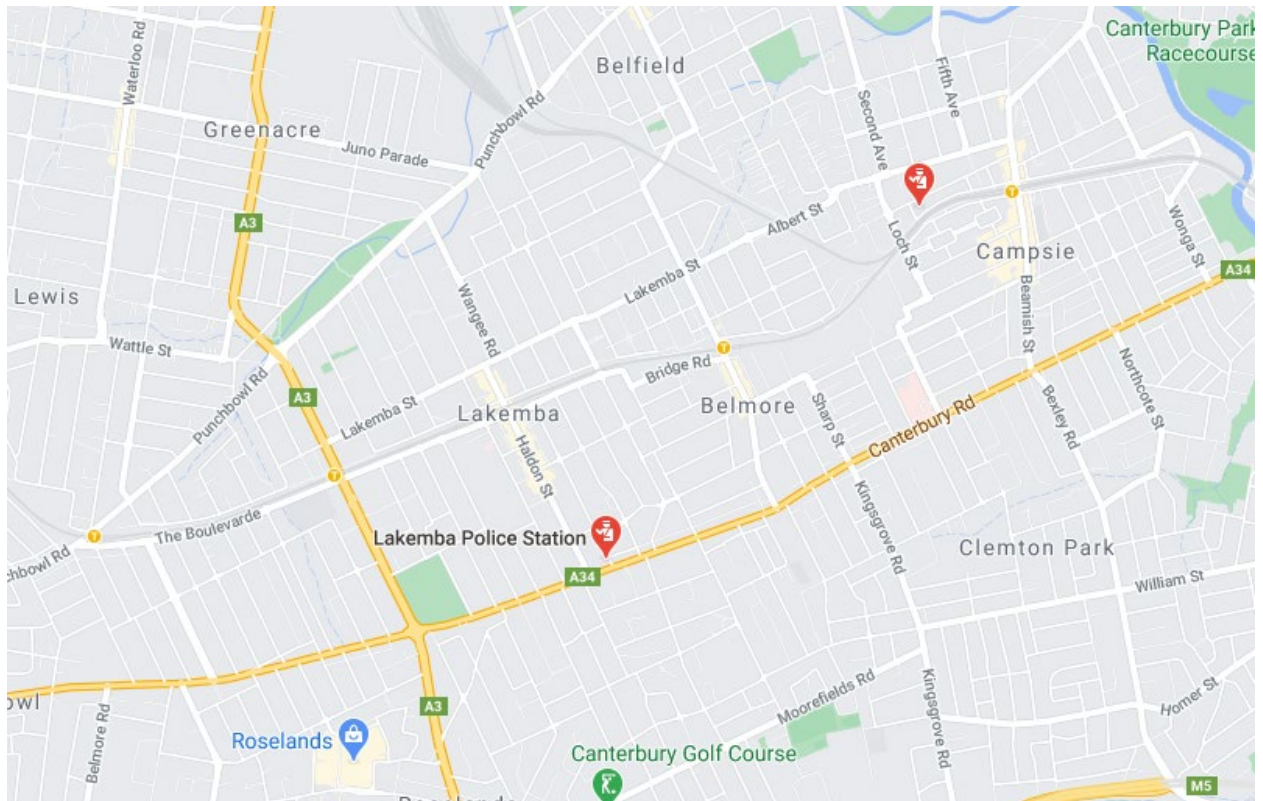


Image adapted from Google Maps

4.6 Site Access

4.6.1 Access Locations

The locations of the rail corridor access gates are detailed in Table 4.1.

Table 4.1: Access Location

Gate Number	Gate ID	Suburb	Frontage Road	Position	Side
SY1	M24 6.001U	Marrickville	Marrickville Rd	Between Railway Parade & Gerald St	Up
SY2	M24 6.331D	Marrickville	Victoria Rd	Between Charlotte Ave & Queen St	Down
SY3	M24 6.335U	Marrickville	Victoria Rd	Between Charlotte Ave & Queen St	Up
SY4	M24 6.410D	Marrickville	Riverdale Ave	At end of no-through road	Down
MA1	M24 6.718D	Marrickville	Warburton St	Opposite Wooley Lane	Down
MA2	M24 7.194U	Marrickville	Marrickville Ave	On corner of Livingstone Rd	Up
MA3	M24 7.338D	Marrickville	Randall St	At end of no-through road	Down
MA4	M24 7.546D	Marrickville	Kays Avenue East	At end of no-through road	Down
MA5	M24 7.572U	Dulwich Hill	Challis Ave	At end of cul-de-sac	Up
MA6	M24 7.685U	Dulwich Hill	Wilga Ave	At end of no-through road	Up
DU1	M24 7.900D	Dulwich Hill	Ewart Lane	Opposite 51A	Down
DU2	M24 8.038D	Dulwich Hill	Ewart Lane	Access through Dulwich Hill Station Commuter Carpark	Down
DU3	M24 8.157D	Dulwich Hill	Ewart St (East of Terrace Rd)	East of Terrace Road	Down
DU4	M24 8.159U	Dulwich Hill	Terrace Rd	Between Hercules Street & Ewart Street	Up
DU5	M24 8.229D	Dulwich Hill	Ewart St (West of Terrace Rd)	West of Terrace Road	Down
DU6	M24 8.291U	Dulwich Hill	The Parade	Opposite Terrace Lane	Up
DU7	M24 8.485D	Dulwich Hill	Garnet St	Between The Parade & Ewart Street	Down
DU8	M24 8.501D	Dulwich Hill	Garnet St	Between Floss Street & Hampden Street	Down
HP1	M24 8.801U	Hurlstone Park	Floss St	Opposite 24 Floss Street	Up
HP2	M24 8.880D	Hurlstone Park	Floss St	At rear of Hurlstone Park Station commuter carpark	Down
HP3	M24 8.880D	Hurlstone Park	Railway Street	Opposite 12 Railway Street	Down
HP4	M24 9.078D	Hurlstone Park	Foord Ave	Between Dunstaffenage Street & Burnett Street	Down
HP5	M24 9.086U	Hurlstone Park	Foord Ave	Opposite Sawyer Reserve	Up
HP6	M24 9.096D	Hurlstone Park	Foord Ave	Between Burnett Street & Dunstaffenage Street	Down
HP7	M24 9.224D	Hurlstone Park	Keir Ave	Corner of Burnett Street	Down

HP8	M24 9.235U	Hurlstone Park	Kilbride St	At end of cul-de-sac	Up
HP9	M24 9.516D	Hurlstone Park	Hurlstone Ave	Opposite Hutton Street	Down
HP10	M24 9.546D	Hurlstone Park	Hutton Street	Opposite 2 Hutton Street	Down
HP11	M24 9.581D	Hurlstone Park	Hutton St	Opposite 8 Hutton Street	Down
HP12	M24 9.731U	Hurlstone Park	Church St	At rear of Warwick Reserve	Up
HP13	M24 9.762D	Hurlstone Park	Hutton St (At Sugar House Rd)	Corner of Sugar House Rd	Down
HP14	M24 9.804D	Hurlstone Park	Church St	Corner of Suga House Road	Down
HP15	M24 9.808U	Hurlstone Park	Church St	At end of cul-de-sac	Up
CB1	M24 10.300D	Canterbury	Charles St	East of commuter carpark	Down
CB2	M24 10.300D	Canterbury	20 Charles St	West of commuter carpark	Down
CB3	M24 10.331U	Canterbury	Broughton St (Opp John St)	Opposite John Street	Up
CB4	M24 10.440D	Canterbury	Charles St	West of Loftus Street	Down
CB5	M24 10.720D	Canterbury	Wairoa St	At Cooks River Path	Down
CB6	M24 10.833D	Canterbury	South Parade (Opp Wonga)	Opposite Wonga Street	Down
CB7	M24 11.282D	Canterbury	South Parade (Opp Park)	Opposite Park Street	Down
CB8	M24 11.282D	Canterbury	South Parade (Opp Duke)	Opposite Duke Street	Down
CB9	M24 11.316U	Canterbury	North Pde	Opposite Browning Street	Up
CP1	M24 11.827U	Campsie	Wilfred Ave / Assets St	Opposite Assets Street	Up
CP2	M24 11.883U	Campsie	Wilfred Ave	Opposite 32 Wilfred Ave	Up
CP3	M24 11.977D	Campsie	Lilian St	Opposite 52 Lillian Street	Down
CP4	M24 12.408D	Campsie	Lillian Lane	Corner of Loftus Street	Down
CP5	M24 12.696U	Campsie	Hall St	Corner of Redman Parade	Up
CP6	M24 13.020U	Campsie	Redman Parade	Opposite 21 Redman Parade	Up
BE1	M24 13.193D	Belmore	Tobruk Ave Car Park	At end of car park	Down
BE2	M24 13.374D	Belmore	Bridge Rd	At end of car park	Down
BE3	M24 13.701U	Belmore	Railway Parade	At Brande Street	Up
BE4	M24 13.701U	Belmore	Railway Parade - Station	At Brande Street	Up
BE5	M24 13.827D	Belmore	The Boulevarde	Opposite 2A The Boulevarde	Down
BE6	M24 13.930U	Belmore	Railway Pde	Opposite 11a Railway Parade	Up
BE7	M24 14.086D	Belmore	The Boulevarde	Between Dennis St & Taylor St	Down
BE8	M24 14.192U	Belmore	Railway Parade	Between Dennis St & Quigg St N	Up

BE9	M24 14.229U	Belmore	Railway Parade	East of community centre	Up
LA1	M24 14.530U	Lakemba	Railway Pde	Opposite Croydon St	Up
LA2	M24 14.533D	Lakemba	The Boulevarde	Opposite Croydon St	Down
LA3	M24 14.756U	Lakemba	Railway Pde	Opposite Bellevue Avenue	Up
LA4	M24 14.861U	Lakemba	Railway Pde	Opposite Ernest Street North	Up
LA5	M24 14.867U	Lakemba	Railway Pde	Opposite Ernest Street North	Up
LA6	M24 14.943D	Lakemba	The Boulevarde	Opposite Kathleen Street	Down
WP1	M24 15.377U	Wiley Park	Shadforth St	At end of cul-de-sac	Up
WP2	M24 15.440D	Wiley Park	The Boulevarde	Opposite Wiley Park Girls School	Down
WP3	M24 15.730U	Wiley Park	Urunga Parade	Between Defoe St & Robinson St N	Up
WP4	M24 15.763D	Wiley Park	The Boulevarde	Between Robinson St South and Faux Street	Down
WP5	M24 15.962U	Wiley Park	Urunga Parade	Opposite 25 Urunga Parade	Up
WP6	M24 15.986D	Wiley Park	The Boulevarde	Opposite Rosemont Street South	Down
WP7	M24 16.050D	Wiley Park	The Boulevarde	Opposite Dudley St	Down
WP8	M24 16.121U	Wiley Park	Urunga Parade	Opposite Dudley St	Up
WP9	M24 16.259U	Wiley Park	The Boulevarde	Opposite 164 The Boulevarde	Down
PB1	M24 16.328U	Wiley Park	Urunga Parade	Opposite Rickard St	Up
PB2	M24 16.358U	Punchbowl	Urunga Parade	At end of no-through road	Up
PB3	M24 16.599U	Punchbowl	Breust Pl	At Kelly St	Up
PB5	M24 16.608D	Punchbowl	South Terrace	At end of Loder Lane	Down
PB6	M24 16.795D	Punchbowl	South Terrace	Opposite 38 South Terrace	Down
PB7	M24 16.995D	Punchbowl	South Terrace	Opposite 64 South Terrace	Down
PB8	M24 17.024U	Punchbowl	Stansfield Ave	At end of no-through road	Up
PB9	M24 17.254D	Punchbowl	South Terrace	Opposite 74 South Terrace	Down
PB10	M24 17.363D	Punchbowl	South Terrace	Opposite 106 South Terrace	Down
PB11	M24 17.642D	Punchbowl	South Terrace	Opposite Carnation Avenue	Down
PB12	M24 17.962D	Punchbowl	South Terrace	Opposite 182 South Terrace	Down
PB13	M24 18.058U	Punchbowl	North Terrace	Opposite Wattle Street	Up
PB14	M24 18.192U	Punchbowl	North Terrace	Opposite Lady Cutler Avenue	Up
PB15	M24 18.223D	Bankstown	South Terrace	Opposite 212 South Terrace Plaza	Down
PB16	M24 18.428D	Bankstown	South Terrace	East of Bankstown Underpass	Down
PB17	M24 18.512D	Bankstown	South Terrace	Opposite 260 South Terrace	Down
PB18	M24 18.648U	Bankstown	North Terrace	Opposite The Appian Way	Up
BA1	M24 18.651D	Bankstown	South Terrace	Through Bus Bay	Down
BA2	M24 18.958U	Bankstown	Marion St	Through Depot Place Carpark	Up

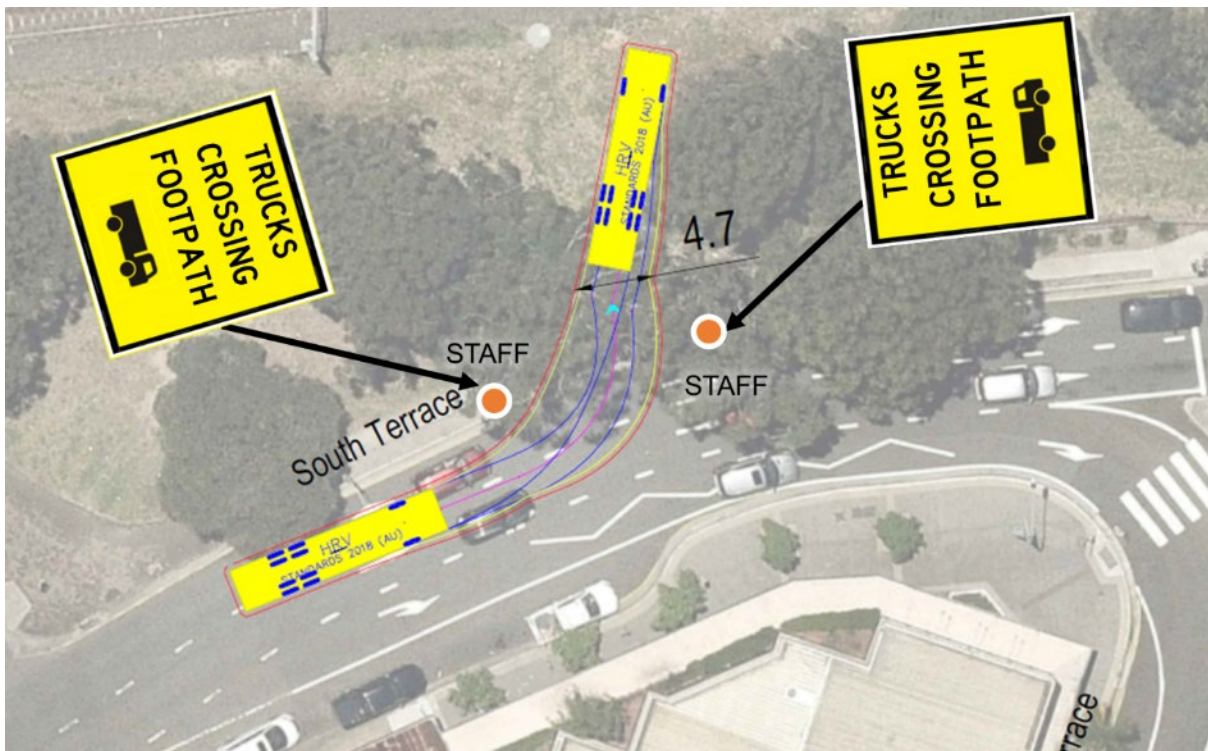
Refer to Appendix A and Appendix B for further details of access routes.

4.6.2 Access Requirements

There is not expected to be conflict between construction activities and pedestrians/cyclists except where the construction vehicles cross the driveways to enter the access gates. All driveways will be staffed by JHLORJV to manage these movements.

To manage the conflict of trucks and pedestrians/cyclists, one staff member is to stand on any footpaths adjacent to the access gates/driveways. These staff are to hold pedestrians and cyclists while vehicles are entering and exiting the gates. They must be positioned to be easily seen by all road and footpath users. Additionally, “TRUCKS CROSSING DRIVEWAY” are to be placed facing footpaths that approach the driveway. An example is illustrated in Figure 4.2.

Figure 4.2 – Example Staff and Sign Positioning At Each Access Gate



4.6.3 Temporary Removal of Car Parking Spaces

Several parking spaces will be impacted for short durations (a couple of days at a time). These locations are shown within this section. The spaces that will be temporarily lost are outside station precincts and as such there is generally free capacity for street parking nearby. In these instances replacement parking is not necessary as spare capacity is located within the immediate area. JHLORJV will continue to monitor impacts from temporary parking losses and where changes occur that lead to long term parking losses, JHLORJV will investigate alternative parking opportunities.

JHLOR will reduce losses on parking by the following means;

- Establishing on-site parking at the proposed Canterbury Compound site
- Parking vehicles within the rail corridor, where possible, as opposed to street parking
- Encouraging workers and staff to carpool
- Encouraging workers and staff to take public transport, noting that for practical reasons (such as transporting tools and equipment) this may not always be possible

Ongoing consultation will occur with Councils in regards to worker parking.

It is expected that "No Stopping" parking restrictions and signs will be required in front of each rail access gate. In addition, the swept path analysis will demonstrate that parking spaces will need to be temporarily restricted at the locations detailed in Table 4.2. These are also shown in

Figure 4.8 – CP6 – M24 13.020U Parking Space Loss

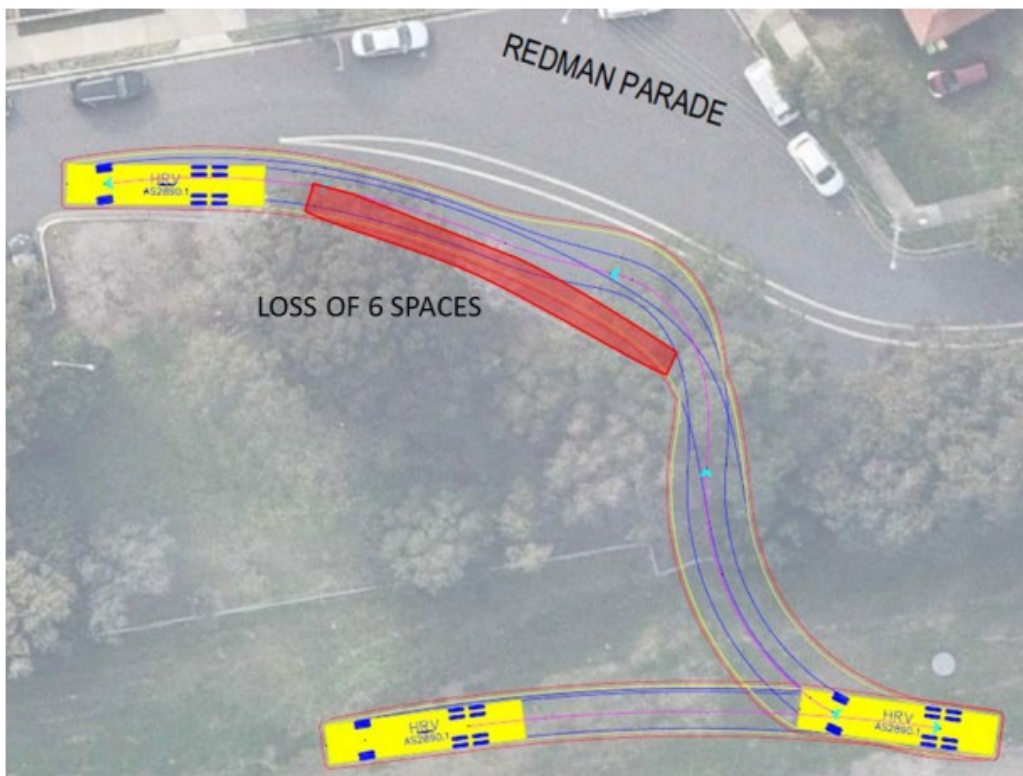


Figure 4.9 – BE3 – M24 13.701U Parking Space Loss

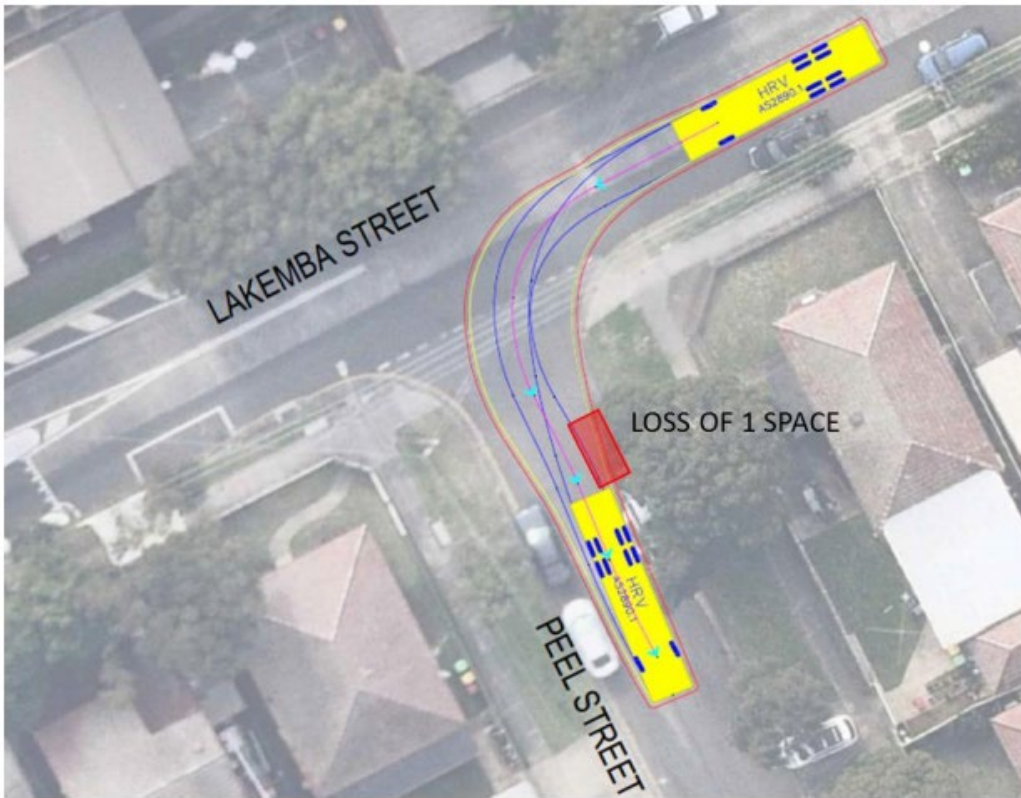


Figure 4.10 – BE7 – M24 14.086D Parking Space Loss

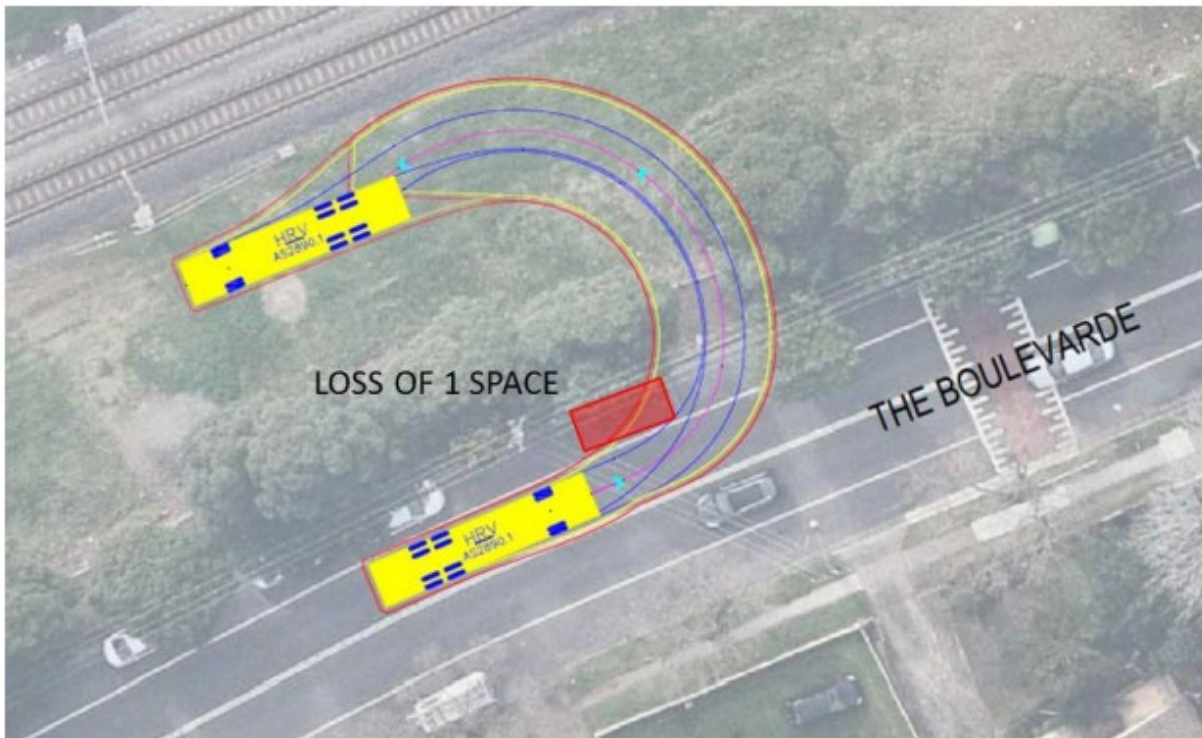


Figure 4.11 – BE9 – M24 14.229U Parking Space Loss

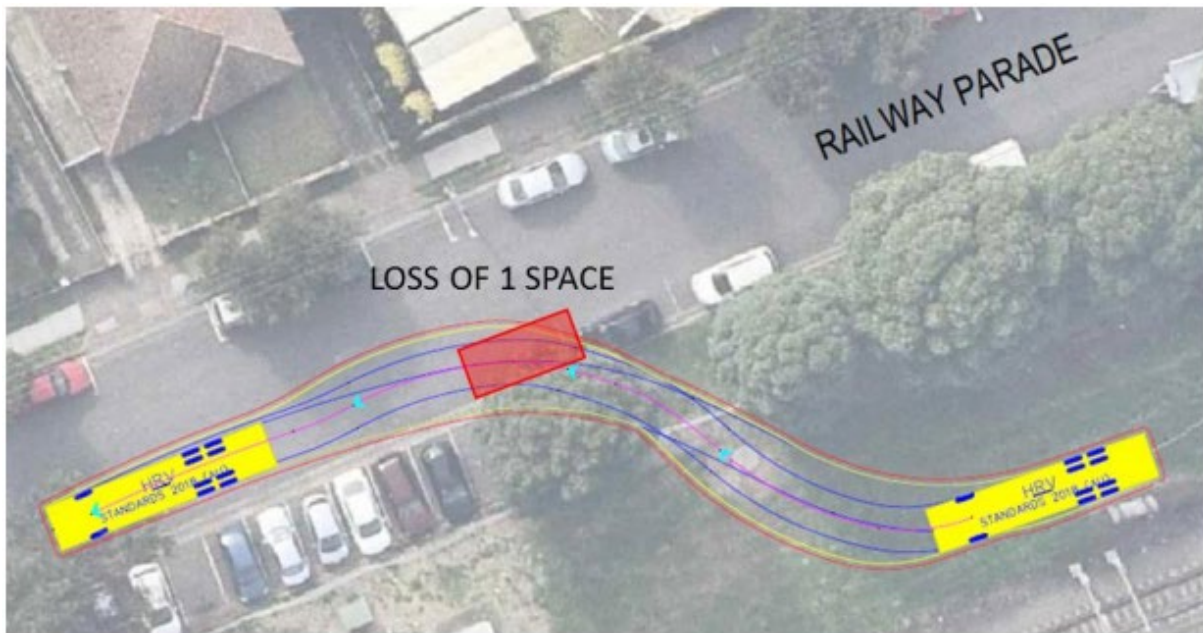


Figure 4.12 to Figure 4.30.

It must be noted that swept paths to determine parking impacts were undertaken using scaled aerial imagery. Furthermore, many swept path All vehicle movements and parking space loss should be confirmed on site prior to use of each access gate.

Table 4.2: Parking Space Removal

Gate Number	Gate ID	Suburb	Frontage Road	Parking Spaces to Be Restricted
SY1	M24 6.001U	Marrickville	Marrickville Rd	None
SY2	M24 6.331D	Marrickville	Victoria Rd	None
SY3	M24 6.335U	Marrickville	Victoria Rd	None
SY4	M24 6.410D	Marrickville	Riverdale Ave	None
MA1	M24 6.718D	Marrickville	Warburton St	Three (3) Spaces on Unnamed lane to West of access gate
MA2	M24 7.194U	Marrickville	Marrickville Ave	None
MA3	M24 7.338D	Marrickville	Randall St	None
MA4	M24 7.546D	Marrickville	Kays Avenue East	None
MA5	M24 7.572U	Dulwich Hill	Challis Ave	None
MA6	M24 7.685U	Dulwich Hill	Wilga Ave	None
DU1	M24 7.900D	Dulwich Hill	Ewart Lane	None
DU2	M24 8.038D	Dulwich Hill	Ewart Lane	None
DU3	M24 8.157D	Dulwich Hill	Ewart St (East of Terrace Rd)	None
DU4	M24 8.159U	Dulwich Hill	Terrace Rd	None
DU5	M24 8.229D	Dulwich Hill	Ewart St (West of Terrace Rd)	None

DU6	M24 8.291U	Dulwich Hill	The Parade	None
DU7	M24 8.485D	Dulwich Hill	Garnet St	None
DU8	M24 8.501D	Dulwich Hill	Garnet St	One (1) parking space North of access gate and two (2) Parking spaces on Garnet Street, opposite to gate
HP1	M24 8.801U	Hurlstone Park	Floss St	None
HP2	M24 8.880D	Hurlstone Park	Floss St	One (1) parking space west of access gate
HP3	M24 8.880D	Hurlstone Park	Railway Street	None
HP4	M24 9.078D	Hurlstone Park	Foord Ave	None
HP5	M24 9.086U	Hurlstone Park	Foord Ave	None
HP6	M24 9.096D	Hurlstone Park	Foord Ave	None
HP7	M24 9.224D	Hurlstone Park	Keir Ave	None
HP8	M24 9.235U	Hurlstone Park	Kilbride St	None
HP9	M24 9.516D	Hurlstone Park	Hurlstone Ave	None
HP10	M24 9.546D	Hurlstone Park	Hutton Street	One (1) parking space opposite gate.
HP11	M24 9.581D	Hurlstone Park	Hutton St	None
HP12	M24 9.731U	Hurlstone Park	Church St	None
HP13	M24 9.762D	Hurlstone Park	Hutton St (At Sugar House Rd)	None
HP14	M24 9.804D	Hurlstone Park	Church St	None
HP15	M24 9.808U	Hurlstone Park	Church St	None
CB1	M24 10.300D	Canterbury	Charles St	None
CB2	M24 10.300D	Canterbury	20 Charles St	None
CB3	M24 10.331U	Canterbury	Broughton St (Opp John St)	None
CB4	M24 10.440D	Canterbury	Charles St	None
CB5	M24 10.720D	Canterbury	Wairoa St	None
CB6	M24 10.833D	Canterbury	South Parade (Opp Wonga)	Three (3) parking spaces at gate
CB7	M24 11.282D	Canterbury	South Parade (Opp Park)	Three (3) parking spaces at gate
CB8	M24 11.282D	Canterbury	South Parade (Opp Duke)	Three (3) parking spaces at gate

CB9	M24 11.316U	Canterbury	North Pde	None
CP1	M24 11.827U	Campsie	Wilfred Ave / Assets St	None
CP2	M24 11.883U	Campsie	Wilfred Ave	None
CP3	M24 11.977D	Campsie	Lilian St	None
CP4	M24 12.408D	Campsie	Lillian Lane	None
CP5	M24 12.696U	Campsie	Hall St	None
CP6	M24 13.020U	Campsie	Redman Parade	Six (6) parking spaces on Redman Parade west of access gate
BE1	M24 13.193D	Belmore	Tobruk Ave Car Park	None
BE2	M24 13.374D	Belmore	Bridge Rd	None
BE3	M24 13.701U	Belmore	Railway Parade	One (1) parking space on East side of Peel Street near the Lakemba Street Intersection
BE4	M24 13.701U	Belmore	Railway Parade - Station	None
BE5	M24 13.827D	Belmore	The Boulevarde	None
BE6	M24 13.930U	Belmore	Railway Pde	None
BE7	M24 14.086D	Belmore	The Boulevarde	One (1) parking space west of access gate
BE8	M24 14.192U	Belmore	Railway Parade	None
BE9	M24 14.229U	Belmore	Railway Parade	One (1) parking space west of access gate
LA1	M24 14.530U	Lakemba	Railway Pde	None
LA2	M24 14.533D	Lakemba	The Boulevarde	None
LA3	M24 14.756U	Lakemba	Railway Pde	None
LA4	M24 14.861U	Lakemba	Railway Pde	None
LA5	M24 14.867U	Lakemba	Railway Pde	One (1) space on southern side of road immediately west of gate
LA6	M24 14.943D	Lakemba	The Boulevarde	One (1) spaces on northern side of road immediately in west of gate
WP1	M24 15.377U	Wiley Park	Shadforth St	None
WP2	M24 15.440D	Wiley Park	The Boulevarde	One (2) spaces on northern side of road immediately east of gate
WP3	M24 15.730U	Wiley Park	Urunga Parade	None
WP4	M24 15.763D	Wiley Park	The Boulevarde	Two (2) spaces on northern side of road immediately east of gate Two (2) spaces on northern side of road immediately west of gate
WP5	M24 15.962U	Wiley Park	Urunga Parade	One (1) space on eastern side of Cornelia Street south of Lakemba Street to allow for left turn on approach haulage route. It is noted that while vehicles have been observed to park in this space, these vehicles are illegally parked as they are within 10m of an intersection. Removal of this space would effectively be removing zero legal parking spaces. One (1) parking space in parking bay immediately east of gate

WP6	M24 15.986D	Wiley Park	The Boulevard	Two (2) spaces on northern side of road immediately east of gate One (1) space on northern side of road immediately west of gate
WP7	M24 16.050D	Wiley Park	The Boulevard	Two (2) spaces on northern side of road immediately east of gate Two (2) spaces on northern side of road immediately west of gate
WP8	M24 16.121U	Wiley Park	Urunga Parade	None
WP9	M24 16.259U	Wiley Park	The Boulevard	None
PB1	M24 16.328U	Wiley Park	Urunga Parade	None
PB2	M24 16.358U	Punchbowl	Urunga Parade	None
PB3	M24 16.599U	Punchbowl	Breust Pl	None
PB5	M24 16.608D	Punchbowl	South Terrace	None
PB6	M24 16.795D	Punchbowl	South Terrace	Two (2) spaces on northern side of road immediately east of gate
PB7	M24 16.995D	Punchbowl	South Terrace	None
PB8	M24 17.024U	Punchbowl	Stansfield Ave	Three (3) parking spaces in front of 102 and 104 Stansfield Avenue (opposite access gate)
PB9	M24 17.254D	Punchbowl	South Terrace	Two (2) spaces on northern side of road immediately east of gate
PB10	M24 17.363D	Punchbowl	South Terrace	Two (2) spaces on northern side of road immediately east of gate
PB11	M24 17.642D	Punchbowl	South Terrace	Two (2) spaces on northern side of road immediately east of gate
PB12	M24 17.962D	Punchbowl	South Terrace	Two (2) spaces on northern side of road immediately east of gate
PB13	M24 18.058U	Punchbowl	North Terrace	None
PB14	M24 18.192U	Punchbowl	North Terrace	None
PB15	M24 18.223D	Bankstown	South Terrace	None
PB16	M24 18.428D	Bankstown	South Terrace	None
PB17	M24 18.512D	Bankstown	South Terrace	One (1) space on northern side of Raymond Street east of West Terrace to allow for left turn on departure haulage route. One (1) space on northern side of Stanley Street east of Cross Street to allow for left turn on departure haulage route.
PB18	M24 18.648U	Bankstown	North Terrace	None
BA1	M24 18.651D	Bankstown	South Terrace	None
BA2	M24 18.958U	Bankstown	Marion Street	None

Figure 4.3 – MA1 - M24 6.718D Parking Space Loss

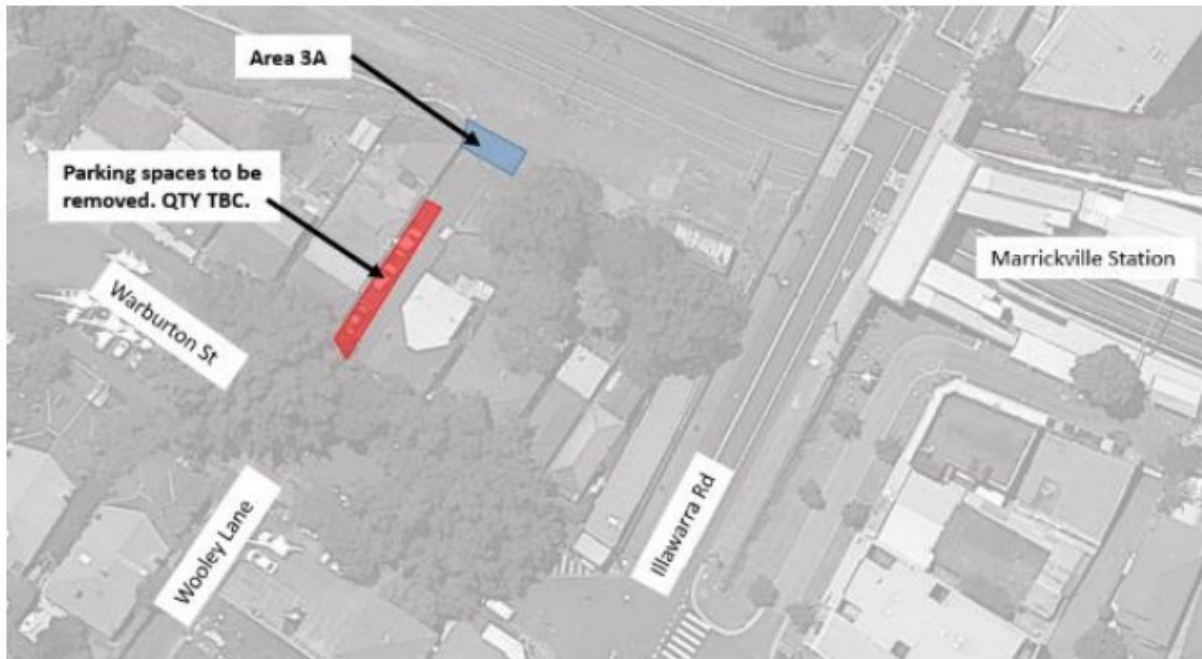


Figure 4.4 – DU8 – M24 8.501D Parking Space Loss

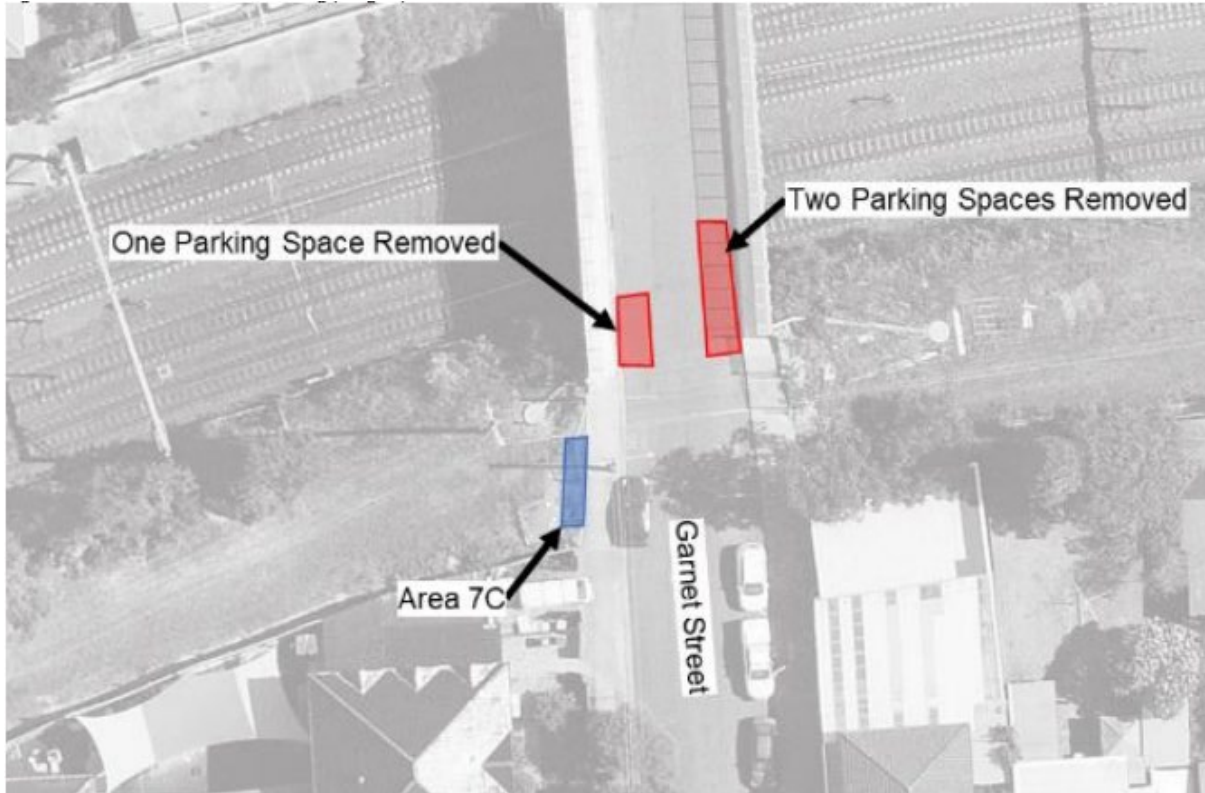


Figure 4.5 – HP2 – M24 8.880D Parking Space Loss

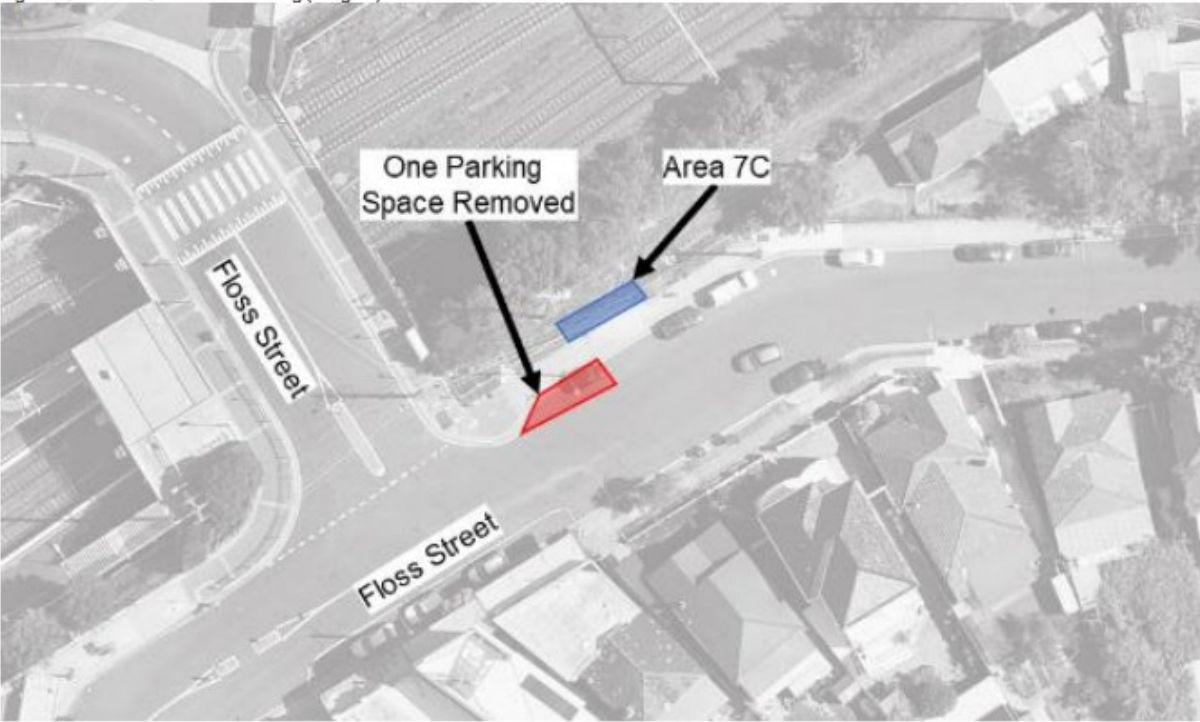


Figure 4.6 – HP10 – M24 9.546D Parking Space Loss



Figure 4.7 – CB7 – M24 11.282D Parking Space Loss

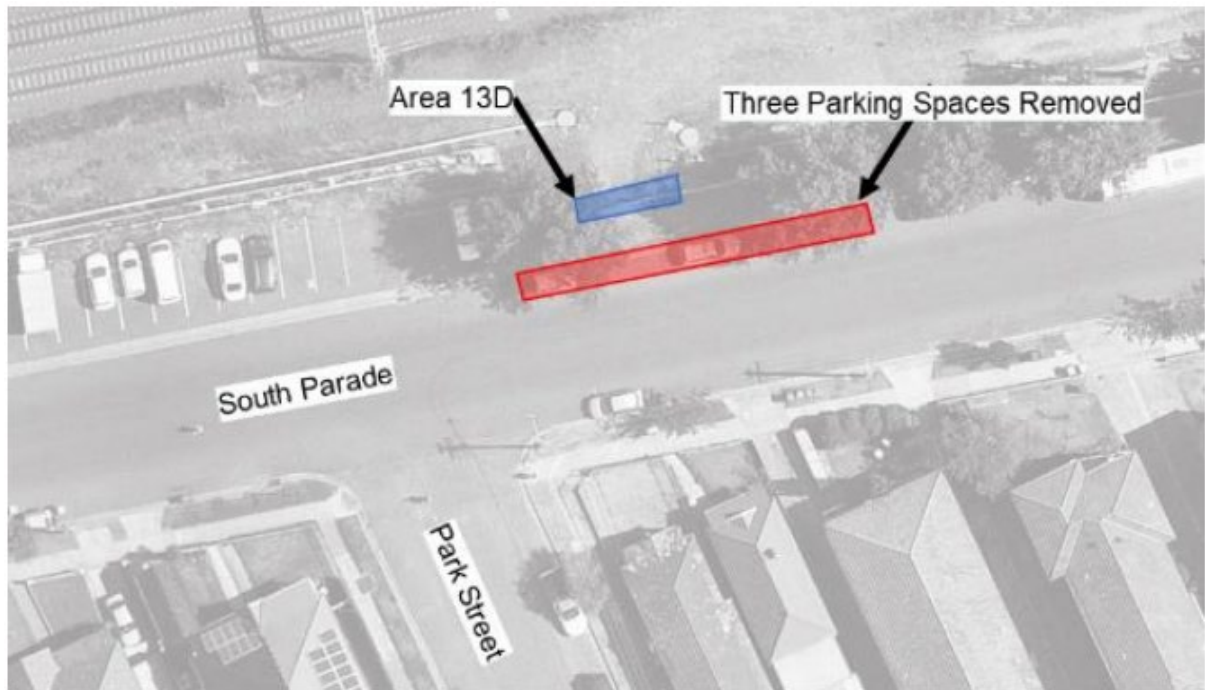


Figure 4.8 – CP6 – M24 13.020U Parking Space Loss

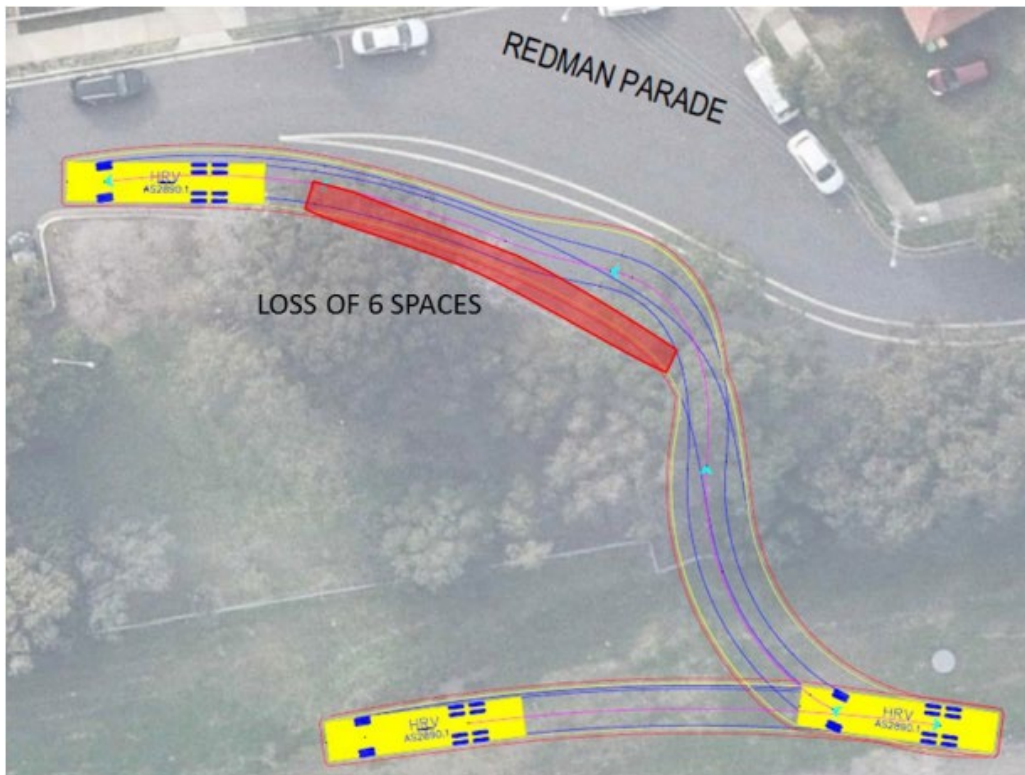


Figure 4.9 – BE3 – M24 13.701U Parking Space Loss

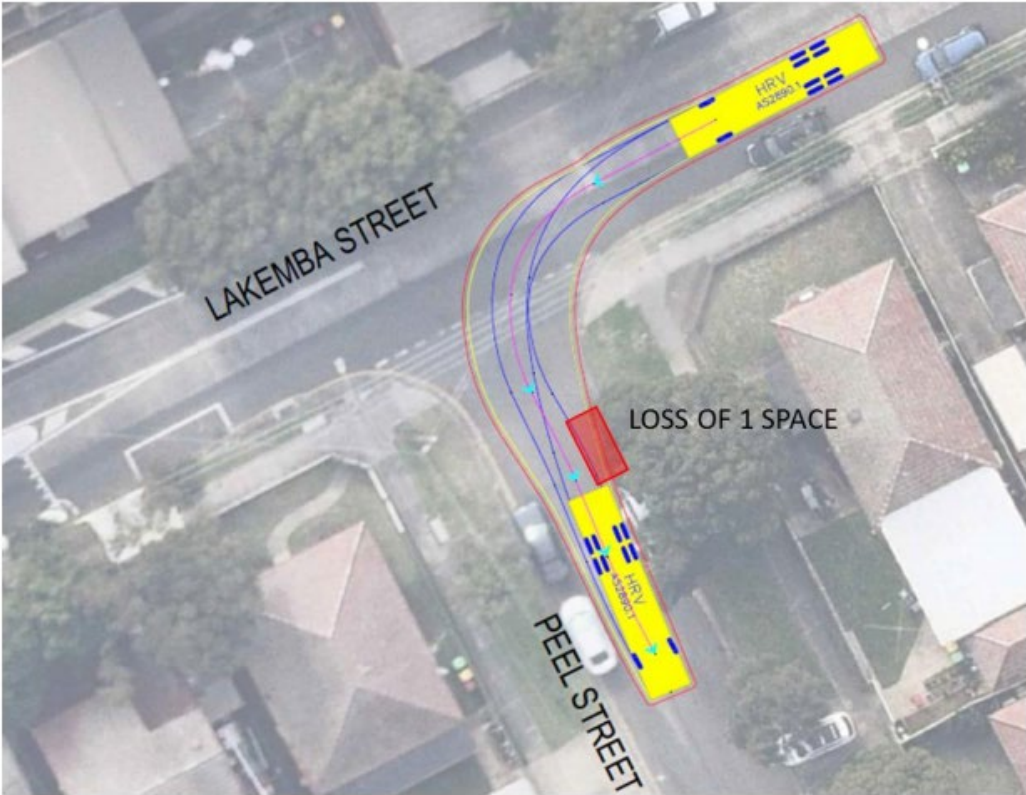


Figure 4.10 – BE7 – M24 14.086D Parking Space Loss

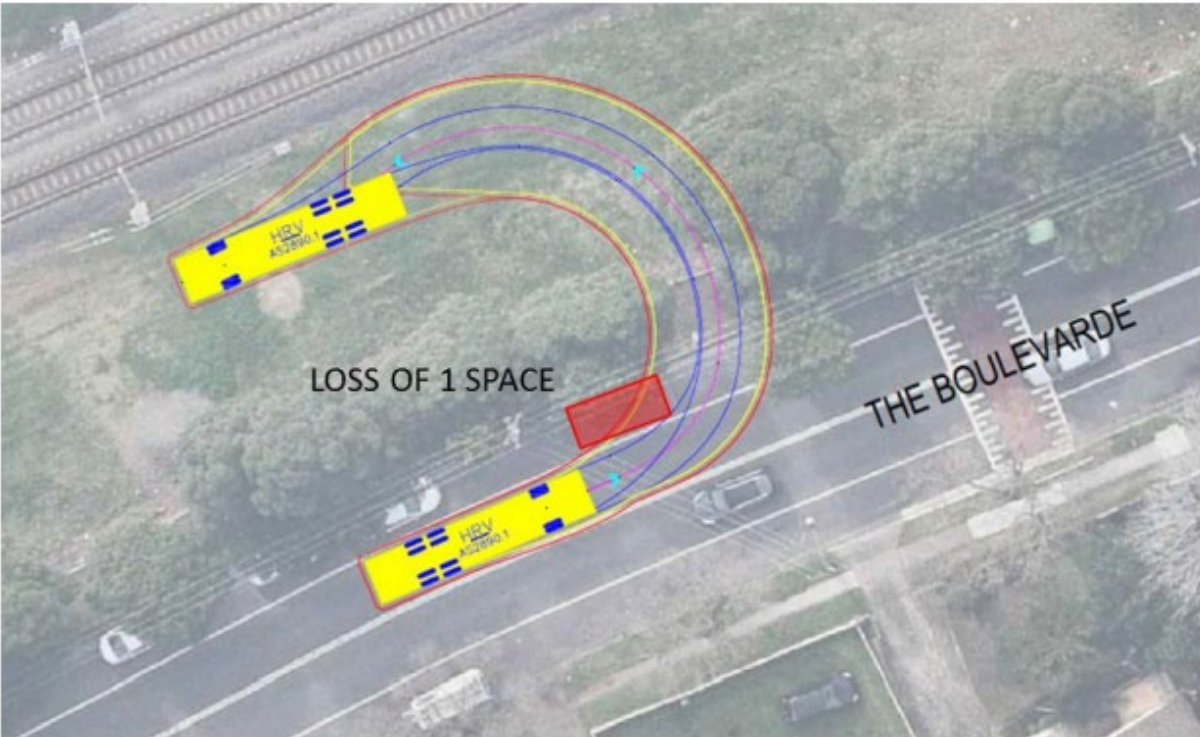


Figure 4.11 – BE9 – M24 14.229U Parking Space Loss

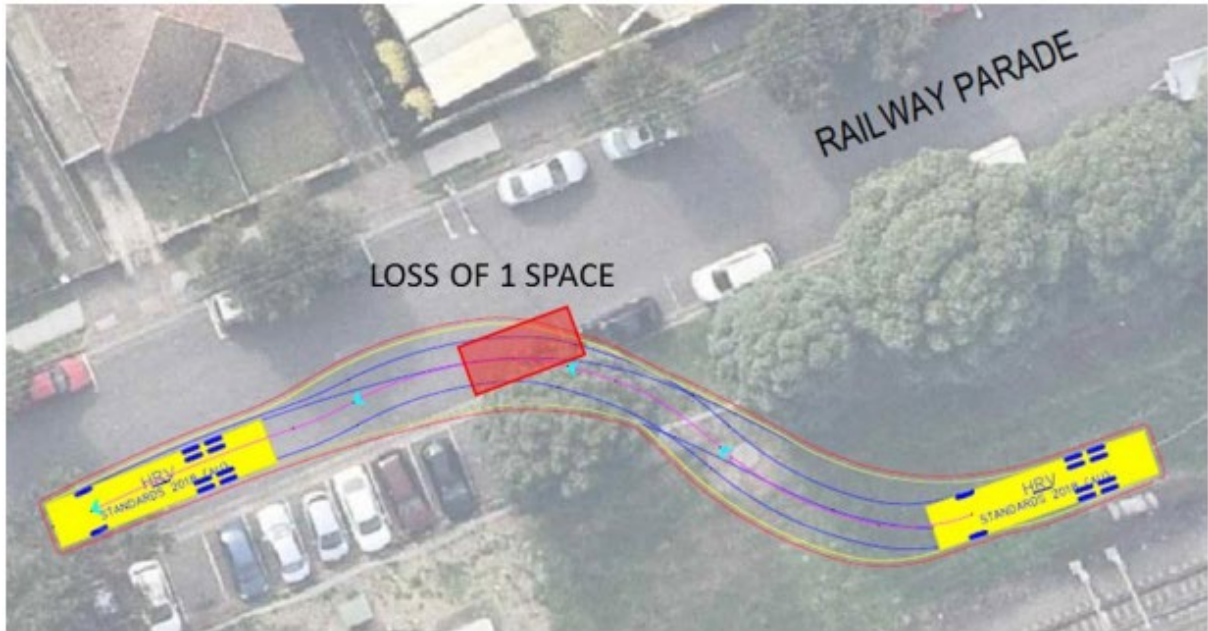


Figure 4.12 – LA5 – M24 14.867U Parking Space Loss

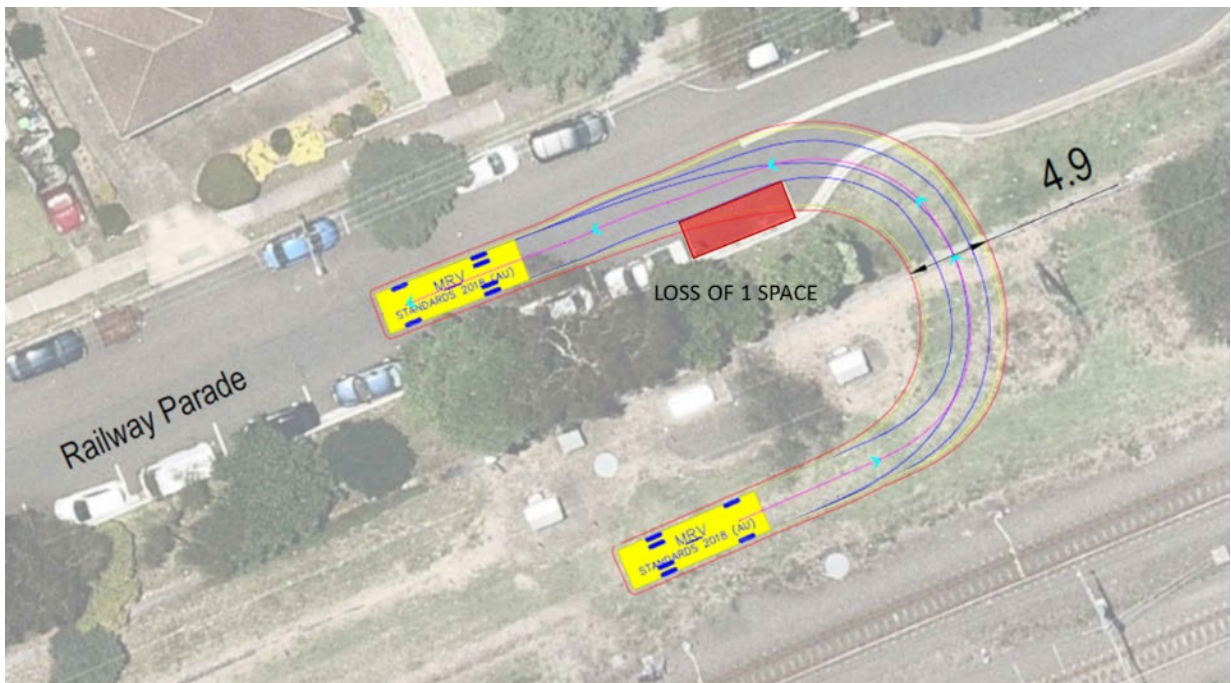


Figure 4.13 – LA6 – M24 14.943D Parking Space Loss

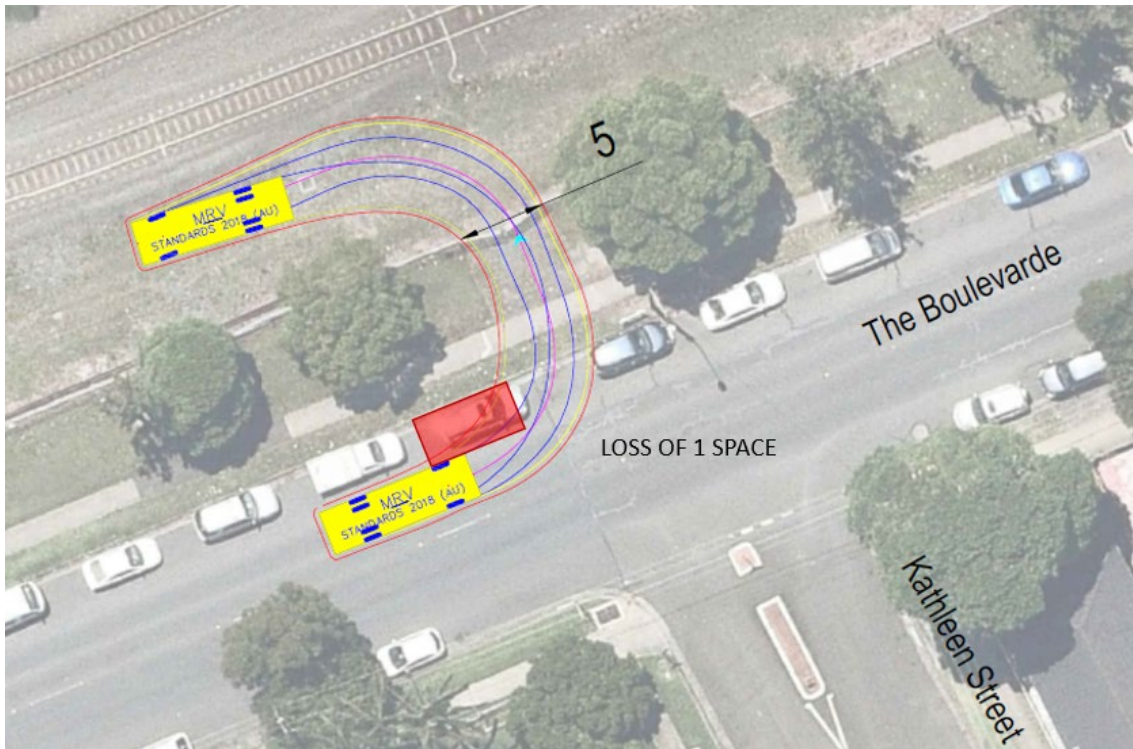


Figure 4.14 – WP2 – M24 15.440D Parking Space Loss



Figure 4.15 – WP4 – M24 15.763D Parking Space Loss



Figure 4.16 – WP4 – M24 15.763D Parking Space Loss

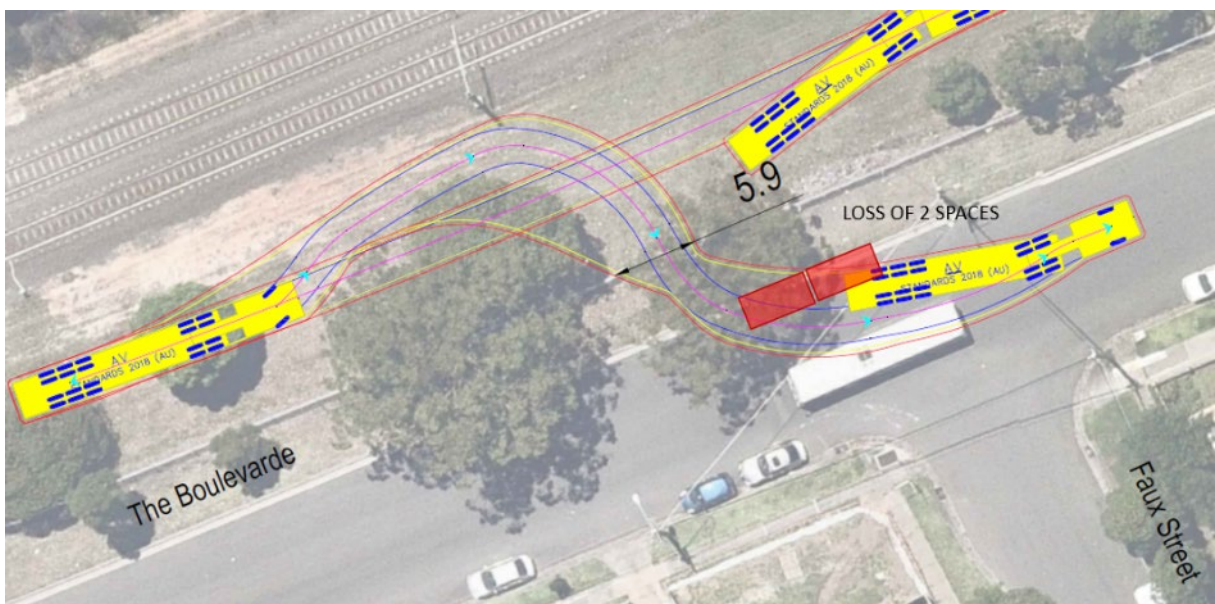


Figure 4.17 – WP5 – M24 15.962U Parking Space Loss



Figure 4.18 – M24 14.962U Parking Space Loss

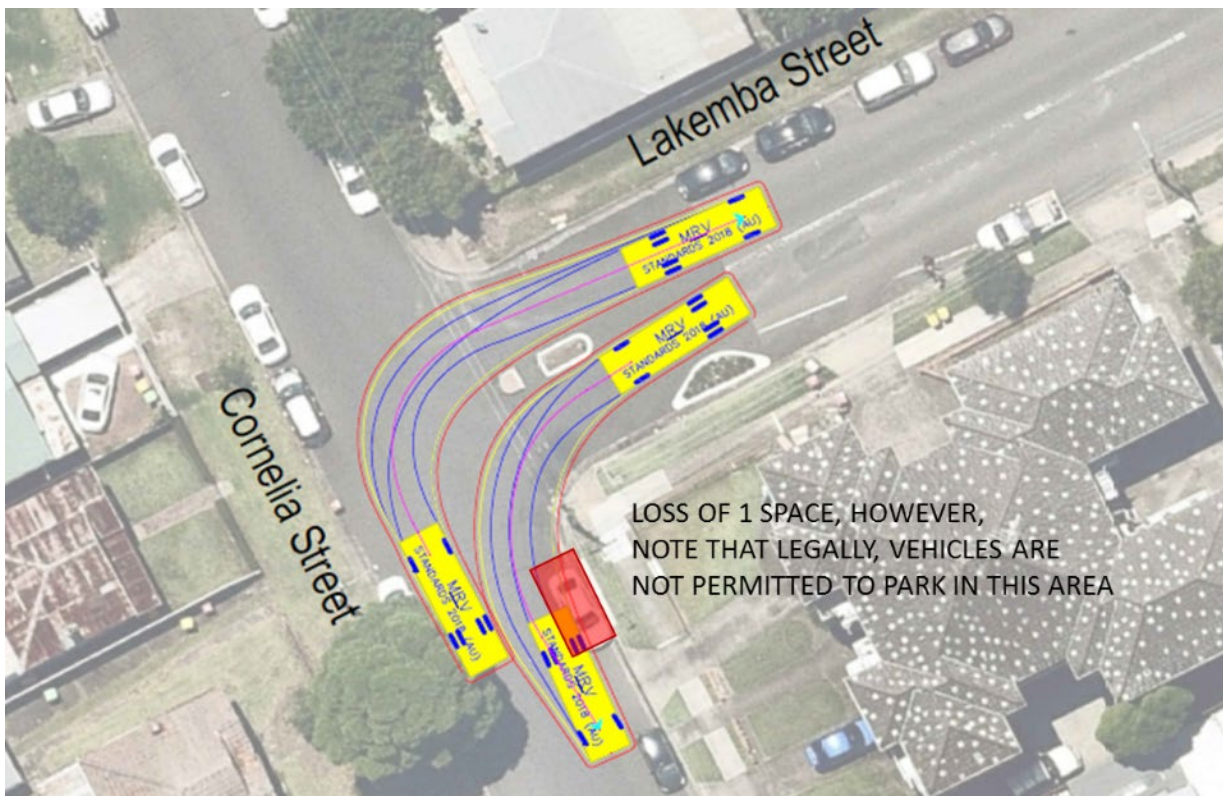


Figure 4.19 – WP6 – M24 15.986D Parking Space Loss



Figure 4.20 – WP6 – M24 15.986D Parking Space Loss

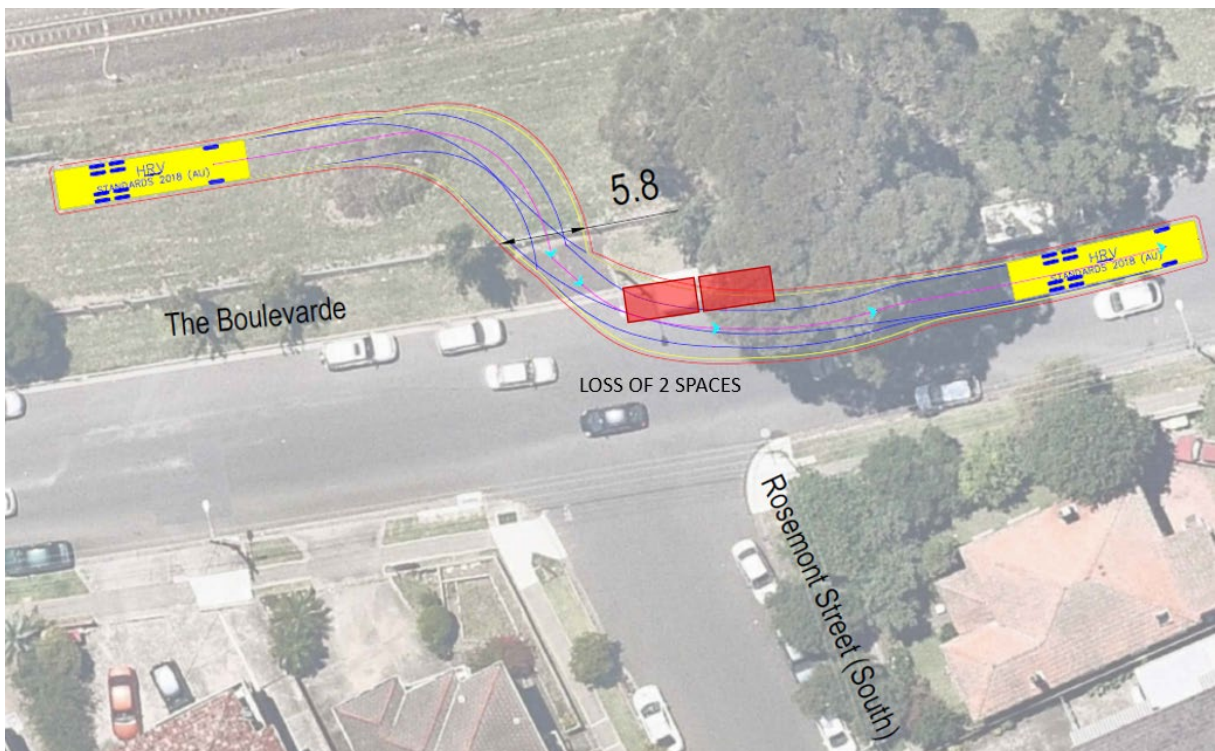


Figure 4.21 – WP7 – M24 16.050D Parking Space Loss

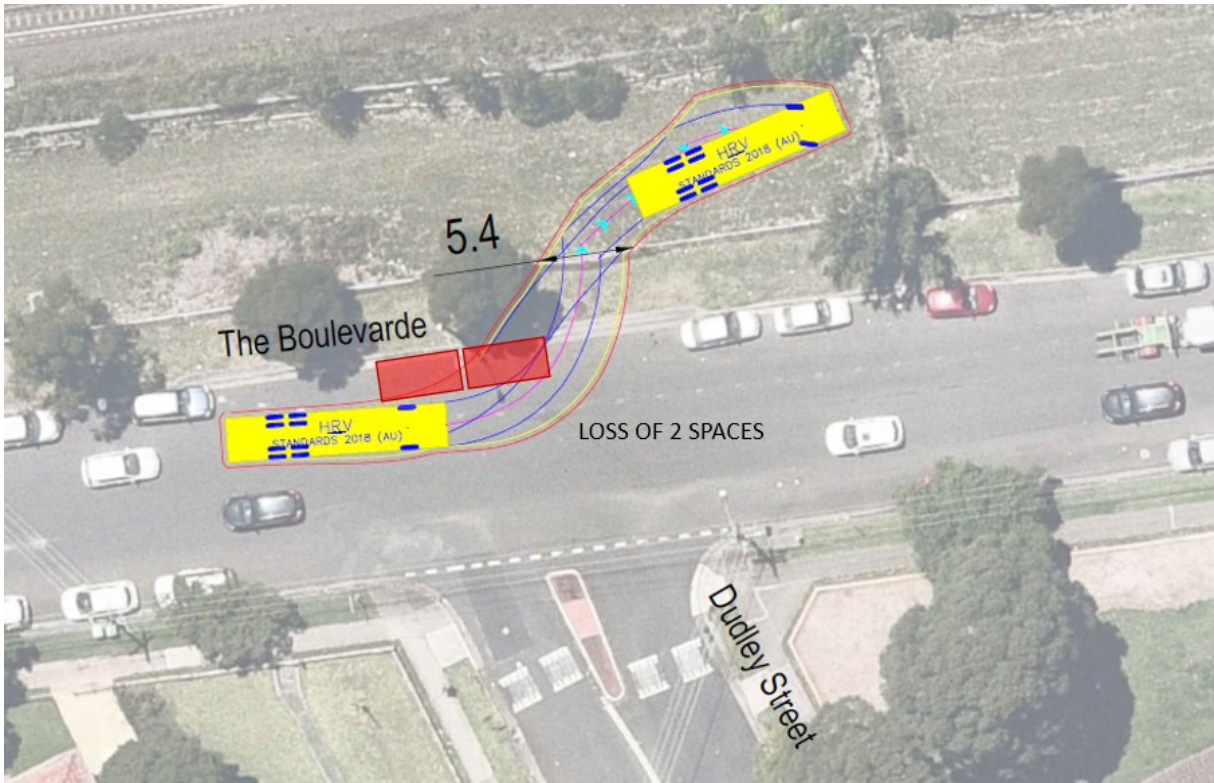


Figure 4.22 – WP7 – M24 16.050D Parking Space Loss

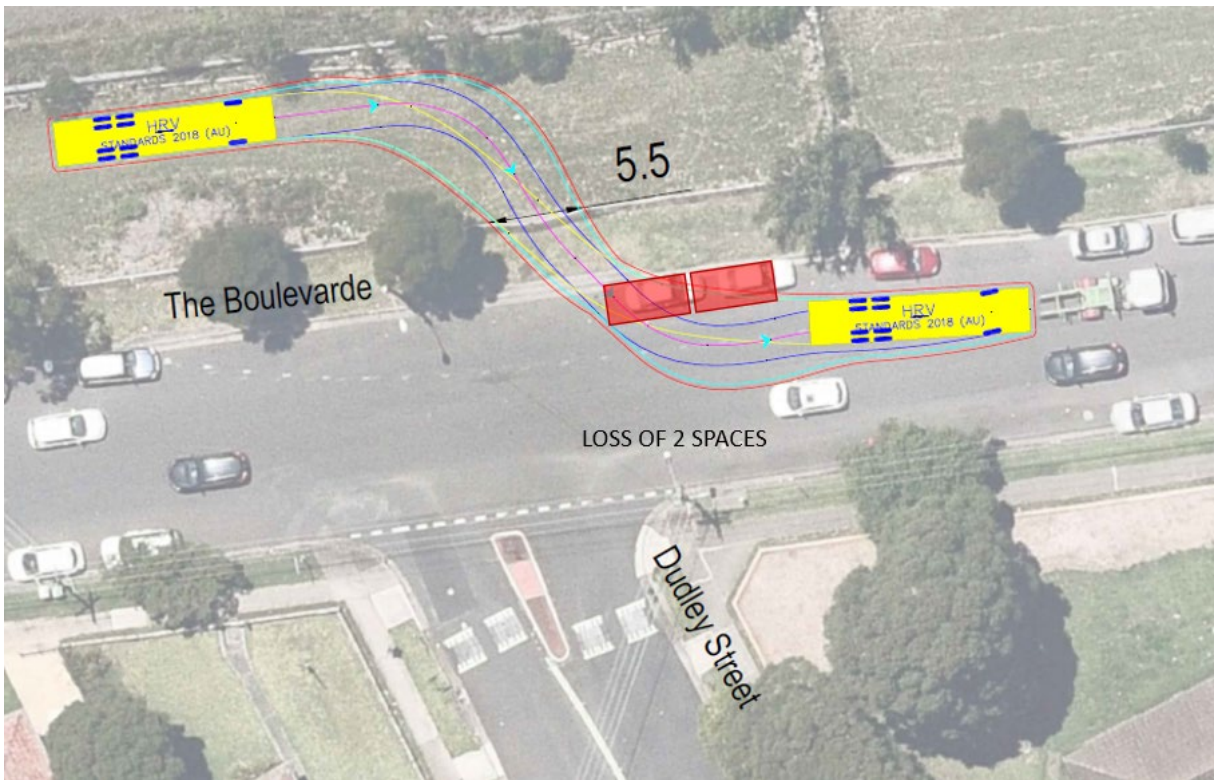


Figure 4.23 – PB6 – M24 16.795D Parking Space Loss



Figure 4.24 – PB8 – M24 17.024U Parking Space Loss

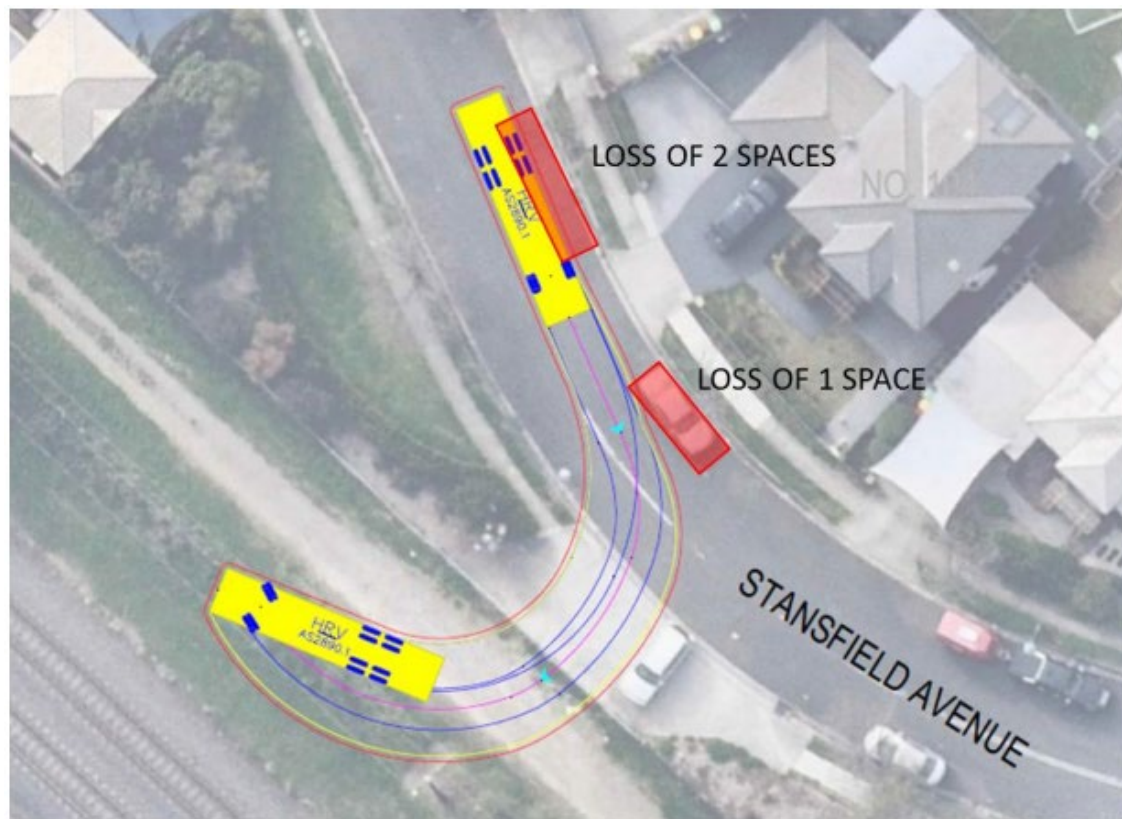


Figure 4.25 – PB9 – M24 17.254D Parking Space Loss

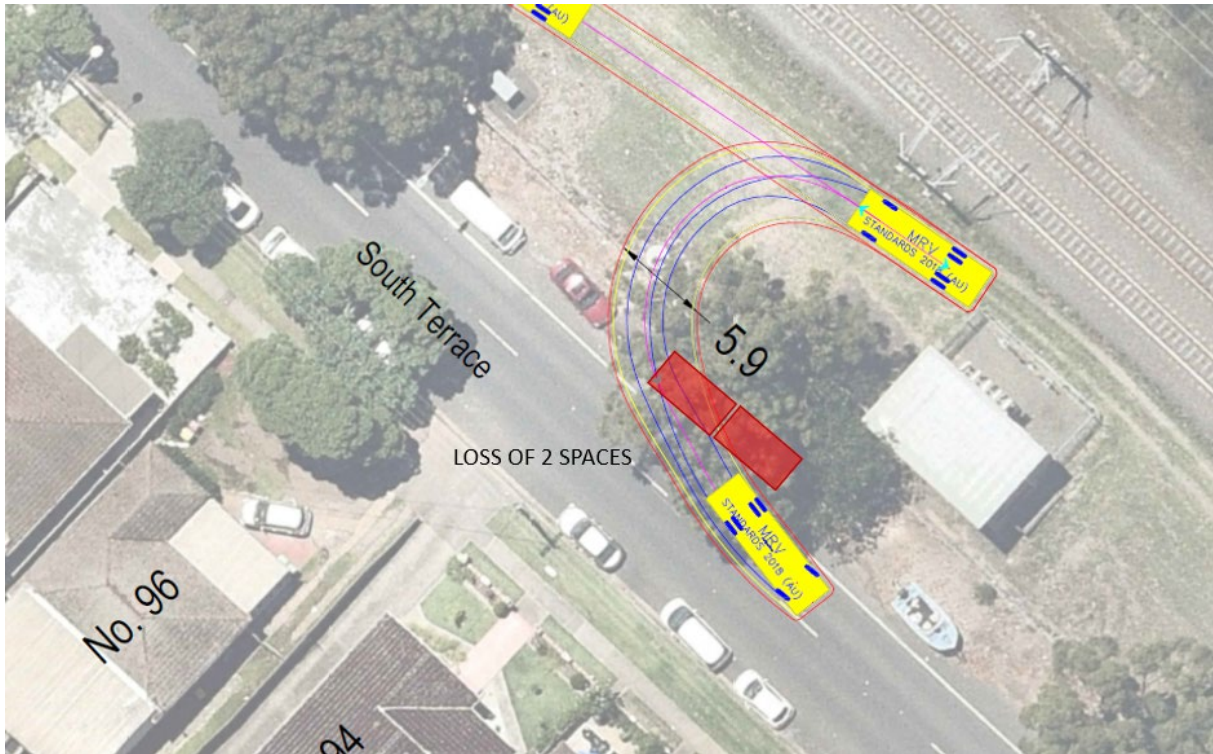


Figure 4.26 – PB10 – M24 17.363D Parking Space Loss



Figure 4.27 – PB11 – M24 17.642D Parking Space Loss

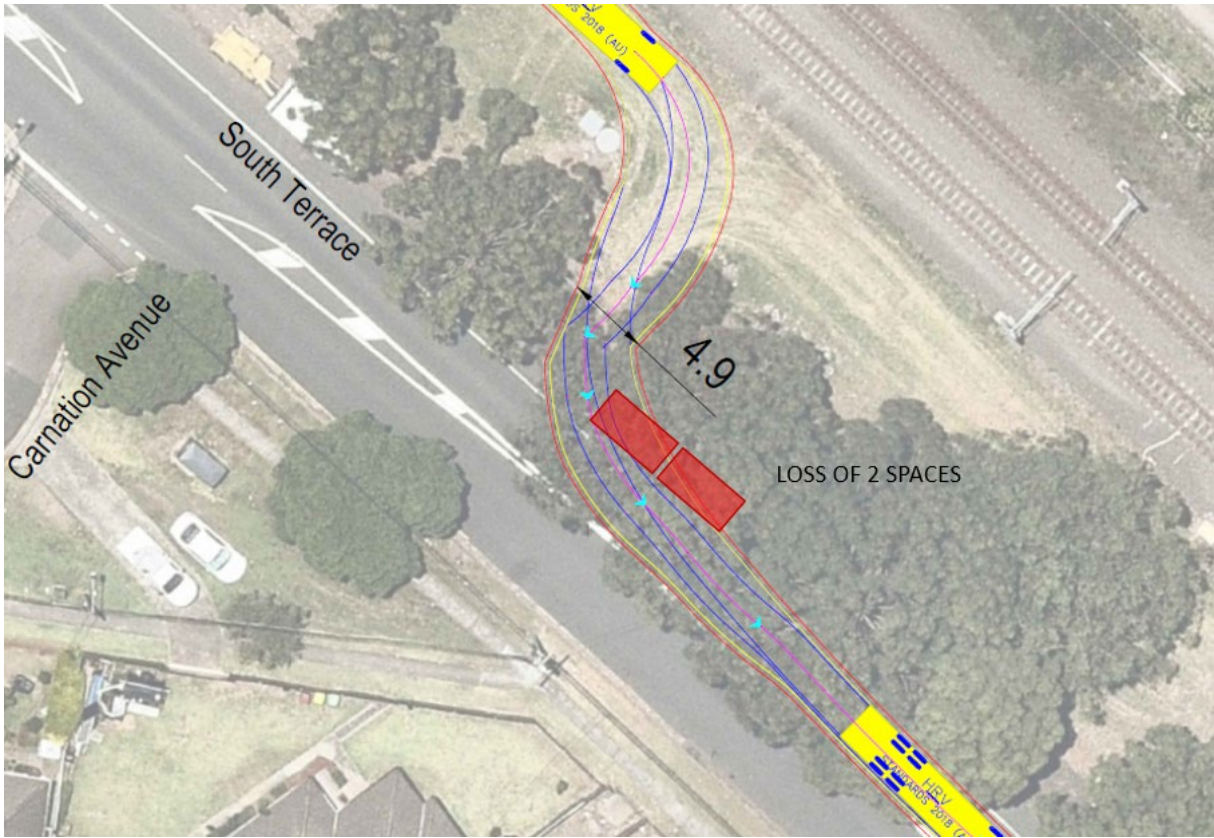


Figure 4.28 – PB12 – M24 17.962D Parking Space Loss

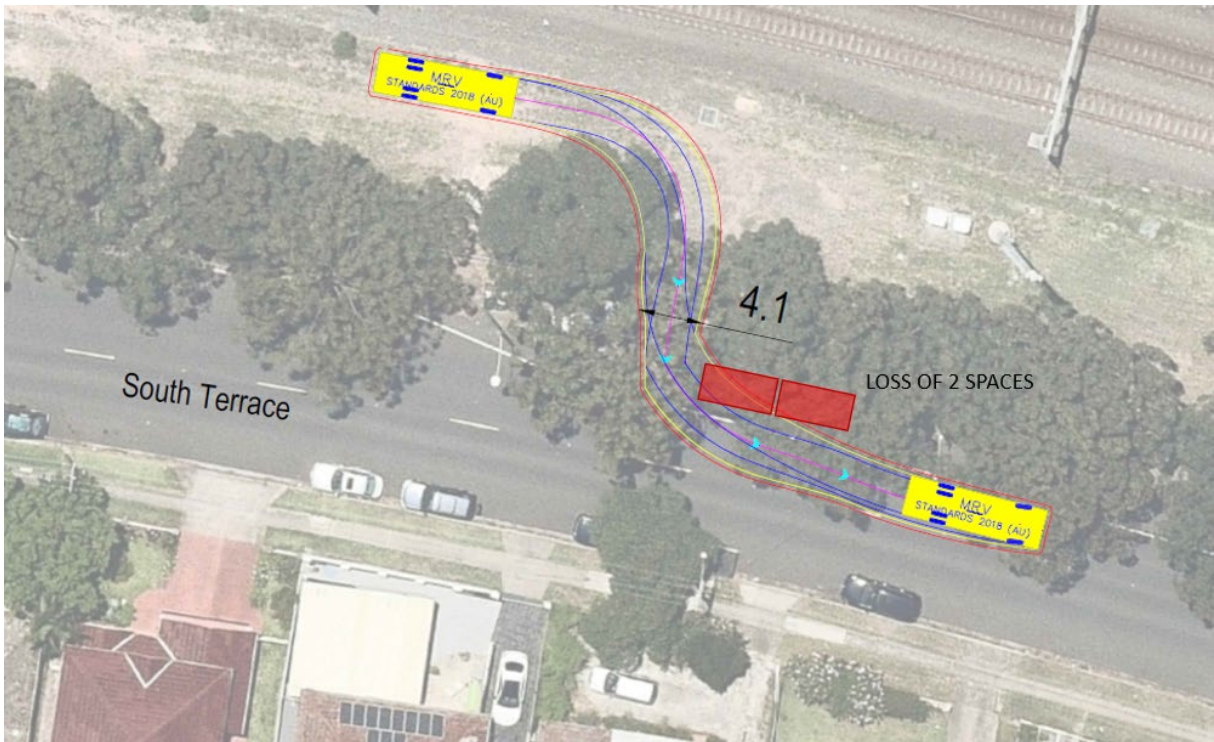


Figure 4.29 – M24 18.512D Parking Space Loss

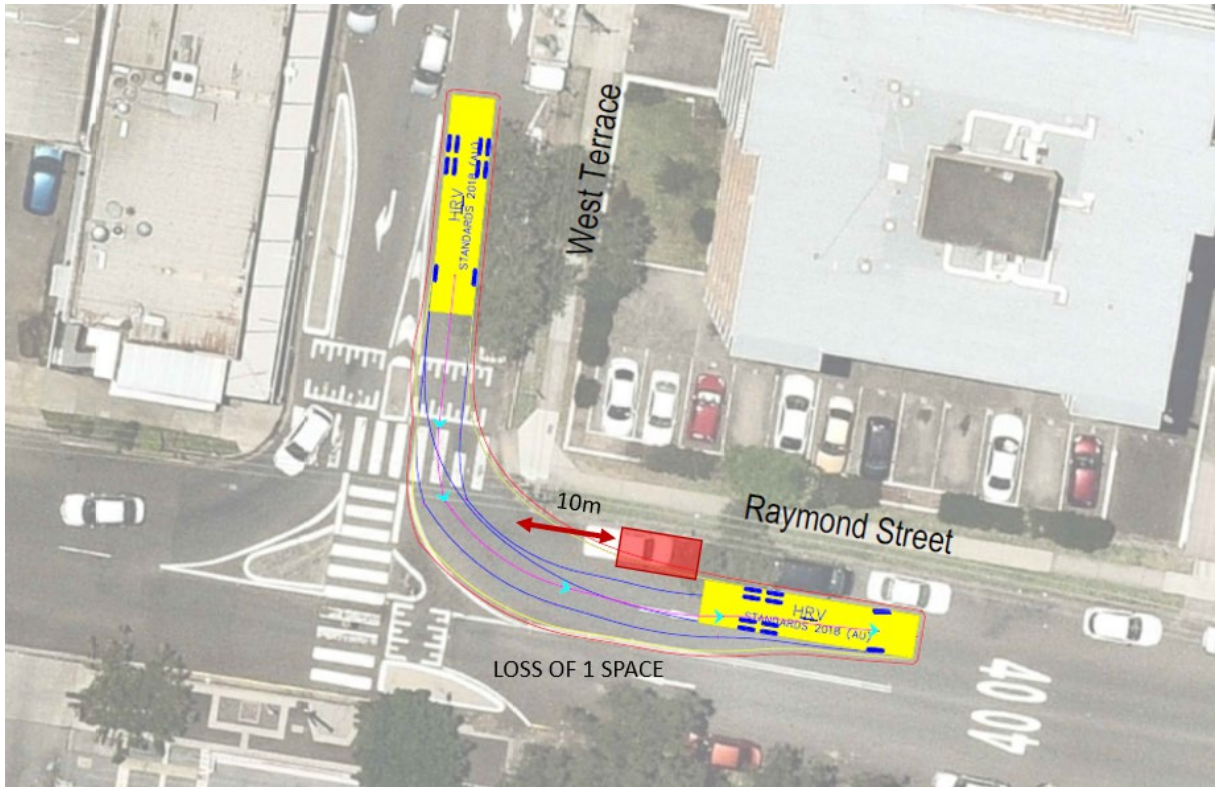
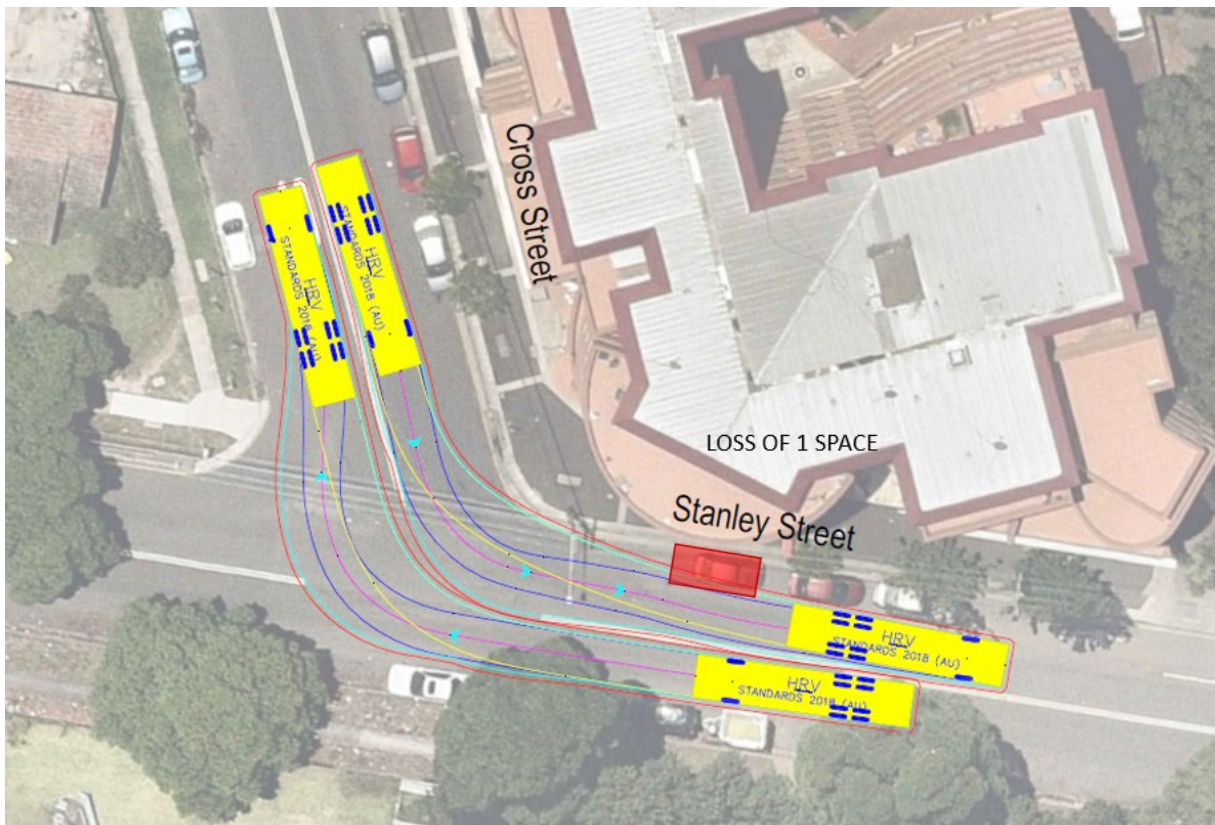


Figure 4.30 – M24 18.512D Parking Space Loss



4.7 Traffic Routing

There are a number of mobility restrictions in and around the project site, including localised weight limits, headroom clearance, one-way streets and banned turns. Some exemptions to these may be needed to allow construction vehicle access to the work sites. The identified restrictions include:

One-way streets:

- One-way traffic system is in place clockwise around Railway Parade, Marrickville Road, Buckley Street, and Sydenham Road, leading back to Railway Parade
- In the eastbound direction on Lilian Lane.

Headroom Clearance:

- 4.0m headroom clearance in the underbridge between Victoria Road and Myrtle Street
- 3.9m headroom clearance in the underbridge on Terrace Road
- 2.9m headroom clearance in the underbridge on Foord Avenue
- 3.3m headroom clearance in the underbridge between Wairoa Street and Nowra Street.

Turn Restrictions:

- No right turn from Illawarra Road to Arthur Street
- No right turn from Victoria Road to Sydenham Road
- No left turn from Sydenham Road to Illawarra Road for vehicles over 6m long
- No right turn from Marrickville Road to Gladstone Street
- No right turn from Illawarra Road to Warren Road
- No right turn from Warren Road to Livingstone Road
- No right turn from Wardell Road to Ewart Street
- No right turn from Charles Street to Canterbury Road
- No right turn from Loch Street to Lilian Lane
- No right turn from Lilian Lane to Beamish Street
- No right turn from Canterbury Road to Beamish Street.

These restrictions have been considered in planning heavy vehicle movements given in Appendix B – Heavy Vehicle Access Route Details.

The swept paths are included in Appendix D – Swept Path Analysis, and the largest truck allowed at each gate is listed in Table 4.3.

Table 4.3: Access Location

Gate ID	Suburb	Frontage Road	Largest Allowable Vehicle	Additional Comments / Restrictions	
SY1	M24 6.001U	Marrickville	Marrickville Rd	20.0m Articulated Vehicle (AV) None	
SY2	M24 6.331D	Marrickville	Victoria Rd	Light Vehicle None	
SY3	M24 6.335U	Marrickville	Victoria Rd	12.5m Heavy Rigid Vehicle (HRV) Overruns kerb on access. Note 4.0m height restriction	
SY4	M24 6.410D	Marrickville	Riverdale Ave	Light Vehicle None	
MA1	M24 6.718D	Marrickville	Warburton St	8.8m Medium Rigid Vehicle (MRV) TC/Parking removal may be required for all vehicles	
MA2	M24 7.194U	Marrickville	Marrickville Ave	Light Vehicle None	
MA3	M24 7.338D	Marrickville	Randall St	12.5m HRV Traffic control is required to reverse in from Livingstone Road	
MA4	M24 7.546D	Marrickville	Kays Avenue East	8.8m MRV None	
MA5	M24 7.572U	Dulwich Hill	Challis Ave	No Vehicular Access None	
MA6	M24 7.685U	Dulwich Hill	Wilga Ave	No Vehicular Access None	
DU1	M24 7.900D	Dulwich Hill	Ewart Lane	8.8m MRV None	
DU2	M24 8.038D	Dulwich Hill	Ewart Lane	To Be confirmed in Revision 4, prior to use.	
DU3	M24 8.157D	Dulwich Hill	Ewart St (East of Terrace Rd)	8.8m MRV None	
DU4	M24 8.159U	Dulwich Hill	Terrace Rd	12.5m HRV TC/Parking removal may be required for HRV only.	
DU5	M24 8.229D	Dulwich Hill	Ewart St (West of Terrace Rd)	8.8m MRV None	
DU6	M24 8.291U	Dulwich Hill	The Parade	To Be confirmed in Revision 4, prior to use.	
DU7	M24 8.485D	Dulwich Hill	Garnet St	To Be confirmed in Revision 4, prior to use.	
DU8	M24 8.501D	Dulwich Hill	Garnet St	To Be confirmed in Revision 4, prior to use.	
HP1	M24 8.801U	Hurlstone Park	Floss St	Light Vehicle None	
HP2	M24 8.880D	Hurlstone Park	Floss St	8.8m MRV Drive through only to Exit on Granet St, cannot turn HRV in Corridor	
HP3	M24 8.880D	Hurlstone Park	Railway Street	12.5m HRV Parking Space removal required for HRV only.	
HP4	M24 9.078D	Hurlstone Park	Foord Ave	To Be confirmed in Revision 4, prior to use.	

HP5	M24 9.086U	Hurlstone Park	Foord Ave	To Be confirmed in Revision 4, prior to use.	
HP6	M24 9.096D	Hurlstone Park	Foord Ave	To Be confirmed in Revision 4, prior to use.	
HP7	M24 9.224D	Hurlstone Park	Keir Ave	12.5m HRV	None
HP8	M24 9.235U	Hurlstone Park	Kilbride St	To Be confirmed in Revision 4, prior to use.	
HP9	M24 9.516D	Hurlstone Park	Hurlstone Ave	8.8m MRV	None
HP10	M24 9.546D	Hurlstone Park	Hutton Street	8.8m MRV	Parking Space removal require for MRV only
HP11	M24 9.581D	Hurlstone Park	Hutton St	No Vehicular Access	None
HP12	M24 9.731U	Hurlstone Park	Church St	No Vehicular Access	None
HP13	M24 9.762D	Hurlstone Park	Hutton St (At Sugar House Rd)	8.8m MRV	None
HP14	M24 9.804D	Hurlstone Park	Church St	12.5m HRV	TC require for reverse movement only
HP15	M24 9.808U	Hurlstone Park	Church St	No Vehicular Access	None
CB1	M24 10.300D	Canterbury	Charles St	12.5m HRV	None
CB2	M24 10.300D	Canterbury	20 Charles St	12.5m HRV	None
CB3	M24 10.331U	Canterbury	Broughton St (Opp John St)	12.5m HRV	None
CB4	M24 10.440D	Canterbury	Charles St	No Vehicular Access	None
CB5	M24 10.720D	Canterbury	Wairoa St	12.5m HRV	TC required for reverse entry and tight exit
CB6	M24 10.833D	Canterbury	South Parade (Opp Wonga)	12.5m HRV	Parking space removal required for HRV only
CB7	M24 11.282D	Canterbury	South Parade (Opp Park)	8.8m MRV	Parking Space removal required for MRV Only
CB8	M24 11.282D	Canterbury	South Parade (Opp Duke)	8.8m MRV	Parking Space removal required
CB9	M24 11.316U	Canterbury	North Pde	To Be confirmed in Revision 4, prior to use.	
CP1	M24 11.827U	Campsie	Wilfred Ave / Assets St	To Be confirmed in Revision 4, prior to use.	
CP2	M24 11.883U	Campsie	Wilfred Ave	Light Vehicle	None
CP3	M24 11.977D	Campsie	Lilian St	12.5m HRV	Remove one parking space next to the gate for MRV, use alternate route for HRV.
CP4	M24 12.408D	Campsie	Lillian Lane	8.8m MRV	None
CP5	M24 12.696U	Campsie	Hall St	To Be confirmed in Revision 4, prior to use.	
CP6	M24 13.020U	Campsie	Redman Parade	12.5m HRV	None

BE1	M24 13.193D	Belmore	Tobruk Ave Car Park	SRV	One-way restriction on Tobruk Avenue and Acacia Lane
BE2	M24 13.374D	Belmore	Bridge Rd	No Vehicular Access	None
BE3	M24 13.701U	Belmore	Railway Parade	12.5m HRV	Peel Street cannot accommodate simultaneous through movement
BE4	M24 13.701U	Belmore	Railway Parade - Station	8.8m MRV	None
BE5	M24 13.827D	Belmore	The Boulevarde	To Be confirmed in Revision 4, prior to use.	
BE6	M24 13.930U	Belmore	Railway Pde	Light Vehicle	None
BE7	M24 14.086D	Belmore	The Boulevarde	12.5m HRV	None
BE8	M24 14.192U	Belmore	Railway Parade	To Be confirmed in Revision 4, prior to use.	
BE9	M24 14.229U	Belmore	Railway Parade	12.5m HRV	Left in-left out only at intersection of Railway Parade / Haldon Street
LA1	M24 14.530U	Lakemba	Railway Pde	8.8m MRV	None
LA2	M24 14.533D	Lakemba	The Boulevarde	8.8m MRV	None
LA3	M24 14.756U	Lakemba	Railway Pde	Light Vehicle	None
LA4	M24 14.861U	Lakemba	Railway Pde	Light Vehicle	None
LA5	M24 14.867U	Lakemba	Railway Pde	8.8m MRV	None
LA6	M24 14.943D	Lakemba	The Boulevarde	8.8m MRV	None
WP1	M24 15.377U	Wiley Park	Shadforth St	8.8m MRV	None
WP2	M24 15.440D	Wiley Park	The Boulevarde	12.5m HRV	None
WP3	M24 15.730U	Wiley Park	Urunga Parade	8.8m MRV	3t weight restriction on Cornelia Street
WP4	M24 15.763D	Wiley Park	The Boulevarde	8.8m MRV	None
WP5	M24 15.962U	Wiley Park	Urunga Parade	8.8m MRV	None
WP6	M24 15.986D	Wiley Park	The Boulevarde	12.5m HRV	None
WP7	M24 16.050D	Wiley Park	The Boulevarde	12.5m HRV	None
WP8	M24 16.121U	Wiley Park	Urunga Parade	12.5m HRV	3t weight restriction on Cornelia Street
WP9	M24 16.259U	Wiley Park	The Boulevarde	8.8m MRV	None
PB1	M24 16.328U	Wiley Park	Urunga Parade	8.8m MRV	None
PB2	M24 16.358U	Punchbowl	Urunga Parade	8.8m MRV	3t weight restriction on Cornelia Street
PB3	M24 16.599U	Punchbowl	Breust Pl	8.8m MRV	None
PB5	M24 16.608D	Punchbowl	South terrace	8.8m MRV	None
PB6	M24 16.795D	Punchbowl	South Terrace	12.5m HRV	None
PB7	M24 16.995D	Punchbowl	South Terrace	12.5m HRV	None
PB8	M24 17.024U	Punchbowl	Stansfield Ave	8.8m MRV	None
PB9	M24 17.254D	Punchbowl	South Terrace	12.5m HRV	None
PB10	M24 17.363D	Punchbowl	South Terrace	12.5m HRV	None
PB11	M24 17.642D	Punchbowl	South Terrace	12.5m HRV	None

PB12	M24 17.962D	Punchbowl	South Terrace	8.8m MRV	None
PB13	M24 18.058U	Punchbowl	North Terrace	Light Vehicle	None
PB14	M24 18.192U	Bankstown	North Terrace	Light Vehicle	None
PB15	M24 18.223D	Bankstown	South Terrace	To Be confirmed in Revision 4, prior to use.	
PB16	M24 18.428D	Bankstown	South Terrace	Light Vehicle	None
PB17	M24 18.512D	Bankstown	South Terrace	12.5m HRV	None
PB18	M24 18.648U	Bankstown	South Terrace	8.8m MRV	None
BA1	M24 18.651D	Bankstown	South Terrace	Light Vehicle	None
BA2	M24 18.958U	Bankstown	South Terrace	12.5m HRV	None

4.7.1 [Haulage Routes](#)

Haul and delivery truck routes to and from construction sites and access points will be developed in key consideration of minimising impact on local streets and maximising use of arterial roads using Higher Mass Limit (HML) routes as outlined by Roads and Maritime Service (RMS) as part of their Intelligent Access Program (IAP) and Restricted Access Vehicle (RAV) routes.

RMS has roads and zones throughout Sydney that are approved for RAV and HML for certain heavy vehicles to travel along.

Relevant local councils and/or RMS permission is required should construction vehicles greater than the allowable load limit require access to roads containing restrictions. These haulage routes must be approved by the RMS following endorsement by Sydney Coordination Office and consultation with the TTLG. The routes are available in in [Appendix B – Heavy Vehicle Routes](#).

Some haulage routes have been identified in the EIS / SPIR. Some of these were determined to not be feasible due to some required vehicles not being able to complete some manoeuvres.

Swept path analysis has been undertaken to assess the viability of updated haulage routes. This analysis is indicative only due to the following:

4.8 [Pedestrian Management](#)

4.8.1 [Pedestrian Movement Plans](#)

Existing Pedestrian Movement Plans (PMPs) are required for each instance where changes to pedestrian routes will be required, such as closing footpaths. PMPs are to be developed in accordance with RMS Traffic Control at Worksites Manual Version 5, and CEMF Clause 8.1. Pedestrian routes for workers are available in Appendix C – Vehicle Management Plans, Pedestrian Movement Plans, and Worker Walking Routes.

Additional enhancements for pedestrian, cyclist and motorist safety in the vicinity of the construction sites would be implemented during construction. This would include measures such as:

- Use of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers
- Community educational events that allow pedestrians, cyclists or motorists to sit in trucks and understand the visibility restrictions of truck drivers, and for truck drivers to understand the visibility from a bicycle; and a campaign to engage with local schools to educate children about road safety and to encourage visual contact with drivers to ensure they are aware of the presence of children

- Specific construction driver training to understand route constraints, expectations, safety issues, human error and its relationship with fitness for work and chain of responsibility duties, and to limit the use of compression braking
- Use of In Vehicle Monitoring Systems (telematics) to monitor vehicle location and driver behaviour
- Safety devices on construction vehicles that warn drivers of the presence of a vulnerable road user located in the vehicles’ blind spots and warn the vulnerable road user that a vehicle is about to turn.

Where existing footpath routes used by pedestrians and/or cyclists are affected by construction, a condition survey would be carried out to confirm they are suitable for use (e.g. suitably paved and lit), with any necessary modifications to be carried out in consultation with Inner West Council and City of Canterbury-Bankstown Council.

Where applicable, PMP’s will be overlaid on the corresponding Traffic Control Plans for the site.

The following locations have been identified as locations where specific PMPs are required:

- Church Street rail overpass footbridge to Sugar House Road footbridge works
- Sugar House Road footpath to Canterbury Station
- Cook River Path.
- Duke Footbridge
- Belmore Oval Underpass
- Punchbowl Up main underpass

Specific pedestrian movement plans are still to be developed once the exact site boundaries are determined.

4.8.2 Pedestrian Considerations

Due consideration to pedestrians shall be given before proceeding with Southwest Metro Corridor works on or adjacent to footpaths. By definition, catering for pedestrians means catering for the different modes of travel used, such as walking, cycling or for people with different characteristics such as disabilities. It also means that JHLORJV shall take into account the fact that pedestrians are often distracted or in a hurry.

Vulnerable road users will be specifically targeted with safety measures to minimise the road safety risks to pedestrians, cyclists, and motorcyclists near the Southwest Metro Corridor works sites.

Measures specific to Southwest Metro Corridor works include, but are not limited to:

- Heavy vehicles equipped with systems to improve vehicle safety, visibility and the detection of vulnerable road users
- Mandatory completion of Sydney Metro City & Southwest project specific Heavy Vehicle Driver Introduction Training for frequent deliveries.

It is expected that some limited interfacing by construction vehicles crossing rail access driveways which intersect pedestrian footpaths may take place. The intersections are detailed in **Error! Reference source not found.**

Table 4.4: Access Location

Gate ID	Suburb	Frontage Road	Pedestrian Interface
SY1	Marrickville	Marrickville Rd	no pedestrian footpath is provided on entrance to Fraser Park car parking areas, pedestrians share roadway with vehicles

SY2	M24 6.331D	Marrickville	Victoria Rd	None
SY3	M24 6.335U	Marrickville	Victoria Rd	interface of vehicles crossing footpath only
SY4	M24 6.410D	Marrickville	Riverdale Ave	None
MA1	M24 6.718D	Marrickville	Warburton St	no pedestrian footpath is provided along Unnamed Lane opposite Wooley Lane, pedestrians share roadway with vehicles, interface of vehicles crossing footpath on Warburton Street
MA2	M24 7.194U	Marrickville	Marrickville Ave	None
MA3	M24 7.338D	Marrickville	Randall St	interface of vehicles crossing shared path (pedestrian and cyclist link between Kays Avenue East and Albermarle Street).
MA4	M24 7.546D	Marrickville	Kays Avenue East	interface of vehicles crossing footpath only.
MA5	M24 7.572U	Dulwich Hill	Challis Ave	None
MA6	M24 7.685U	Dulwich Hill	Wilga Ave	None
DU1	M24 7.900D	Dulwich Hill	Ewart Lane	None
DU2	M24 8.038D	Dulwich Hill	Ewart Lane	interface of vehicles crossing footpath only.
DU3	M24 8.157D	Dulwich Hill	Ewart St (East of Terrace Rd)	interface of vehicles crossing footpath only.
DU4	M24 8.159U	Dulwich Hill	Terrace Rd	vehicles may conflict with pedestrian activity due to adjacent car parking spaces
DU5	M24 8.229D	Dulwich Hill	Ewart St (West of Terrace Rd)	interface of vehicles crossing footpath only.
DU6	M24 8.291U	Dulwich Hill	The Parade	interface of vehicles crossing footpath only.
DU7	M24 8.485D	Dulwich Hill	Garnet St	vehicles may conflict with pedestrian activity due to adjacent car parking spaces
DU8	M24 8.501D	Dulwich Hill	Garnet St	vehicles may conflict with pedestrian activity due to adjacent car parking spaces
HP1	M24 8.801U	Hurlstone Park	Floss St	None
HP2	M24 8.880D	Hurlstone Park	Floss St	interface of vehicles crossing footpath only.
HP3	M24 8.880D	Hurlstone Park	Railway Street	None
HP4	M24 9.078D	Hurlstone Park	Foord Ave	None
HP5	M24 9.086U	Hurlstone Park	Foord Ave	None
HP6	M24 9.096D	Hurlstone Park	Foord Ave	None
HP7	M24 9.224D	Hurlstone Park	Keir Ave	None
HP8	M24 9.235U	Hurlstone Park	Kilbride St	To Be confirmed in Revision 4, prior to use.
HP9	M24 9.516D	Hurlstone Park	Hurlstone Ave	interface of vehicles crossing footpath only.

HP10	M24 9.546D	Hurlstone Park	Hutton Street	None
HP11	M24 9.581D	Hurlstone Park	Hutton St	None
HP12	M24 9.731U	Hurlstone Park	Church St	To Be confirmed in Revision 4, prior to use.
HP13	M24 9.762D	Hurlstone Park	Hutton St (At Sugar House Rd)	None
HP14	M24 9.804D	Hurlstone Park	Church St	vehicles will conflict with any pedestrian crossing movements on the Church Street footbridge
HP15	M24 9.808U	Hurlstone Park	Church St	None
CB1	M24 10.300D	Canterbury	Charles St	vehicles may conflict with pedestrian activity due to adjacent off-street car park
CB2	M24 10.300D	Canterbury	20 Charles St	vehicles may conflict with pedestrian activity due to adjacent off-street car park
CB3	M24 10.331U	Canterbury	Broughton St (Opp John St)	interface of vehicles crossing footpath only
CB4	M24 10.440D	Canterbury	Charles St	interface of vehicles crossing footpath only
CB5	M24 10.720D	Canterbury	Wairoa St	interface of vehicles crossing footpath only. Gate is noted to be adjacent to high pedestrian activity attractors (Tasker Park Playground, Cooks River Path and Canterbury Ice Rink)
CB6	M24 10.833D	Canterbury	South Parade (Opp Wonga)	vehicles may conflict with pedestrian activity due to adjacent car parking spaces
CB7	M24 11.282D	Canterbury	South Parade (Opp Park)	vehicles may conflict with pedestrian activity due to adjacent car parking spaces
CB8	M24 11.282D	Canterbury	South Parade (Opp Duke)	vehicles may conflict with pedestrian activity due to adjacent off-street car park
CB9	M24 11.316U	Canterbury	North Pde	interface of vehicles crossing footpath only
CP1	M24 11.827U	Campsie	Wilfred Ave / Assets St	None
CP2	M24 11.883U	Campsie	Wilfred Ave	None
CP3	M24 11.977D	Campsie	Lilian St	interface of vehicles crossing footpath only
CP4	M24 12.408D	Campsie	Lillian Lane	No pedestrian interface
CP5	M24 12.696U	Campsie	Hall St	No pedestrian interface
CP6	M24 13.020U	Campsie	Redman Parade	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
BE1	M24 13.193D	Belmore	Tobruk Ave Car Park	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
BE2	M24 13.374D	Belmore	Bridge Rd	To Be confirmed in Revision 4, prior to use.
BE3	M24 13.701U	Belmore	Railway Parade	No pedestrian interface
BE4	M24 13.701U	Belmore	Railway Parade - Station	To Be confirmed in Revision 4, prior to use.
BE5	M24 13.827D	Belmore	The Boulevard	To Be confirmed in Revision 4, prior to use.
BE6	M24 13.930U	Belmore	Railway Pde	To Be confirmed in Revision 4, prior to use.

BE7	M24 14.086D	Belmore	The Boulevarde	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
BE8	M24 14.192U	Belmore	Railway Parade	To Be confirmed in Revision 4, prior to use.
BE9	M24 14.229U	Belmore	Railway Parade	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
LA1	M24 14.530U	Lakemba	Railway Pde	Adjacent pedestrian access to car parking area
LA2	M24 14.533D	Lakemba	The Boulevarde	Vehicles crossing footpath
LA3	M24 14.756U	Lakemba	Railway Pde	None
LA4	M24 14.861U	Lakemba	Railway Pde	None
LA5	M24 14.867U	Lakemba	Railway Pde	None
LA6	M24 14.943D	Lakemba	The Boulevarde	Vehicles crossing footpath
WP1	M24 15.377U	Wiley Park	Shadforth St	Vehicles crossing footpath
WP2	M24 15.440D	Wiley Park	The Boulevarde	Vehicles crossing footpath
WP3	M24 15.730U	Wiley Park	Urunga Parade	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
WP4	M24 15.763D	Wiley Park	The Boulevarde	None
WP5	M24 15.962U	Wiley Park	Urunga Parade	None
WP6	M24 15.986D	Wiley Park	The Boulevarde	None
WP7	M24 16.050D	Wiley Park	The Boulevarde	None
WP8	M24 16.121U	Wiley Park	Urunga Parade	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
WP9	M24 16.259U	Wiley Park	The Boulevarde	None
PB1	M24 16.328U	Wiley Park	Urunga Parade	Adjacent pedestrian access to car parking area
PB2	M24 16.358U	Punchbowl	Urunga Parade	Adjacent pedestrian access to car parking area
PB3	M24 16.599U	Punchbowl	Breust Pl	Vehicles crossing footpath
PB5	M24 16.608D	Punchbowl	South terrace	Adjacent pedestrian access to car parking area
PB6	M24 16.795D	Punchbowl	South Terrace	None
PB7	M24 16.995D	Punchbowl	South Terrace	Vehicles may conflict with pedestrian activity due to adjacent car parking spaces
PB8	M24 17.024U	Punchbowl	Stansfield Ave	Vehicles crossing footpath
PB9	M24 17.254D	Punchbowl	South Terrace	None
PB10	M24 17.363D	Punchbowl	South Terrace	None
PB11	M24 17.642D	Punchbowl	South Terrace	None
PB12	M24 17.962D	Punchbowl	South Terrace	none
PB13	M24 18.058U	Punchbowl	North Terrace	Vehicles crossing footpath
PB14	M24 18.192U	Punchbowl	North Terrace	Vehicles crossing footpath
PB15	M24 18.223D	Bankstown	South Terrace	Vehicles crossing footpath
PB16	M24 18.428D	Bankstown	South Terrace	Vehicles crossing footpath
PB17	M24 18.512D	Bankstown	South Terrace	Vehicles crossing footpath
PB18	M24 18.648U	Bankstown	North Terrace	Vehicles crossing footpath
BA1	M24 18.651D	Bankstown	South Terrace	Vehicles crossing footpath

BA2	M24 18.958U	Bankstown	Marion Street	Adjacent pedestrian access to car parking area
-----	-------------	-----------	---------------	------------------------------------------------

To manage the conflict of trucks and pedestrians/cyclists, one staff member is to stand on any footpaths adjacent to the access gates/driveways. These staff are to hold pedestrians and cyclists while vehicles are entering and exiting the gates. They must be positioned to be easily seen by all road and footpath users. Additionally, “TRUCKS CROSSING FOOTPATH” are to be placed facing footpaths that approach the driveway as per Section 4.6.2.

Any instances of interfacing between construction vehicles and vulnerable road users will be managed by traffic controllers as required. Pedestrians and cyclists will be held by traffic controllers to allow single movements only and then released. Consideration of this will be taken in any design and plan for travel paths.

4.9 Cyclist Management

When there is a temporary reduction in the bicycle facilities (such as parking), replacement facilities must be provided.

Where existing bicycle routes used by cyclists are affected by construction, a condition survey would be carried out to confirm they are suitable for use (e.g. suitably paved and lit), with any necessary modifications to be carried out in consultation with Inner West Council and City of Canterbury-Bankstown Council.

Safe pedestrian and cyclist access must be maintained around Work sites during Construction. In circumstances where pedestrian and cyclist access is restricted or removed due to Construction activities, an alternate route which complies with the relevant standards must be provided and signposted.

4.10 Traffic Modelling

Traffic modelling would only be necessary when long-term changes to the road network are due required due to project works. All road occupancies from SMEW works are short term and would not require modelling.

Traffic modelling can also be used to assess modifications to signal timing or phases in order to optimise the road network performance due to construction vehicles and rail replacement buses. Any modifications to signals will require consultation and approval from RMS and TTLG. SMEW heavy vehicle volumes are relatively low and so it is not considered necessary to modify signals

4.11 Dilapidation Report

One of the hold points for this project is the use of local roads by heavy vehicles. The release of the hold point is the road dilapidation report, completed by a professional nominated by the principal contractor.

Before any local road is used by a heavy vehicle for the purposes of Construction of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the relevant council(s) within four (4) weeks of completion of the survey and at least two (2) weeks before the road is used by heavy vehicles associated with the Construction of the CSSI.

If damage to local roads occurs as a result of Construction of the CSSI, the Proponent must either:

- compensate the relevant road authority for the damage so caused. The amount of compensation may be agreed with the relevant road authority
- rectify the damage to restore the road to at least the condition it was in pre-Construction as identified in the Road Dilapidation Report(s)

4.12 Public Transport

Modification of existing bus stops, or implementation of new stops and alterations to service patterns, would be carried out by Sydney Metro in consultation with the Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and Canterbury-Bankstown councils, and bus operators.

Current plans for full road closures do not affect existing bus routes.

Partial road closures on existing bus routes are to be designed so standard buses are able to successfully navigate the roadworks. This is to be verified with swept path analysis.

4.13 Road Safety Audit

A Road Safety Audit has not been undertaken for these works.

Any requested road safety audits will be undertaken in line with TfNSW RSA guidelines.

5. Traffic Controllers

5.1 Traffic Controllers

All traffic controllers shall hold Roads and Maritime Services (RMS) Traffic Controller ‘Blue Card’ and wear the required Personal Protective Equipment (PPE) at all times (e.g. helmets, safety boots and high visibility vests, etc.).

During all work on site, the following precautions shall be taken:

- A traffic controller shall direct traffic and work vehicles using a “STOP/SLOW” sign
- All trucks involved in the work shall follow a set route to minimise traffic disruption.

Where JHLOR JV works require vehicles to be stopped or slowed down to navigate through or past the work site then it shall be necessary to use qualified RMS Blue Card Holding Traffic Controllers. The selected Traffic Controller Subcontractor will be responsible for the management of all traffic throughout the delivery phase.

A Traffic Controller is a person who has graduated from an accredited course to Traffic Controller. Traffic controllers are also required to maintain a log book of traffic control related information. Traffic Controllers are required to implement the approved TCP for the subject work area. All activities should be conducted in accordance with Section 4. A summary of expectations of traffic controllers is listed in Section 5.1 below.

5.1.1 Use of Traffic Controllers

Some typical situations where traffic controllers can be used are shown in Table below

Situation	Purpose
One Lane of a two-lane/two-way road is closed	Restrict traffic flow to a single direction and alternate direction of flow over available width of carriageway
Conditions at the work site are such that low speed operations are essential.	Warn or slow down traffic
Plant of machinery regularly crosses or enters and existing road.	Avoid conflict between plant/machinery and road traffic

Sight distance to the worksite is limited.	Control and warn motorists of the presence of work machinery and/or personnel
--------------------------------------------	-------------------------------------------------------------------------------

5.1.2 [Number of Traffic Controllers](#)

One (1) Traffic Controller may be used operating alone with a STOP/SLOW bat and any other relevant signs provided that it will be utilised only for management of pedestrians/cyclists on footpath.

Two (2) or more Traffic controllers equipped with two-way radios should be used for all other conditions.

5.1.3 [Traffic Controller\(s\) Role and Responsibility](#)

- Ensure all relevant signs and devices are in place before starting traffic control
- Wear high visibility clothing and carry their traffic control identification
- Maintain an approved logbook to record experience gained as a trainee Traffic Controller
- Not obstruct drivers’ view of or be partially hidden by other road signs and devices
- Give definite and clear signals
- When two traffic controllers are used, be visible to one another or have radio communication so the flow of traffic from each direction can be coordinated
- Traffic will be held only to allow single HV movements to be made and then released
- Follow all other relevant procedures and requirements contained in the relevant TCP or JSA/SWMS for the activity undertaken.

6. **Footpaths**

6.1 **Pedestrian Considerations**

Refer to Section 4.8.2

6.2 **Pedestrian Safety Points**

The following pedestrian safety points should be included in the final control measures by the JHLOR JV supervisor. These points should be observed before the work is commenced. This is not an exhaustive list and should be updated by the supervisor according to the circumstances at the work site.

6.2.1 [All pedestrians](#)

- Always look at the pedestrian's route
 - Routes are free of any slip or trip hazards
 - Pedestrians safely negotiate the work site
 - Pedestrians can safely negotiate any “squeeze” points in and around the work site.
- Check that the pedestrians’ routes are continuous through/next to the work sit
- Determine the most applicable time of the day to conduct the works taking into account both normal and peak hour times
- Determine what is the most appropriate means for pedestrians to negotiate (through, past or around) the worksite

- Where applicable ensure any barriers erected do not force pedestrians to cross at an inappropriate location.

6.2.2 Elderly Pedestrians

- Travel path is relatively smooth and clear of overhanging foliage
- The work site adequately illuminated.

6.2.3 Young Pedestrians

- Barriers have been erected to guide children past or through the work site
- Travel paths remain continuous through the scheme
- Ensure no road signs/devices obstruct the vision of or visibility to younger pedestrians
- Manage parking of JHLOR JV vehicles to maximise the sight lines.

6.2.4 Intoxicated Pedestrians

- Assess whether there is potential for intoxicated pedestrians in the area
- Ensure appropriate barriers in place to guide them past or through the work site
- Ensure drivers given every chance of seeing pedestrians
- Manage parking of JHLOR JV vehicles to maximise the sight lines.

6.2.5 People with Disabilities or Prams

- Ensure the work site be identified by visually impaired people
- The travel path must be sufficient to cater for wheelchairs, prams, etc.

7. Consultation with Stakeholders

7.1 Notifications

Under CoA E46, the Proponent must establish a Traffic and Transport Liaison Group(s) (TTLGs) to inform traffic and transport management measures during Construction and Operation of the CSSI. Management measures must be coordinated with the RMS following consultation with the Sydney Coordination Office the Relevant Roads Authority.

The TTLG must comprise representatives from the Relevant Road Authority(ies), transport operators (including bus and taxi operators) and emergency services as required. The TTLG must be consulted to inform preparation of the Construction Traffic Management Plan(s).

Project monthly and activity specific notifications will include details of the type and extent of work being undertaken as well as the expected impact to traffic and transport. Any changes to conditions will be notified via notification and email at least seven days before changes to traffic and access arrangements are made.

Significant traffic management changes, detours and traffic disruptions will be advertised in local newspapers at least seven days before any change occurs.

Copies of project notifications will also be sent to Inner West Council Council via (council@innerwest.nsw.gov.au), and Canterbury-Bankstown (council@cbc.city.nsw.gov.au).

Any changes made to the public domain must be submitted to the Inner West Council, which will be referred to the Local Traffic Committee.

7.2 Community

The community would be notified in advance of proposed road and pedestrian network changes through appropriate forms of community notification.

The CCS outlines the JHLOR JV's approach to managing communications and engagement during design and construction of the SMEW upgrade as part of the Sydney Metro City & Southwest program of work.

This CCS describes the engagement approach, processes, procedures and tools that will be used to provide timely, accurate and relevant information to the community. The CCS aims to maximise stakeholder and community understanding of the project activities, objectives and benefits, timing of potential impacts and available mitigation measures.

A number of communications tools will be used to notify the community of any upcoming changes to traffic conditions that have the potential to impact them, including:

- Monthly and specific notifications
- Traffic alert emails
- Variable Message Signs
- Static signage
- Advertisements
- Sydney Metro website
- Sydney Metro social media
- Doorknocks and other meetings.

Access to existing properties and buildings would be maintained at all times and any temporary changes or closures only implemented in consultation with and following agreement from property owners.

Some of the mitigation measures include:

- Proactively advising community of upcoming work to ensure they are fully informed of potential impacts
- Providing early notification of changes and one on one meetings if required
- Ensuring the community understands how they can find out more information and who to contact in case they have an enquiry or complaint
- Develop communication and way finding strategies for people with reduced visibility, people from non-English speaking backgrounds and for people with a disability
- Provide traffic management signage to safely direct vehicles and pedestrians around the construction site • Provide timely and effective responses to complaints and enquiries
- Use of social media for long term / permanent changes.

The EIS states that Transport for NSW would undertake an extensive community awareness and information campaign before changes to public transport services are implemented. This would include a range of communication activities such as:

- Information at stations
- Wayfinding signage
- Clearly marked bus stop locations
- Letter box drops
- Web based information and transport 'app' where changes to travel are found in a single place
- Information via 131 500
- Advertising in local papers
- Email information bulletins.

7.3 Businesses

The Sydenham Metro upgrade and Southwest Metro Corridor works Business Management Plan (SMCSWSSJ-JHL-WSS-CL-PLN-000024) (BMP) identifies businesses potentially affected by the Sydenham Metro upgrade work and Southwest Metro Corridor works, and proposes communication and engagement strategies to mitigate impacts and encourage cooperation. The BMP is a sub-plan of the Community Communications Strategy (CCS).

This BMP has been prepared in accordance with the Transport for NSW's (TfNSW) Sydney Metro City & Southwest Overarching Community Communications Strategy (OCCS) that outlines TfNSW's policies and instructions relating to managing engagement and ongoing consultation with business owners, the Ministers' Conditions of Approval (CoA) and the principles of best practice.

The BMP outlines how the JHLOR JV will consult with local businesses regarding impacts from temporary changes to vehicle access and/or increased road traffic, temporary changes to pedestrian access and temporary changes or closure of nearby parking.

7.4 Special Events

Due to the large scope of the project, there is potential that there may be conflicts between special events and project work. JHLOR JV will liaise with Inner West Council and City of Canterbury-Bankstown Council to coordinate work around events. If any special events are planned, works will be coordinated with those events and any specific road closures. For special events that require specific traffic and pedestrian management, measures would be developed and implemented in consultation with Transport for NSW, Sydney Coordination Office, Roads and Maritime Services, the Inner West and City of Canterbury-Bankstown councils, and the organisers of the event.

The possession work when Temporary shutdowns occur;

- Monday, 28 June 2021 to Sunday, 11 July 2021
- Saturday, 26 December 2021 to Sunday, 9 January 2022
- Monday, 26 December 2022 to Sunday, 8 January 2023

are to be treated as a special event in terms of the coordination that is needed.

Appendix A – Site Plan

Appendix B – Heavy Vehicle Routes

	Gate	Arrival Route	Departure Route
SY1	M24 6.001U	via Marrickville Road, travel left onto Fraser Park internal road, left into car park and access gate.	via access gate to car park, travel right onto Fraser Park internal road, right onto Marrickville Road, and then left onto Buckley Street
SY3	M24 6.335U	via Marrickville Road turn right onto Victoria Road and then right into access gate	via access gate, travel left onto Victoria Road, and then left onto Marrickville Road.
MA1	M24 6.718D	via Sydenham Road, travel right onto Illawarra Road, right onto Warburton Lane, right onto Unnamed Lane and then through into access gate	via access gate, travel through onto Unnamed Lane, left onto Warburton Lane, right onto Illawarra Road
MA3	M24 7.338D	via Illawarra Road, travel left onto Marrickville Road, left onto Livingstone Road, reverse onto Randall Street (traffic control) and then reverse into access gate.	via access gate, travel through onto Randall Street and then left onto Livingstone Road.
MA4	M24 7.546D	From Marrickville Road, left onto Livingstone Road, right onto Albermarle Street, left onto Kayes Avenue E and then through into access gate.	via access gate, travel through onto Kayes Avenue E, right onto Albermarle St, and then left onto Livingstone Road.
DU2	M24 8.038D	via Wardell Road, travel right onto Ewart Street and then right into access gate.	via access gate, travel left onto Ewart Street and then left onto Wardell Road.
DU3	M24 8.157D	via Wardell Road, travel right onto Ewart Street and then right into access gate.	via access gate, travel left onto Ewart Street and then left onto Wardell Road.
DU4	M24 8.159U	via Wardell Road, travel right onto Ewart Street, turn right into Terrace Rd and then right into access gate.	via access gate, travel left onto Terrace Rd, left onto Ewart Street and then left onto Wardell Road.
DU5	M24 8.229D	via Wardell Road, travel right onto Ewart Street and then right into access gate.	via access gate, travel right onto Ewart Street, through onto Floss Street, right onto Crinan Street and then right onto Canterbury Road
DU6	M24 8.291U	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
DU7	M24 8.485D	via Canterbury Road, travel right onto Crinan Street, left onto Floss Street, left into Garnet St and then right into access gate	via access gate, travel right onto Garnet Street (or through to Ewart Street) and then left onto New Canterbury Road
DU8	M24 8.501D	via Canterbury Road, travel right onto Crinan Street, left onto Floss Street, left into Garnet St and then left into access gate	via access gate, travel left onto Garnet Street (or through to Ewart Street) and then left onto New Canterbury Road
HP2	M24 8.880D	via Canterbury Road, travel right onto Crinan Street, left onto Floss Street and then left into access gate or stop kerbside next to access gate.	via Floss Street if stopped at kerbside, continue on Floss Street, left onto Garnet Street (or through to Ewart Street) and then left onto New Canterbury Road
HP3	M24 8.880D	via Canterbury Road, travel right onto Crinan Street, right onto Duntroon Street, right onto Commons Street, left onto Hopetoun Street, right onto Burnett Street, right onto Railway Street and then left into access gate.	via access gate, travel right onto Railway Street, left onto Burnett Street, left onto Hopetoun Street, right onto Commons Street, left onto Duntroon Street, left onto Crinan Street and then right onto Canterbury Road. One parking space to be removed from east side of Railway Street

HP4	M24 9.078D	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
HP5	M24 9.086U	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
HP6	M24 9.096D	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
HP7	M24 9.224D	via Canterbury Road, travel right onto Crinan Street, right onto Duntroon Street, right onto Commons Street, left onto Hopetoun Street, right onto Burnett Street, left onto Keir Avenue and then right into access gate	via access gate, travel left onto Keir Avenue, right onto Burnett Street, left onto Hopetoun Street, right onto Commons Street, left onto Duntroon Street, left onto Crinan Street and then right onto Canterbury Road.
HP8	M24 9.235U	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
HP9	M24 9.516D	via Canterbury Road, travel right onto Crinan Street, right onto Duntroon Street, right onto Commons Street, left onto Hopetoun Street, right onto Burnett Street, left onto Keir Avenue, right onto Hurlstone Avenue and right into gate.	via access gate, travel left onto Hurlstone Avenue, left onto Keir Avenue, right onto Burnett Street, left onto Hopetoun Street, right onto Commons Street, left onto Duntroon Street, left onto Crinan Street and then right onto Canterbury Road.
HP10	M24 9.546D	via Canterbury Road, travel right onto Crinan Street, right onto Duntroon Street, right onto Commons Street, left onto Hopetoun Street, right onto Burnett Street, left onto Keir Avenue, right onto Hurlstone Avenue, right onto Hutton Street and right into gate	via access gate, travel left onto Hutton Street, left onto Melford Street, left onto Crinan Street and then right onto Canterbury Road.
HP13	M24 9.762D	via Canterbury Road, travel right onto Crinan Street, right onto Melford Street, right onto Hutton Street and then right into access gate.	via access gate, travel left onto Hutton Street, left onto Melford Street, left onto Crinan Street and then right onto Canterbury Road.
HP14	M24 9.804D	via Canterbury Road, travel right onto Crinan Street, right onto Melford Street, right onto Hutton Street, turnaround near Access M and then reverse into access gate.	via access gate, travel through onto Hutton Street, left onto Melford Street, left onto Crinan Street and then right onto Canterbury Road
CB1	M24 10.300D	via Canterbury Road, travel left onto Charles Street and then right into access gate.	via access gate, travel left onto Charles Street and then left onto Canterbury Road.
CB2	M24 10.300D	via Canterbury Road, travel left onto Charles Street and then right into access gate.	via access gate, travel left onto Charles Street and then left onto Canterbury Road.
CB3	M24 10.331U	Via Canterbury Road, travel left onto Broughton Street and the left into access driveway and then down to access Gate	Via access gate, down the access driveway and then turn right out of driveway onto Broughton Street and then left onto Canterbury Road.
CB4	M24 10.440D	via Canterbury Road, travel left onto Charles Street and then right into access gate.	via access gate, travel left onto Charles Street and then left onto Canterbury Road.
CB5	M24 10.720D	via Canterbury Road, travel left onto Wonga Street, right onto S Parade, right into Wairoa Street, and then reverse into Cooks River Path and access gate (traffic control).	via access gate and Cooks River Path, travel left onto Wairoa Street, left onto Wonga Street and then right onto Canterbury Road.

CB6	M24 10.833D	via Canterbury Road, travel left onto Wonga Street, right onto S Parade and then left into access gate or stop kerbside next to access gate.	via S Parade or access gate, travel through or left onto S Parade, right onto Wairoa Street, left onto Wonga Street and then right onto Canterbury Road.
CB7	M24 11.282D	via Canterbury Road, travel right onto Park Street, right onto S Parade and then left into access gate or stop kerbside next to access gate (larger vehicles).	via S Parade or access gate, travel through or left onto S Parade, right onto Wairoa Street, left onto Wonga Street and then right onto Canterbury Road.
CB8	M24 11.282D	via Canterbury Road, travel right onto Park Street, left onto S Parade and then right into access gate.	via access gate, travel left onto S Parade, right onto Wairoa Street, left onto Wonga Street and then right onto Canterbury Road
CB9	M24 11.316U	Via Canterbury Road, travel left onto Charles Street and then right into access gate.	Via access gate, travel left onto Charles Street and then left onto Canterbury Road.
CP1	M24 11.827U	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
CP3	M24 11.977D	via Canterbury Road, travel left onto Thomcraft Parade, right onto Loftus Street, right onto Evaline Street, left onto Loch Street, right onto Anglo Road, left onto Carrington Square, left onto Carrington Street, right onto Lilian Street and then left into access gate.	via access gate, travel right onto Lilian Street, left onto Carrington Street, left onto Carrington Square, left onto Anglo Road, left onto Loch Street, right onto Evaline Street, left onto Loftus Street, continue onto Thomcraft Parade and then left onto Canterbury Road.
CP4	M24 12.408D	via Canterbury Road, travel northbound on Thomcraft Street, through to Loftus Street, left onto Lilian Street and right into access gate.	via access gate, travel eastbound on Lilian Street, right onto Loftus Street, through to Thomcraft Street, and right onto Canterbury Road
CP5	M24 12.696U	To Be confirmed in Revision 4, prior to use.	To Be confirmed in Revision 4, prior to use.
CP6	M24 13.020U	via Burwood Road, travel eastbound on Redman Parade, and left into access gate.	via access gate, travel westbound on Redman Parade, and left onto Burwood Road
BE1	M24 13.193D	via Burwood Road, travel eastbound on Tobruk Avenue, left into car park, and through into access gate.	via access gate, car park, turn left into Tobruk Avenue, right onto to Acacia Lane, right onto Leylands Parade, left onto Burwood Road.
BE3	M24 13.701U	via Burwood Road, travel westbound on Lakemba Street, left onto Peel Street, left onto Railway Parade, and right into access gate.	via access gate, left onto Railway Parade, right onto Peel Street, right onto Lakemba Street, right onto Burwood Road.
BE4	M24 13.701U	via Burwood Road, travel westbound on Lakemba Street, left onto Haldon Street, left onto Railway Parade, right into access gate	via access gate, left onto Railway Parade, left onto Haldon Street, right onto Canterbury Road.
BE5	M24 13.827D	via King Georges Road, travel eastbound on The Boulevarde, left into access gate.	via access gate, right onto The Boulevarde, onto King Georges Road.
BE7	M24 14.086D	via King Georges Road, travel eastbound on The Boulevarde, left into access gate.	via access gate, right onto The Boulevarde, onto King Georges Road.
BE8	M24 14.192U	via Burwood Road, travel westbound on Lakemba Street, left onto Haldon Street, left onto Railway Parade, right into access gate	via access gate, left onto Railway Parade, left onto Haldon Street, right onto Canterbury Road.
BE9	M24 14.229U	via Burwood Road, travel westbound on Lakemba Street, left onto Haldon Street, left onto Railway Parade, right into access gate	via access gate, left onto Railway Parade, left onto Haldon Street, right onto Canterbury Road.

LA1	M24 14.530U	via Lakemba Street, to Croydon Street, to Railway Parade, into gate.	via gate, to Railway Parade, to Croydon Street, to Lakemba Street.
LA6	M24 14.943D	via King Georges Road, travel eastbound on The Boulevarde, then left into access gate	via access gate, right onto The Boulevarde, then left or right onto King Georges Road
WP1	M24 15.377U	via King Georges Road, travel westbound on Lakemba Street, left onto Shadforth Street, and through into access gate	via access gate, through onto Shadforth Street, right onto Lakemba Street, then left or right onto King Georges Road
WP2	M24 15.440D	via King Georges Road, travel westbound on The Boulevarde, then right into access gate	via access gate, left onto The Boulevarde, then left or right onto King Georges Road
WP3	M24 15.730U	via Punchbowl Road, travel southbound on Cornelia Street, right onto Urunga Parade, left into access gate.	via access gate, right onto Urunga Parade, left onto Cornelia Street, onto Punchbowl Road.
WP5	M24 15.962U	via King Georges Road, travel westbound on Lakemba Street, left onto Cornelia Street, right onto Urunga Parade, then left into access gate	via access gate, right onto Urunga Parade, left onto Cornelia Street, right onto Lakemba Street, then left or right onto King Georges Road
WP6	M24 15.986D	via Punchbowl Road, travel eastbound on The Boulevarde, then left into access gate	via access gate, left onto The Boulevarde, then left or right onto King Georges Road
WP7	M24 16.050D	via Punchbowl Road, travel eastbound on The Boulevarde, then left into access gate	via access gate, left onto The Boulevarde, then left or right onto King Georges Road
WP8	M24 16.121U	via Punchbowl Road, travel southbound on Dudley Street, through into access gate	via access gate, through onto Dudley Street, onto Punchbowl Road.
WP9	M24 16.259U	via King Georges Road, travel westbound on Lakemba Street, left onto Cornelia Street, right onto Urunga Parade, then left into access gate	via access gate, right onto Urunga Parade, left onto Cornelia Street, right onto Lakemba Street, then left or right onto King Georges Road
PB1	M24 16.328U	via King Georges Road, travel westbound on Lakemba Street, left onto Cornelia Street, right onto Urunga Parade, then left into access gate	via access gate, right onto Urunga Parade, left onto Cornelia Street, right onto Lakemba Street, then left or right onto King Georges Road
PB2	M24 16.358U	via King Georges Road, travel westbound on Lakemba Street, left onto Cornelia Street, right onto Urunga Parade, then left into access gate	via access gate, right onto Urunga Parade, left onto Cornelia Street, right onto Lakemba Street, then left or right onto King Georges Road
PB5	M24 16.608D	via Punchbowl Road, travel westbound on South Terrace, right onto Loder Lane, then through into access gate	via access gate, through onto Loder Lane, left onto South Terrace, then left or right onto Punchbowl Road
PB6	M24 16.795D	via Punchbowl Road, travel westbound on South Terrace, then right into access gate	via access gate, left onto South Terrace, then left or right onto Punchbowl Road
PB7	M24.16.995D	via Punchbowl Road, travel northbound on South Terrace, right into access gate.	via access gate, left onto South Terrace, onto Punchbowl Road.
PB8	M24 17.024U	via Wattle Street, right onto Stansfield Avenue, right into access gate.	via access gate, left onto Stansfield Street, right onto Wattle Street,
PB9	M24 17.254D	via Punchbowl Road, travel westbound on South Terrace, then right into access gate	via access gate, left onto South Terrace, then left or right onto Punchbowl Road
PB10	M24 17.363D	via Punchbowl Road, travel westbound on South Terrace, then right into access gate	via access gate, left onto South Terrace, then left or right onto Punchbowl Road
PB11	M24 17.642D	via Punchbowl Road, travel westbound on South Terrace, then right into access gate	via access gate, left onto South Terrace, then left or right onto Punchbowl Road

PB12	M24 17.962D	via Punchbowl Road, travel westbound on South Terrace, then right into access gate	via access gate, left onto South Terrace, then left or right onto Punchbowl Road
PB17	M24 18.512D	via Stacey Street, travel westbound on Stanley Street, right onto Cross Street, left onto Raymond Street, right onto Restwell Street, right onto South Terrace, then left into access gate	via access gate, left onto South Terrace, right onto West Terrace, left onto Raymond Street, Right onto Cross Street, then left or right onto Stacey Street
PB18	M24 18.648U	via Stacey Street, travel eastbound on Wattle Street, right onto North Terrace, then left into access gate	via access gate, right onto North Terrace, left onto Wattle Street, then left or right onto Stacey Street
BA2	M24 18.958U	via Marion Street or Meredith Street, travel eastbound on Marion Street, right onto Depot Place, then through into access gate	via access gate, through onto Depot Place, then left onto Marion Street, then right onto Meredith Street or through onto Marion Street

	Access Gate	Tested Vehicles	Vehicle Usage	Additional Comments / Restrictions
SY1	M24 6.001U	20.0m AV Articulated Vehicle	TBC	None
SY2	M24 6.331D	N/A		
SY3	M24 6.335U	12.5m Heavy Rigid Vehicle (HRV)	TBC	Overruns kerb on access. Note 4.0m height restriction
SY4	M24 6.410D	N/A		
MA1	M24 6.718D	8.8m Medium Rigid Vehicle (MRV)	TBC	TC/parking may be required for all vehicles
MA2	M24 7.194U	N/A		
MA3	M24 7.338D	12.5m HRV	TBC	Traffic Control is required to reverse in from Livingstone Road.
MA4	M24 7.546D	8.8m MRV	TBC	Heavy Rigid cannot Turn out of Alberma
MA5	M24 7.572U	N/A		
MA6	M24 7.685U	N/A		
DU1	M24 7.900D	8.8m MRV	TBC	None
DU2	M24 8.038D	CHECK		To Be confirmed in Revision 4, prior to use.
DU3	M24 8.157D	8.8m MRV	TBC	None
DU4	M24 8.159U	12.5m HRV	TBC	TC/parking may be required for HRV Only
DU5	M24 8.229D	8.8m MRV	TBC	None
DU6	M24 8.291U	CHECK		To Be confirmed in Revision 4, prior to use.
DU7	M24 8.485D	CHECK		To Be confirmed in Revision 4, prior to use.
DU8	M24 8.501D	CHECK		To Be confirmed in Revision 4, prior to use.
HP1	M24 8.801U	N/A		
HP2	M24 8.880D	8.8m MRV	TBC	Drive through only to Exit Garnet St (H-2) - cannot turn HV in corridor.
HP3	M24 8.880D	12.5m HRV	TBC	Parking Space removal required for HRV only.
HP4	M24 9.078D	CHECK		To Be confirmed in Revision 4, prior to use.
HP5	M24 9.086U	CHECK		To Be confirmed in Revision 4, prior to use.

HP6	M24 9.096D	CHECK		To Be confirmed in Revision 4, prior to use.
HP7	M24 9.224D	12.5m HRV	TBC	None
HP8	M24 9.235U	CHECK		To Be confirmed in Revision 4, prior to use.
HP9	M24 9.516D	8.8m MRV	TBC	None
HP10	M24 9.546D	8.8m MRV	TBC	Parking Space removal required for MRV only.
HP11	M24 9.581D	N/A		
HP12	M24 9.731U	N/A		
HP13	M24 9.762D	8.8m MRV	TBC	None
HP14	M24 9.804D	12.5m HRV	TBC	TC required for reverse movement only.
HP15	M24 9.808U	N/A		
CB1	M24 10.300D	12.5m HRV	TBC	None
CB2	M24 10.300D	12.5m HRV	TBC	None
CB3	M24 10.331U	12.5m HRV	TBC	None
CB4	M24 10.440D	N/A		
CB5	M24 10.720D	12.5m HRV	TBC	TC required for reverse entry and tight exit
CB6	M24 10.833D	12.5m HRV	TBC	Parking Space removal required for HRV only.
CB7	M24 11.282D	8.8m MRV	TBC	Parking Space removal required for MRV only.
CB8	M24 11.282D	8.8m MRV	TBC	Parking Space removal required
CB9	M24 11.316U	CHECK		To Be confirmed in Revision 4, prior to use.
CP1	M24 11.827U	CHECK		To Be confirmed in Revision 4, prior to use.
CP2	M24 11.883U	N/A		
CP3	M24 11.977D	12.5m HRV		Remove one parking space next to the gate for MRV. Use alternative route for HRV
CP4	M24 12.408D	8.8m MRV	TBC	None
CP5	M24 12.696U	CHECK		To Be confirmed in Revision 4, prior to use.
CP6	M24 13.020U	12.5m HRV	TBC	None
BE1	M24 13.193D	N/A		
BE2	M24 13.374D	N/A		
BE3	M24 13.701U	12.5m HRV	TBC	Peel Street cannot accommodate simultaneous through movement
BE4	M24 13.701U	8.8m MRV	TBC	None
BE5	M24 13.827D	CHECK		To Be confirmed in Revision 4, prior to use.
BE6	M24 13.930U	N/A		
BE7	M24 14.086D	12.5m HRV	TBC	None
BE8	M24 14.192U	CHECK		To Be confirmed in Revision 4, prior to use.
BE9	M24 14.229U	12.5m HRV	TBC	Left in-left out only at intersection of Railway Parade / Haldon Street
LA1	M24 14.530U	CHECK		To Be confirmed in Revision 4, prior to use.
LA2	M24 14.533D	8.8m MRV	TBC	None

LA5	M24 14.867U	8.8m MRV	TBC	Access via LATM chicane. This was not able to be verified by swept paths due to overhanging vegetation. This movement should be verified separately prior to usage of this haulage route.
LA6	M24 14.943D	8.8m MRV	TBC	None
WP1	M24 15.377U	8.8m MRV	TBC	None
WP2	M24 15.440D	12.5m HRV	TBC	Left in-left out only at intersection of Railway Parade / Haldon Street
WP3	M24 15.730U	12.5m HRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
WP4		CHECK		To Be confirmed in Revision 4, prior to use.
WP5	M24 15.962U	8.8m MRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
WP6	M24 15.986D	12.5m HRV	TBC	None
WP7	M24 16.050D	12.5m HRV	TBC	3t weight restriction on Dudley Street
WP8	M24 16.121U	8.8m MRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
WP9	M24 16.259U	6.4m SRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
PB1	M24 16.328U	8.8m MRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
PB2	M24 16.358U	8.8m MRV	TBC	3t weight restriction on local roads between Punchbowl Road and rail corridor
PB5	M24 16.608D	8.8m MRV	TBC	None
PB6	M24 16.795D	12.5m HRV	TBC	None
PB7	M24 16.995D	12.5m HRV	TBC	None
PB8	M24 17.024U	8.8m MRV	TBC	None
PB9	M24 17.254D	12.5m HRV	TBC	None
PB10	M24 17.363D	12.5m HRV	TBC	None
PB11	M24 17.642D	12.5m HRV	TBC	None
PB12	M24 17.962D	8.8m MRV	TBC	None
PB17	M24 18.512D	12.5m HRV	TBC	None
PB18	M24 18.648U	8.8m MRV	TBC	5m height clearance on North Terrace under Stacey Street bridge
BA2	M24 18.958U	12.5m HRV	TBC	None

Haulage Route Maps

Figure 5 – Access A



Figure 6 – Access B



Figure 7 – Access C



Figure 8 – Access D and E



Figure 9 – Access F, G and W



Figure 10 – Access H-1



Figure 11 – Access I and J



Figure 12 – Access K



Figure 13 – Access L

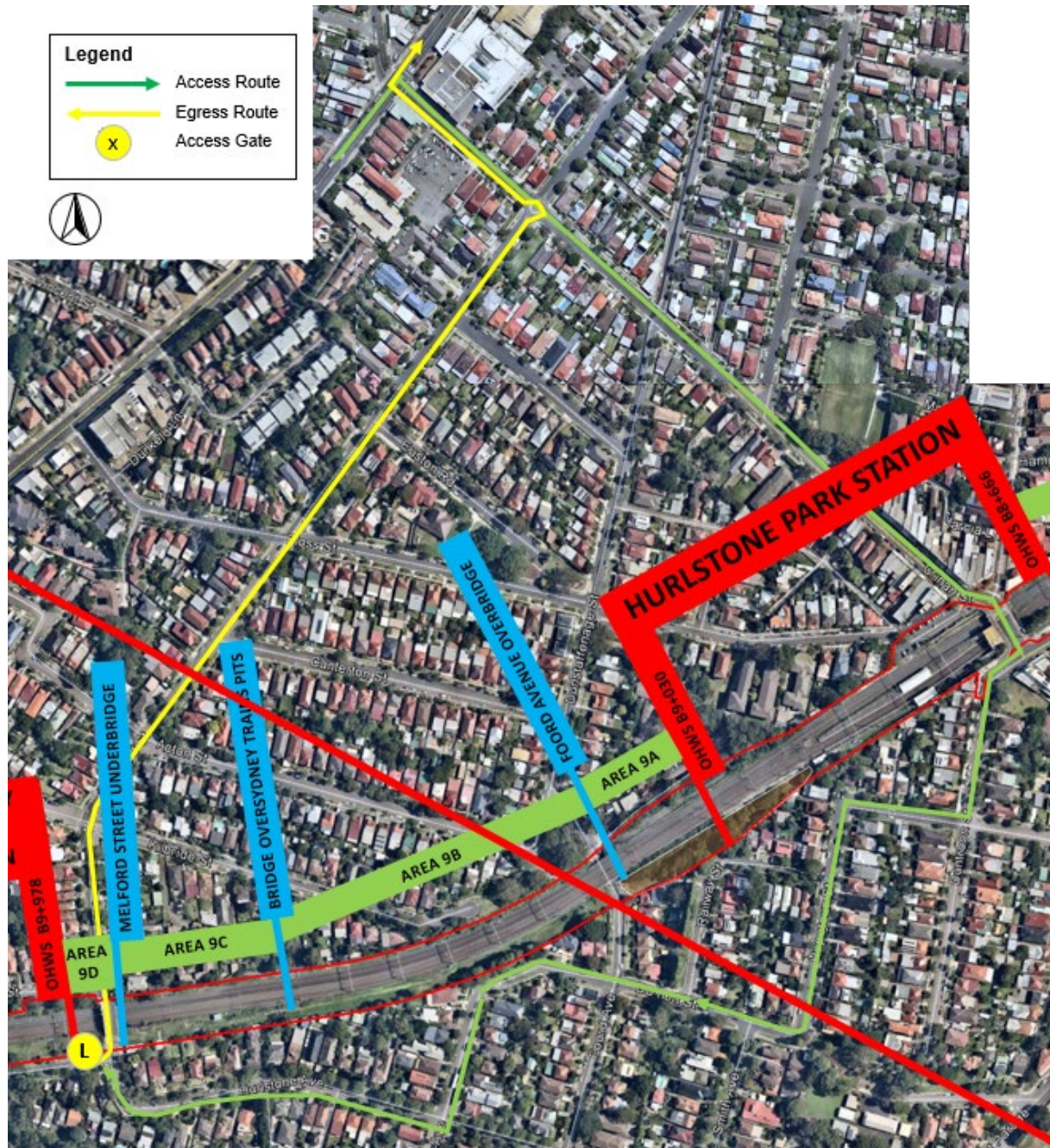


Figure 14 – Access M and N



Figure 15 – Access O, Y & V

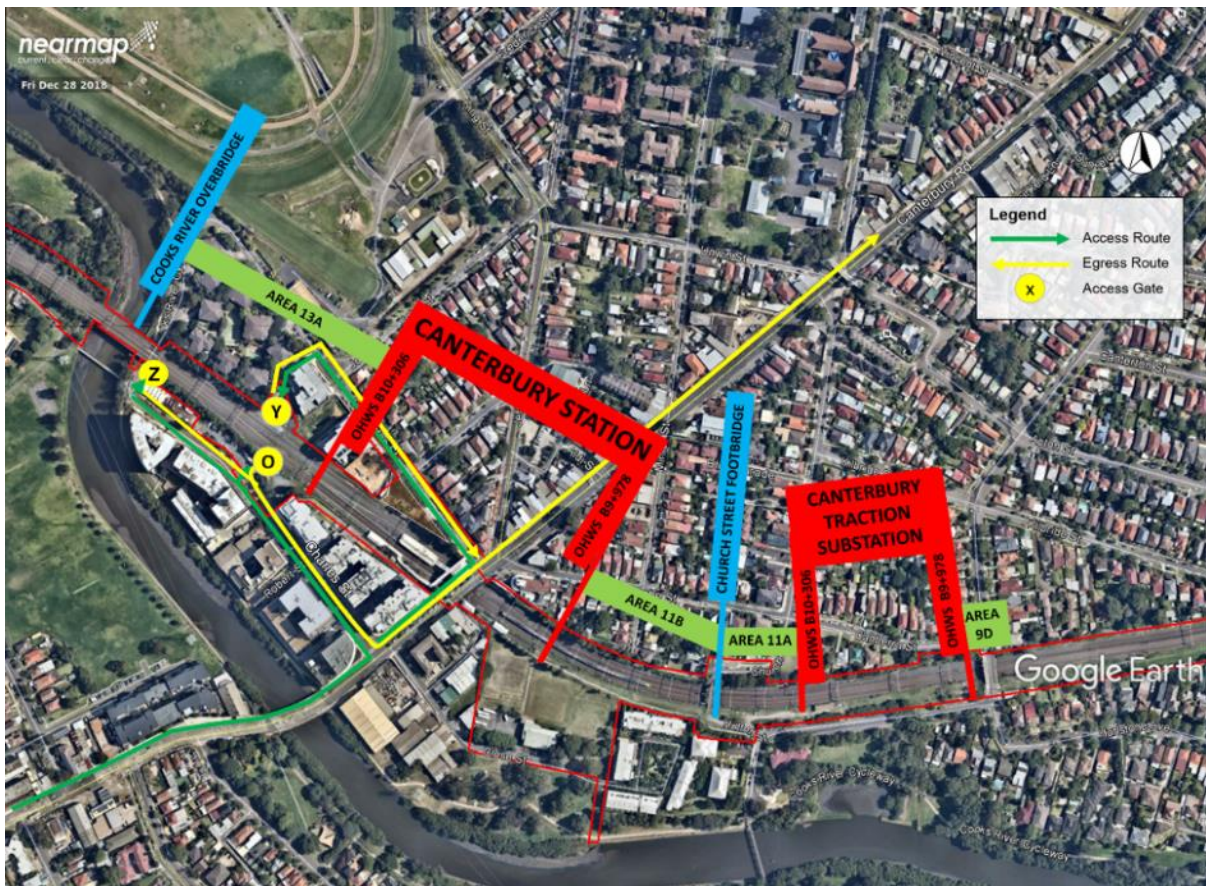


Figure 16 – Access P and Q



Figure 17 – Access R



Figure 18 – Access S



Figure 19 – Access T – Standard route (up to and including MRV vehicles)



Figure 20 – Access T – HRV vehicles only



Figure 21 – Area 16 - Access U – LV vehicles only

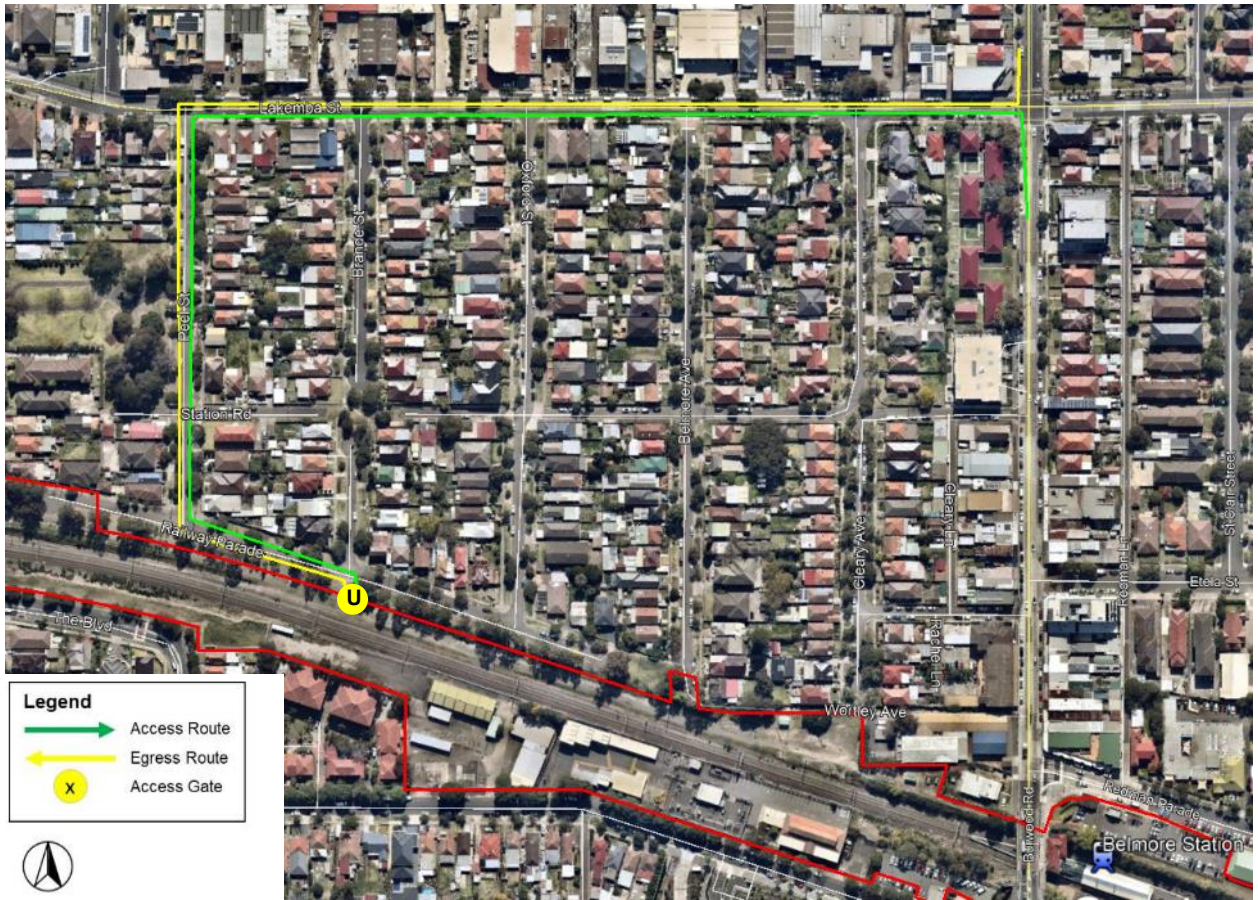


Figure 22 – Victoria Road Underbridge



Figure 23 – Albermarle Street Overbridge



Figure 24 – Terrace Road (Ness Avenue) Underbridge



Figure 25 – Foord Avenue Underbridge



Figure 26 – Charles St Underbridge



Figure 27 – Wairoa Street Underbridge



Figure 28 – Wairoa Street Underbridge

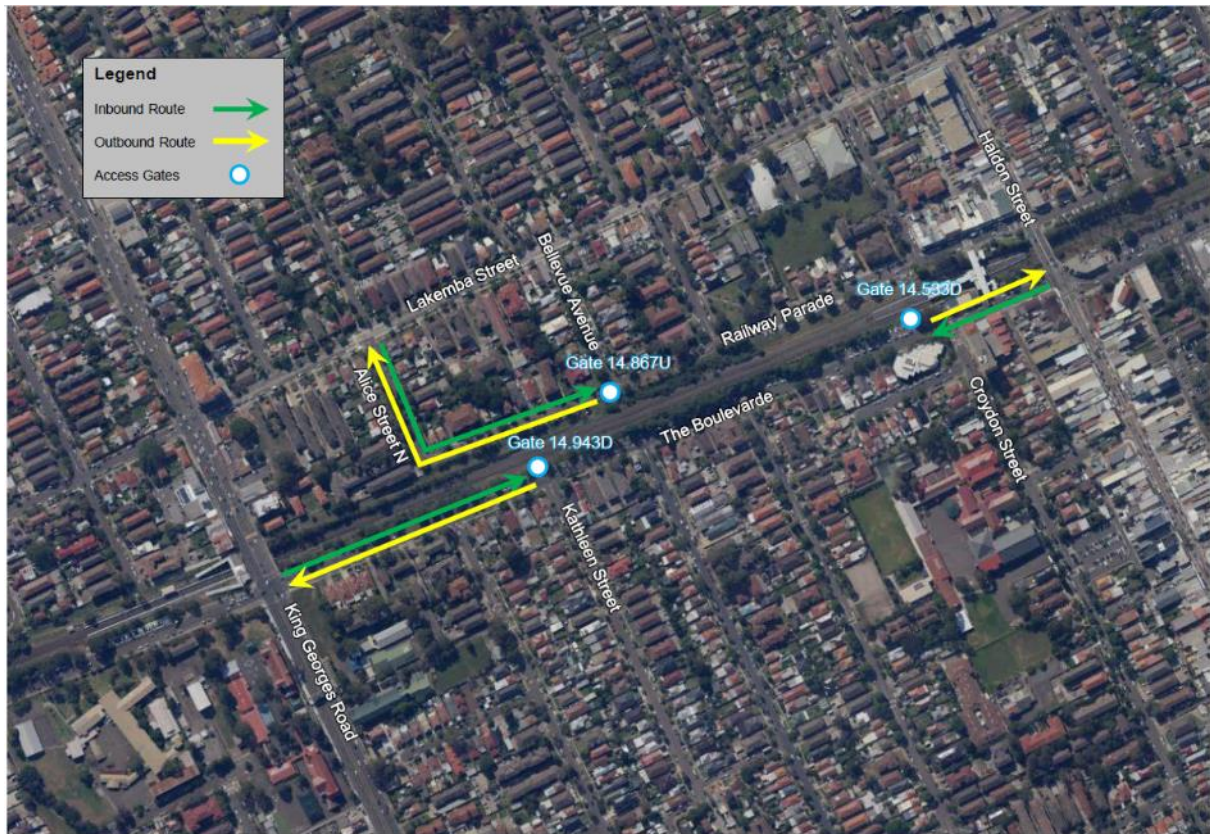


Figure 29 – Wairoa Street Underbridge

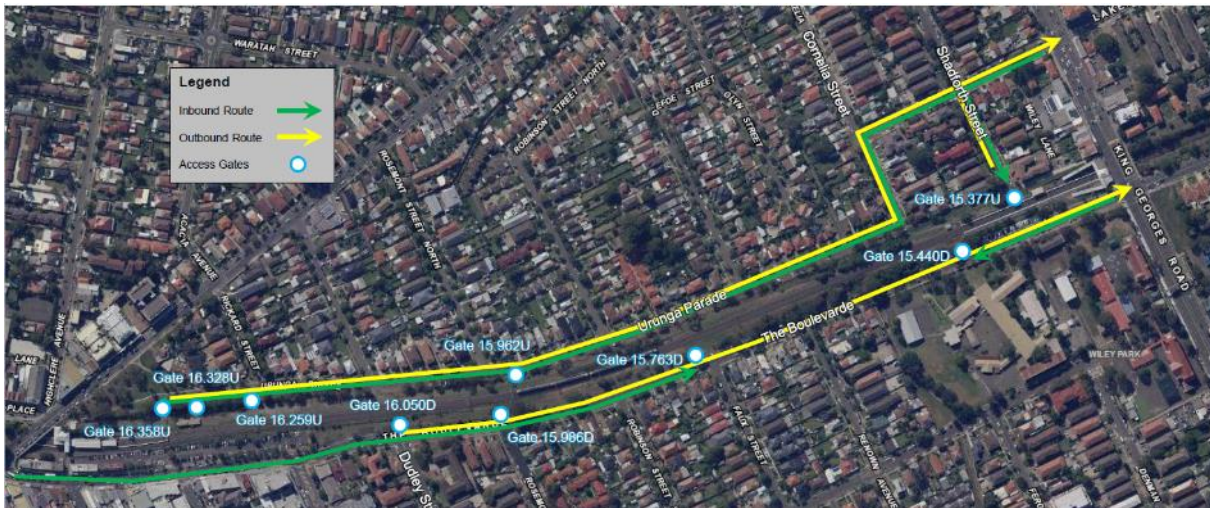


Figure 30 – Wairoa Street Underbridge

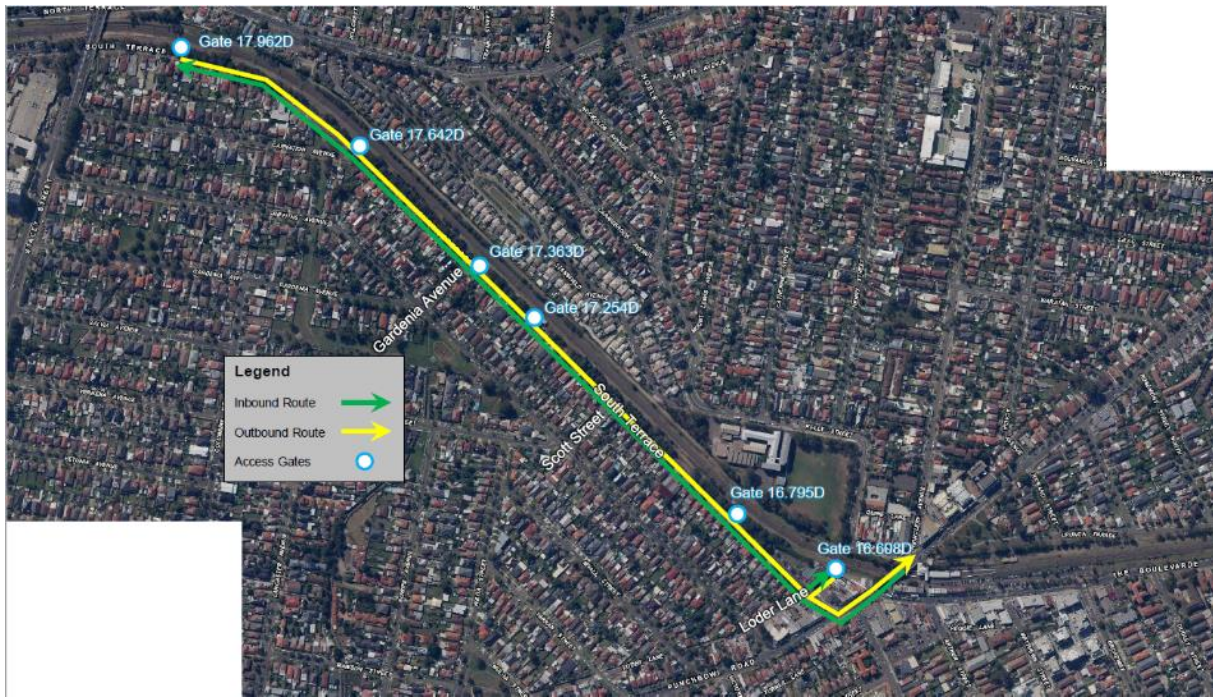
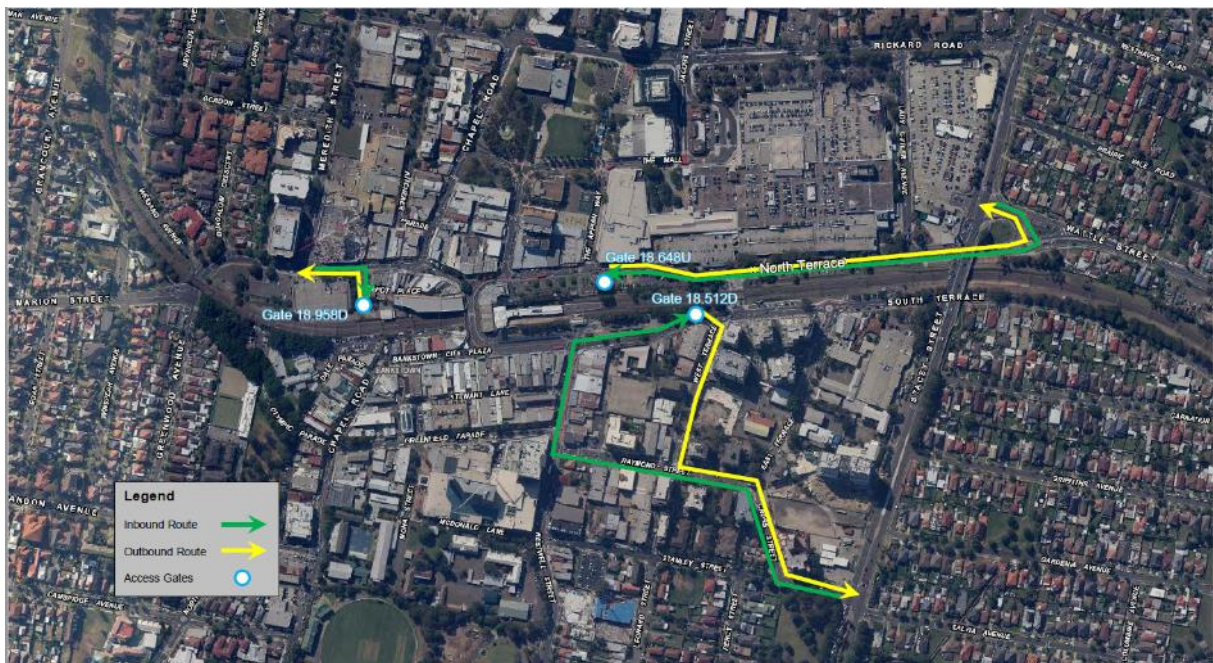


Figure 31 – Wairoa Street Underbridge



Appendix C – Traffic Control Plan Register and Plans

Traffic Control Plan Register

TCP#	TCP Description	LOCATION	FROM	TO	COMMENCING	TRAFFIC CONTROL	WORK	IMPACTS	REV
001	Terrace Rd, Dulwich Hill Gate DU 4 M24 8.159U	Terrace Rd, Dulwich Hill	Hercules St	Ewart St	19 December 2020`	Intermittent stop / slow	Existing rail corridor gate access.	Minimal impact to traffic / where possible deliveries outside peak	Rev 1
002	Shadforth St, Wiley Park Gate WP 1 M24 15.377U	Shadforth St, Wiley Park	Lakemba St	Wiley Lane	19 December 2020	Intermittent stop / slow	Existing rail corridor gate access.	Minimal impact to traffic / where possible deliveries outside peak	Rev 1
003	Breust Pl, Punchbowl	Breust Pl, Punchbowl	Highclere Ave	Kelly St	19 December 2020	Removal of parking	Standing plant -	Minimal impacts to traffic loss of 3 parking spaces	Rev 1
004	Crinan St, Hurlstone Park Gate HP 1 M24 8.901U – TCP Rescinded as DOWNER are occupying Carpark	Crinan St, Hurlstone Park	Duntroon St	Floss St	15 th February 2021	Intermittent stop / slow	Existing carpark / rail corridor gate access.	Minimal impact to traffic / where possible deliveries outside peak	Rev 1 Rev 2
005	The Boulevard, Lakemba Gate BE 7 M24 14.086D	The Boulevard, Lakemba	Dennis St	Taylor St	15 th February 2021	Intermittent stop / slow	Existing rail corridor gate access.	Minimal impact to traffic / where possible deliveries outside peak	Rev 1
006	Wiley Ln, Wiley Park Pedestrian Control	Wiley Lane, Wiley Park	Lakemba St	Stanlea Parade	6 th March 2021	Pedestrian Control	Standing plant -	Minimal impacts to traffic	Rev 1
007	Railway Parade, Lakemba Zone 1 Parking Removal	Railway Parade, Lakemba	Croydon St	Bellevue Ave	15 th February 2021	Removal of parking	Standing plant -	Minimal impacts to traffic loss of 11 parking spaces	Rev 1
008	Railway Parade, Lakemba Zone 2 Parking Removal	Railway Parade, Lakemba	Croydon St	Bellevue Ave	15 th February 2021	Removal of parking	Standing plant -	Minimal impacts to traffic loss of 11 parking spaces	Rev 1

009	Railway Parade, Lakemba Zone 3 Parking Removal	Railway Parade, Lakemba	Croydon St	Bellevue Ave	15 th February 2021	Removal of parking	Standing plant -	Minimal impacts to traffic loss of 11 parking spaces	Rev 1
010	Cornelia St, Wiley Park Truck laydown Area	Urunga Parade, Wiley Park	Cornelia St	Defoe St	15 th February 2021	Removal of parking	Standing plant -	Minimal impacts to traffic Parking on Verge	Rev 1
011	The Boulevard, Lakemba & Railway Parade, Lakemba Culvert Inspection	The Boulevard, Lakemba & Railway Parade, Lakemba	Bellevue Ave & Croydon St	Croydon St & Sproule Street	10 th March 2021	Lane Closure	Contraflow on Night Shift	Minimal impacts to traffic Parking on Verge	Rev 1
012	The Boulevard, Lakemba & Railway Parade, Lakemba NDD Works	The Boulevard, Lakemba & Railway Parade, Lakemba	Bellevue Ave & Croydon St	Croydon St & Sproule Street	24 th March 2021	Removal of parking	Standing plant -	Minimal impact to traffic – Pedestrian Ramp required to allow pedestrians to cross NDD Hose	Rev 1 Updated Rev 2
013	15 Close Street Parking Removal	Close Street, Canterbury	Canterbury Rd	Sugar House Rd	14 th June 2021	Removal of Parking	Standing Plant	Minimal impacts to traffic loss of 10 parking spaces	Rev 3
014	15 Close Street Gate Access	Close Street Canterbury	Canterbury Rd	Sugar House Rd	14 th June 2021	Intermittent stop / slow	Existing gate access.	Minimal impacts to traffic	Rev 3
015	Close Street Canterbury EB Services Connection	Close Street Canterbury	Canterbury Rd	Sugar House Rd	14 th June 2021	Single Lane Closure	Alternating Traffic	Minimal impacts to traffic	Rev 3
016	Close Street Canterbury EB Services Connection	Close Street Canterbury	Sugar House Rd	Canterbury Rd	14 th June 2021	Single Lane Closure	Alternating Traffic	Minimal impacts to traffic	Rev 3
017	Close Street Exiting Canterbury Rd	Canterbury Rd, Canterbury	Broughton Street	Close Street	31 st May 2021	Convey Vehicles	Slow / Control Traffic Speed	Minimal impacts to traffic	Rev 3

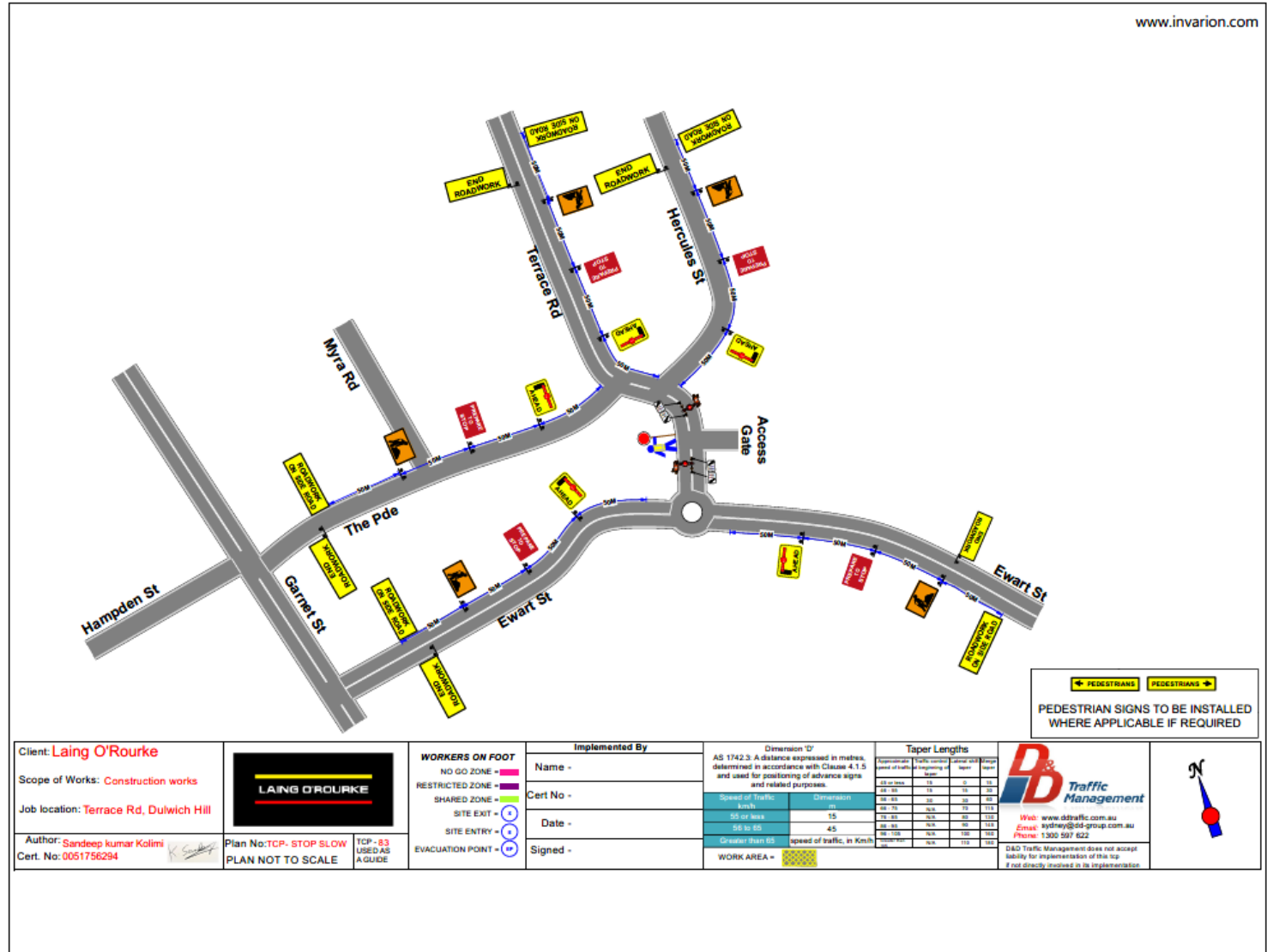
018	South Terrace Access Gate PB6	South Terrace, Puncbowl	Scott Street	Loder Lane	21 st June 2021	Intermittent stop / slow	Existing gate access.	Minimal impacts to traffic	Rev 3
019	North Parade & South Parade Campsie Parking removal for WE Works	South Parade & North Parade	Duke Street Moore Street	Gould Street Browning St	21 st June 2021	Removal of Parking	Standing Plant	Minimal impacts to traffic loss of 20 parking spaces	Rev 3
020	Arthur Stree, Marrickville	Arthur Street, Marrickville	Ann Street		TBA	TBA	TBA	ON HOLD – CLARITY ISSUE	N/A
021	30 School Parade Marrickville NDD works	School Parade, Marrickville	Osgood Ave	Dudley Street	14 th June 2021	Cycle Lane Closure	Standing Plant	Minimal impacts to traffic	Rev 3
022	Ewart Street, Dulwich Hill NDD works	Ewart Street, Dulwich Hill	Terrace Ave	Ewart Lane	14 th June 2021	Lane Closure	Alternating Traffic	Minimal impacts to traffic	Rev 3
023	Lillian Lane, Campsie NDD Works	Lillian Lane, Campsie	Loftus Street	Loch Street	14 th June 2021	Footpath reduced	Standing Plant	Minimal impacts to pedestrians	Rev 3
024	Minter Street, Canterbury NDD works	Minter Street, Canterbury	Tincombe Street	Cul-de-sac	14 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
025	Belmore Oval Underpass NDD Works	Redman Parade, Belmore	Hall Street	Redman Parade	14 th June 2021	Footpath reduced	Standing Plant	Minimal impacts to pedestrians	Rev 3
026	Not Used								N/A
027	The Parade, Dulwich Hill NDD Works	The Parade, Dulwich Hill	Myra Road	Terrace Road	14 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
028	Wilga Avenue, Dulwich Hill NDD works	Wilga Avenue, Dulwich Hill	Wardell Road	Cul-de-sac	14 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
029	Wairoa Street Canterbury, NB NDD Works	Wairoa Street	South Parade	Nowra Street	14 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3

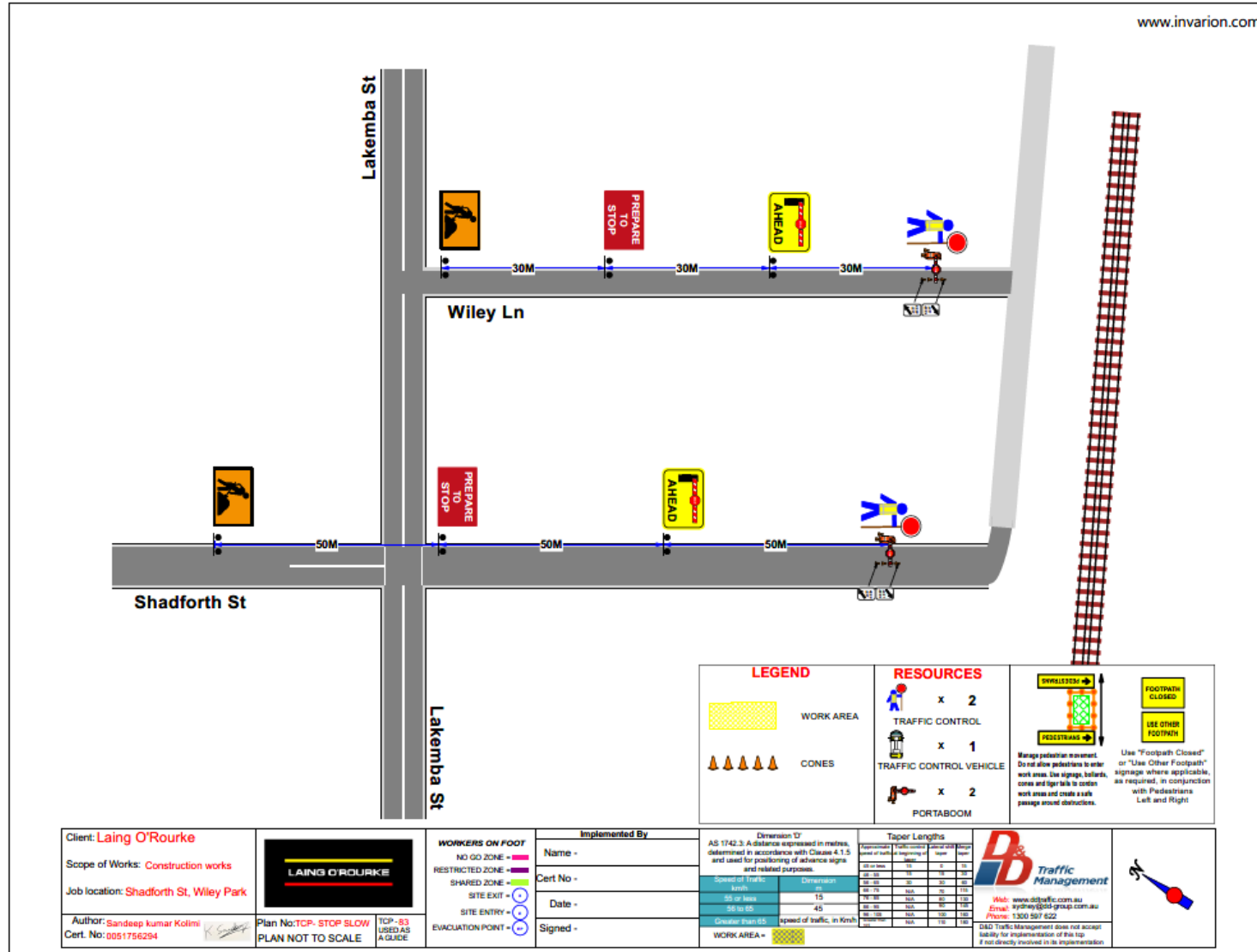
030	Wairoa Street Canterbury, SB NDD Works	Wairoa Street	Nowra Street	South Parade	14 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
031	Albermarle Street, Marrickville Access for ULX	Albermarle Street, Marrickville	Kays Ave East	Challis Ave	5 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
032	South Parade Camspie Trackwork June Shutdown pt1	South Parade & North Parade	Duke Street Moore Street	Gould Street Browning St	21 st June 2021	Removal of Parking / Parking Lane Closures	Contraflow on alternate parking & Travel lanes	Minimal impacts to traffic Loss of 64 parking spaces	Rev 3
033	South Parade Camspie Trackwork June Shutdown pt2	South Parade & North Parade	Duke Street Moore Street	Gould Street Browning St	21 st June 2021	Removal of Parking / Parking Lane Closures	Contraflow on alternate parking & Travel lanes	Minimal impacts to traffic Loss of 37+31 = 68 parking spaces	Rev 3
034	Victoria Rd, Marrickville, SS NB Bridge works	Victoria Rd, Marrickville	Myrtle Street	Queen Street	21 st June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
035	Victoria Rd, Marrickville, SS SB Bridge works	Victoria Rd, Marrickville	Meeks Road	Myrtle street	21 st June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
036	Livingstone Road, Marrickville Pedestrian Mng. NB	Livingstone Road, Marrickville	Randall Street	Marrickville Ave	21 st June 2021	Footpath reduced	Standing Plant	Minimal impacts to pedestrians	Rev 3
037	Livingstone Road, Marrickville Pedestrian Mng. SB	Livingstone Road, Marrickville	Arthur Street	Jersey Street	21 st June 2021	Footpath reduced	Standing Plant	Minimal impacts to pedestrians	Rev 3
038	Livingstone Road, Marrickville Bridge Works. NB	Livingstone Road, Marrickville	Randall Street	Marrickville Ave	12 th July 2021	Parking Lane / Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 12 parking spaces	Rev 3
039	Livingstone Road, Marrickville Bridge Works. SB	Livingstone Road, Marrickville	Arthur Street	Jersey Street	12 th July 2021	Parking Lane / Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 12 parking spaces	Rev 3
040	Livingstone Road, Marrickville Bridge Works. NB June Shutdown	Livingstone Road, Marrickville	Randall Street	Marrickville Ave	28 th June 2021	Parking Lane / Lane Closure	Contraflow on alternate parking & Travel lane	Minimal impacts to traffic Loss of 10 parking spaces	Rev 3

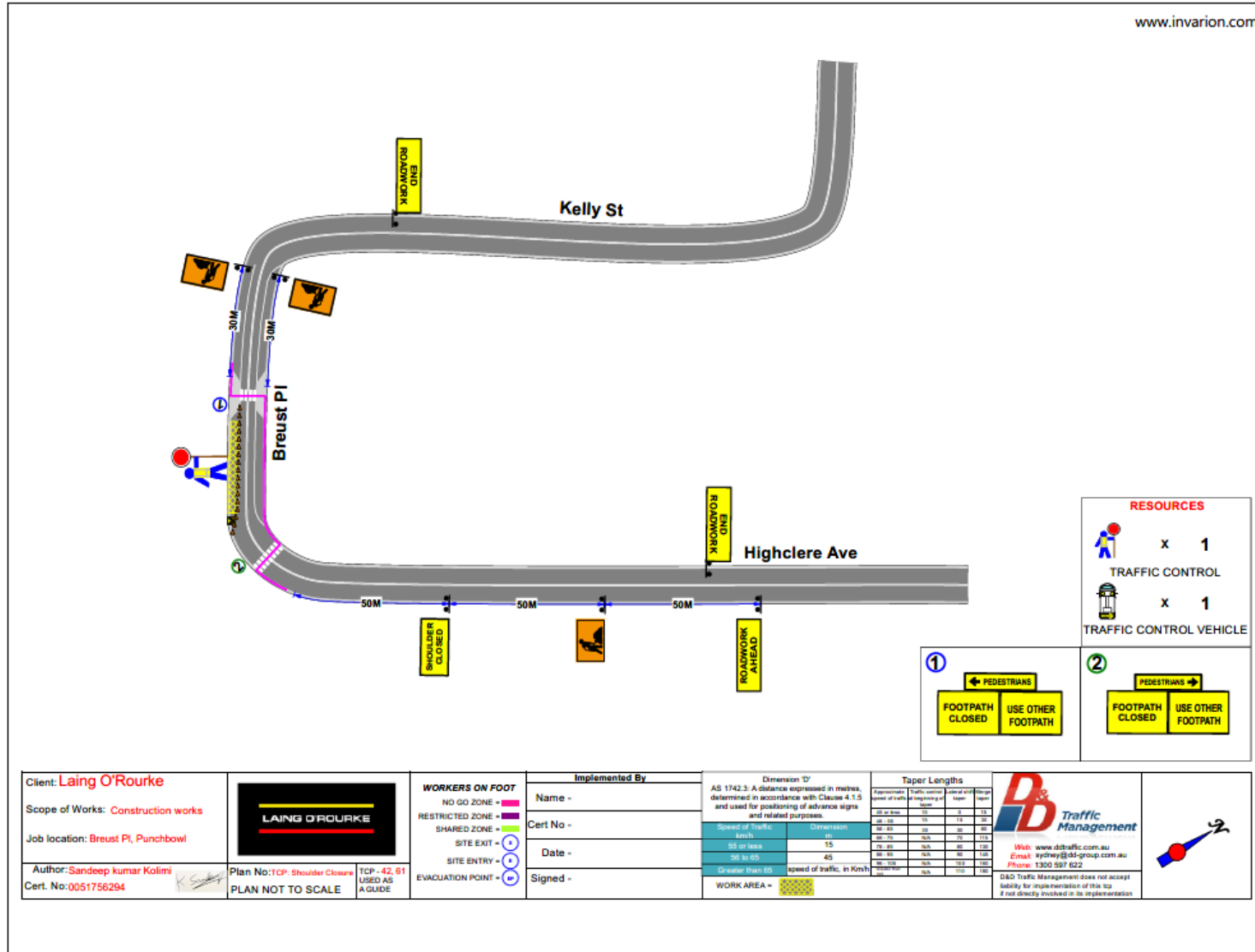
041	Livingstone Road, Marrickville Bridge Works. SB June Shutdown	Livingstone Road, Marrickville	Arthur Street	Jersey Street	28 th June 2021	Parking Lane / Lane Closure	Contraflow on alternate parking & Travel lane	Minimal impacts to traffic Loss of 10 parking spaces	Rev 3
042	Albermarle Street, Marrickville Bridge Works EB	Albermarle Street, Marrickville	Challis Ave	Kays Ave East	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 6 parking spaces	Rev 3
043	Albermarle Street, Marrickville Bridge Works WB	Albermarle Street, Marrickville	Kays Ave East	Challis Ave	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 6 parking spaces	Rev 3
044	Melford Street, Canterbury Bridge Works NB	Melford Street, Canterbury	Hutton Street	Canberra Street	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 6 parking spaces	Rev 3
045	Melford Street, Canterbury Bridge Works SB	Melford Street, Canterbury	Kilbride Street	Hurlstone Ave	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic Loss of 6 parking spaces	Rev 3
046	Wairoa Street, Canterbury Bridge Works NB	Wairoa Street, Canterbury	South Parade	Nowra Street	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
047	Wairoa Street, Canterbury Bridge Works SB	Wairoa Street, Canterbury	Nowra Street	South Parade	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
048	Wairoa Street, Canterbury Bridge Works NB	Wairoa Street, Canterbury	South Parade	Nowra Street	28 th June 2021	Lane Closure	Alternating Traffic / Temporary Traffic Lights	Minimal impacts to traffic	Rev 3
049	Wairoa Street, Canterbury Bridge Works SB	Wairoa Street, Canterbury	Nowra Street	South Parade	28 th June 2021	Lane Closure	Alternating Traffic / Temporary Traffic Lights	Minimal impacts to traffic	Rev 3
050	Moreton Street, Lakemba Bridge Works SB	Moreton Street, Lakemba	Railway Parade	The Boulevarde	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
051	Moreton Street, Lakemba Bridge Works NB	Moreton Street, Lakemba	The Boulevarde	Railway Parade	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3

052	Loch Street, Campsie Bridge Works NB	Loch Street, Campsie	Evaline	Campsie St	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3
053	Loch Street, Campsie Bridge Works NB	Loch Street, Campsie	Campsie St	Anglo Rd	28 th June 2021	Lane Closure	Standing Plant / Alternating Traffic	Minimal impacts to traffic	Rev 3

Traffic Control Plans







Client: **Laing O'Rourke**
 Scope of Works: **Construction works**
 Job location: **Breust Pl, Punchbowl**
 Author: **Sandeep kumar Kolimi**
 Cert. No: **0051756294**

Plan No: **TCP - Shoulder Closure**
 PLAN NOT TO SCALE

WORKERS ON FOOT
 NO GO ZONE -
 RESTRICTED ZONE -
 SHARED ZONE -
 SITE EXIT -
 SITE ENTRY -
 EVACUATION POINT -

Implemented By
 Name -
 Cert No -
 Date -
 Signed -

Dimension 'D'
 AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes.

Speed of Traffic (km/h)	Dimension (m)
50 or less	15
56 to 65	45
Greater than 65	speed of traffic, in Kmph

WORK AREA -

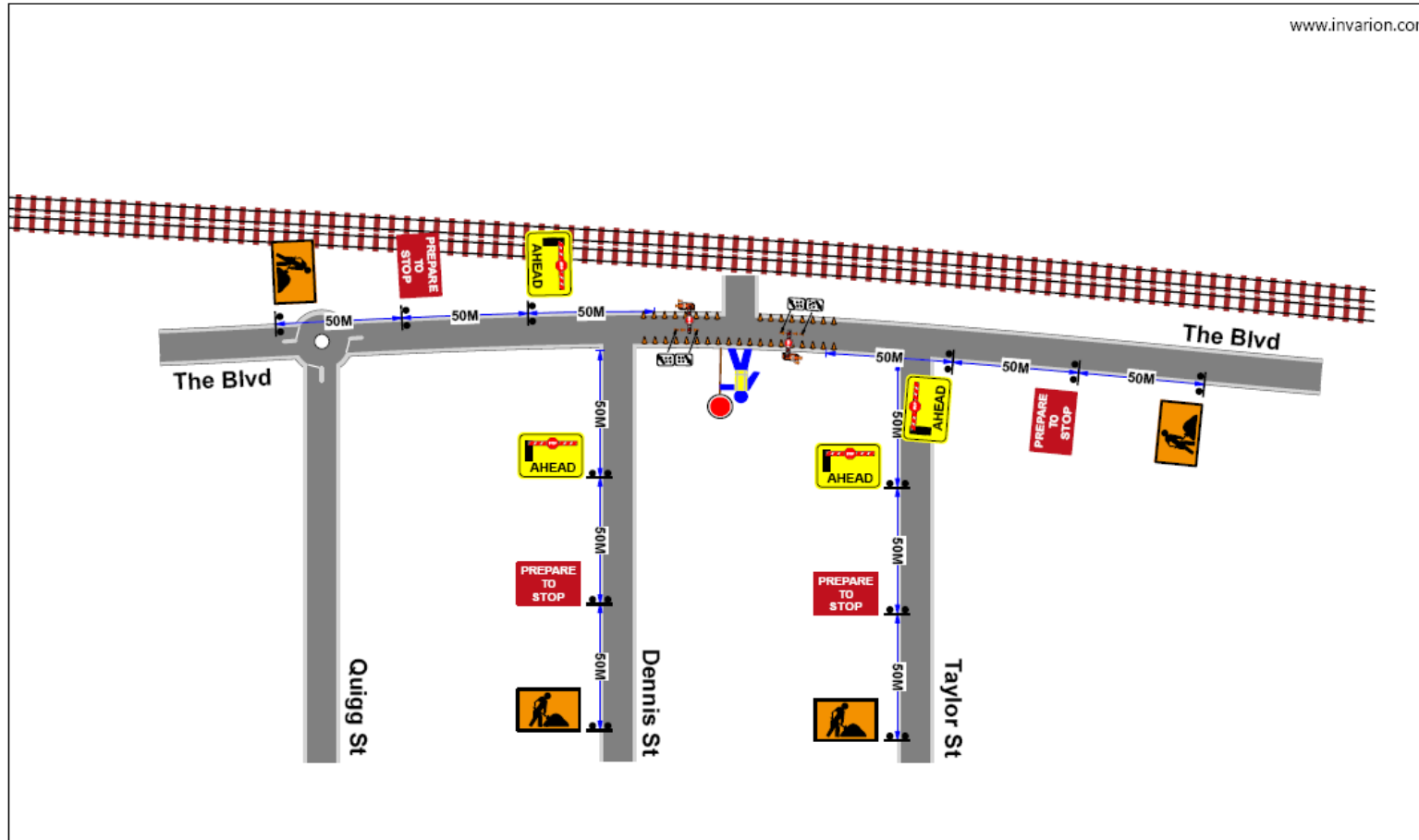
Taper Lengths

Recommended speed of traffic (km/h)	Length of taper (m)	Speed (km/h)	Distance (m)
30 or less	15	0	15
40 or less	20	0	20
50 or less	30	0	30
60 or less	45	0	45
70 or less	60	0	60
80 or less	75	0	75
90 or less	90	0	90
100 or less	105	0	105
Greater than 100	speed of traffic, in Kmph	0	speed of traffic, in Kmph

Web: www.dtraffic.com.au
 Email: sydney@dtd-group.com.au
 Phone: 1300 597 622

D&D Traffic Management does not accept liability for implementation of this sign if not directly involved in its implementation

TCP Rescinded – Downer are occupying Floss Street Carpark for their works



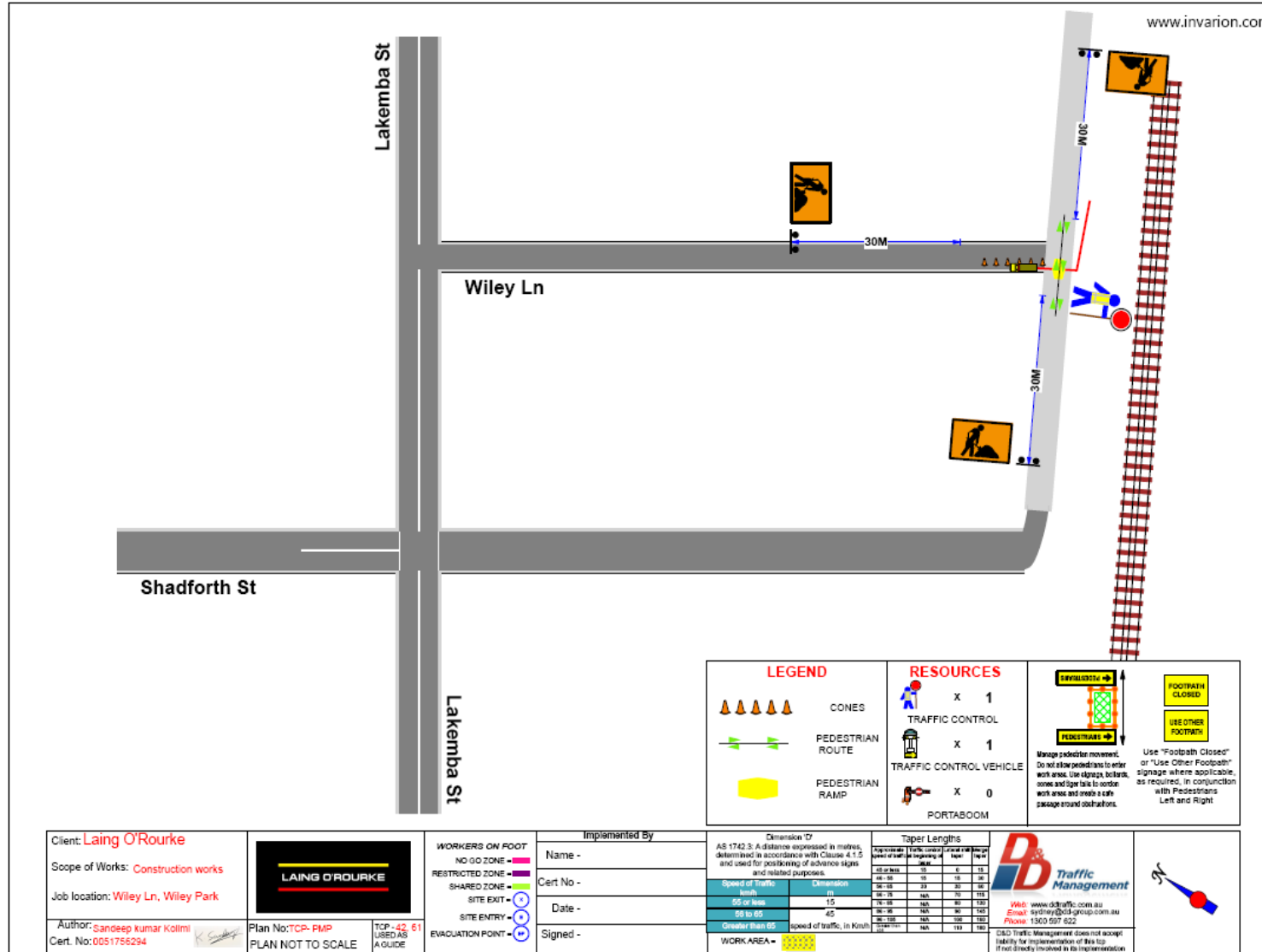
www.invarion.com

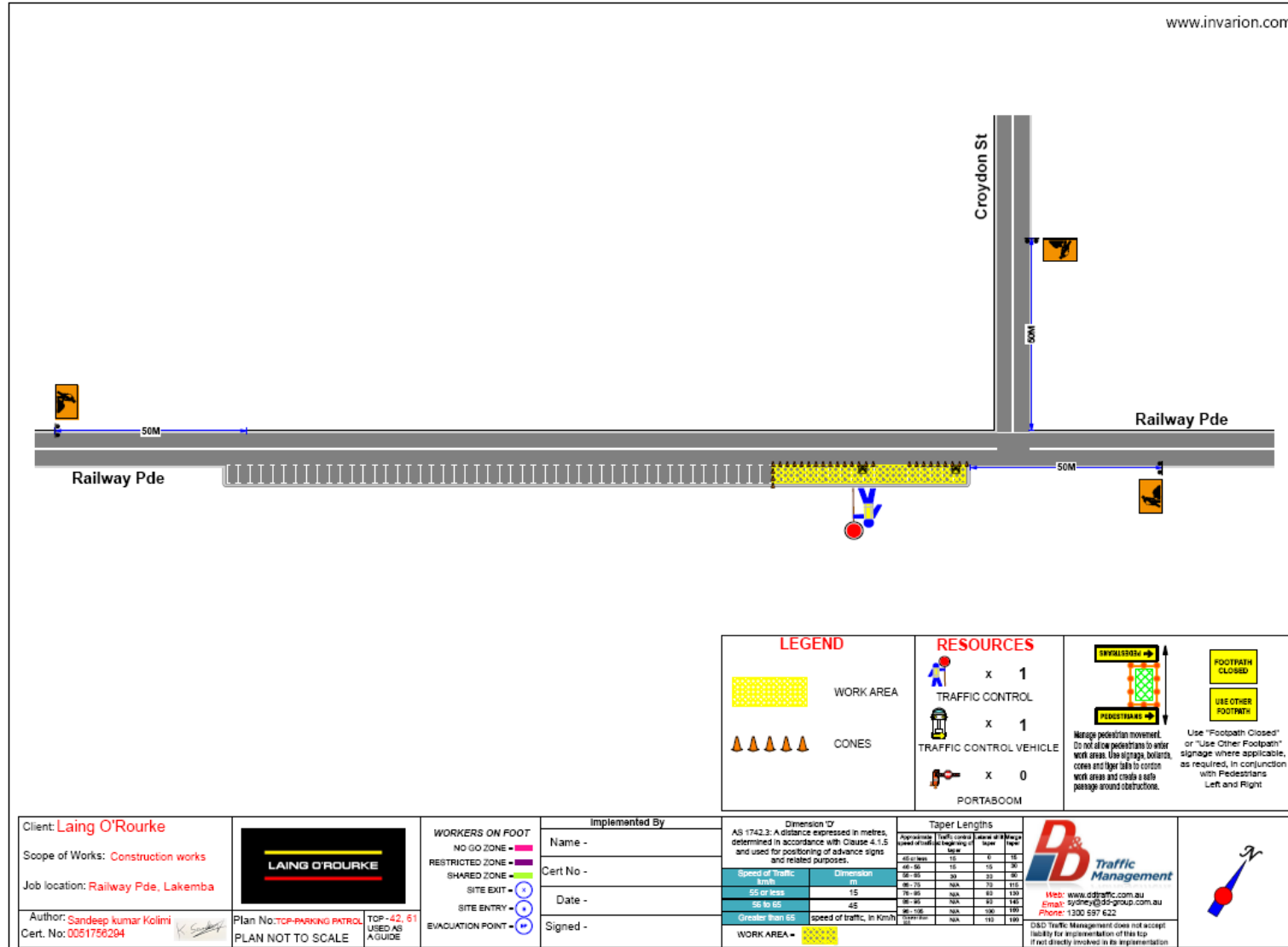
Client: Laing O'Rourke Scope of Works: Construction works Job location: The Boulevard, Lakemba		WORKERS ON FOOT NO GO ZONE - RESTRICTED ZONE - SHARED ZONE - SITE EXIT - SITE ENTRY - EVACUATION POINT -	Implemented By Name - Cert No - Date - Signed -		Dimension 'D' AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes. <table border="1"> <thead> <tr> <th>Speed of Traffic km/h</th> <th>Dimension m</th> </tr> </thead> <tbody> <tr> <td>55 or less</td> <td>15</td> </tr> <tr> <td>55 to 65</td> <td>45</td> </tr> <tr> <td>Greater than 65</td> <td>speed of traffic, in Km/h</td> </tr> </tbody> </table> WORK AREA -	Speed of Traffic km/h	Dimension m	55 or less	15	55 to 65	45	Greater than 65	speed of traffic, in Km/h	<table border="1"> <thead> <tr> <th>Approximate speed of traffic km/h</th> <th>Minimum taper length of sign m</th> <th>Sign size</th> <th>Sign</th> <th>Sign</th> </tr> </thead> <tbody> <tr> <td>45 or less</td> <td>15</td> <td>0</td> <td>15</td> <td></td> </tr> <tr> <td>45-55</td> <td>15</td> <td>15</td> <td>30</td> <td></td> </tr> <tr> <td>55-65</td> <td>30</td> <td>30</td> <td>60</td> <td></td> </tr> <tr> <td>65-75</td> <td>N/A</td> <td>75</td> <td>115</td> <td></td> </tr> <tr> <td>75-85</td> <td>N/A</td> <td>90</td> <td>130</td> <td></td> </tr> <tr> <td>85-100</td> <td>N/A</td> <td>90</td> <td>145</td> <td></td> </tr> <tr> <td>100-115</td> <td>N/A</td> <td>130</td> <td>180</td> <td></td> </tr> <tr> <td>115-130</td> <td>N/A</td> <td>130</td> <td>190</td> <td></td> </tr> </tbody> </table>	Approximate speed of traffic km/h	Minimum taper length of sign m	Sign size	Sign	Sign	45 or less	15	0	15		45-55	15	15	30		55-65	30	30	60		65-75	N/A	75	115		75-85	N/A	90	130		85-100	N/A	90	145		100-115	N/A	130	180		115-130	N/A	130	190	
			Speed of Traffic km/h	Dimension m																																																							
55 or less	15																																																										
55 to 65	45																																																										
Greater than 65	speed of traffic, in Km/h																																																										
Approximate speed of traffic km/h	Minimum taper length of sign m	Sign size	Sign	Sign																																																							
45 or less	15	0	15																																																								
45-55	15	15	30																																																								
55-65	30	30	60																																																								
65-75	N/A	75	115																																																								
75-85	N/A	90	130																																																								
85-100	N/A	90	145																																																								
100-115	N/A	130	180																																																								
115-130	N/A	130	190																																																								
Author: Sandeep Kumar Kolmi Cert. No: 0051756294	Plan No: Gate BE-7 PLAN NOT TO SCALE Legend: Down Main	TQP - 61, 63 USED AS A GUIDE	Dimension 'D' AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes.		 Web: www.dtraffic.com.au Email: sydenham@df-group.com.au Phone: 1300 597 622																																																						

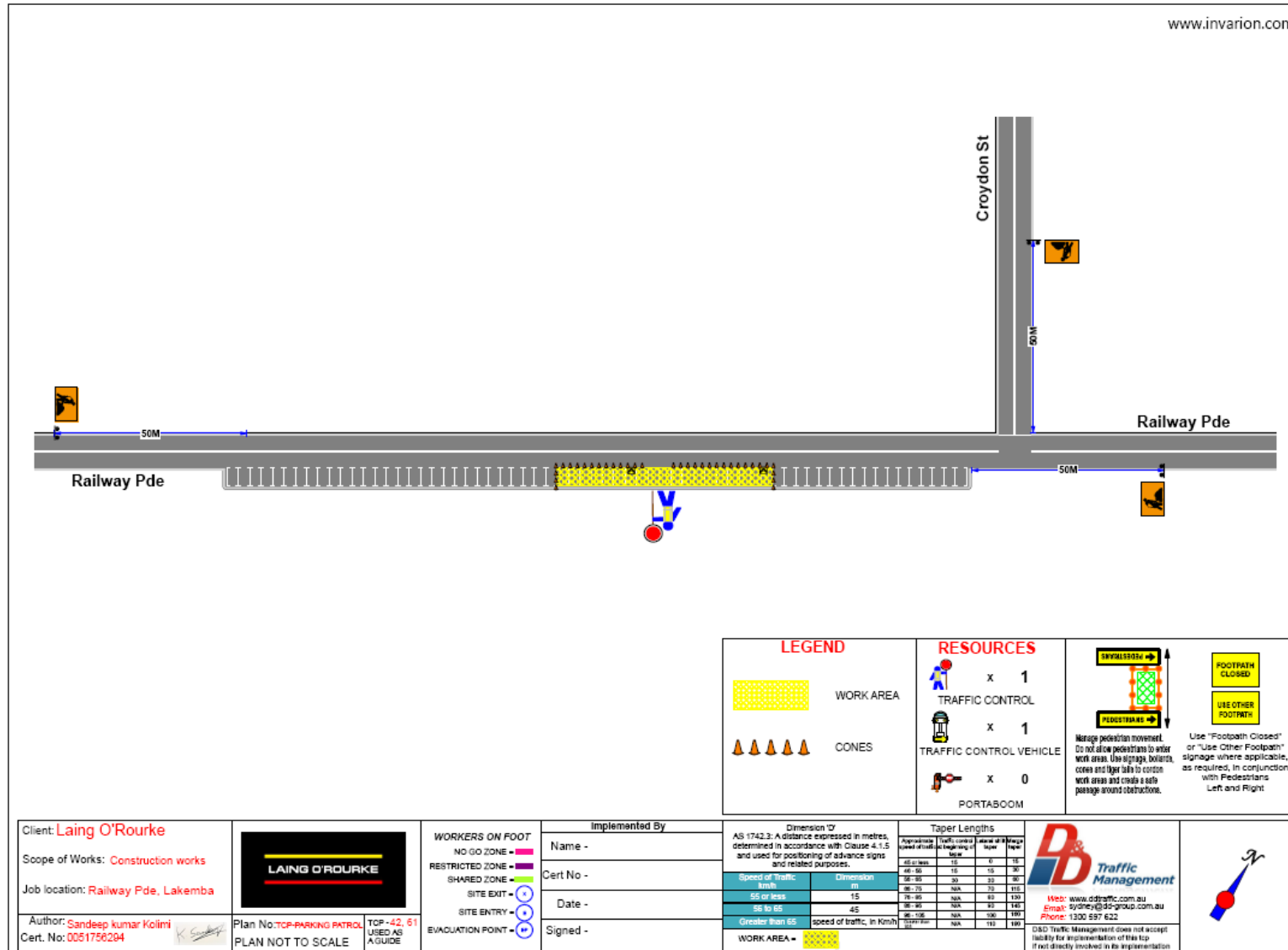
Web: www.dtraffic.com.au
 Email: sydenham@df-group.com.au
 Phone: 1300 597 622

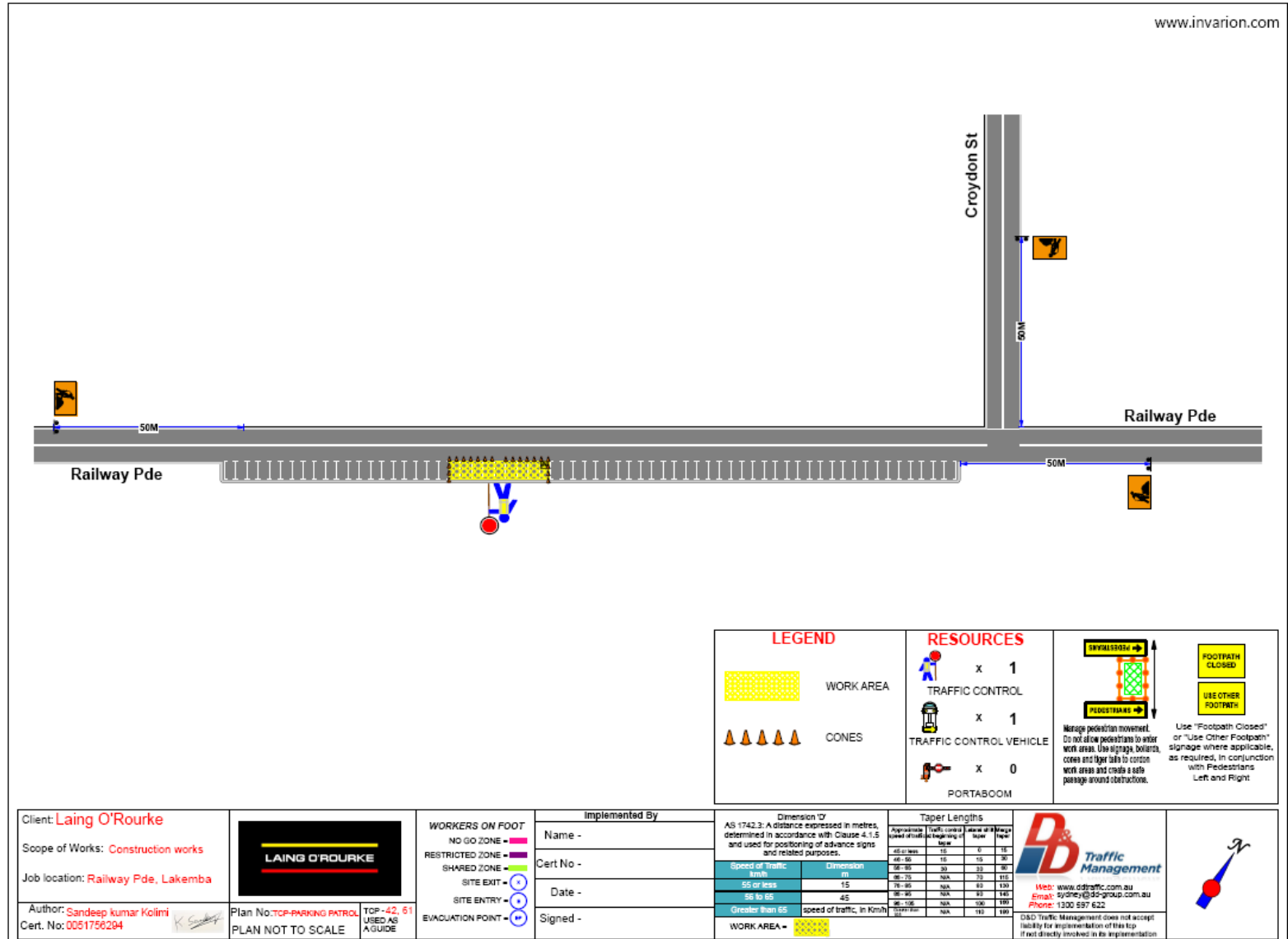
D&D Traffic Management does not accept liability for implementation of this top if not directly involved in the implementation











Client: **Laing O'Rourke**
 Scope of Works: **Construction works**
 Job location: **Railway Pde, Lakemba**
 Author: **Sandeep kumar Kolimi**
 Cert. No: **0051756294**

LAING O'ROURKE
 Plan No: **TCP-PARKING PATROL**
 PLAN NOT TO SCALE
 TOP -42, 61
 USED AS
 A GUIDE

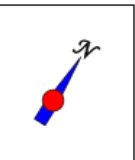
WORKERS ON FOOT
 NO GO ZONE -
 RESTRICTED ZONE -
 SHARED ZONE -
 SITE EXIT -
 SITE ENTRY -
 EVACUATION POINT -

Implemented By
 Name -
 Cert No -
 Date -
 Signed -

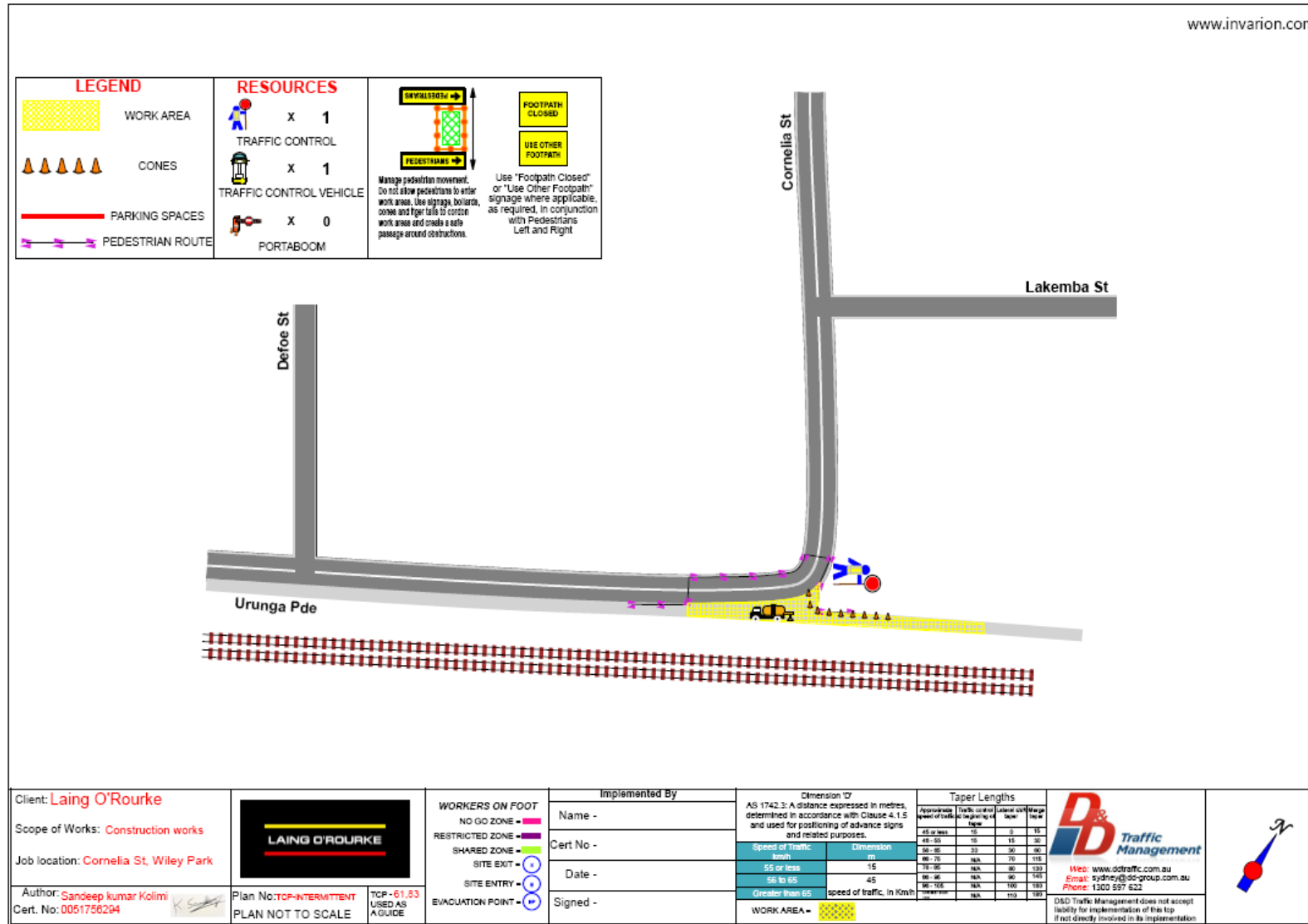
Dimension 17
 AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes.

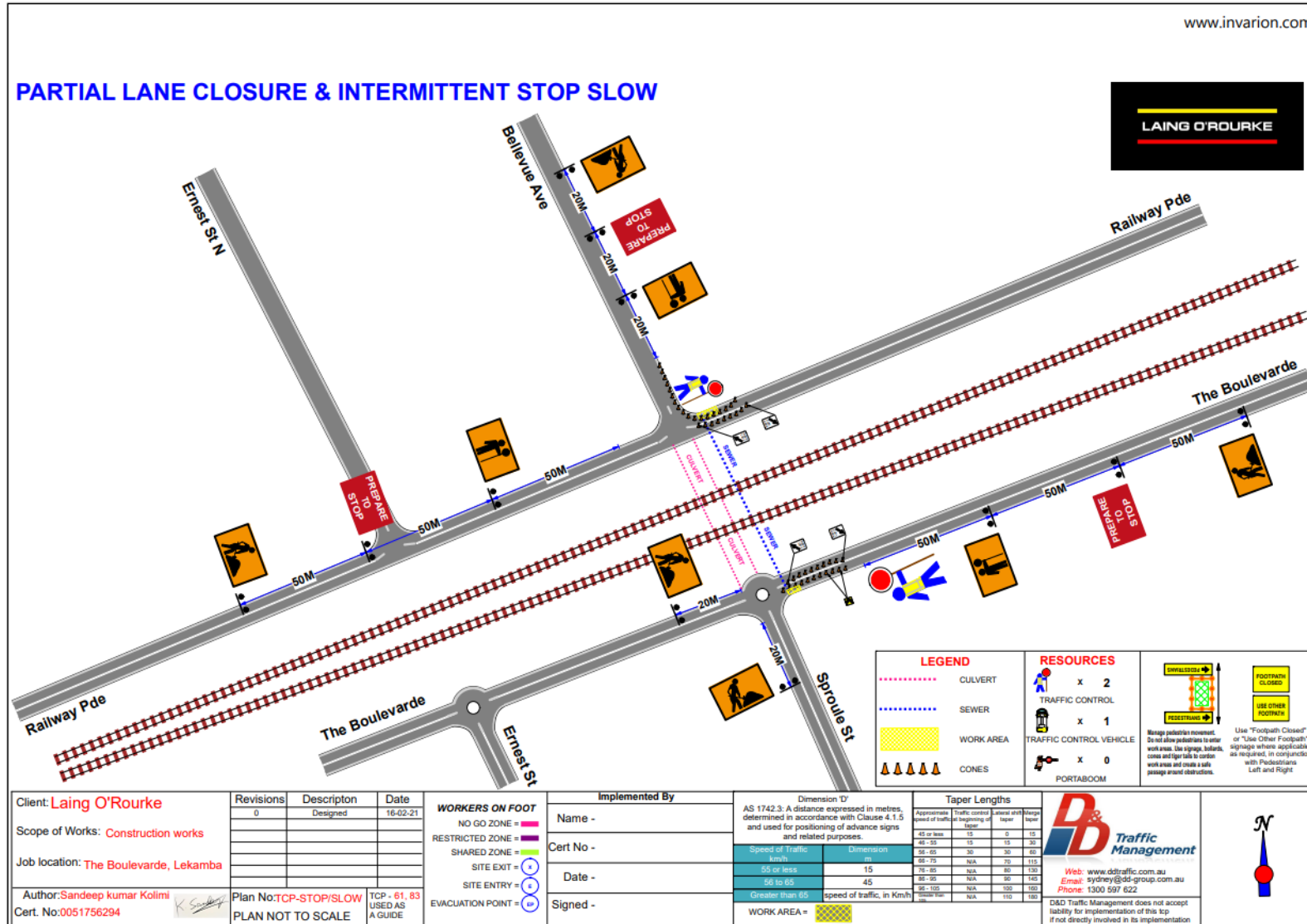
WORK AREA -

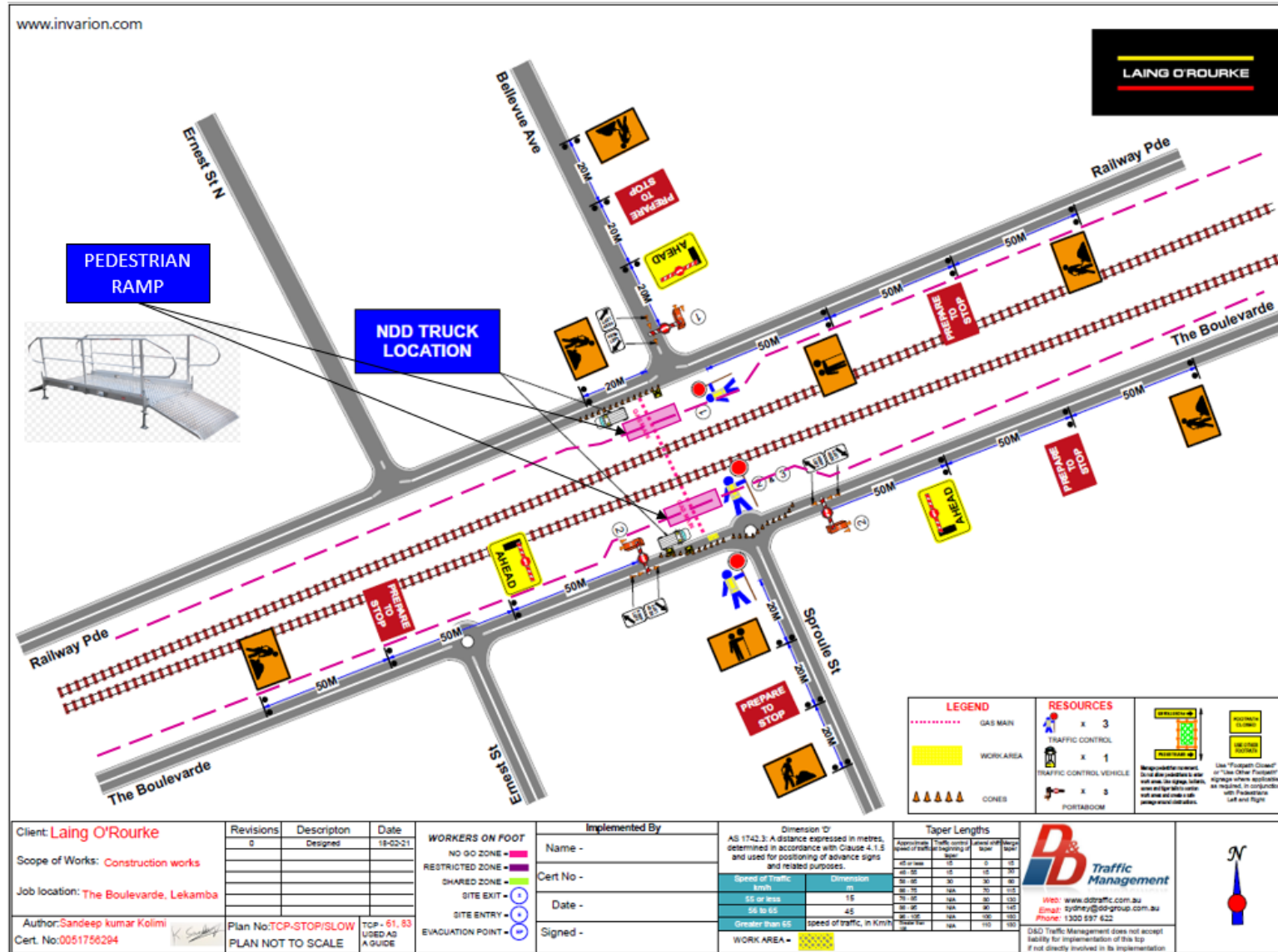
DB Traffic Management
 Web: www.dtraffic.com.au
 Email: sydney@db-group.com.au
 Phone: 1300 597 622

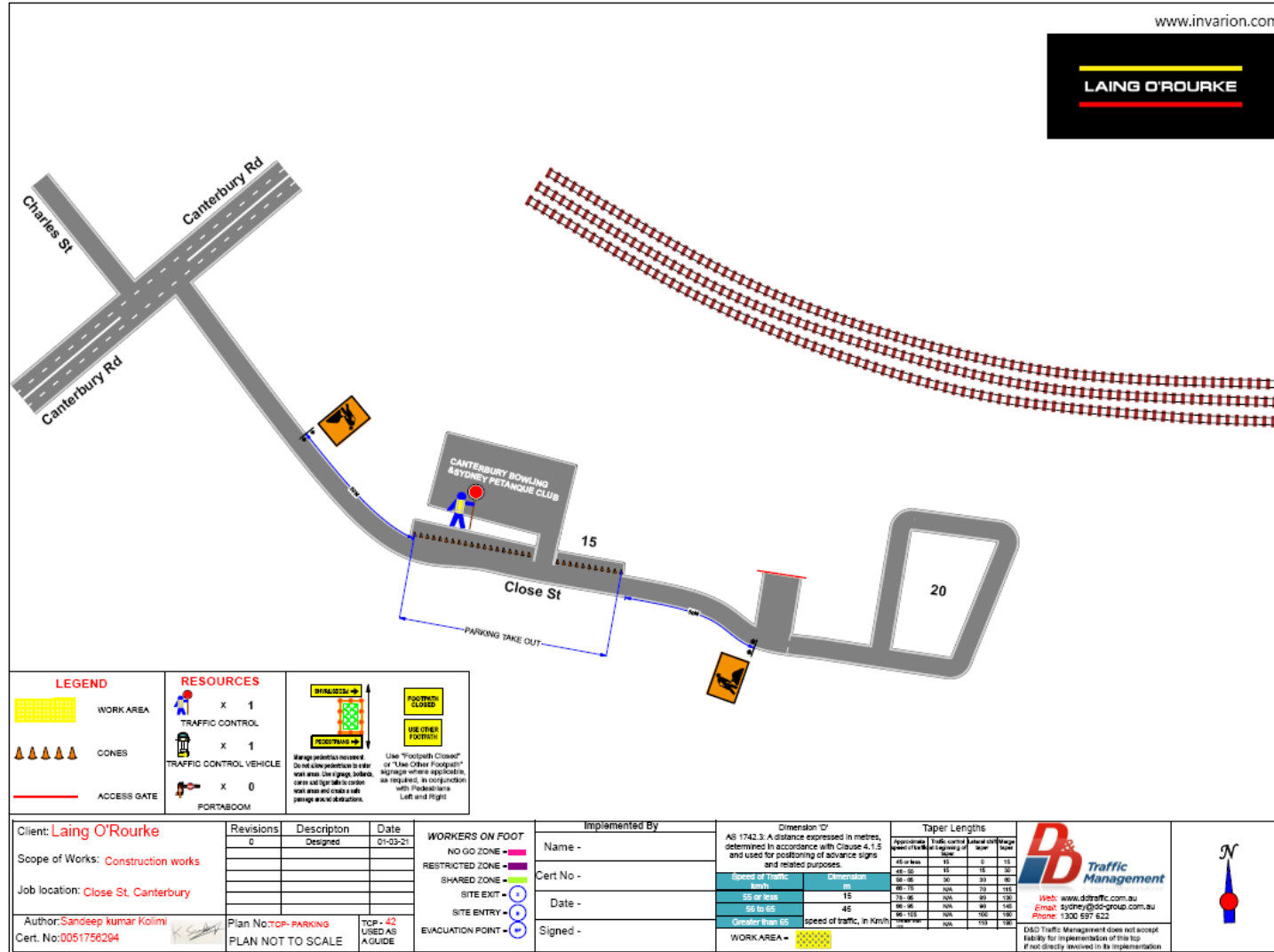


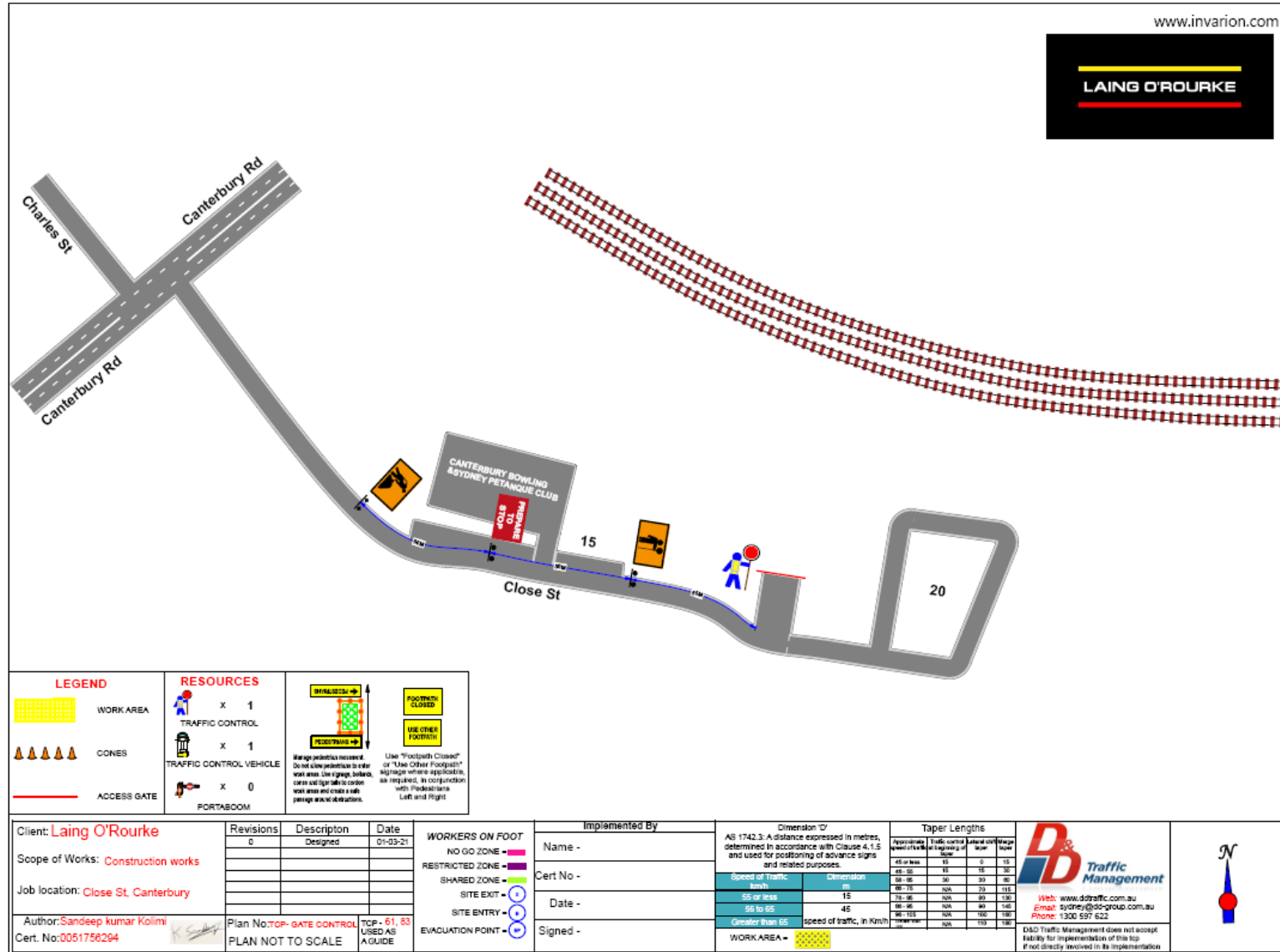
DBD Traffic Management does not accept liability for implementation of this tcp if not directly involved in its implementation

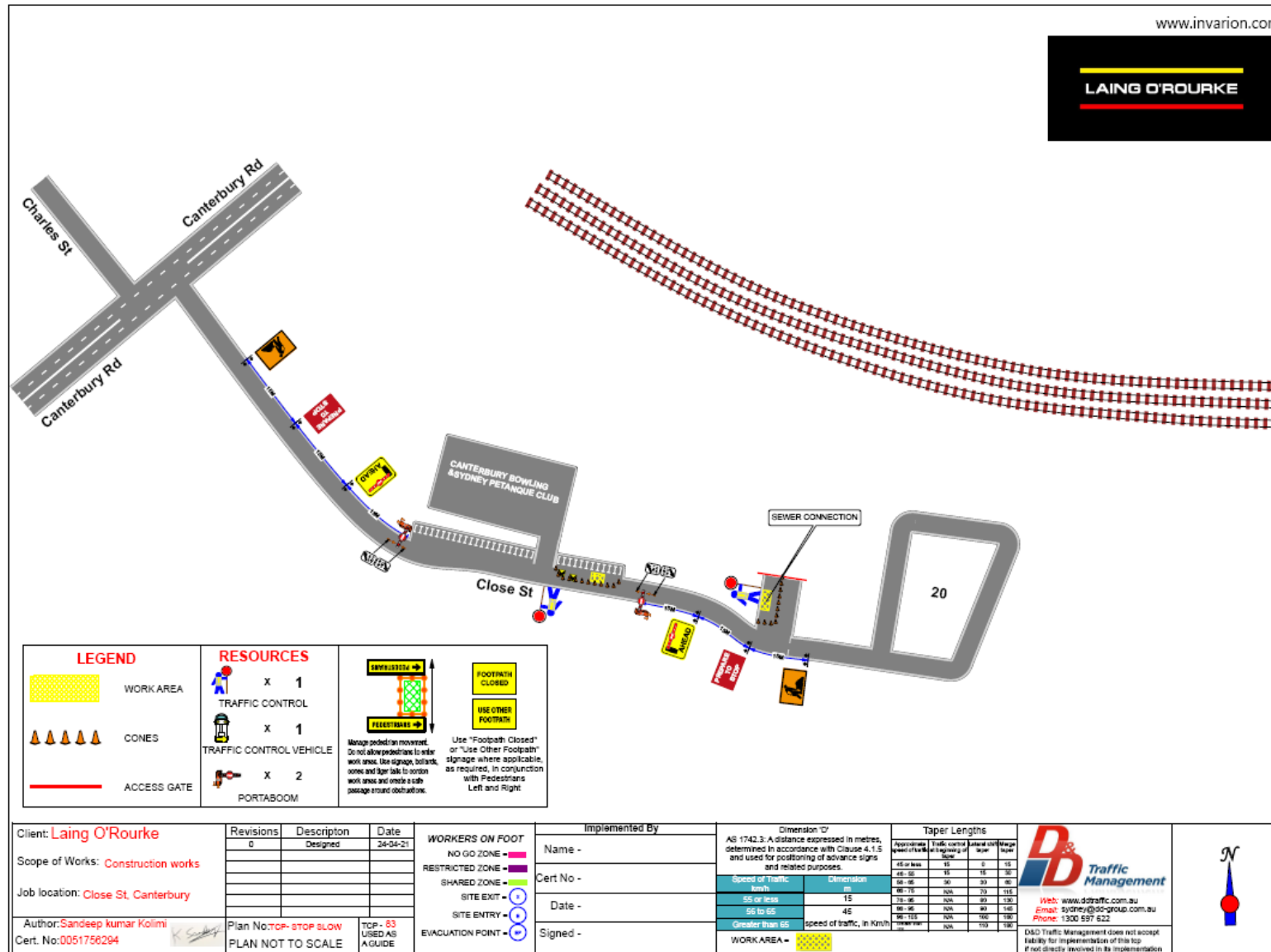


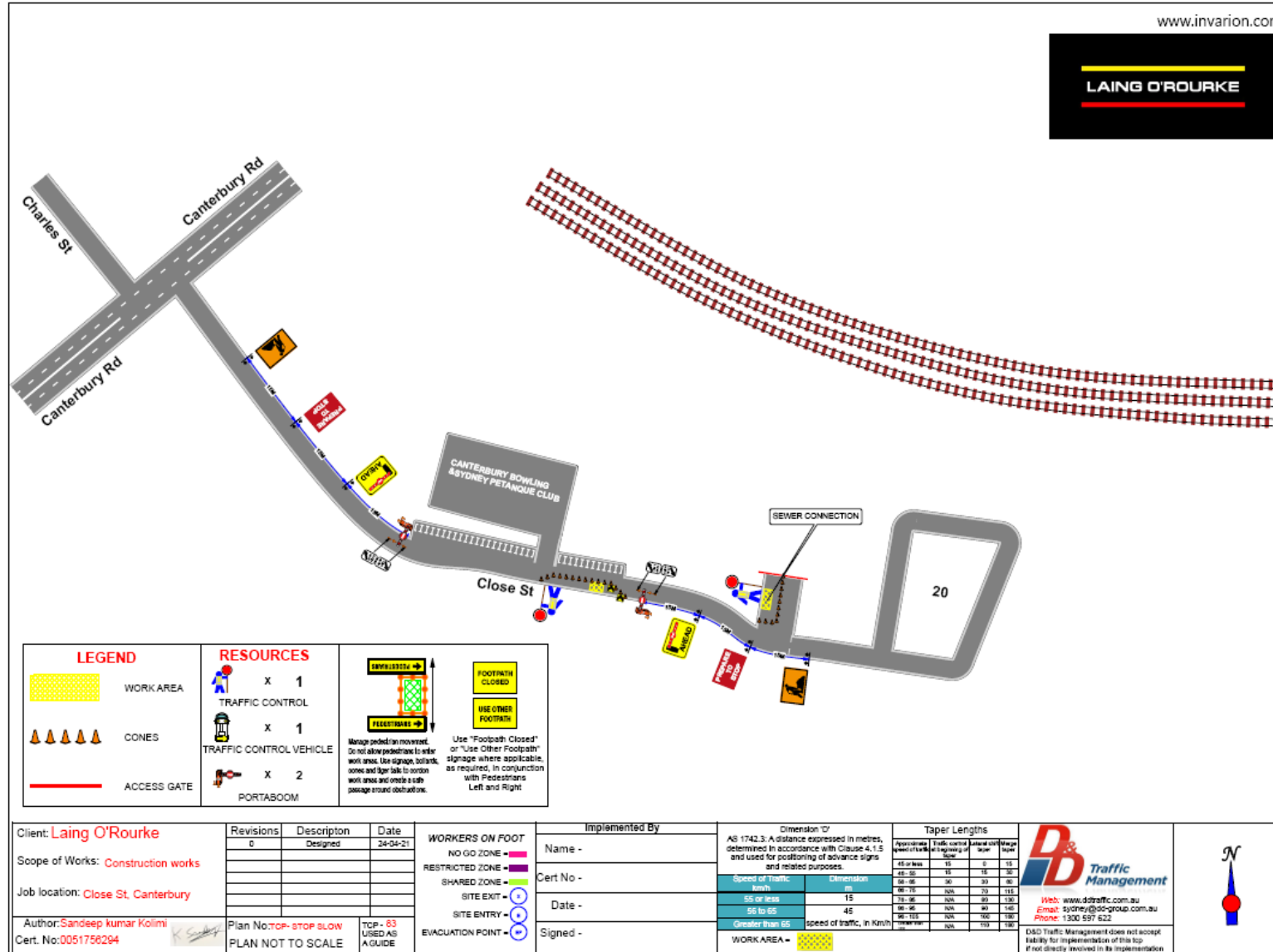












www.invarion.com



LEGEND		RESOURCES	
	WORK AREA		X 1
	CONES		X 1
	ACCESS GATE		X 2
			PORTABOOM

Client: **Laing O'Rourke**
 Scope of Works: **Construction works**
 Job location: **Close St, Canterbury**
 Author: **Sandeep Kumar Kolmi**
 Cert. No: **0051756294**

Revisions	Description	Date
0	Designed	24-04-21

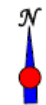
WORKERS ON FOOT
 NO GO ZONE -
 RESTRICTED ZONE -
 SHARED ZONE -
 SITE EXIT -
 SITE ENTRY -
 EVACUATION POINT -

Implemented By	
Name -	
Cert No -	
Date -	
Signed -	

Dimension 'D'		Taper Lengths	
Speed of Traffic	Dimension	Approach	Retard
55 or less	15	45 or less	15
56 to 65	4E	46-55	15
Greater than 65	speed of traffic, in Km/h	56-65	30
WORK AREA -		66-75	70
		76-85	110
		86-95	150
		96-105	200
		106-115	250
		116-125	300



Web: www.dtraffic.com.au
 Email: sydney@dc-group.com.au
 Phone: 1300 597 622



TCP016



TRUCK EXIT PROCEDURE

- ARTICULATED TRUCKS TURNING LEFT FROM CLOSE STREET TO CANTERBURY ROAD MUST PARK ON NORTHERN SIDE OF CLOSE STREET AND WAIT FOR THE WORK CONVOY TO CREATE GAP IN TRAFFIC
- TRAFFIC CONTROLLER ON CLOSE STREET MUST NOTIFY WORK CONVOY OF WAITING TRUCK VIA RADIO
- THREE WORK CONVOY VEHICLES, CONSISTING OF TWO 'SHADOW' VEHICLES AND ONE TAIL VEHICLE MUST TURN RIGHT FROM BRIGHTON STREET TO CANTERBURY ROAD AND ADVANCE SLOWLY TO CREATE A SUITABLE GAP FOR THE TRUCK TO TURN OUT FROM CLOSE STREET



GENERAL NOTES

- TRAFFIC CONTROLLERS MUST BE RMS ACCREDITED
- TWO-WAY RADIOS TO BE USED BY TRAFFIC CONTROLLERS
- SIZE B SIGNS TO BE USED FOR ADVANCE WARNING
- SIGNS TO BE POSITIONED WHERE THEY WILL NOT BE OBSCURED BY TREES, PARKED VEHICLES OR OTHER OBSTRUCTIONS AND WILL NOT OBSCURE OTHER SIGNS
- SIGNS AND DEVICES (IN PARTICULAR VMS'S) WILL NOT BE PLACED ON FOOTPATHS SO THAT THEY BLOCK PEDESTRIAN MOVEMENT OR BLOCK PEOPLE USING MOBILITY SCOOTERS, BIKES, PRAMS OR WHEELCHAIRS
- SIGNS SHOULD BE PLACED IN A NON-OBSTRUCTIVE LOCATION ON THE GROUND UNDERNEATH A POLE IF APPROPRIATE WITHOUT OBSTRUCTING ACCESS TO THE FOOTPATH OR VEHICULAR TRAFFIC AND MAINTAIN SATISFACTORY VISIBILITY TO THE ROAD CONDITIONS FOR ALL TRAFFIC

THE TRAFFIC MANAGER SHOULD:

- ENSURE THE SIGNS ARE POSITIONED WHERE THEY WILL NOT BE OBSCURED BY TREES, PARKED VEHICLES OR OTHER OBSTRUCTIONS
- PERIODICALLY REVIEW TRAFFIC CONDITIONS AND THE TCP
- ENSURE SIGNS ARE IN A GOOD CONDITION
- ENSURE SIGHT DISTANCES ARE MAINTAINED FOR PEDESTRIANS AT ALL TIMES

BITZIOS consulting
 traffic engineering • transport planning

Gold Coast
 Suite 16, 98 Riverside Avenue, Robina QLD 4226
 P: (07) 5562-5377
 W: www.bitziiconsulting.com.au
 Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000
 P: (07) 3851-4442
 E: sales@bitziiconsulting.com.au
 Sydney
 Suite 203, 3 Chisholm Street, Newtown NSW 2042
 P: (02) 9557-6262

Item	REVISIONS Description	Drawn	Date
001	INITIAL TGS	JHL	18.03.2021
002	ADD SIGNAGE RELOCATION TGS	JHL	21.04.2021
003	ADD NEW TCP	MJH	12.03.2021
004	CHANGES TO RED TRAFFIC SIGNAL PHASE TCP	JHL	12.03.2021

APPROVED
 ALEX O'ROURKE
 PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN
 CARD NO. 0091873071
 EXPIRY: 06/11/2021

Alex O'Rourke

Project: SSJ EXTENSION WORKS
 SYDENHAM TO BANKSTOWN
 CLOSE STREET CANTERBURY SITE

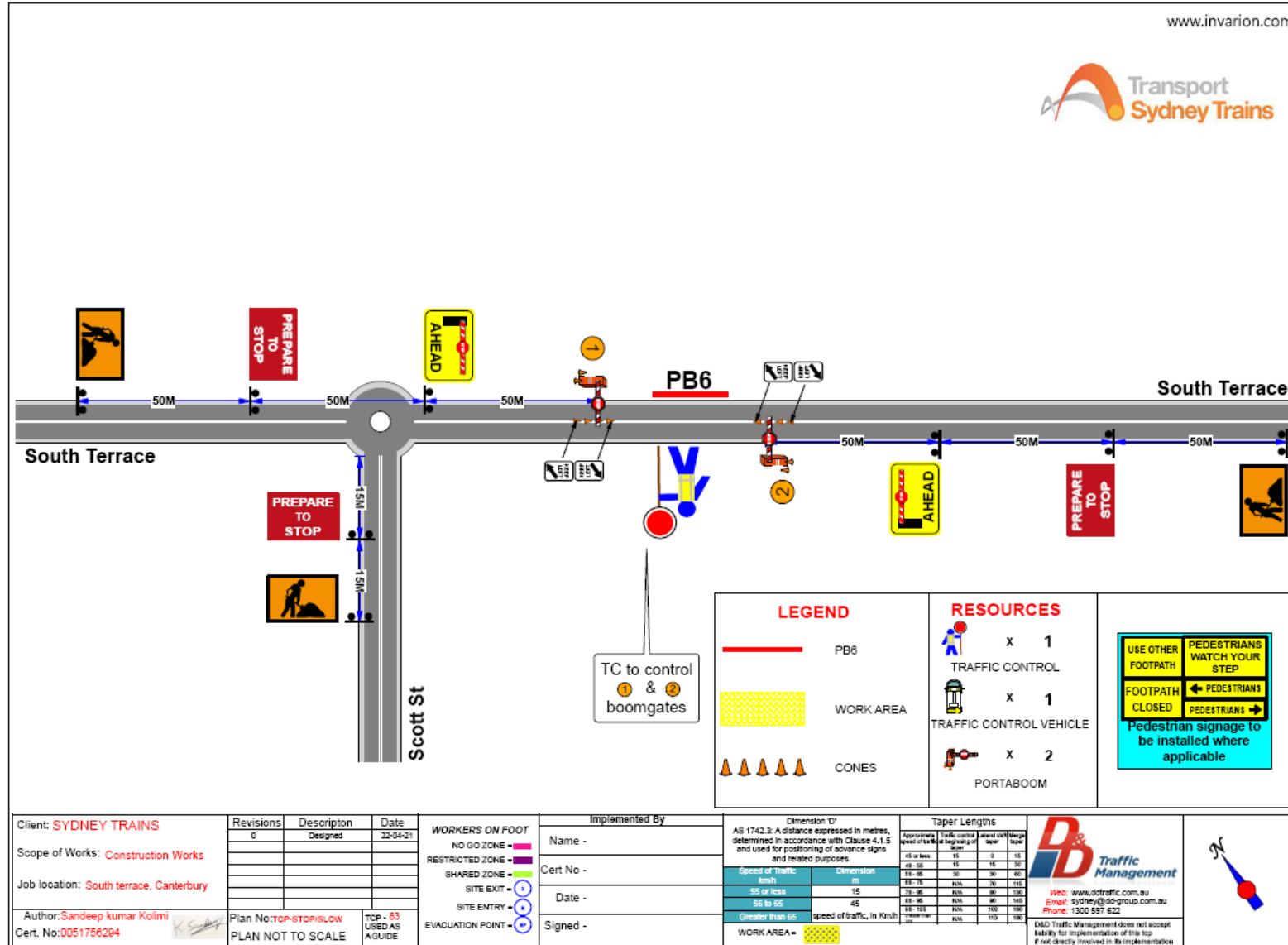
Title: TRAFFIC GUIDANCE SCHEME
 CONTROL FOR AV ENTERING/EXITING
 CLOSE STREET DURING CANTERBURY ROAD
 RED TRAFFIC SIGNAL PHASE

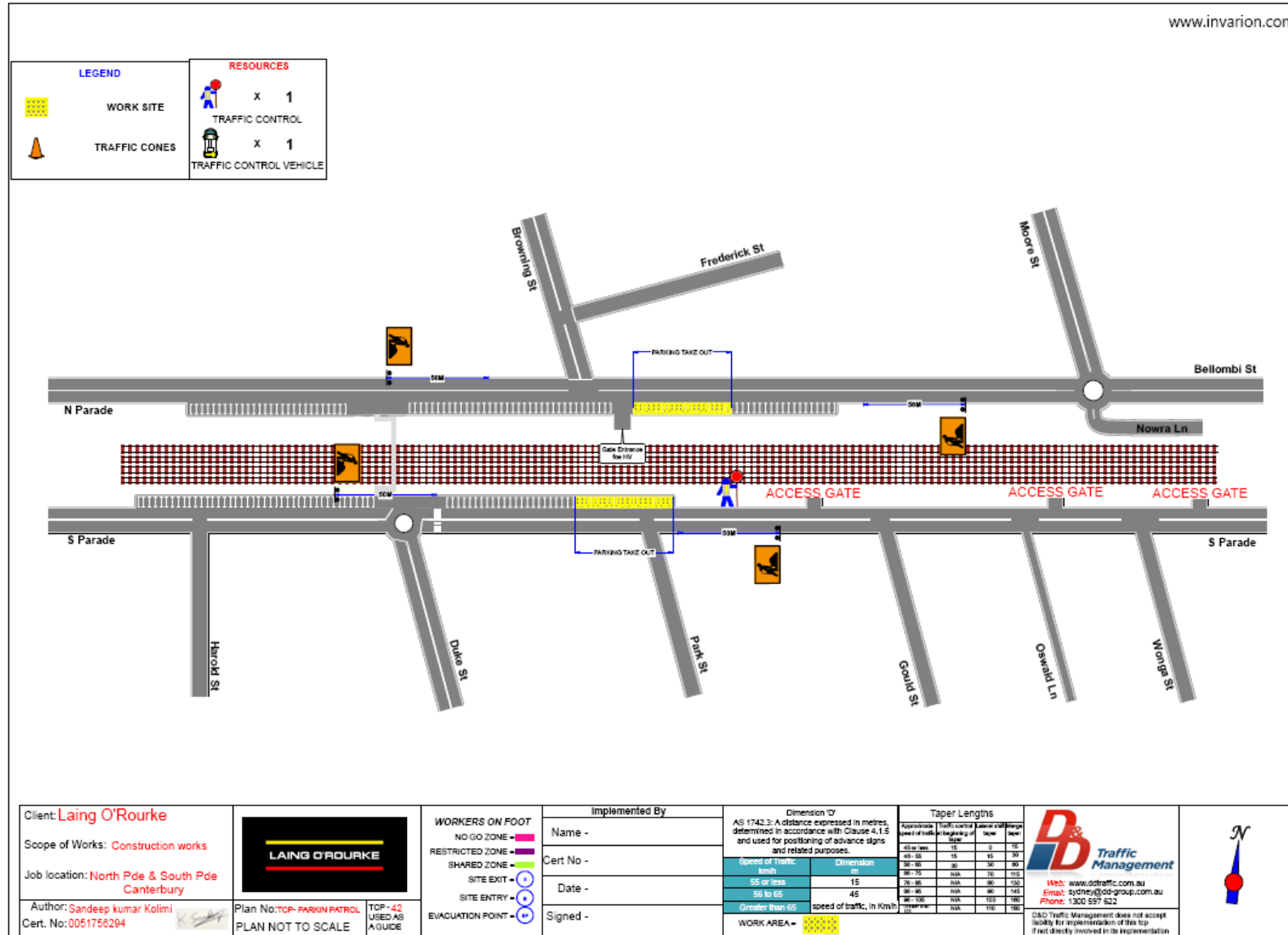
Design	Drawn	Checked	Date
M.JH	J.H	A.G	13.05.2021

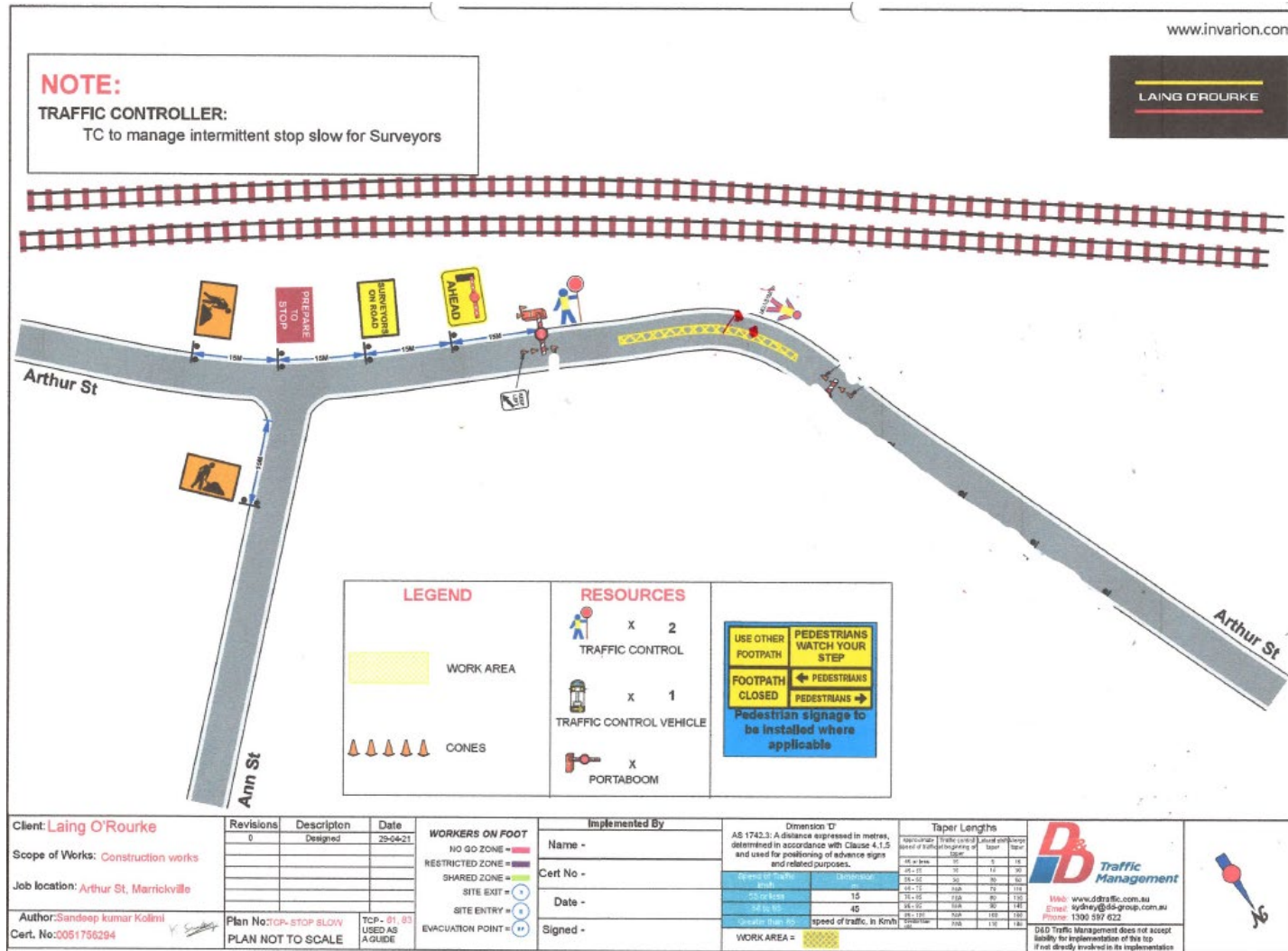
NOT FOR CONSTRUCTION

Project Number	Sheet Number	Issue
P3519	4	004

TCP017

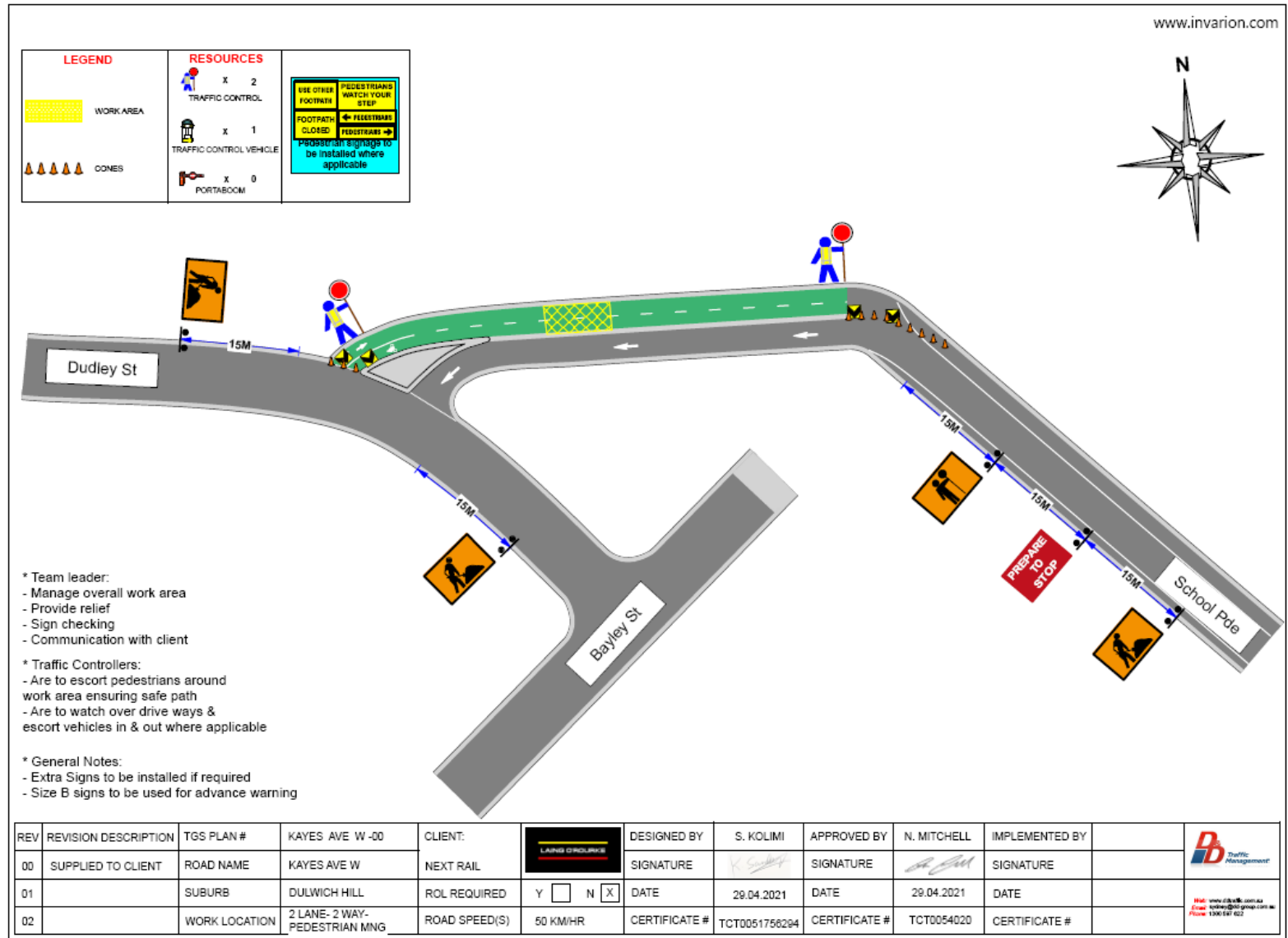




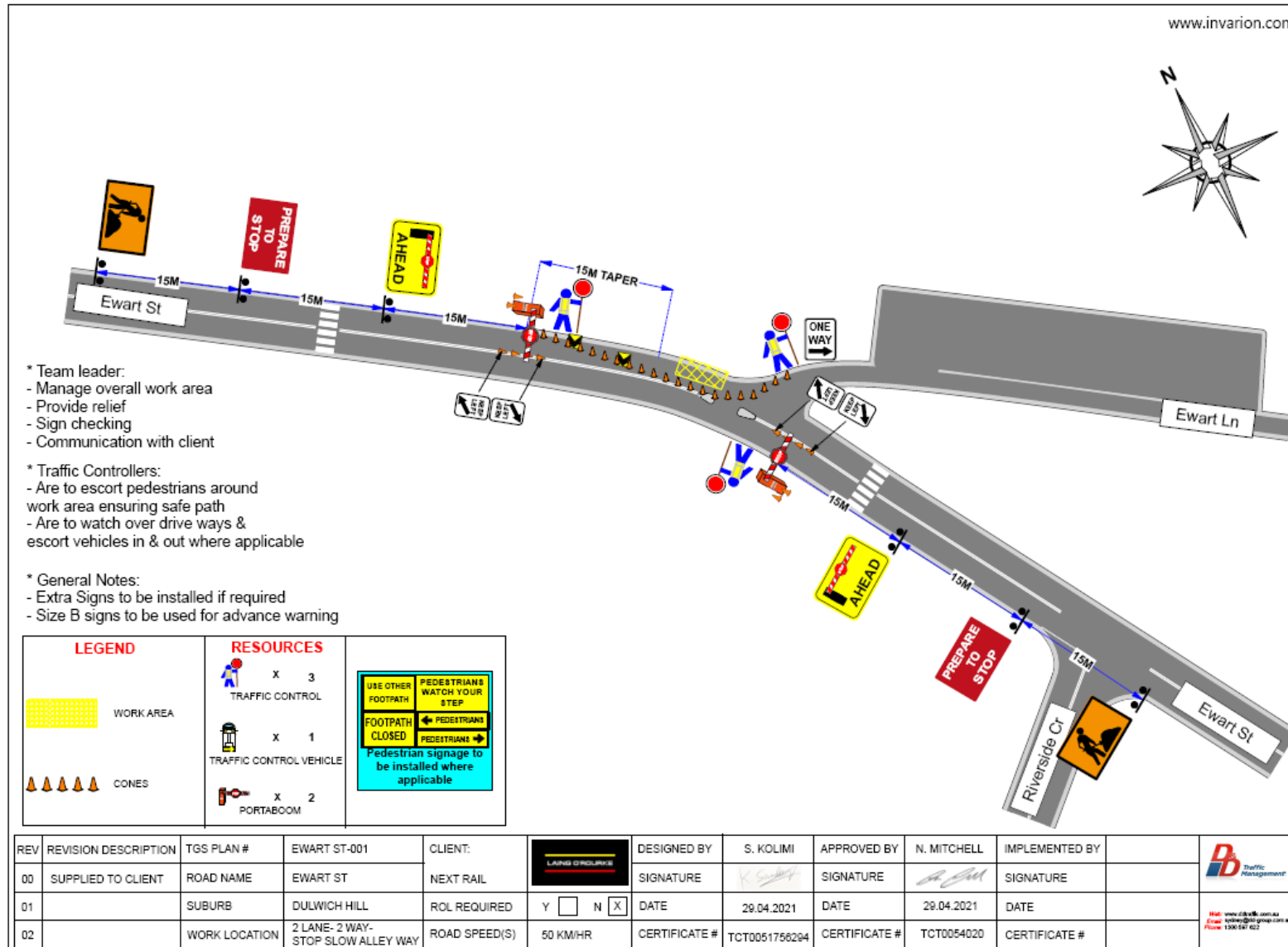


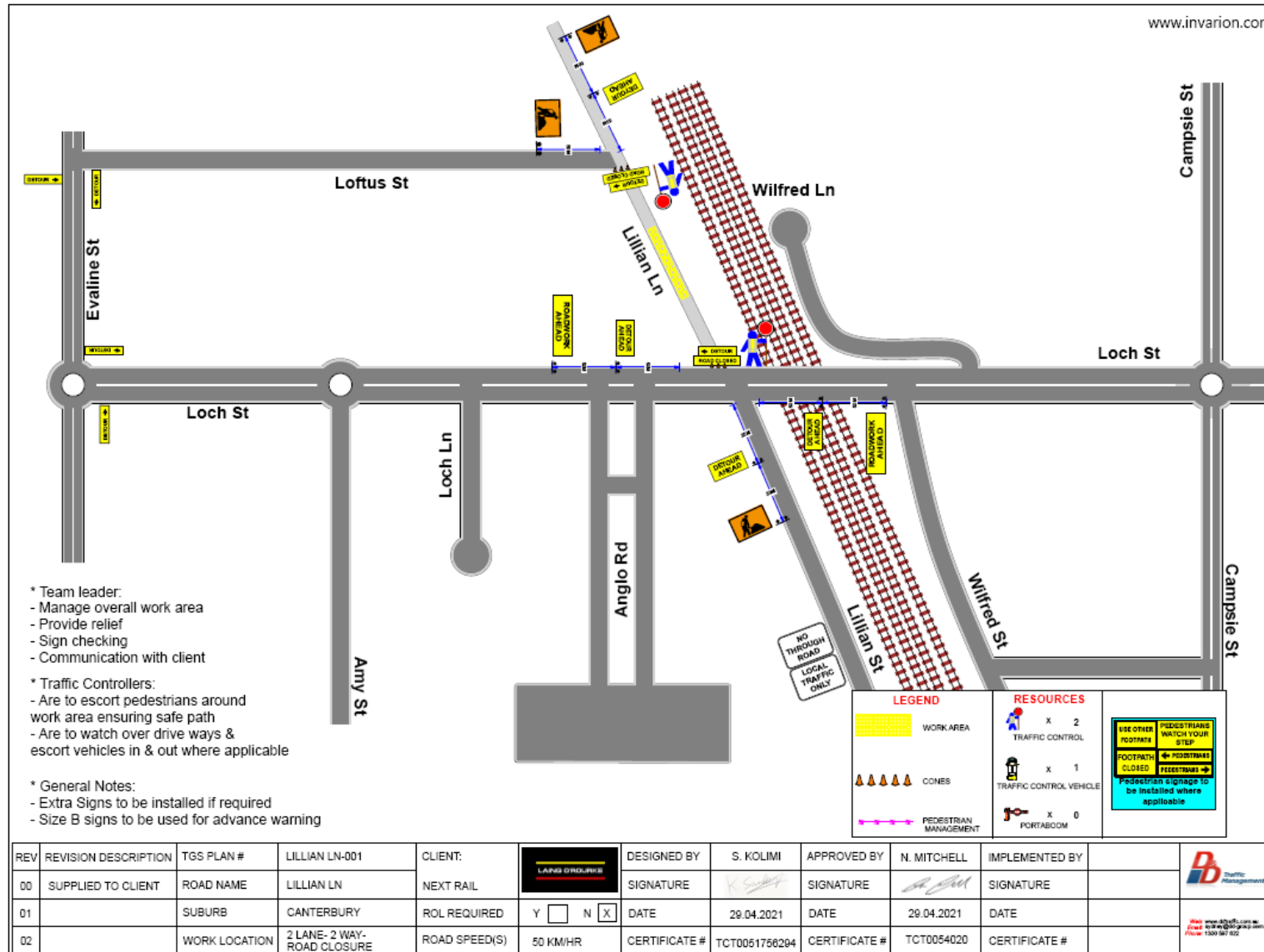
TCP020

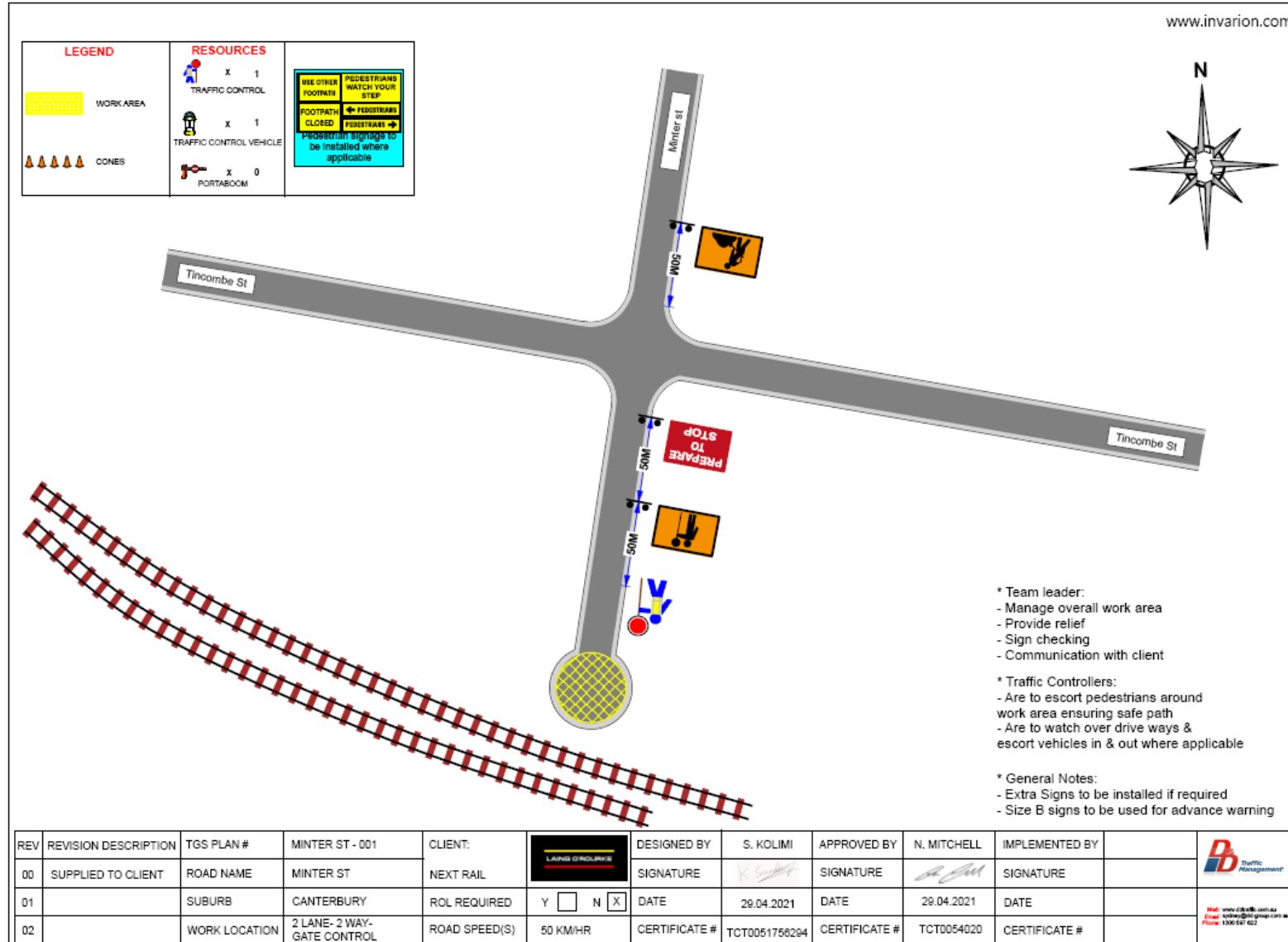
Do not use

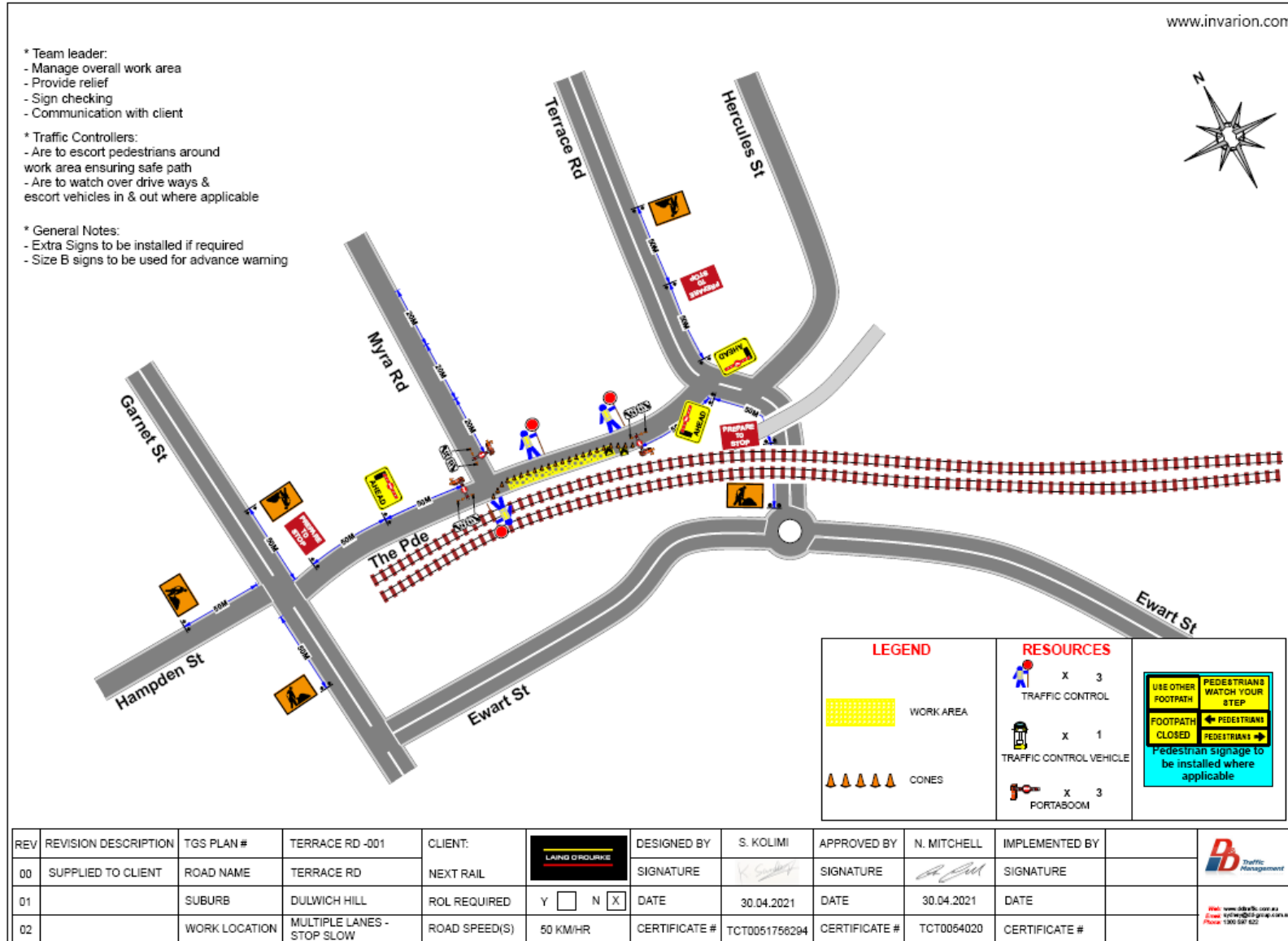


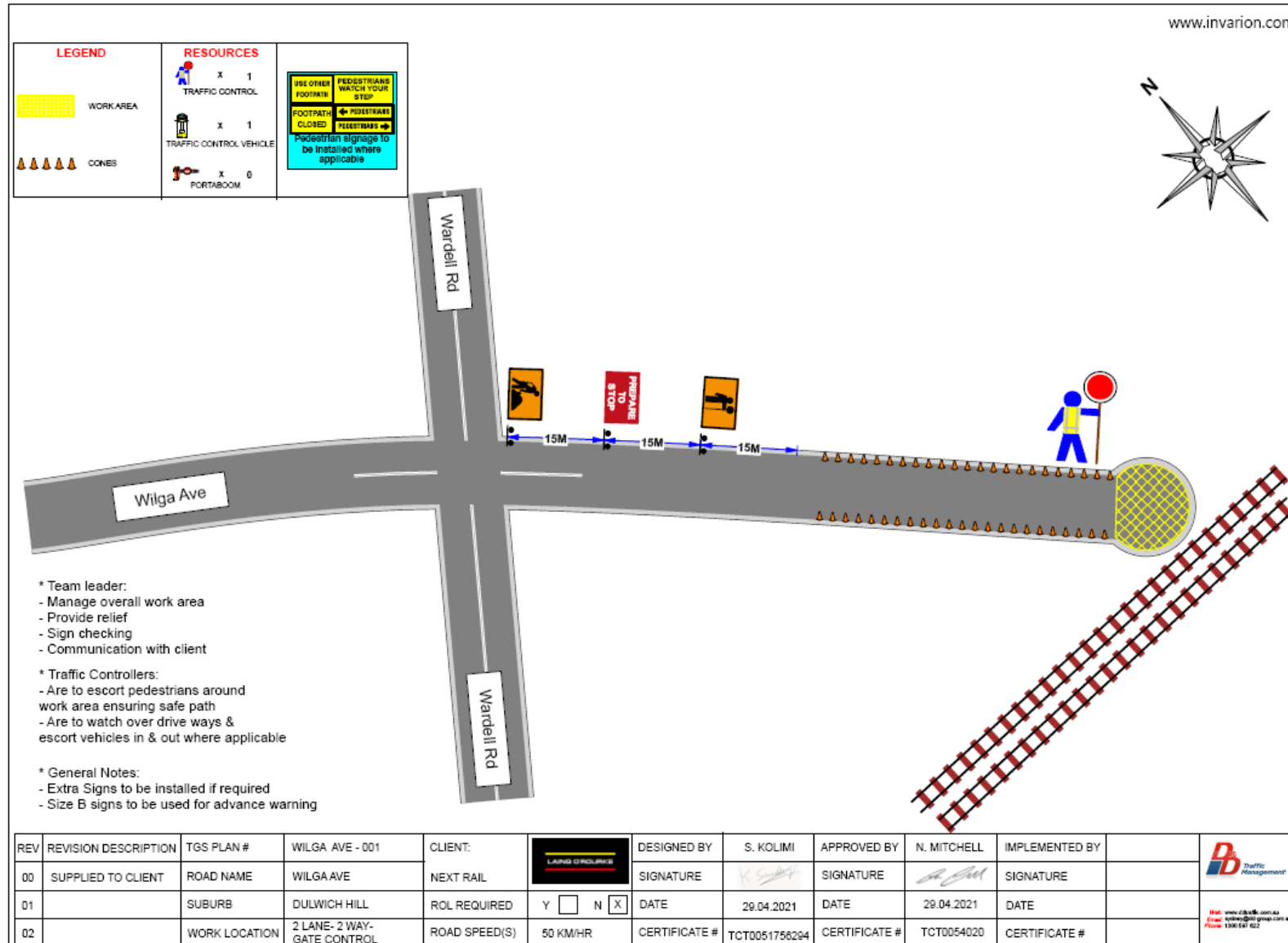
TCP021

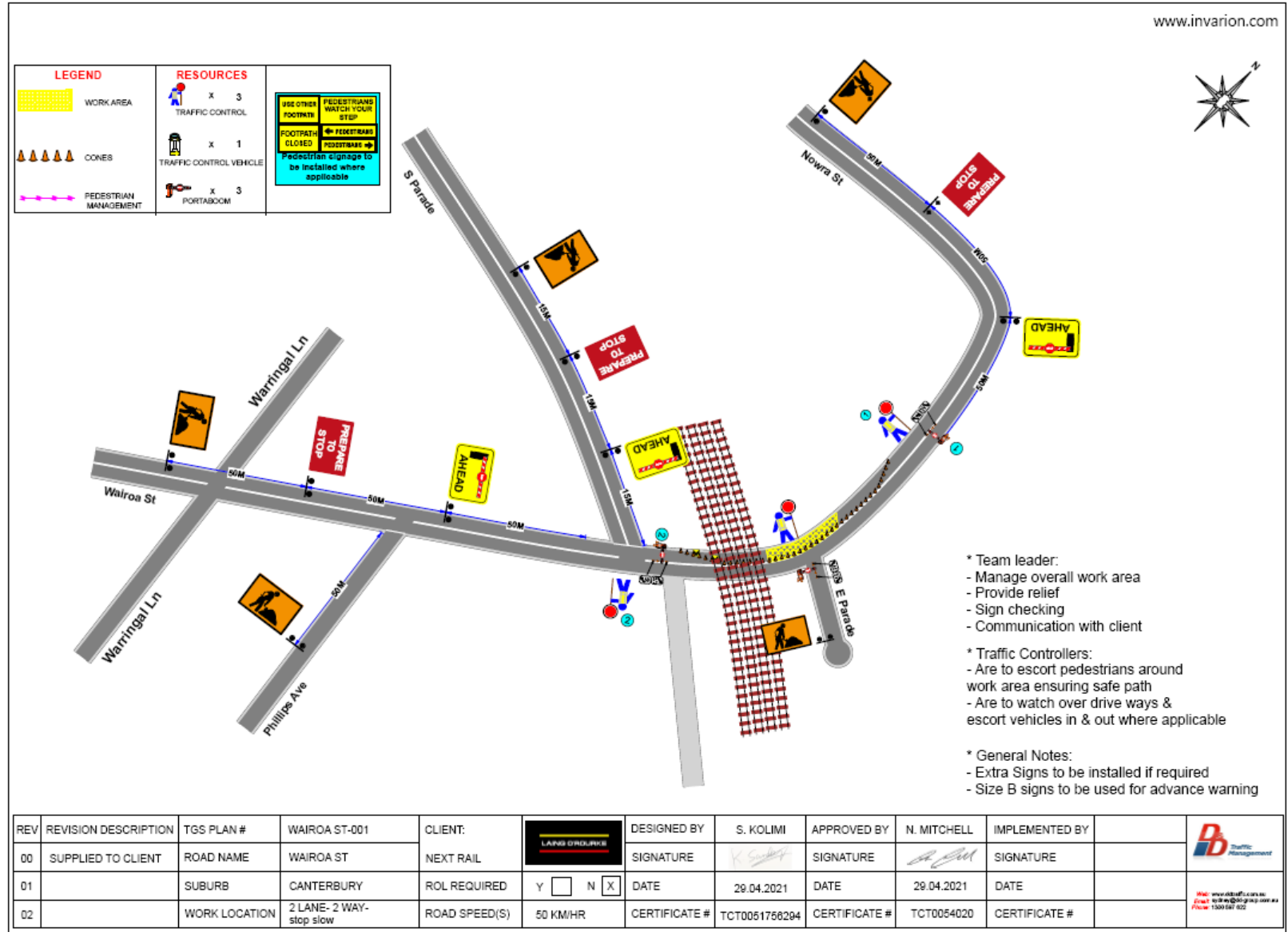


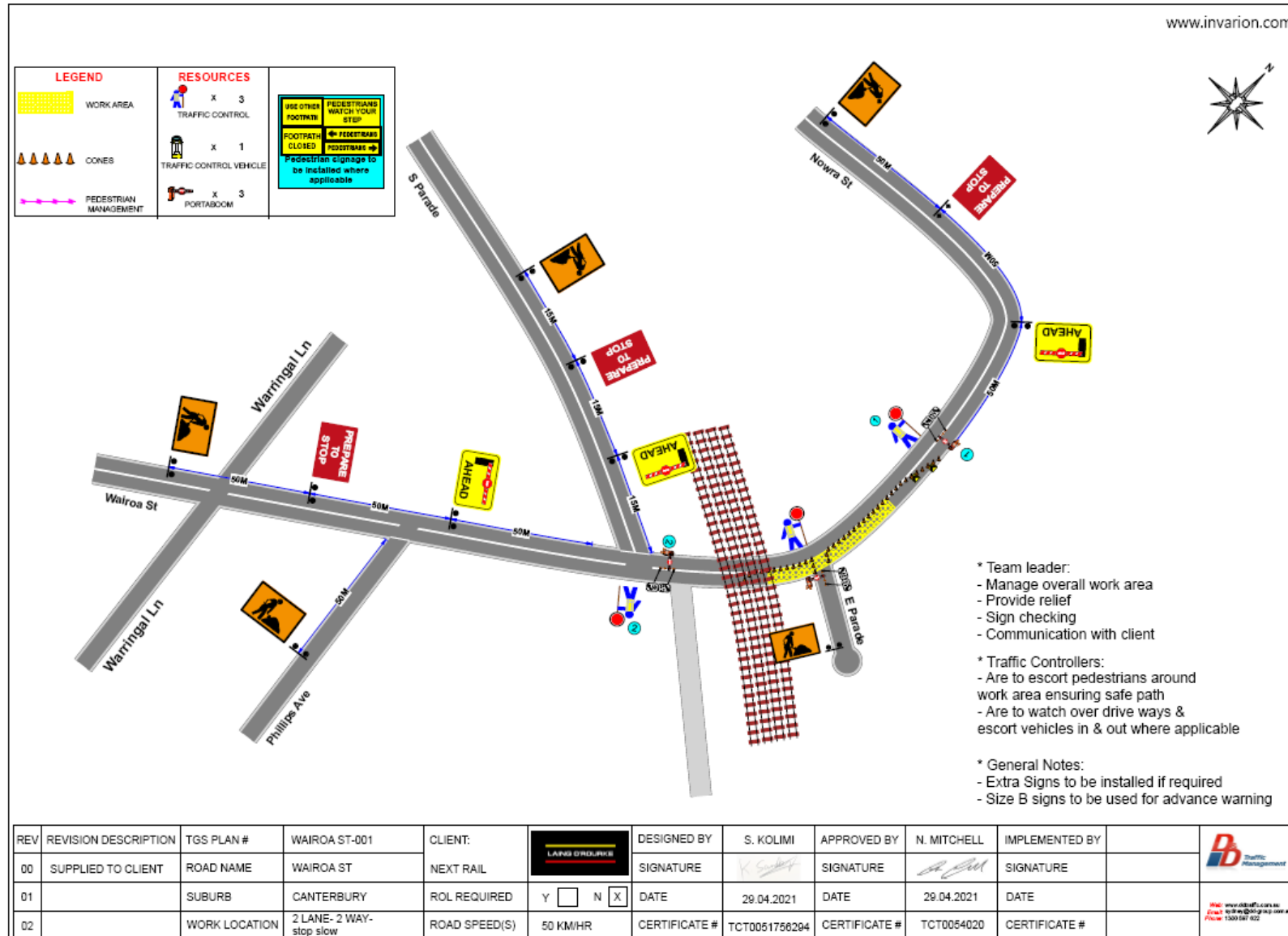


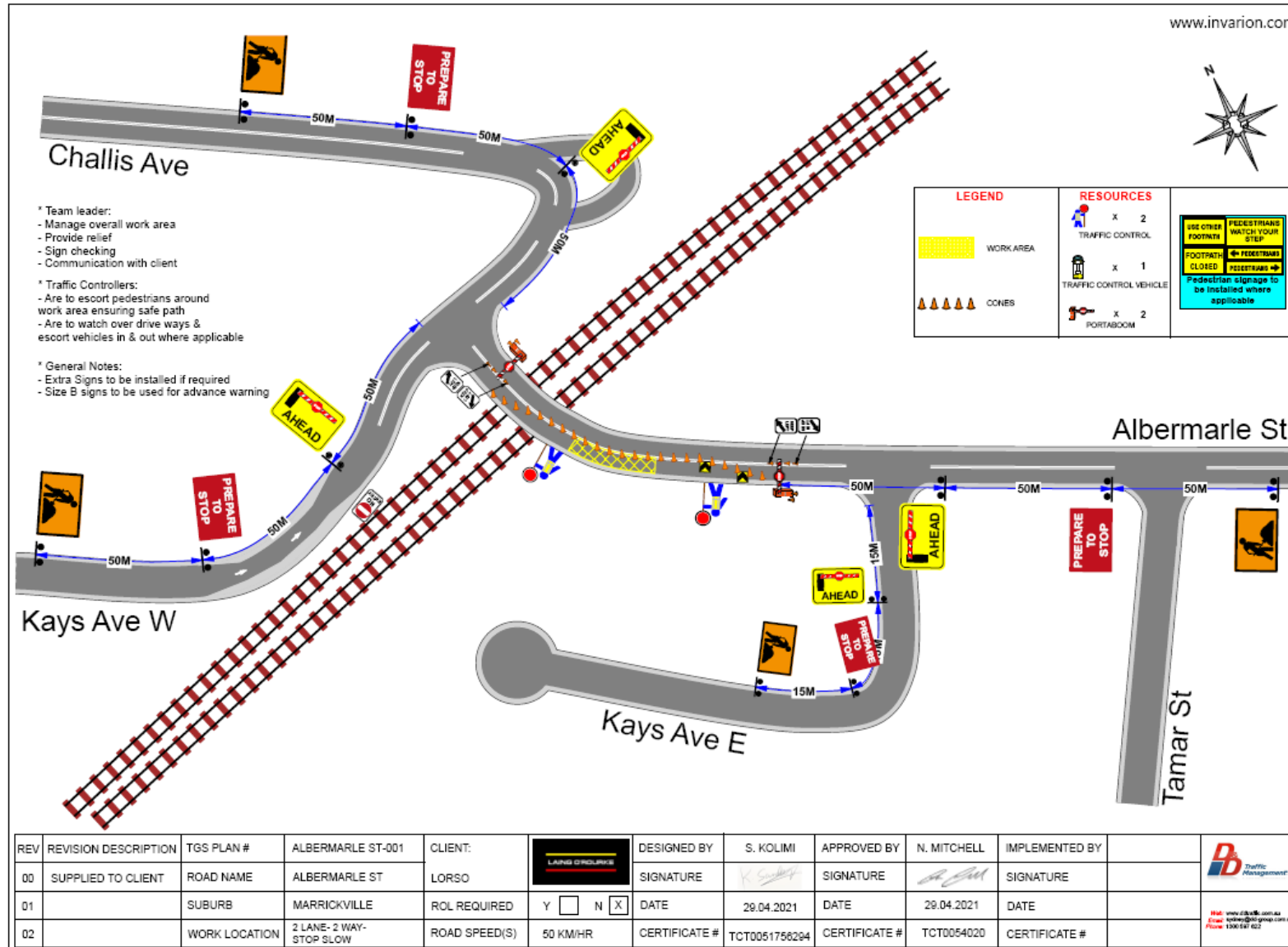


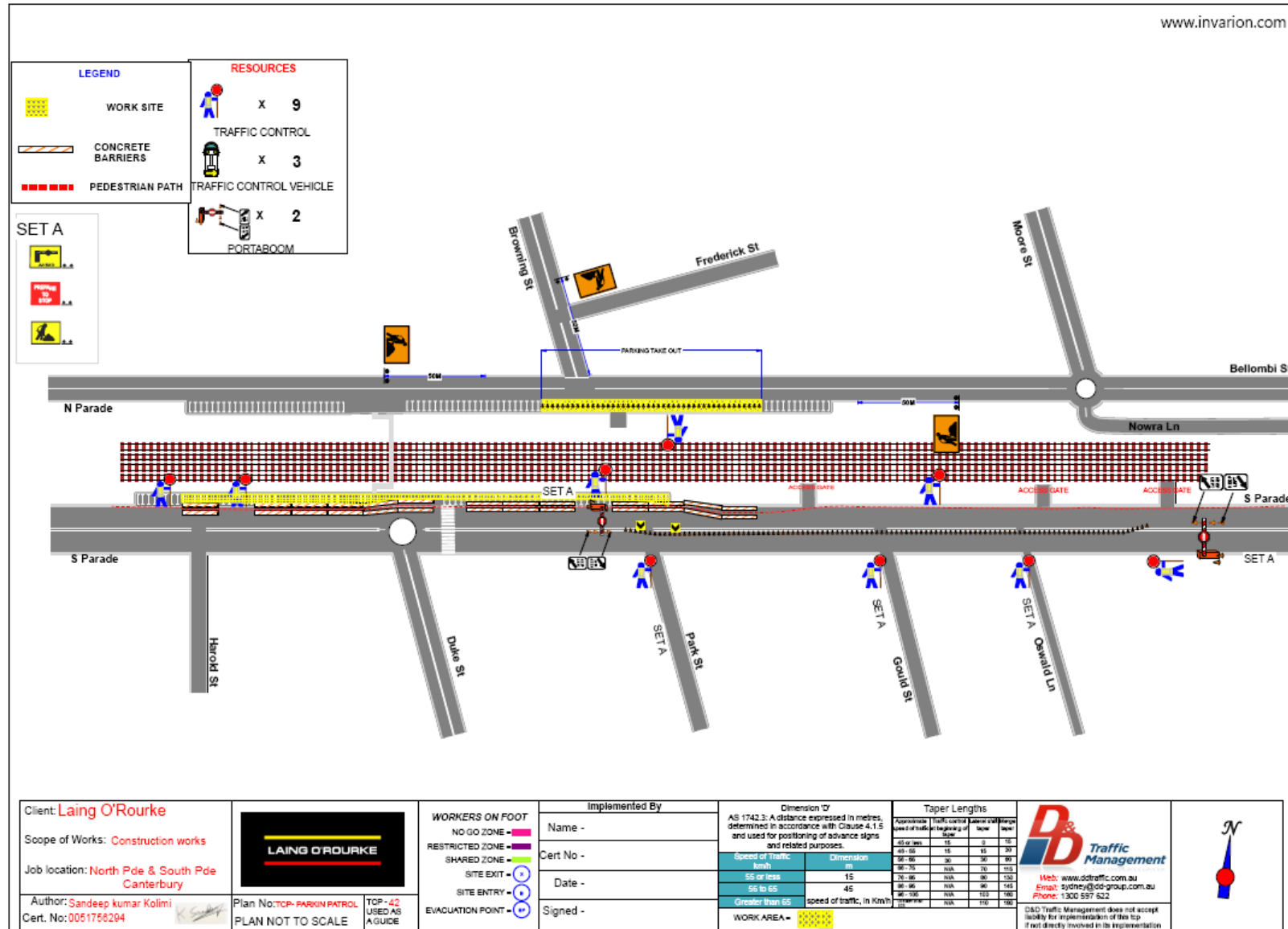


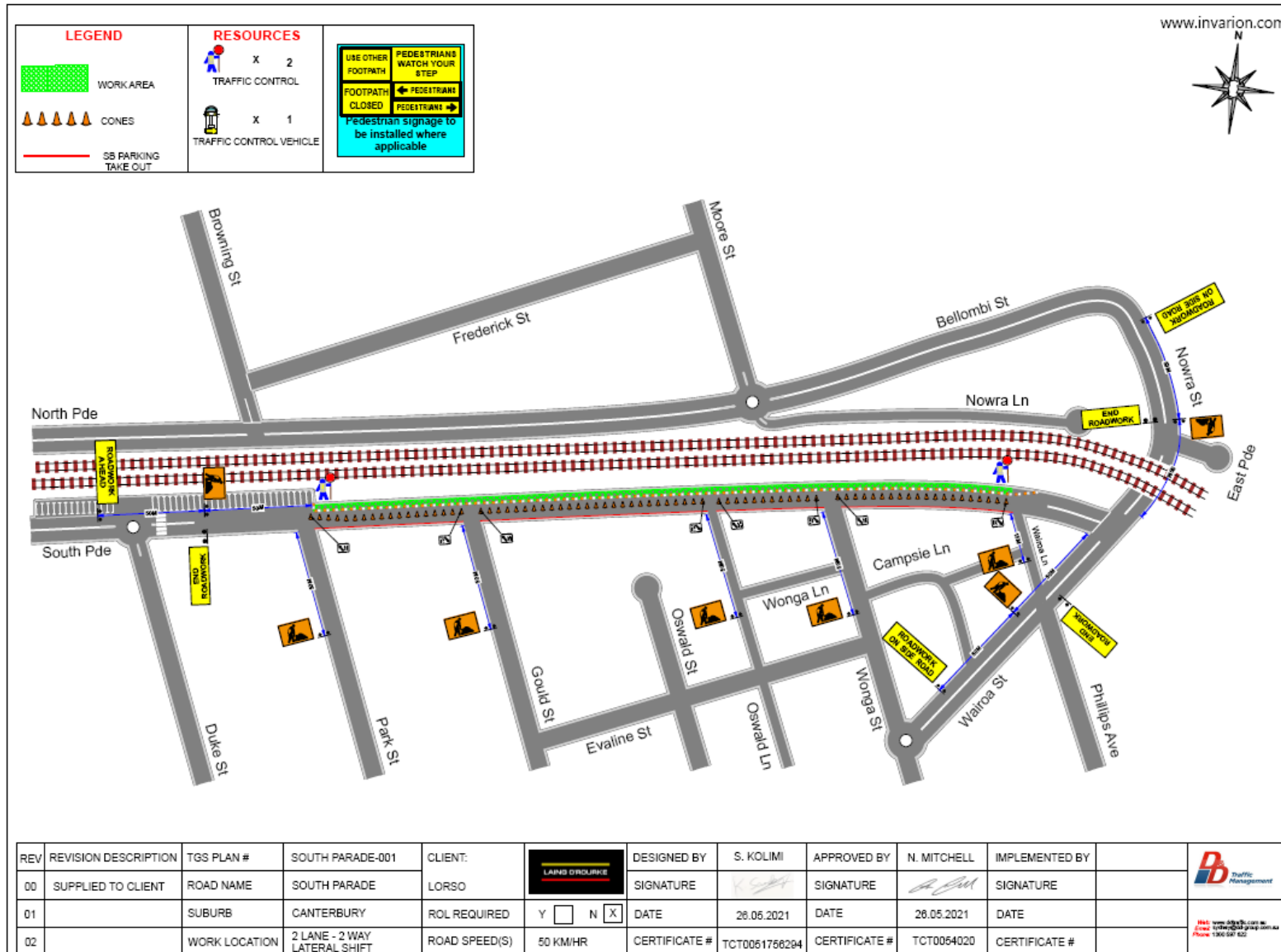


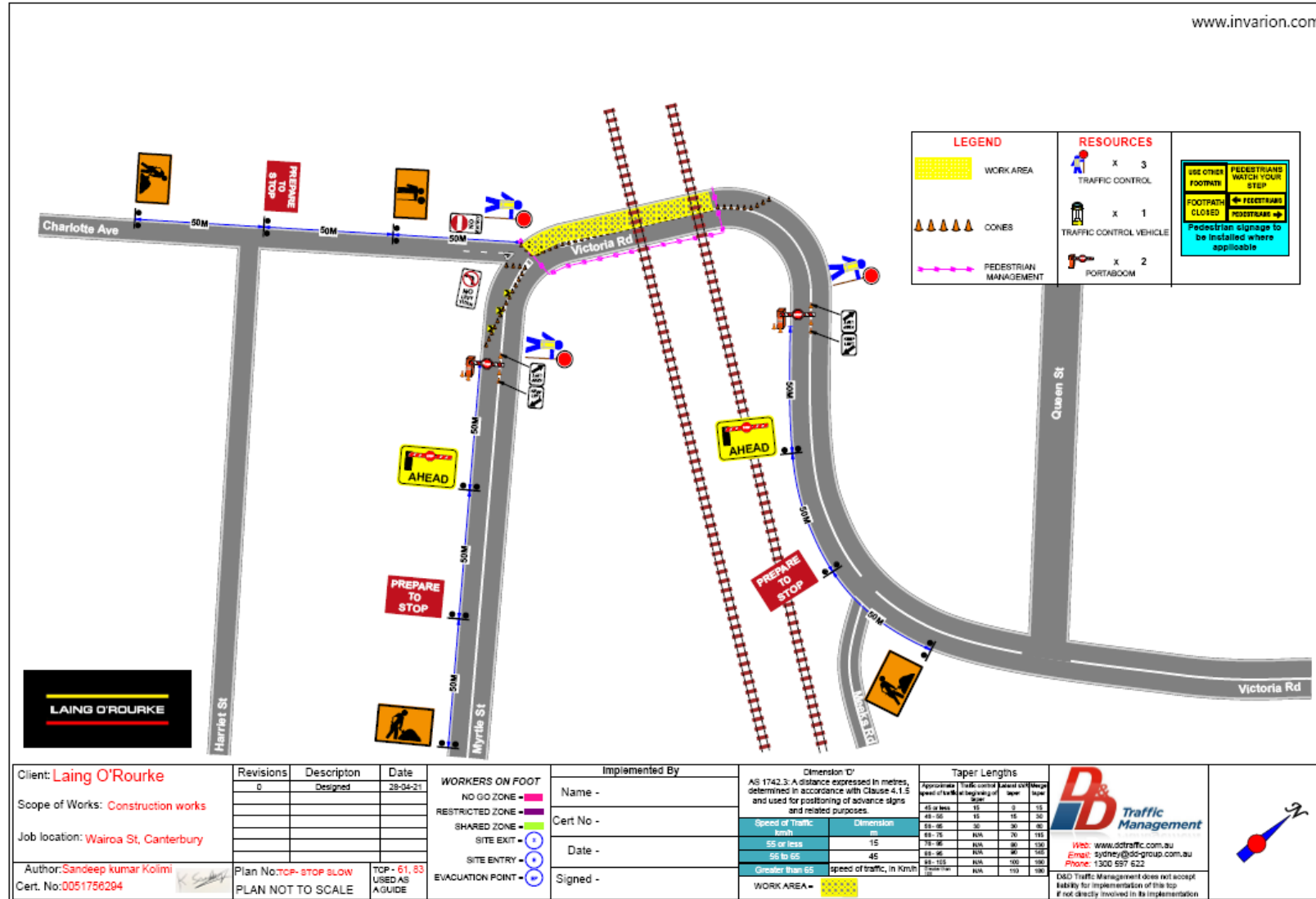




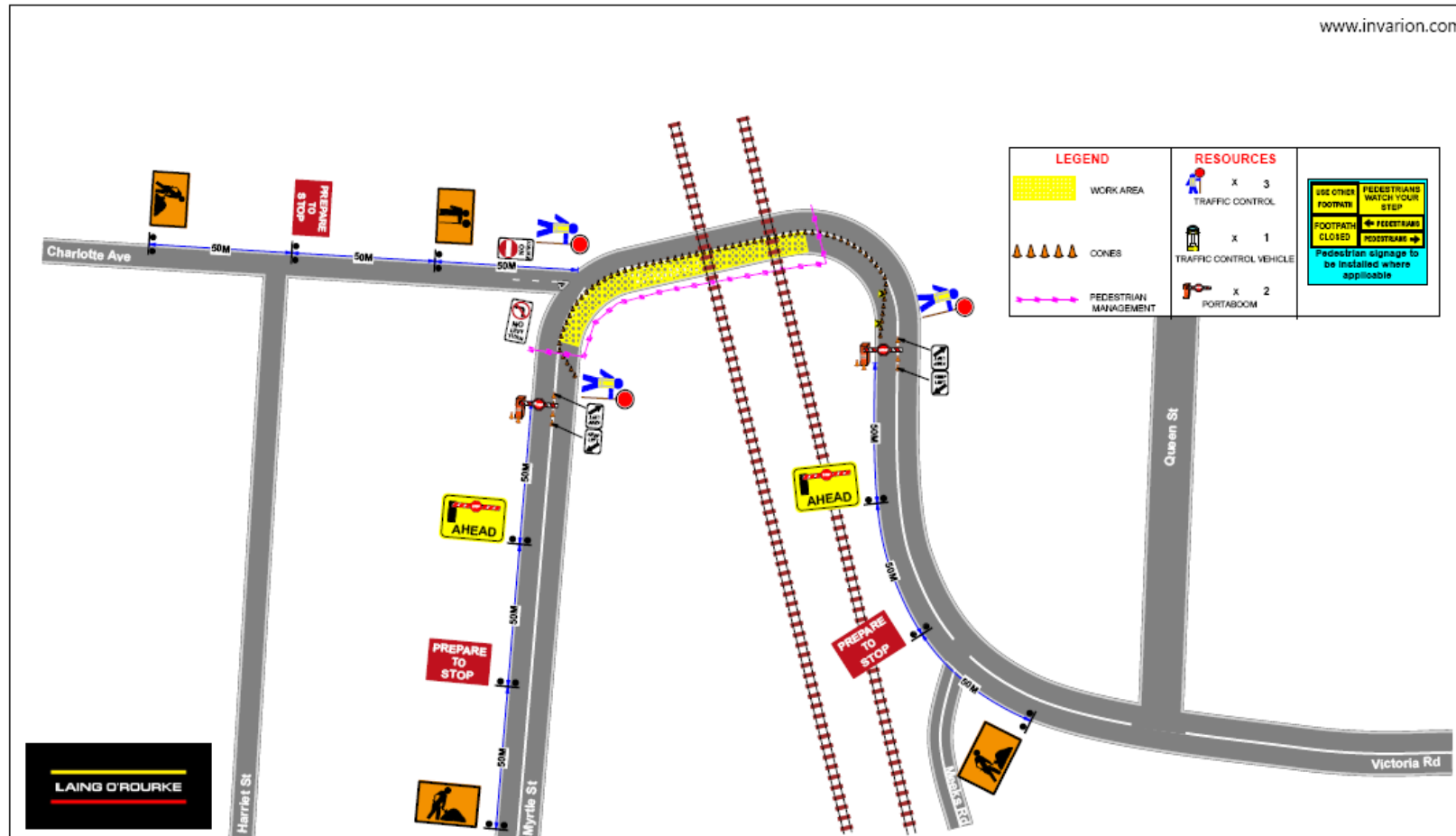








TCP034



Client: **Laing O'Rourke**
 Scope of Works: **Construction works**
 Job location: **Wairoa St, Canterbury**
 Author: **Sandeep kumar Kolmi**
 Cert. No: **0051756294**

Revisions	Description	Date
0	Designed	28-04-21

Plan No: **TCP-STOP BLOW**
 PLAN NOT TO SCALE

TOP - 61, 83
 USED AS
 A GUIDE

WORKERS ON FOOT
NO GO ZONE - [Red line]
RESTRICTED ZONE - [Purple line]
SHARED ZONE - [Green line]
SITE EXIT - [Blue arrow]
SITE ENTRY - [Red arrow]
EVACUATION POINT - [Blue circle]

Implemented By
Name -
Cert No -
Date -
Signed -

Dimension D'	Speed of Traffic	Dimension
AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5 and used for positioning of advance signs and related purposes.	km/h	m
	55 or less	15
	56 to 65	45
	Greater than 65	speed of traffic, in Km/h

Taper Lengths			
Approximate speed of traffic, km/h	Traffic control sign spacing of	Advance sign spacing	Work zone length
45 or less	15	15	15
46-50	15	15	30
51-65	30	30	60
66-75	N/A	70	140
76-85	N/A	90	180
86-100	N/A	90	180
101-110	N/A	100	190
111-120	N/A	110	220

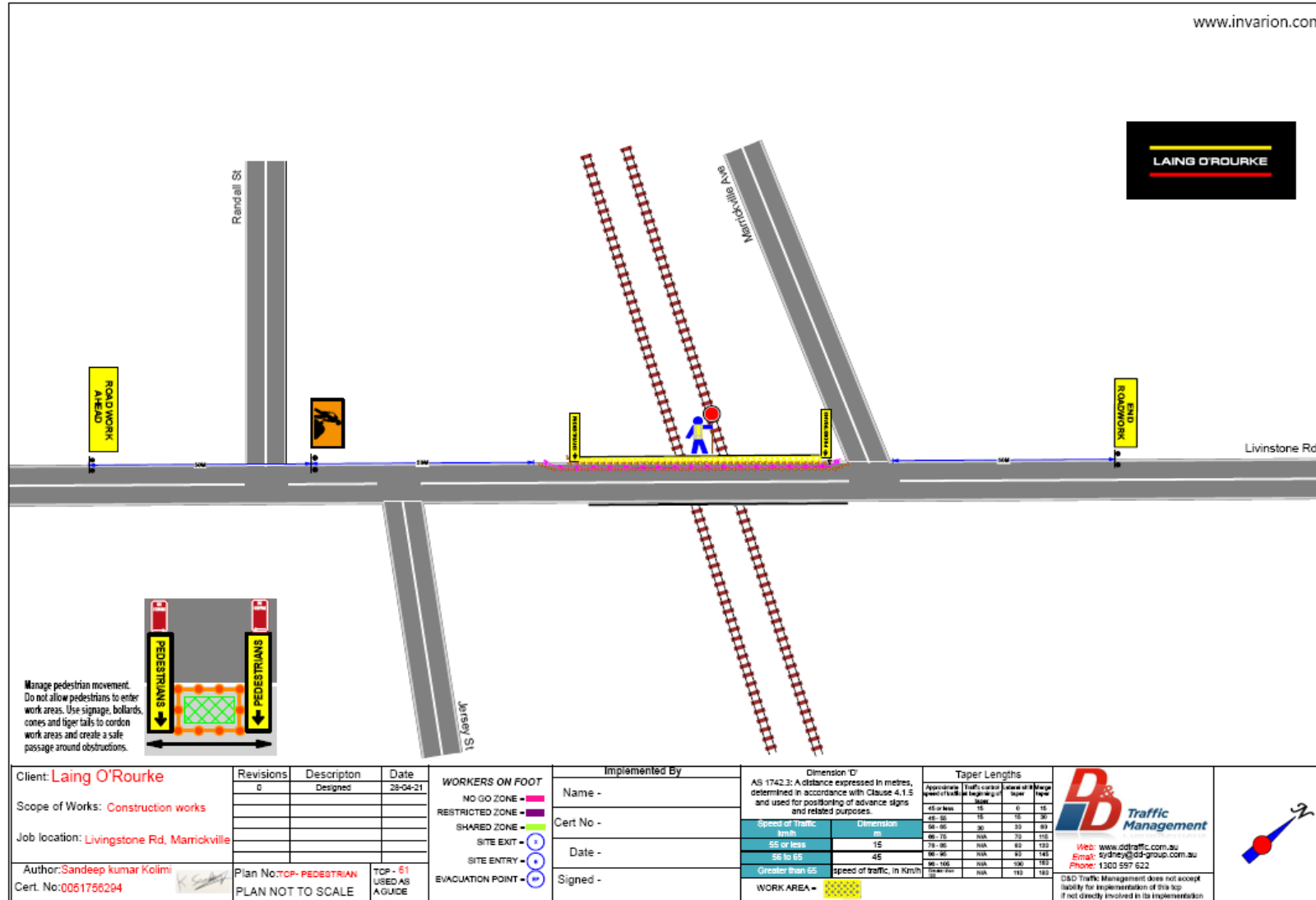
DB Traffic Management
 Web: www.dtraffic.com.au
 Email: sydney@db-group.com.au
 Phone: 1300 597 622

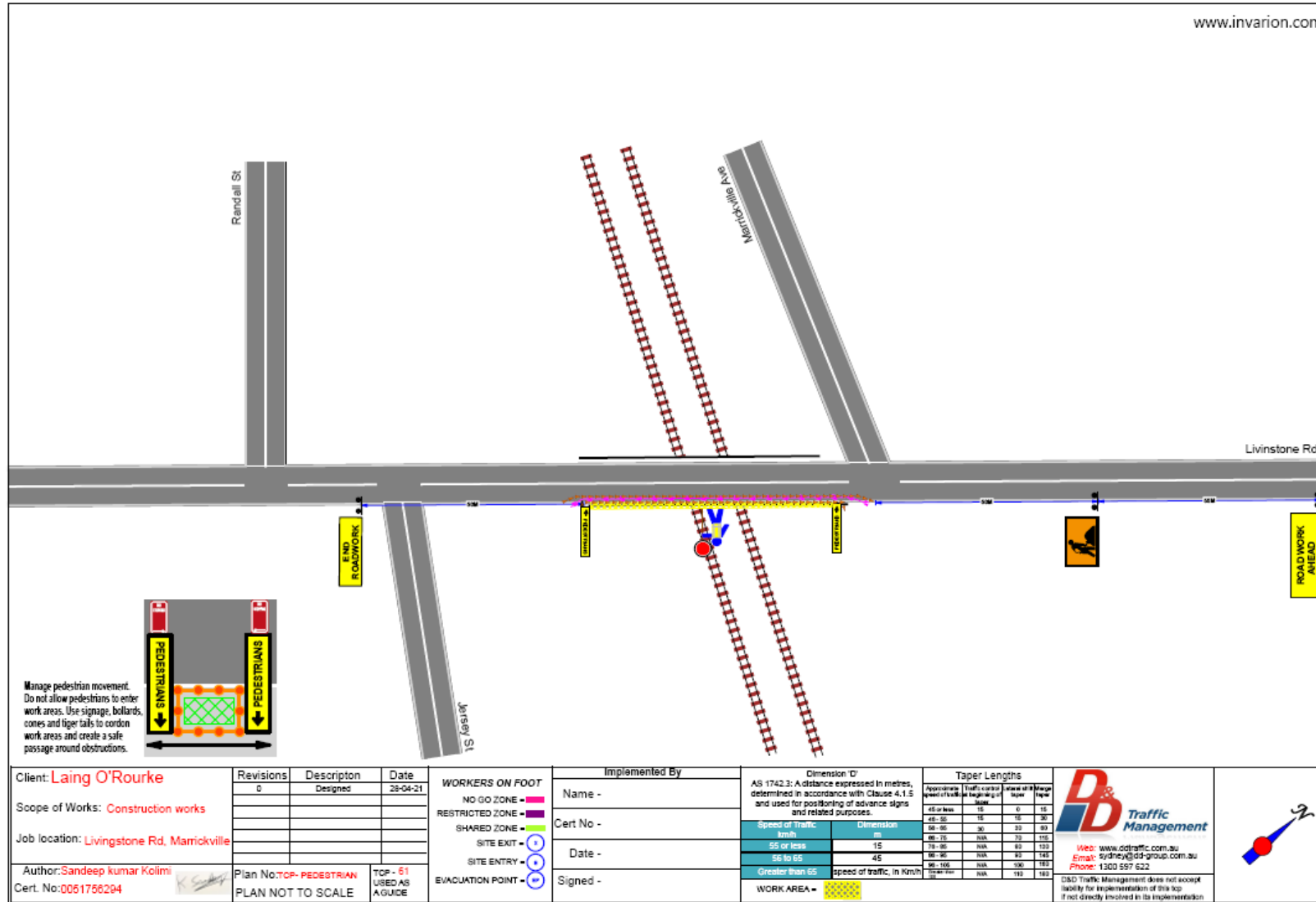
D&D Traffic Management does not accept liability for implementation of this top if not directly involved in its implementation

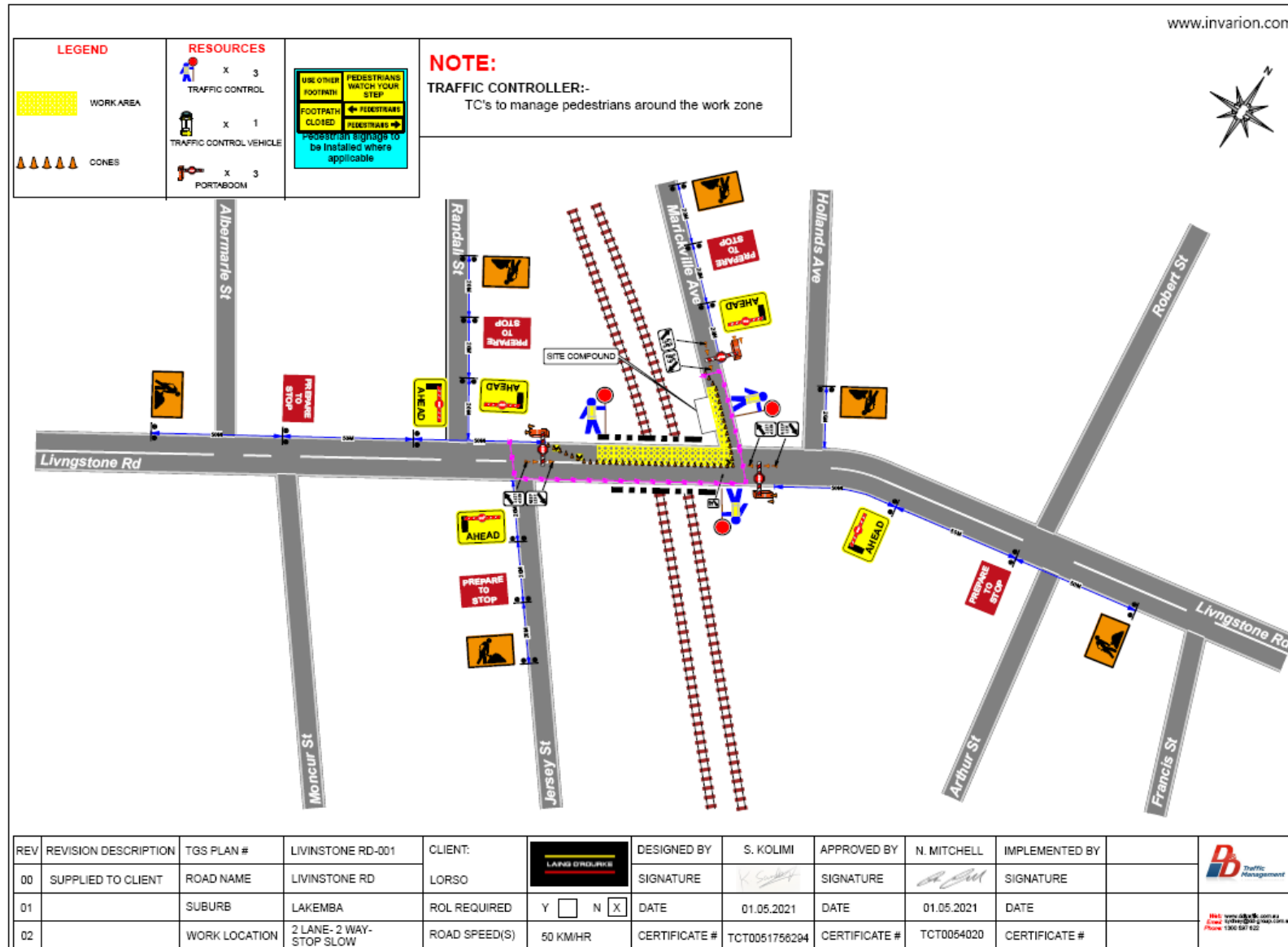


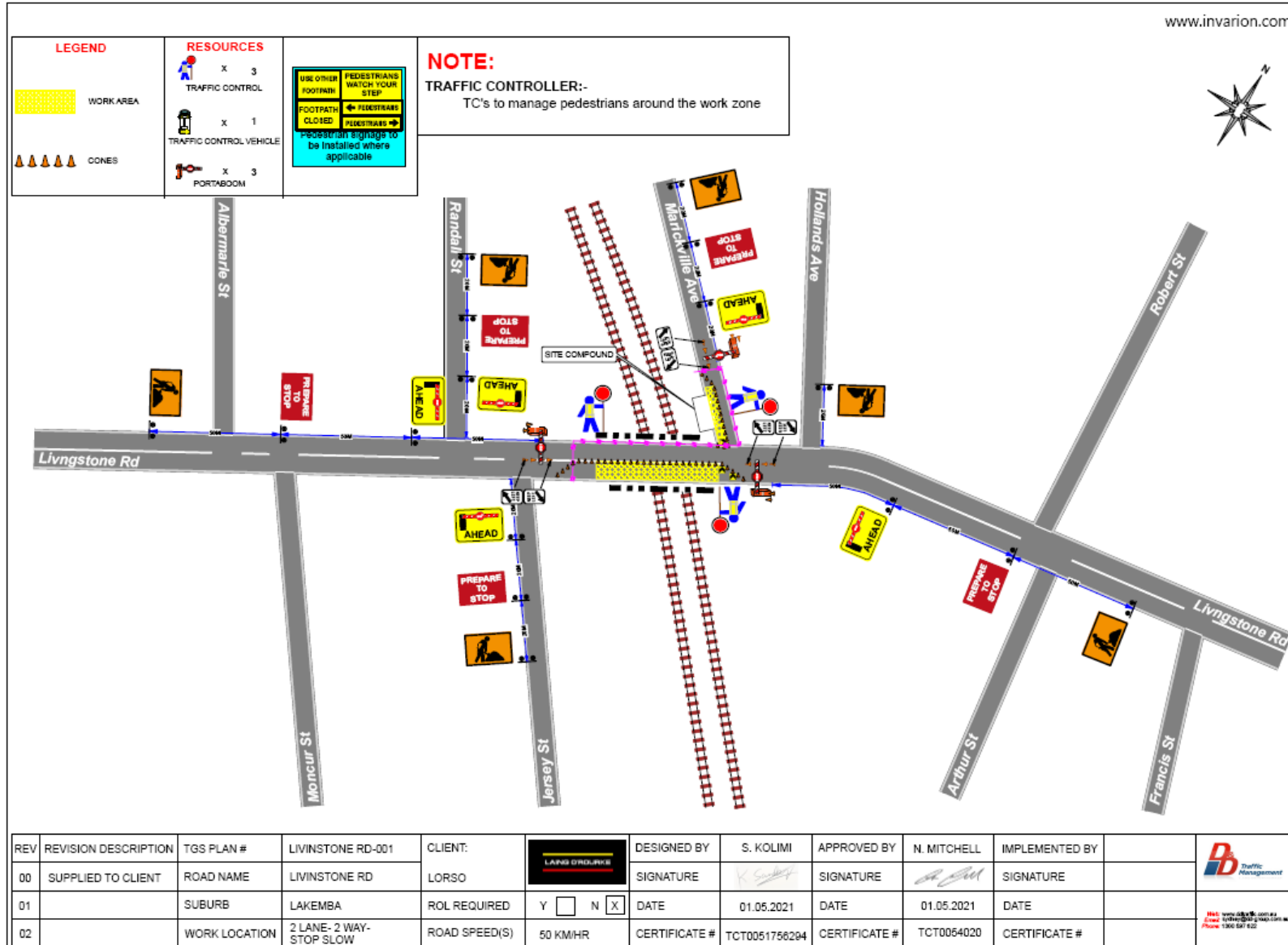
TCP035

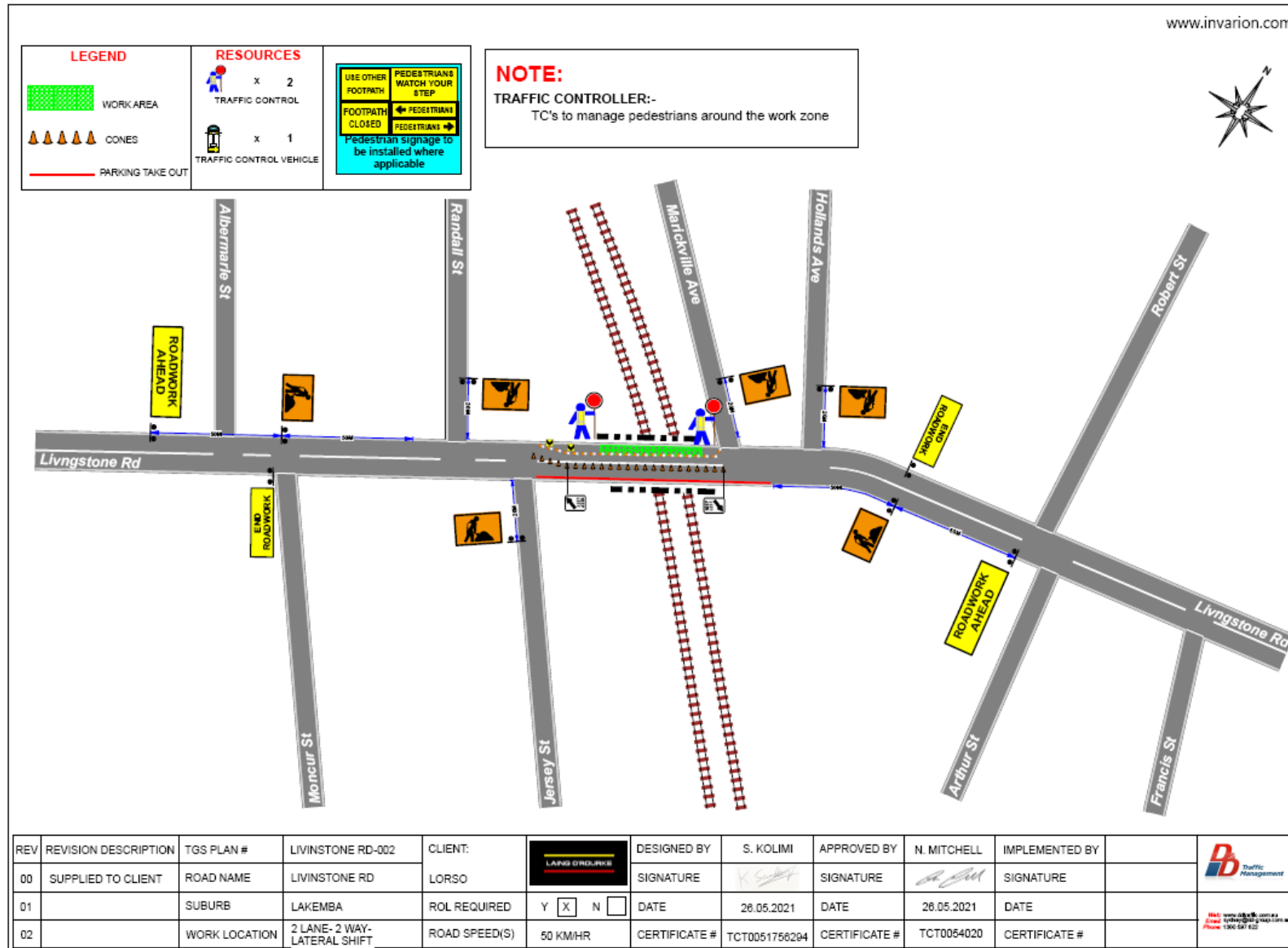


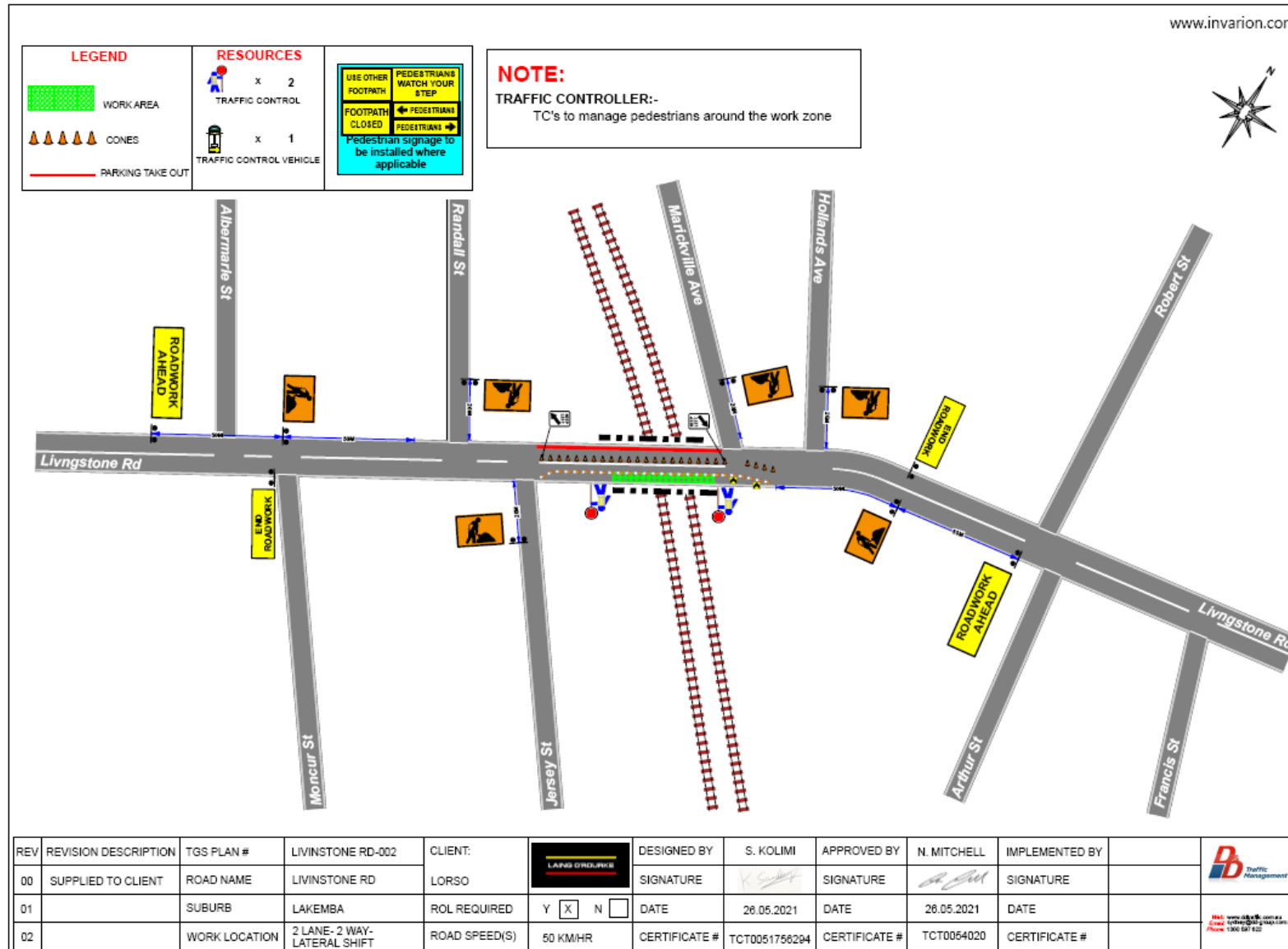


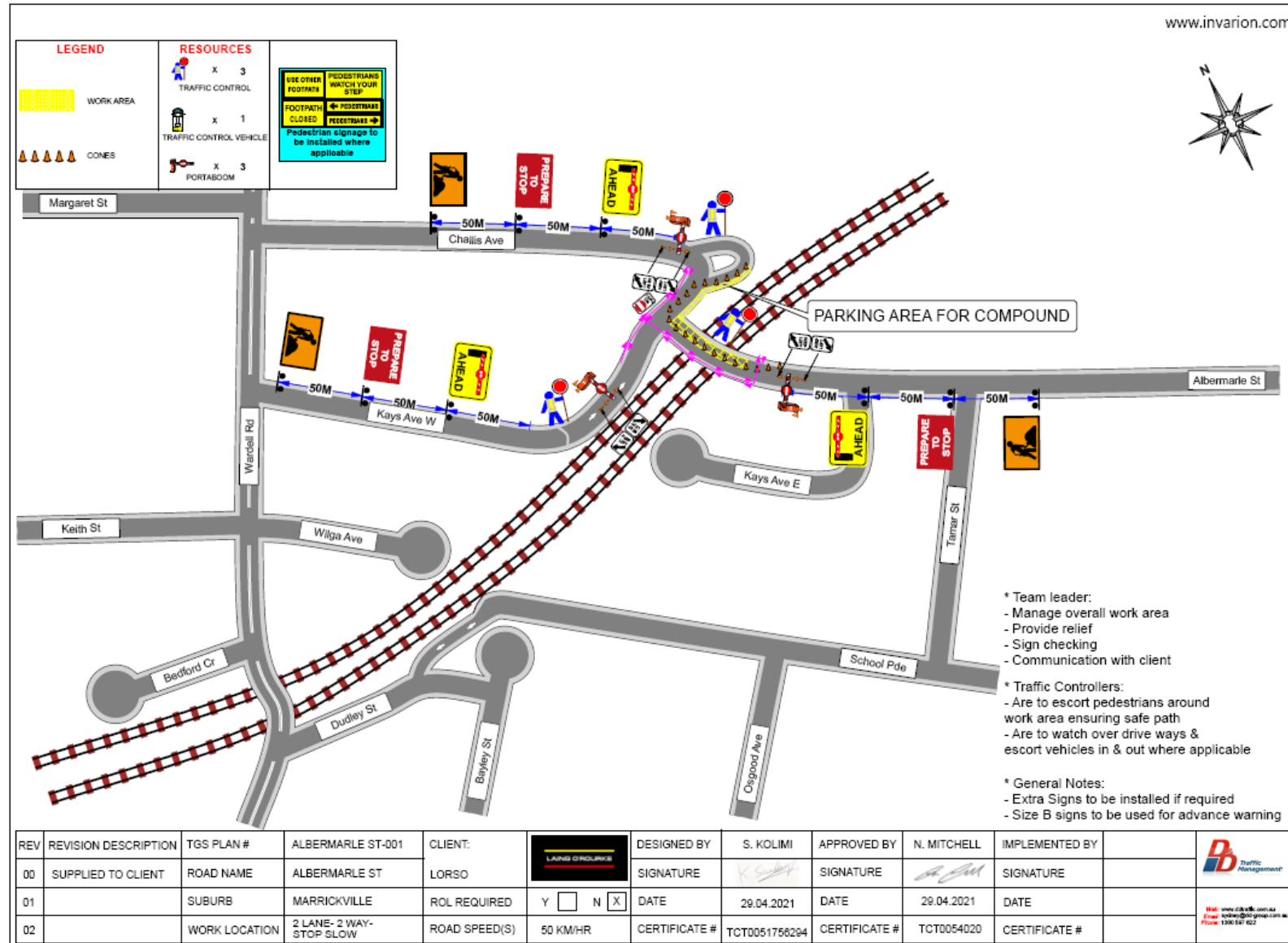


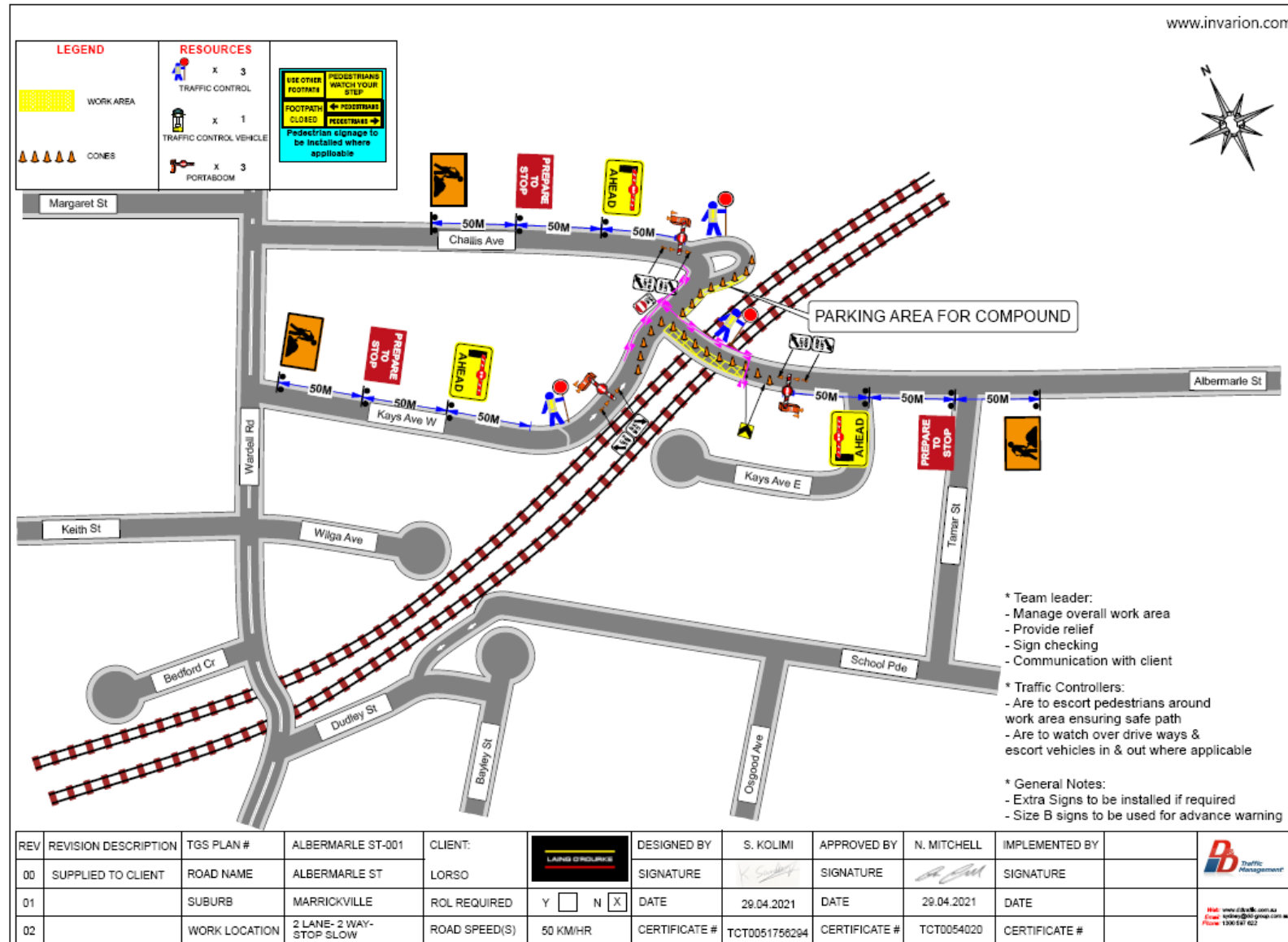


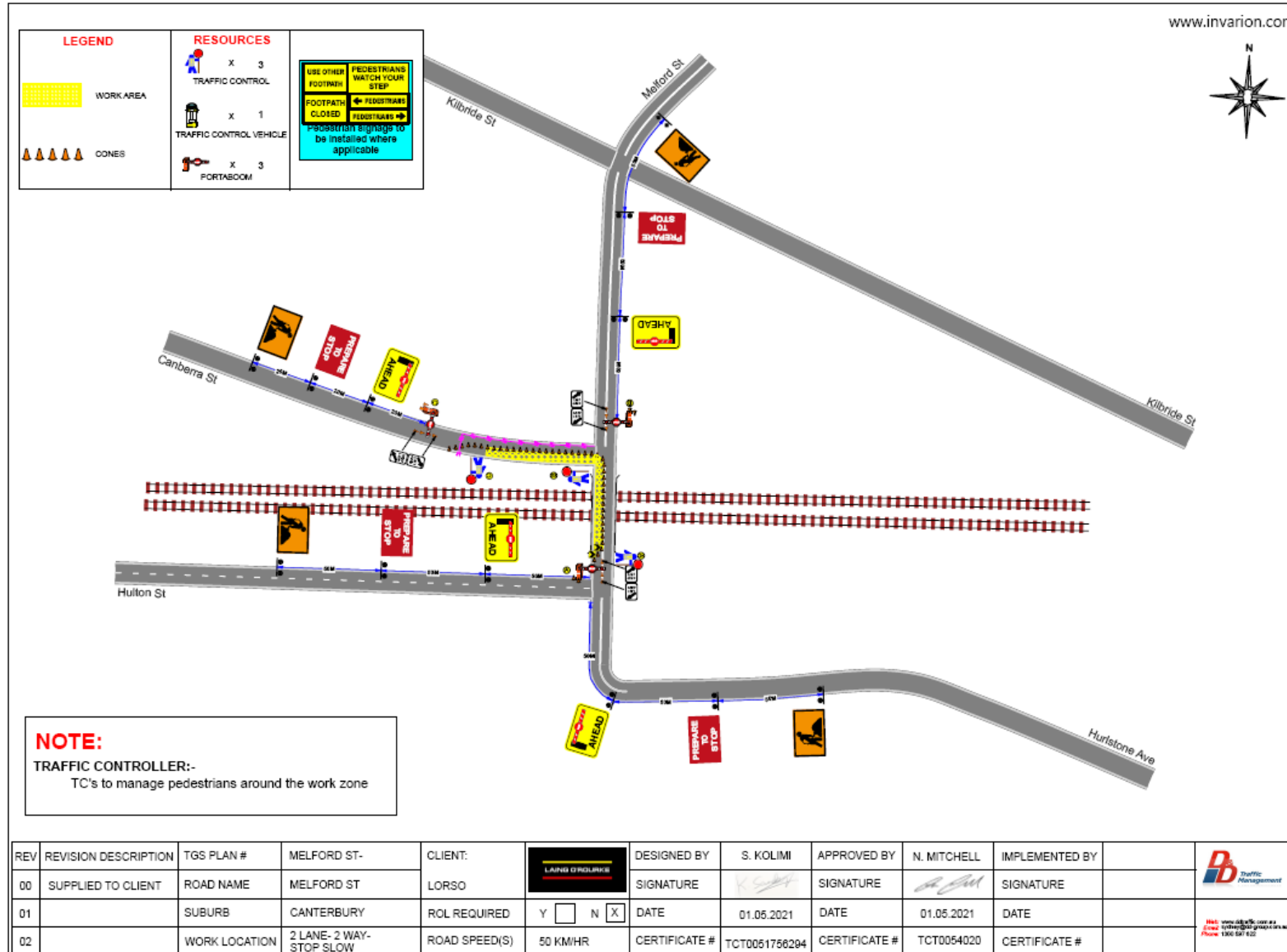


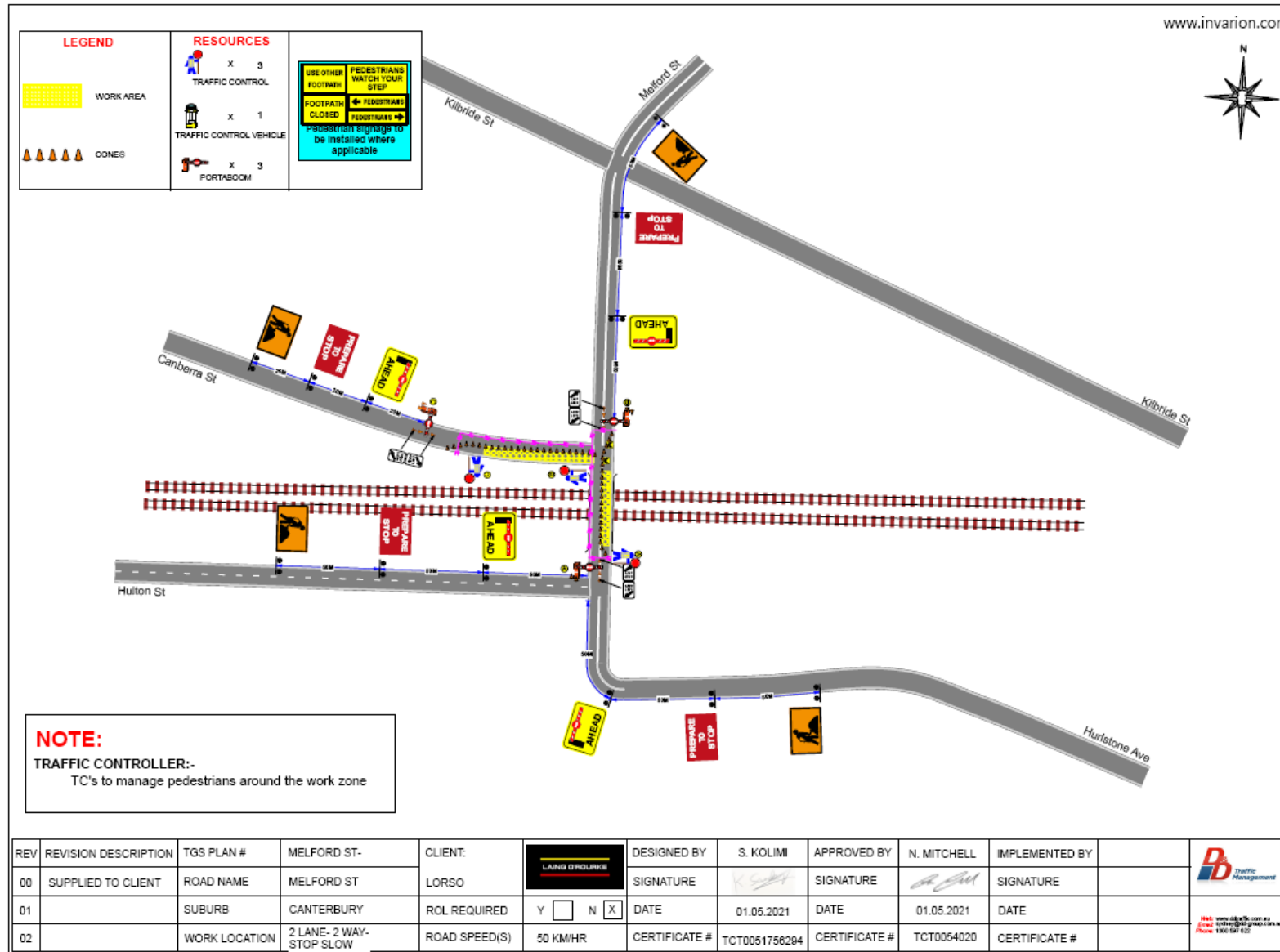




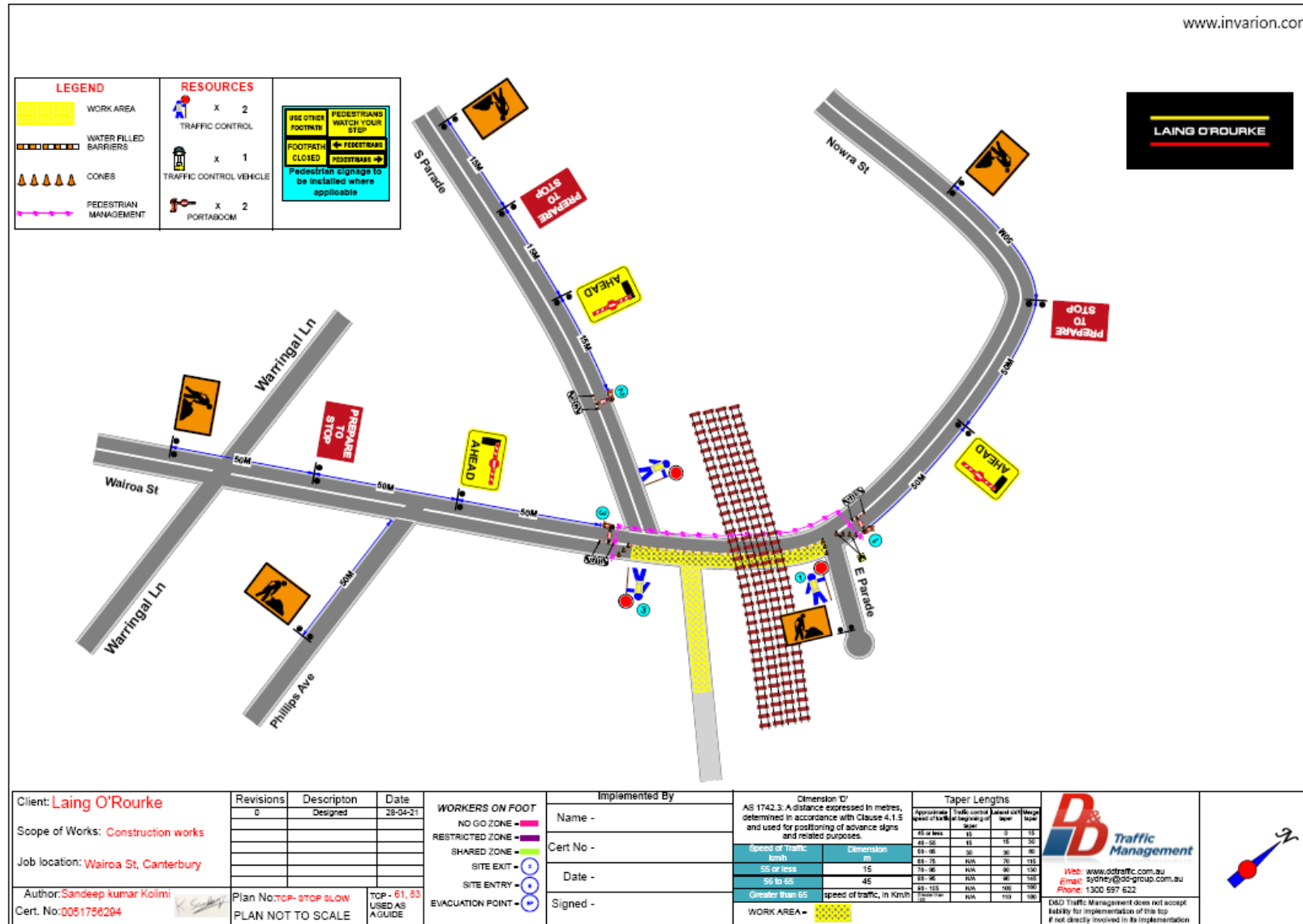


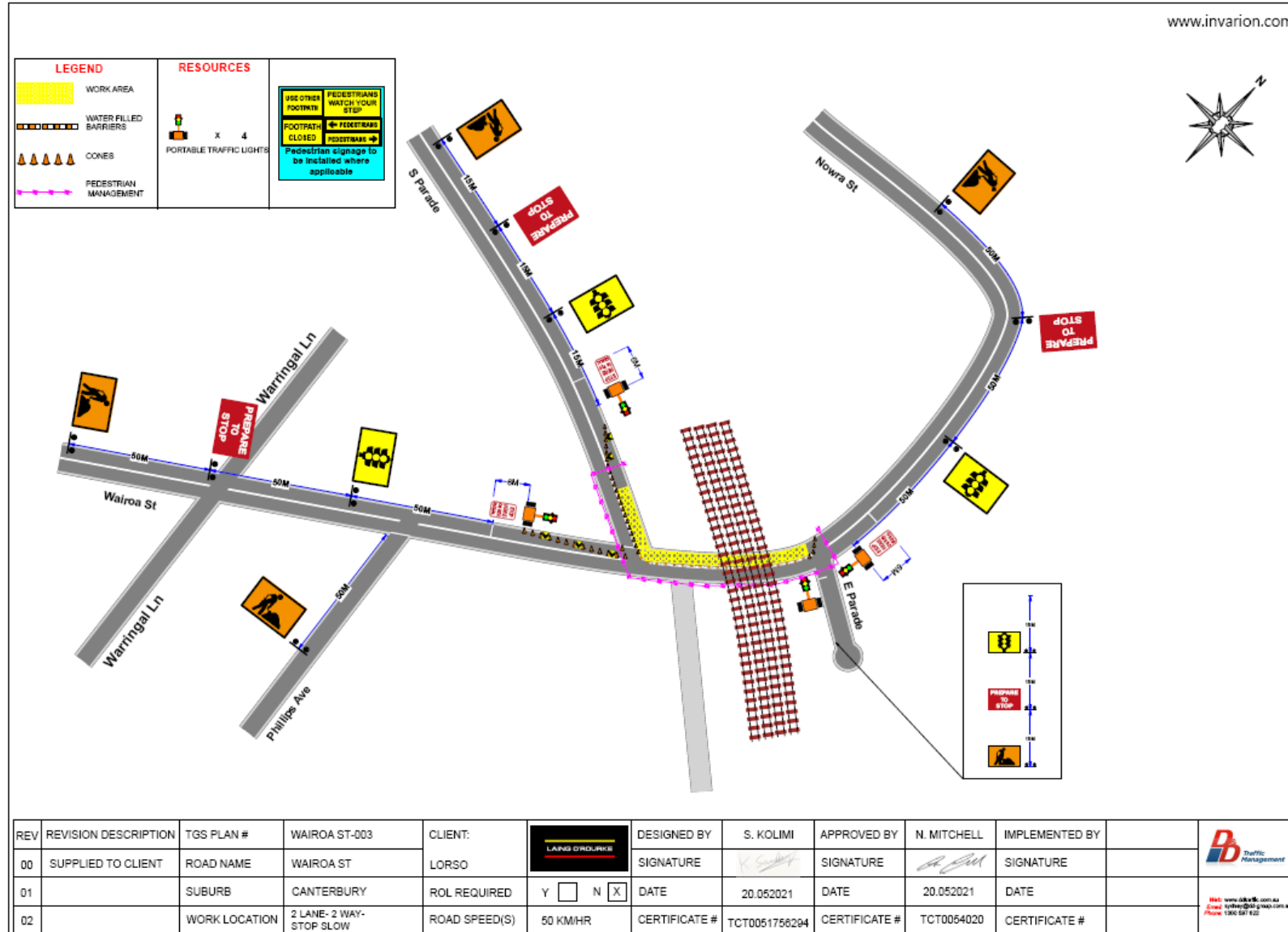


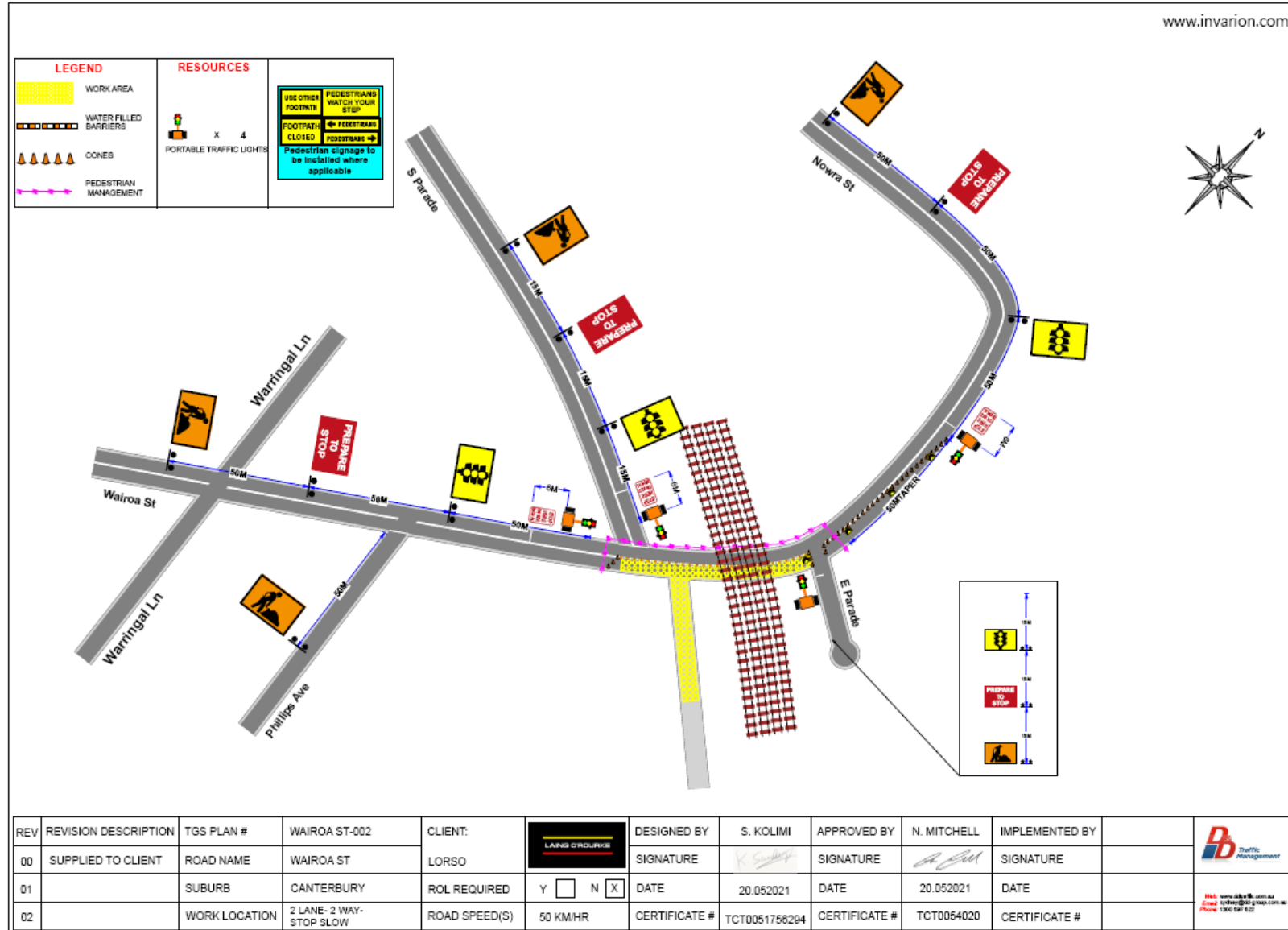


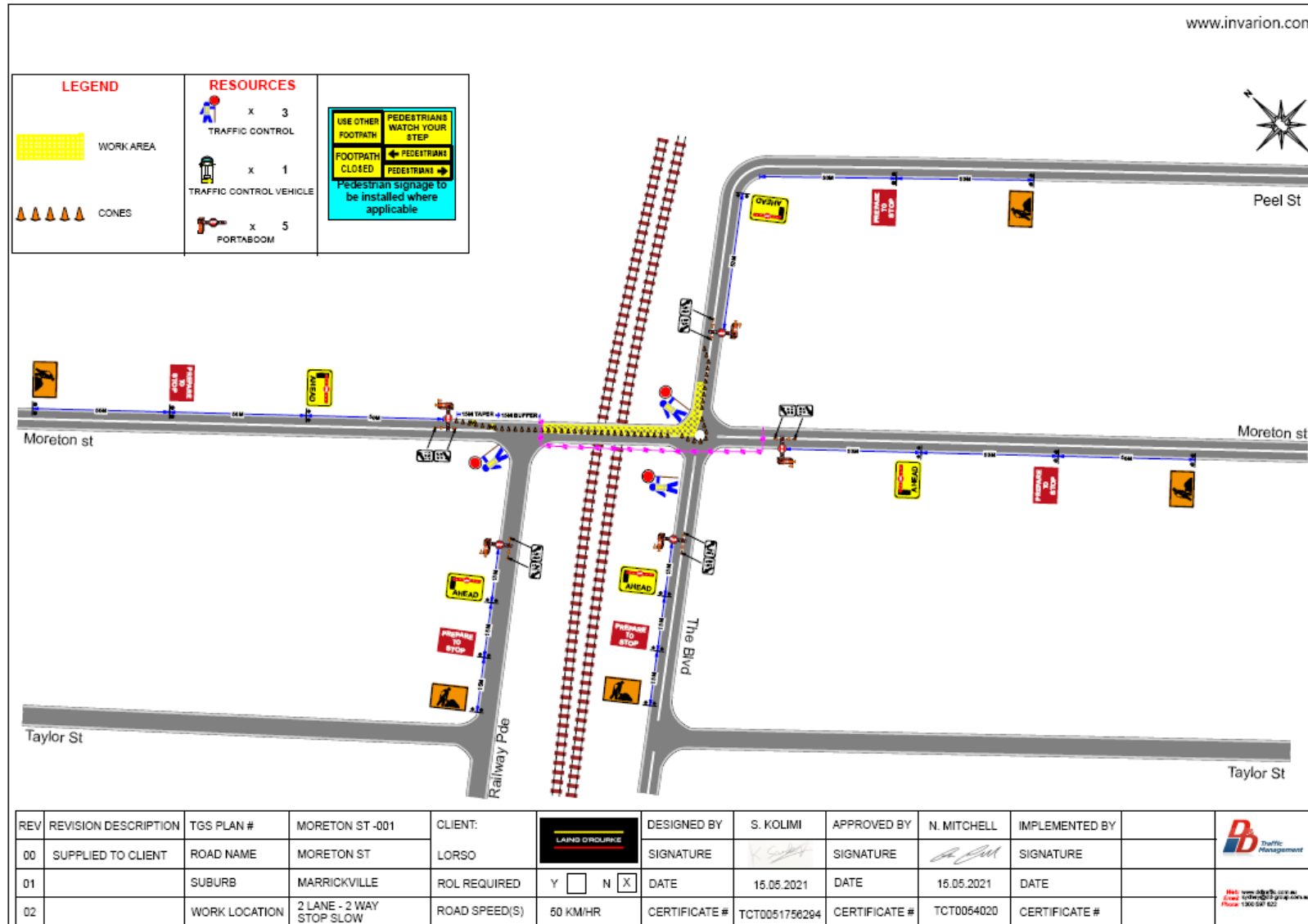


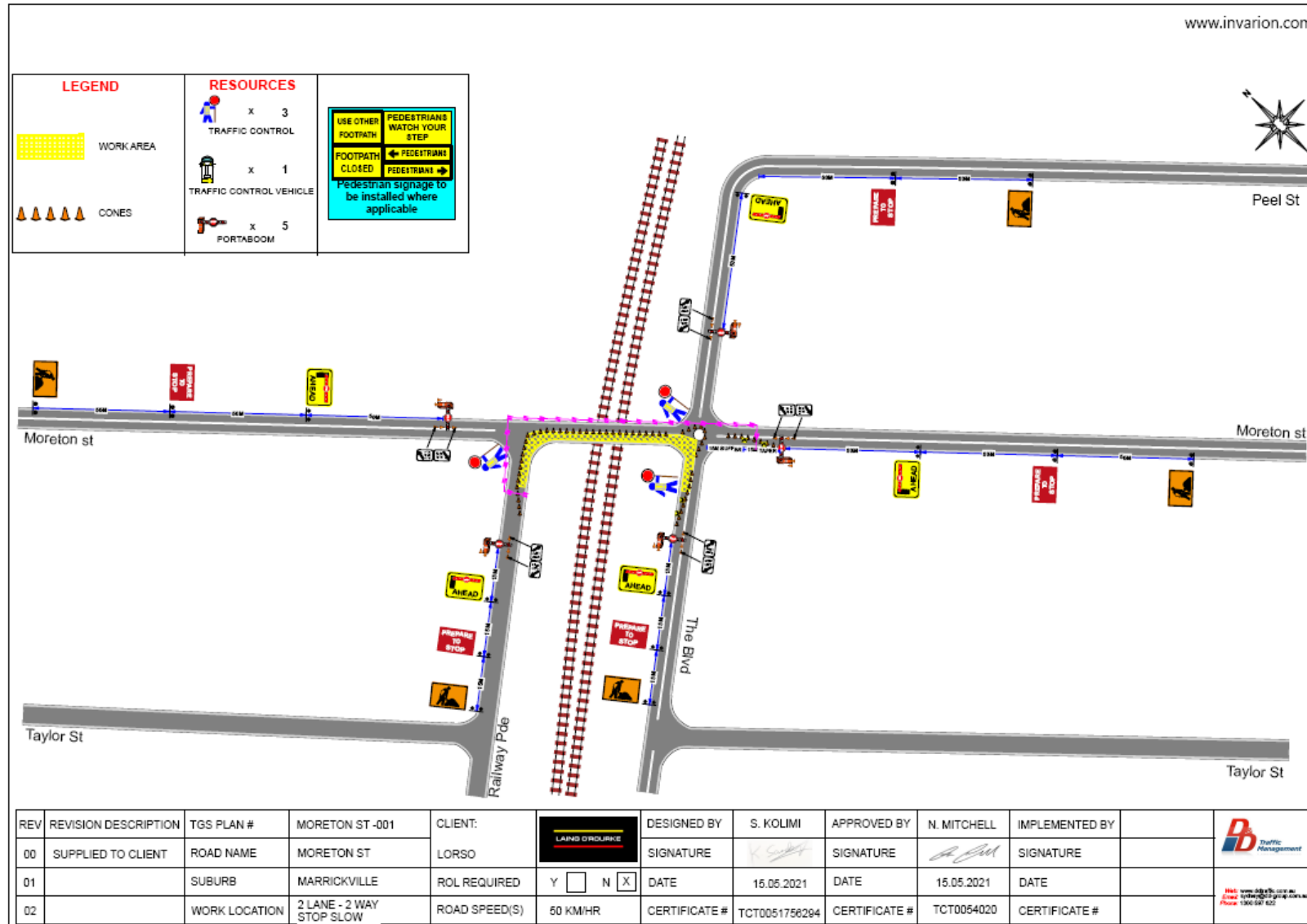
REV	REVISION DESCRIPTION	TGS PLAN #	MELFORD ST-	CLIENT:	DESIGNED BY	S. KOLIMI	APPROVED BY	N. MITCHELL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	MELFORD ST	LORSO	SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	CANTERBURY	ROL REQUIRED	DATE	01.05.2021	DATE	01.05.2021	DATE	
02		WORK LOCATION	2 LANE- 2 WAY- STOP SLOW	ROAD SPEED(S)	CERTIFICATE #	TCT0051756294	CERTIFICATE #	TCT0054020	CERTIFICATE #	





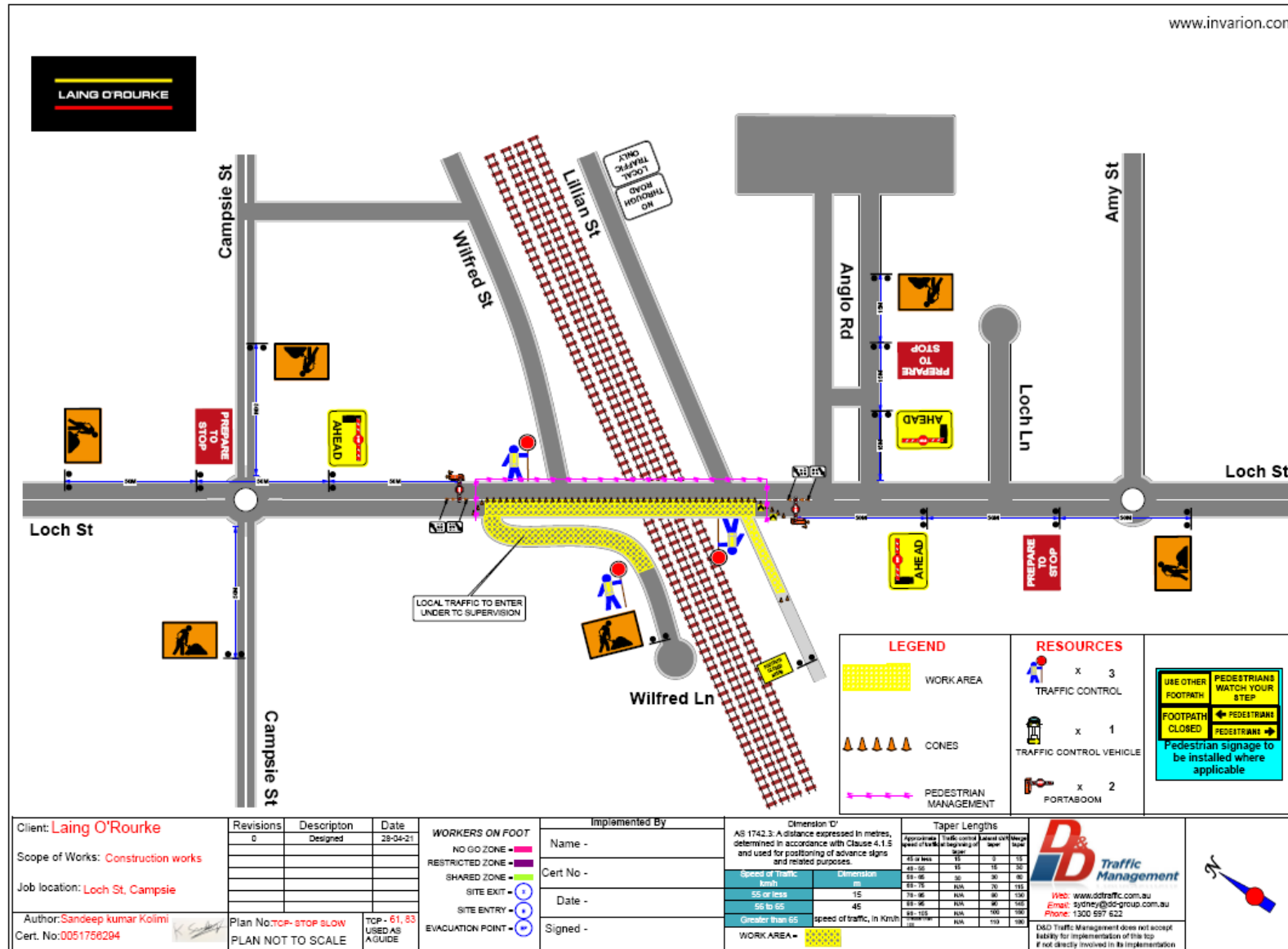


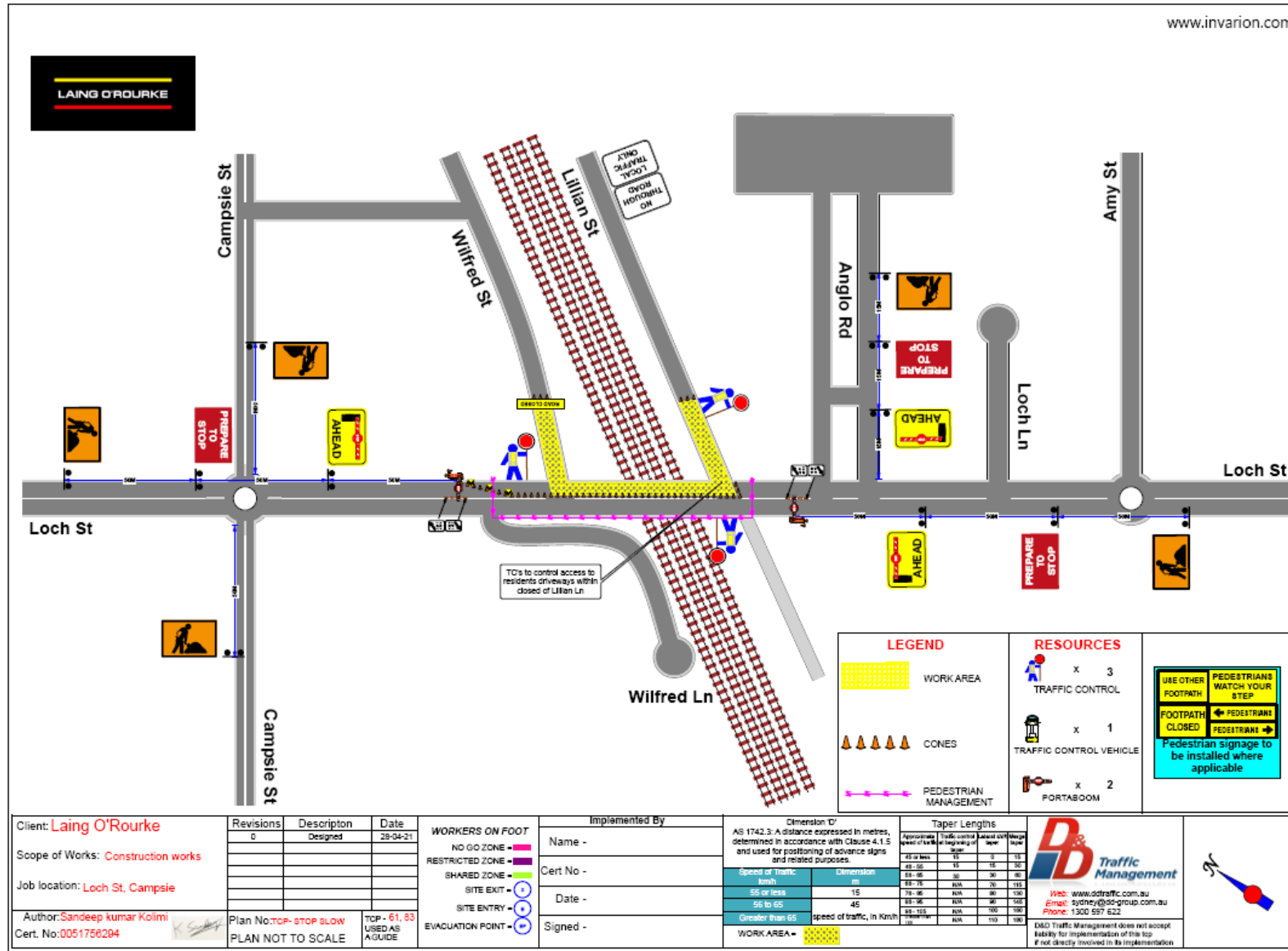




REV	REVISION DESCRIPTION	TGS PLAN #	MORETON ST -001	CLIENT:	DESIGNED BY	S. KOLIMI	APPROVED BY	N. MITCHELL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	MORETON ST	LORSO	SIGNATURE		SIGNATURE			
01		SUBURB	MARRICKVILLE	ROL REQUIRED	DATE	15.05.2021	DATE	15.05.2021	DATE	
02		WORK LOCATION	2 LANE - 2 WAY STOP SLOW	ROAD SPEED(S)	CERTIFICATE #	TCT0051750294	CERTIFICATE #	TCT0054020	CERTIFICATE #	

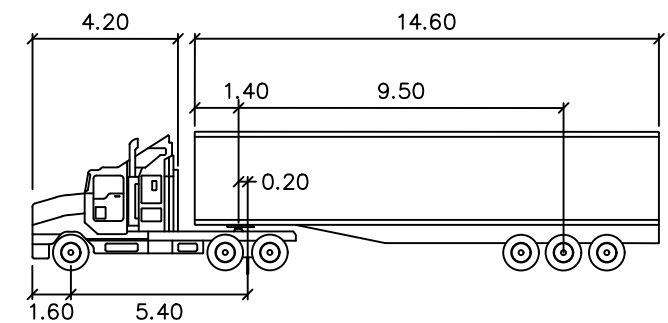
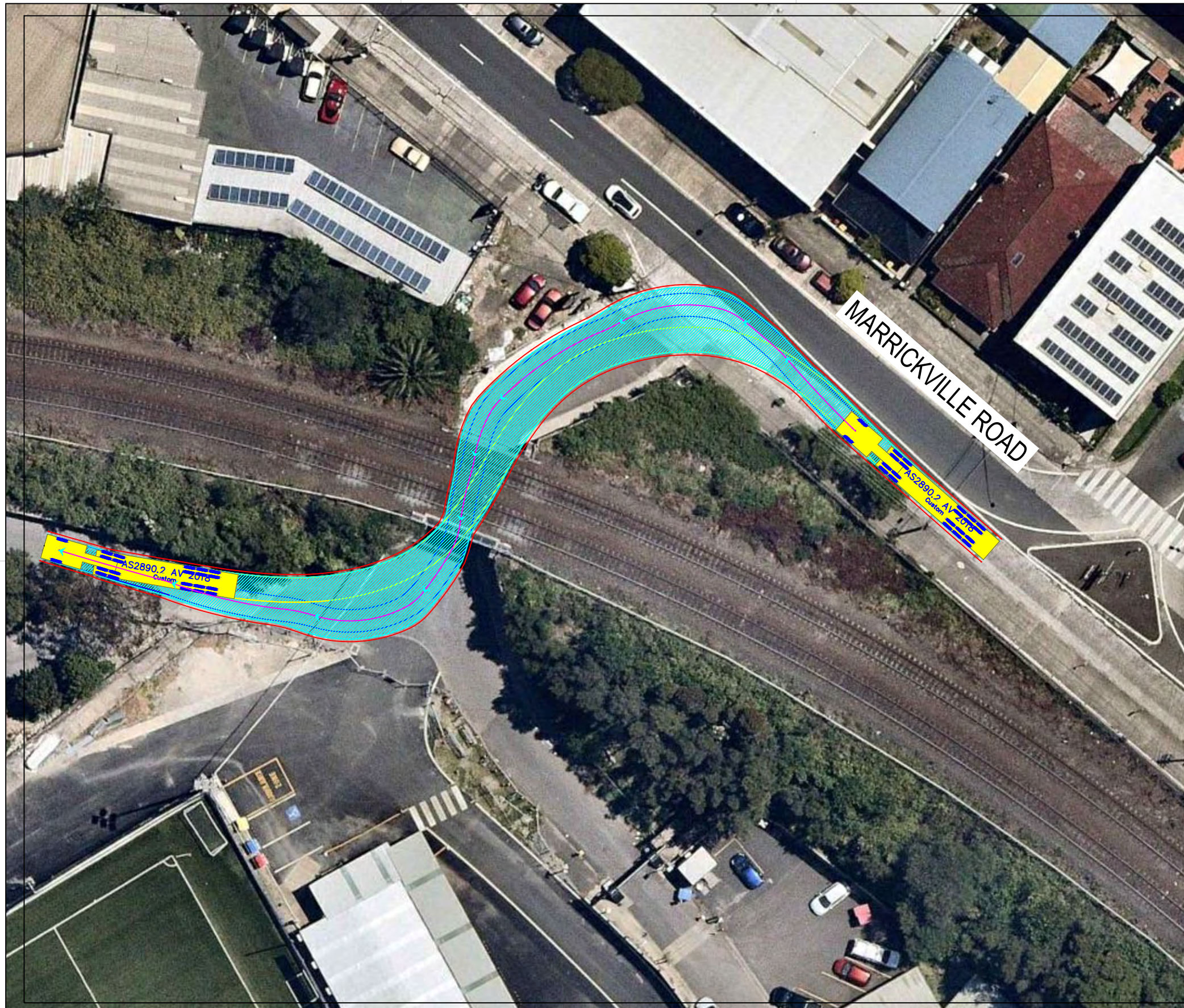
TCP051





Appendix D – Swept Path Analysis

Swept paths have been provided to demonstrate the special requirements for heavy vehicles accessing the site gates.

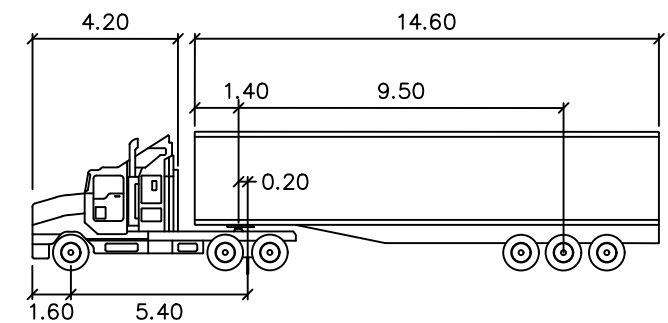
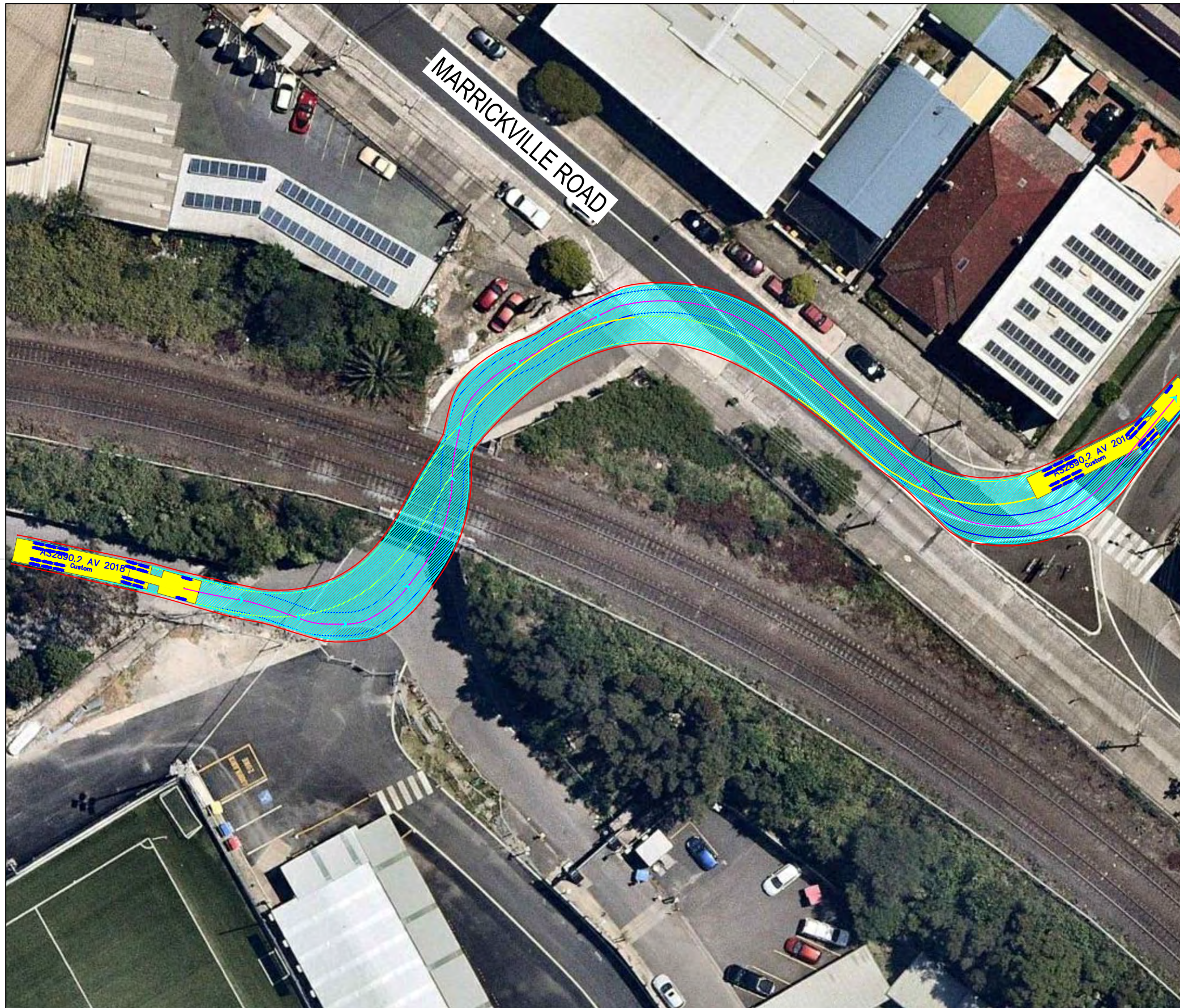


AS2890.2 AV 2018 meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019				
010	NO CHANGE	M.H	08.11.2019				
011	NO CHANGES	M.H	11.11.2019				
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 1A ENTRY MOVEMENT (UNDERPASS)	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	1	Issue	011		

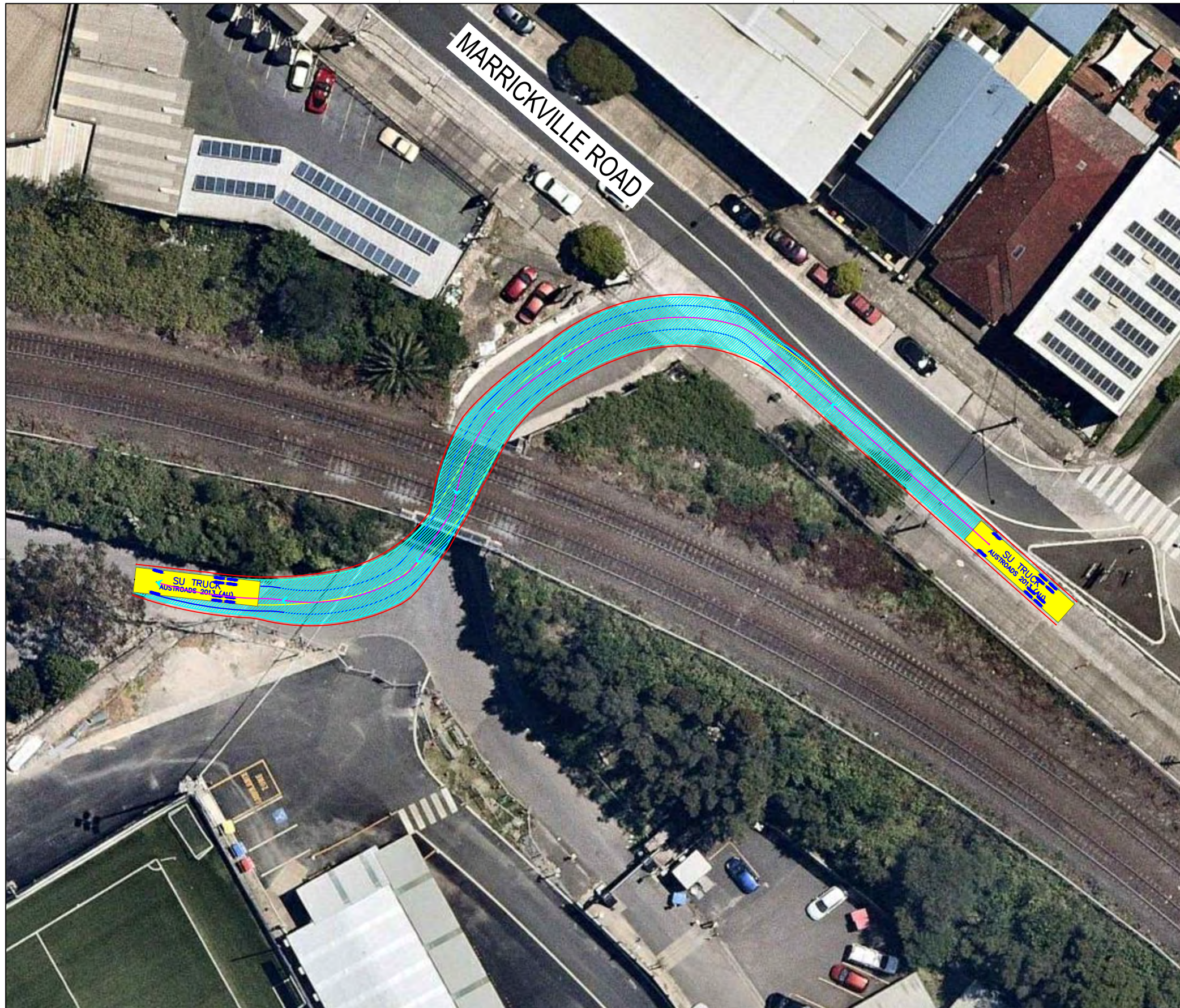


AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018	AS2890.2 AV 2018
Tractor Width	: 2.50	Tractor Track	: 2.50	Trailer Width	: 2.50	Trailer Track	: 2.50	Lock to Lock Time	: 6.0	Steering Angle	: 27.8
								Articulating Angle	: 70.0		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 1A EXIT MOVEMENT (UNDERPASS)	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	2	Issue	011		



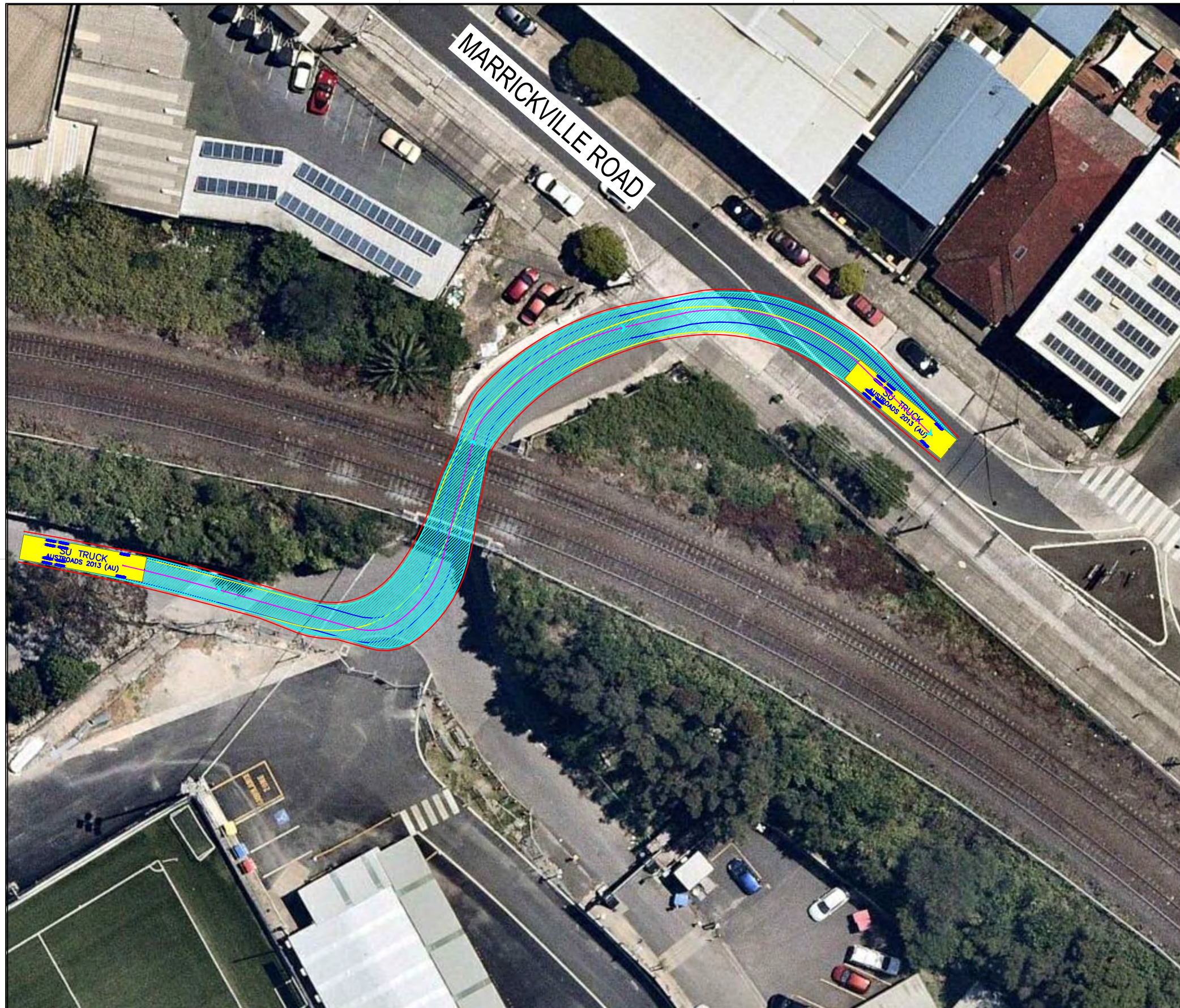
SU TRUCK meters

Width : 12.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
009				NO CHANGE	M.H	23.08.2019	
010				NO CHANGE	M.H	08.11.2019	
011				NO CHANGES	M.H	11.11.2019	
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 1A ENTRY MOVEMENT (UNDERPASS)	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	3	Issue	011		



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 1A EXIT MOVEMENT (UNDERPASS)		
Project Number	P3519	Sheet Number	4
Issue	011		

NOT FOR CONSTRUCTION



SU TRUCK meters

Width : 12.50
 Track : 2.20
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 1A ENTRY MOVEMENT (CAR PARK)

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	5	Issue	011	



SU TRUCK meters

Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
-consulting
traffic engineering ■ transport planning

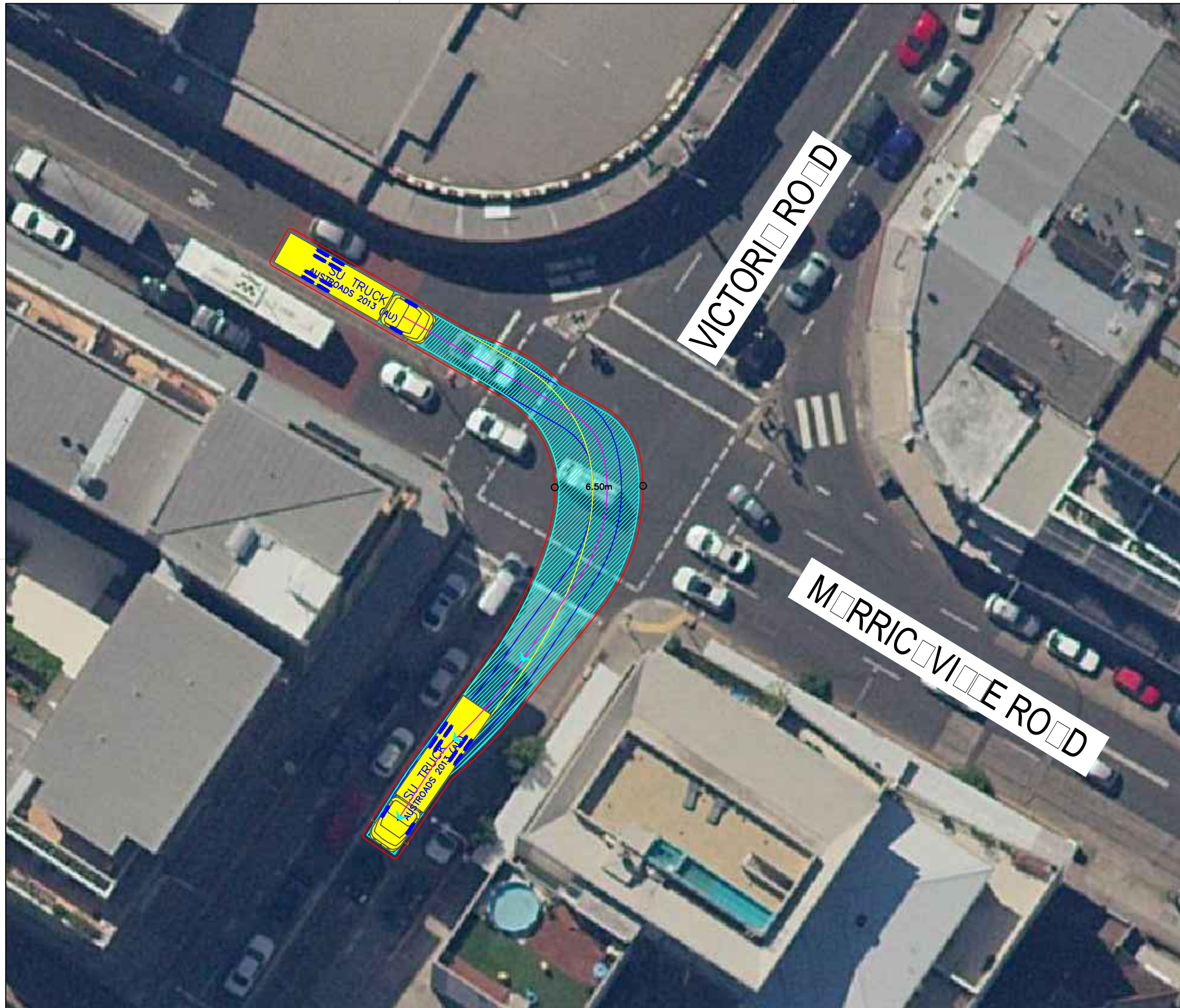
Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000.
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042.
P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project
SYDNEY METRO CITY & SOUTHWEST
SOUTHWEST METRO EARLY WORKS

Title
SWEPT PATH
AREA 1A
TURN AND EXIT MOVEMENT (CAR PARK)

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		Date
Project Number		11.11.2019
P3519	Sheet Number	Issue
	6	011

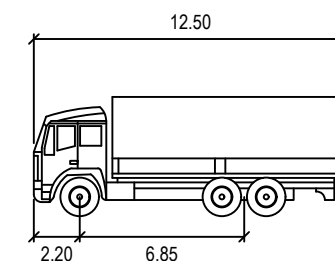
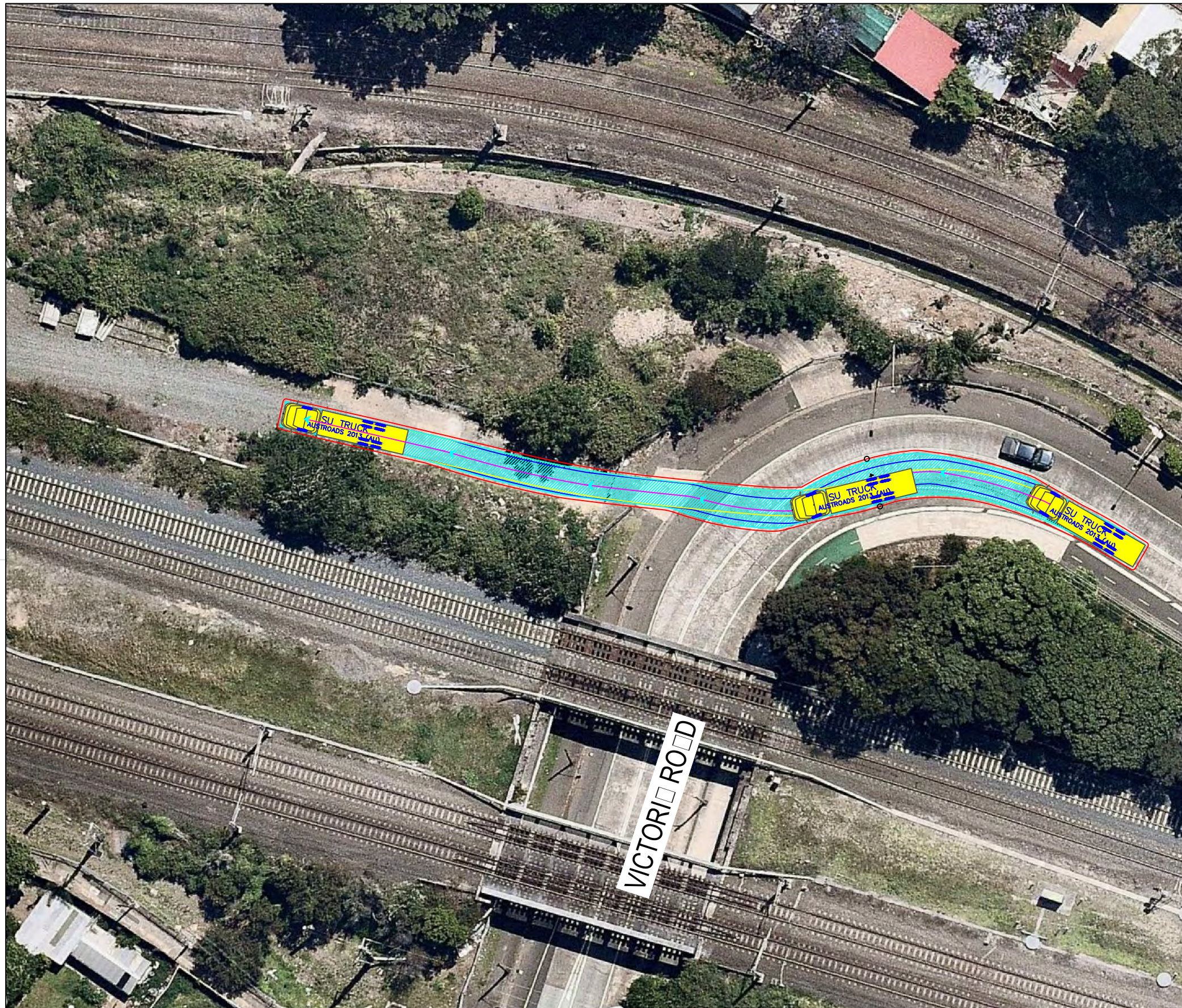


SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NOT USED	-	-
002	NOT USED	-	-	010	NOT USED	-	-
003	NOT USED	-	-	011	NOT USED	-	-
004	NOT USED	-	-	012	CHANGE AREA 1B APPROACH	K.W	18.12.2019
005	NOT USED	-	-	ENGINEERING CERTIFICATION RPE			
006	NOT USED	-	-	Name	Signature	No.	Date
007	NOT USED	-	-				
008	NOT USED	-	-				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	K.W	Drawn	K.W	Checked	M.H
Title	SWEPT PATH AREA 1B ENTRY MOVEMENT 1	NOT FOR CONSTRUCTION		Date	18.12.2019		
Project Number	P3519	Sheet Number	7	Issue	012		



SU TRUCK meters

Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

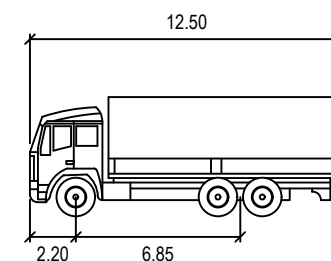
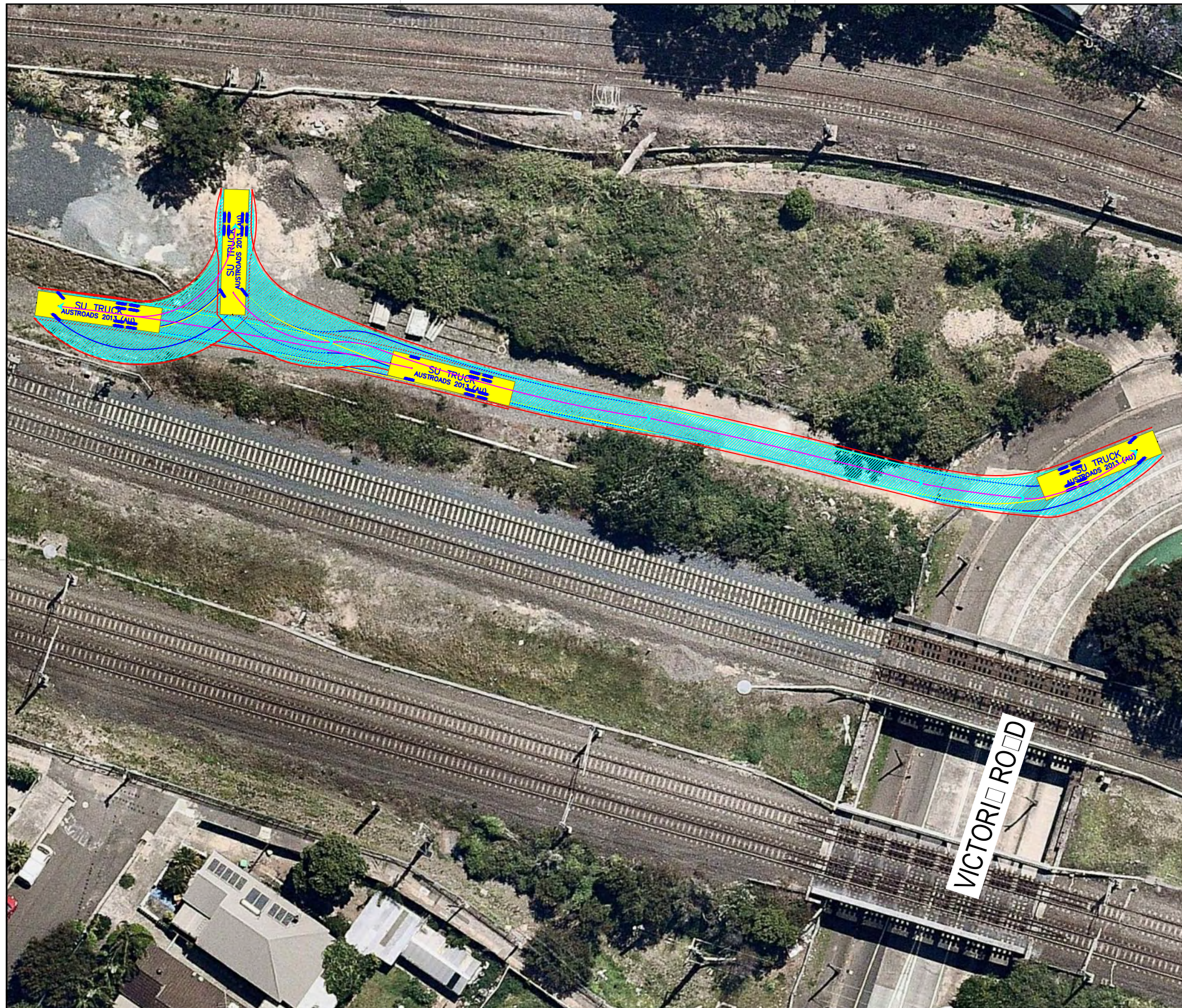
Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
009	NOT USED	-	-	001	NOT USED	-	-
010	NOT USED	-	-	002	NOT USED	-	-
011	NOT USED	-	-	003	NOT USED	-	-
012	CHANGE AREA 1B APPROACH	K.W	18.12.2019	004	NOT USED	-	-
ENGINEERING CERTIFICATION RPE							
Name		Signature		No.		Date	

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 1B GATE ENTRY MOVEMENT

Design	Drawn	Checked
K.W	K.W	M.H
NOT FOR CONSTRUCTION		Date
Project Number		18.12.2019
P3519	Sheet Number	Issue
8	8	012



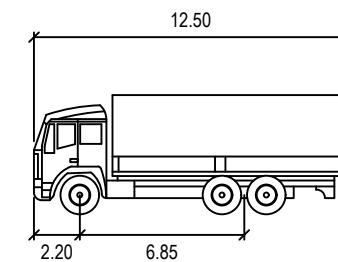
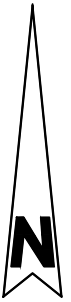
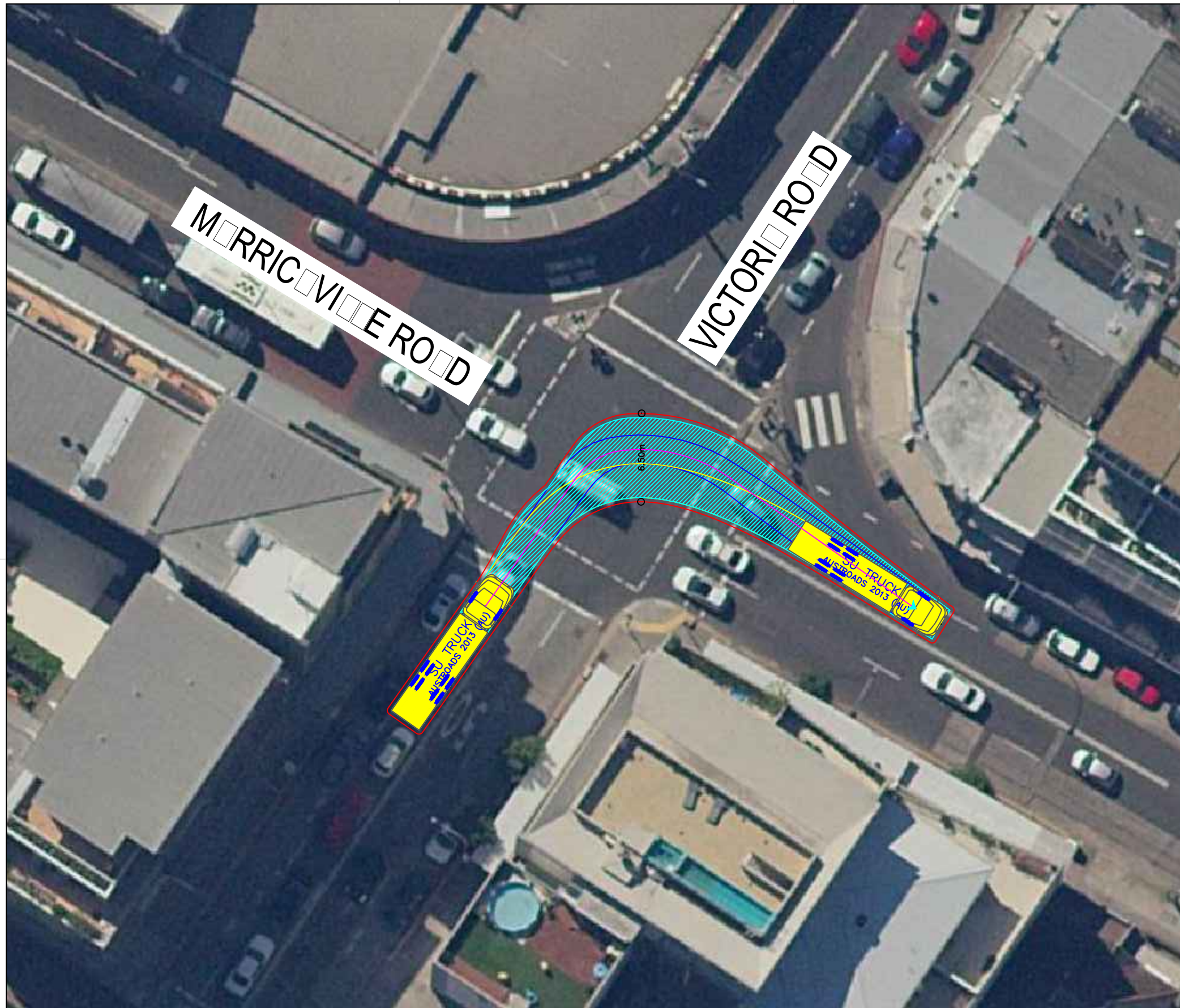
SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	012	CHANGE SHEET TITLE	M.H	18.12.2019
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	ENGINEERING CERTIFICATION (RPE)			
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			18.12.2019
Title	SWEPT PATH AREA 1B GATE EXIT MOVEMENT		
Project Number	P3519	Sheet Number	8A
Issue	012		

NOT FOR CONSTRUCTION



SU TRUCK meters
 Width : 12.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NOT USED	-	-
002	NOT USED	-	-	010	NOT USED	-	-
003	NOT USED	-	-	011	NOT USED	-	-
004	NOT USED	-	-	012	CHANGE AREA 1B APPROACH	K.W	18.12.2019
005	NOT USED	-	-	ENGINEERING CERTIFICATION RPE			
006	NOT USED	-	-	Name	Signature	No.	Date
007	NOT USED	-	-				
008	NOT USED	-	-				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	K.W	Drawn	K.W	Checked	M.H
Title	SWEPT PATH AREA 1B EXIT MOVEMENT 1	NOT FOR CONSTRUCTION		Date	18.12.2019		
Project Number	P3519	Sheet Number	8B	Issue	012		



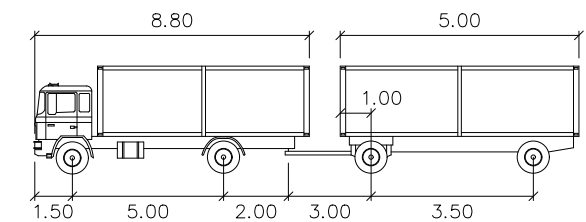
TD StB	meters			
First Unit Width	: 2.50	Lock to Lock Time	: 6.0	
Trailer Width	: 2.30	Steering Angle	: 37.9	
First Unit Track	: 2.50	Articulating Angle	: 70.0	
Trailer Track	: 2.30			

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 3A ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	9
Issue	011		

NOT FOR CONSTRUCTION

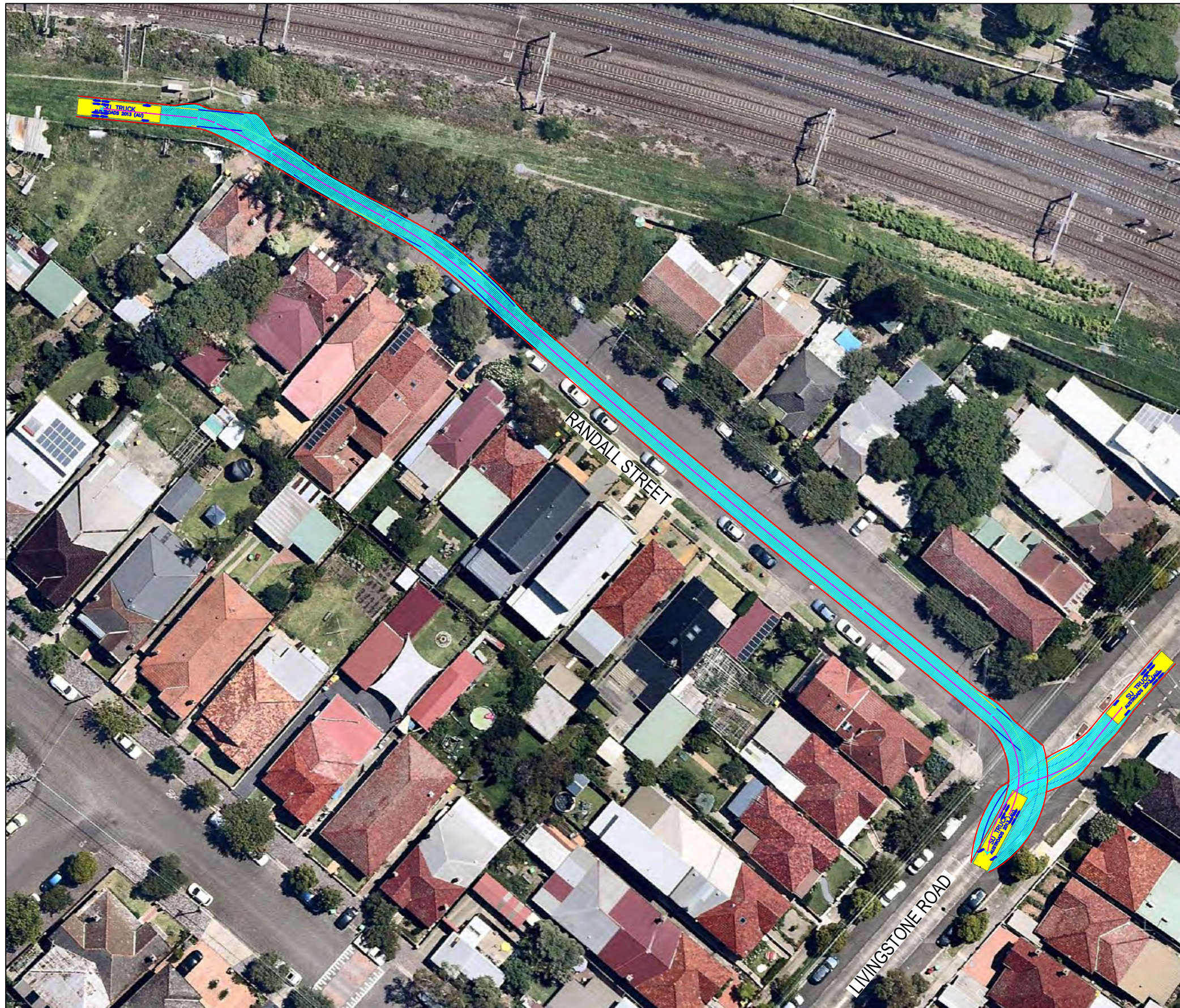


TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

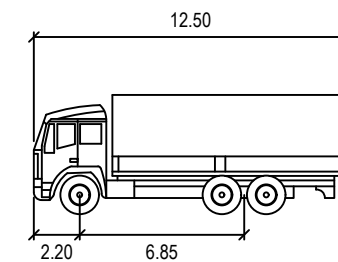
DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 3A EXIT MOVEMENT		
Project Number	P3519	Sheet Number	10
Issue	011		



REQUIRES TRAFFIC CONTROL
SEE TCP FOR THIS MANOEUVRE



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

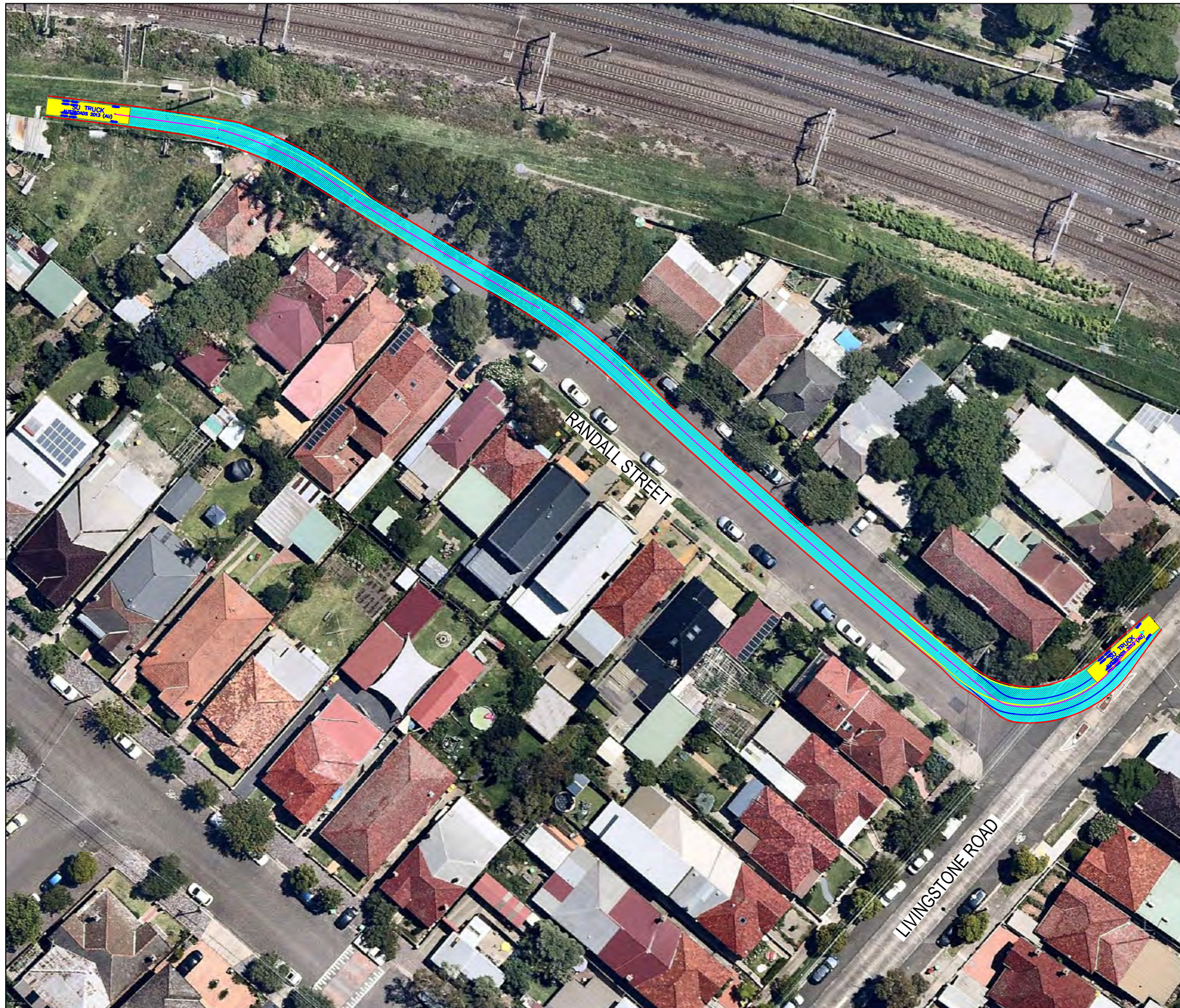
BITZIOS
 consulting
 traffic engineering ■ transport planning

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		Drawn	Date	Issue	Description	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019	010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019	011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 3B/5A ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	11
Issue			011

NOT FOR CONSTRUCTION



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

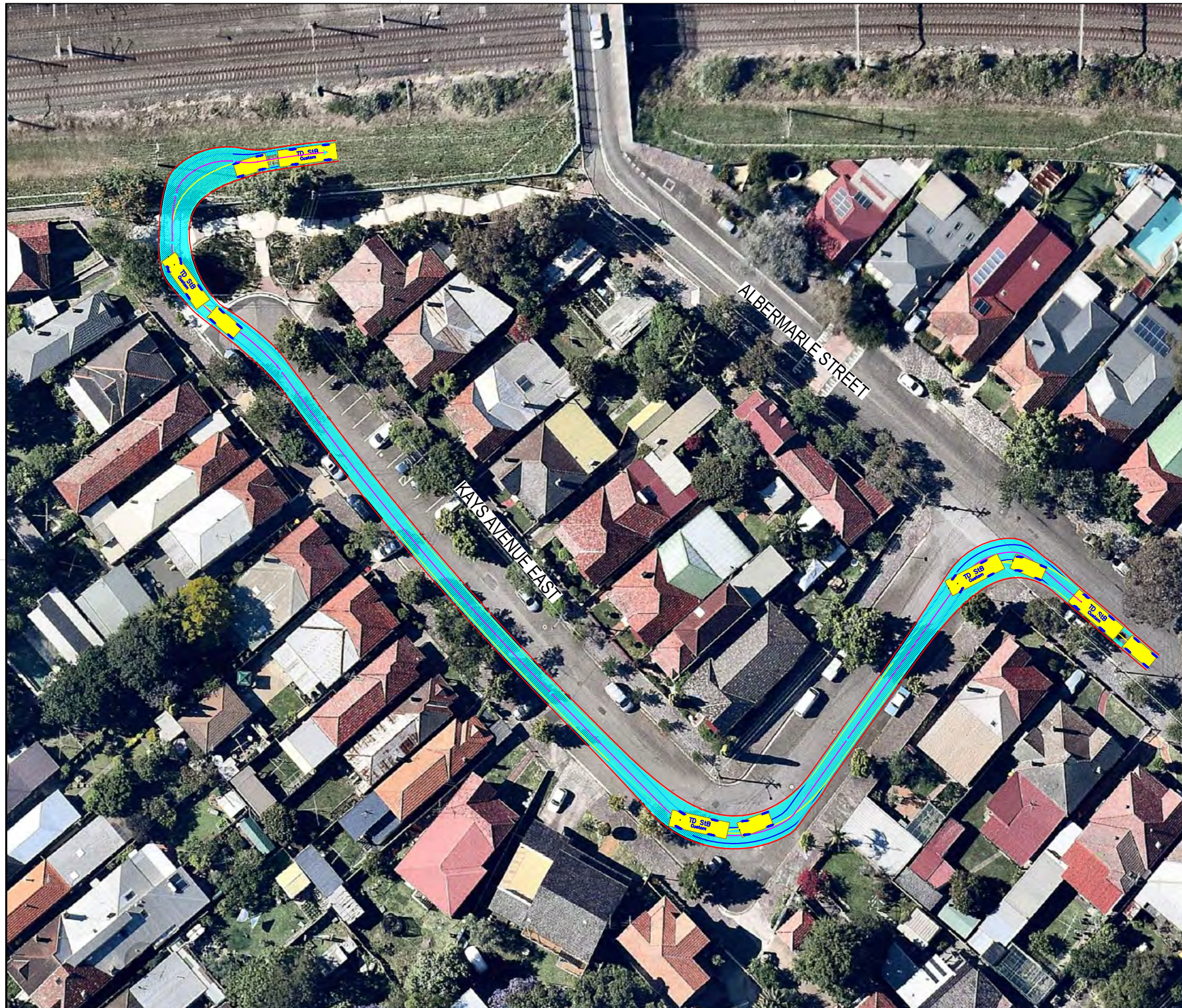
BITZIOS
 consulting
 traffic engineering ■ transport planning

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

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title	SWEPT PATH AREA 3B/5A EXIT MOVEMENT		
Project Number		Sheet Number	Issue
P3519		12	011
		Date	11.11.2019

NOT FOR CONSTRUCTION

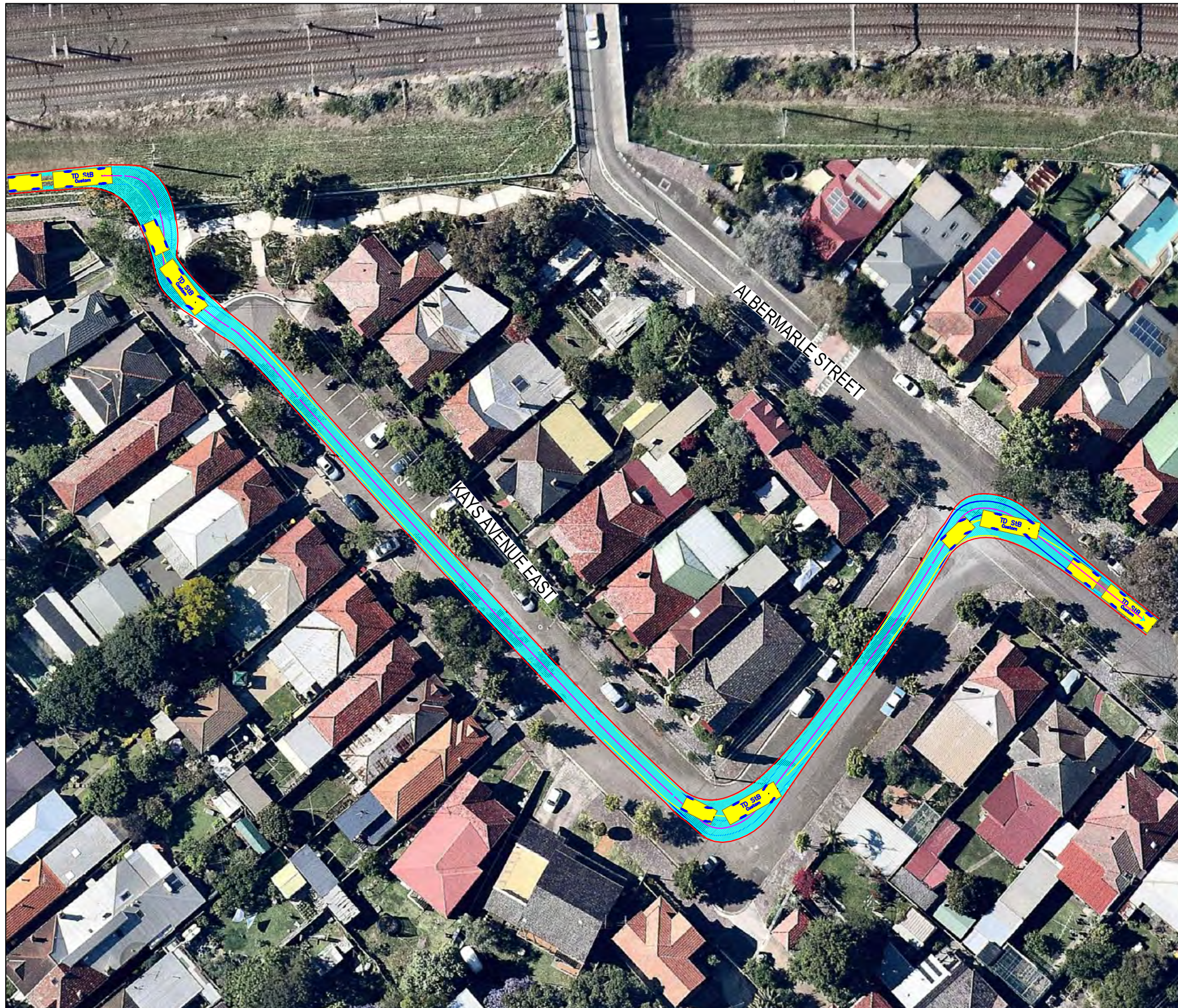


TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 5B ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	13
Issue	011		



TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

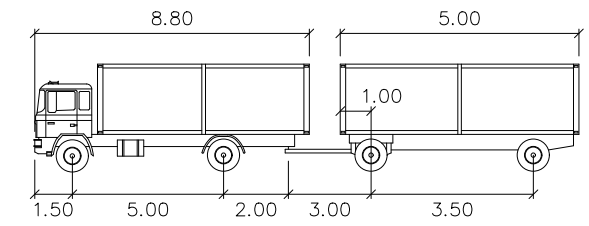
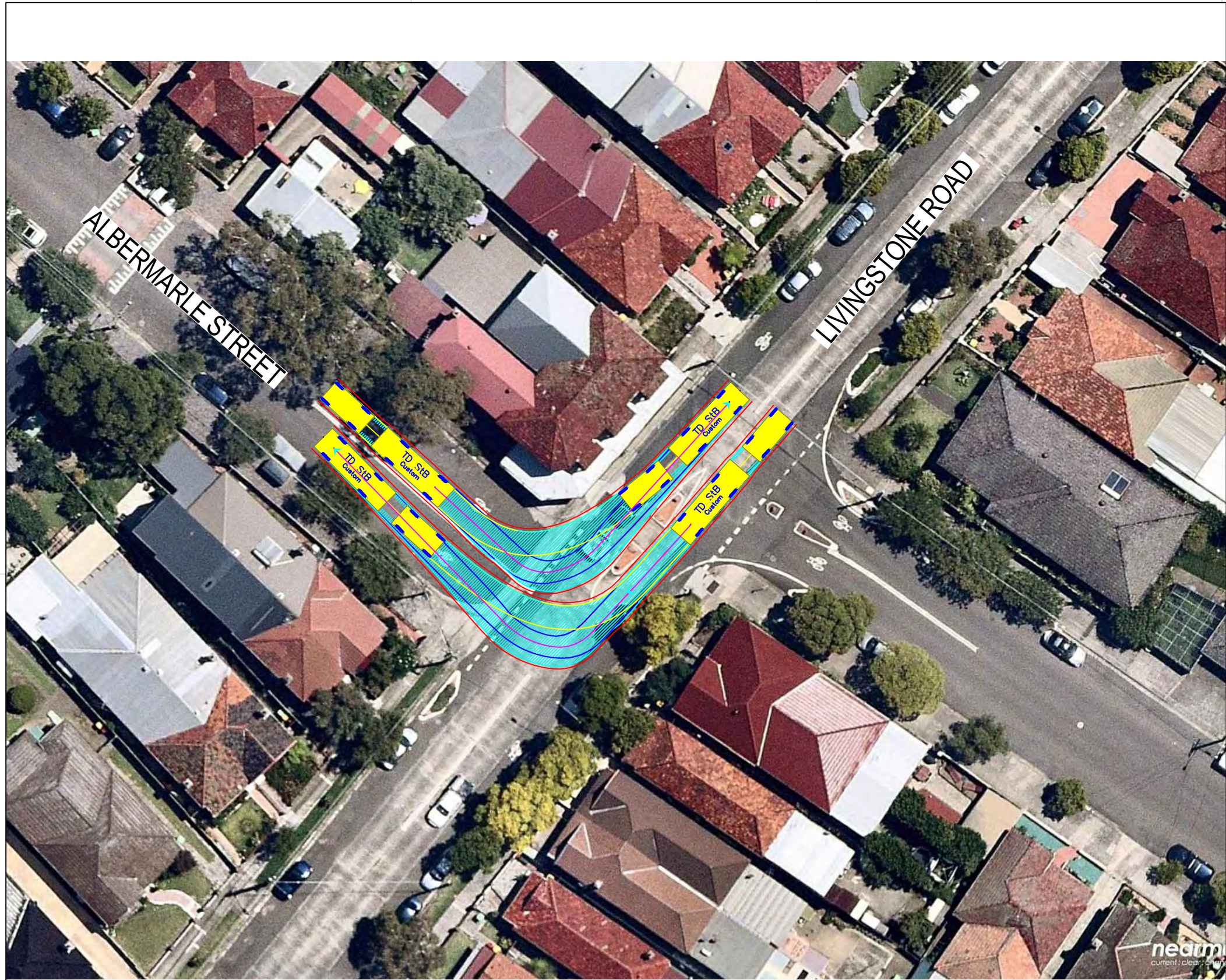
DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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

Issue	Revisions/Descriptions	Drawn	Date	009	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019			
004	MINOR AMENDMENTS	M.H	01.04.2019			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	ENGINEERING CERTIFICATION (RPEQ)		
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.
007	NO CHANGES	M.H	10.07.2019			Date
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 5B EXIT MOVEMENT		
Project Number	P3519	Sheet Number	14
Issue	011		

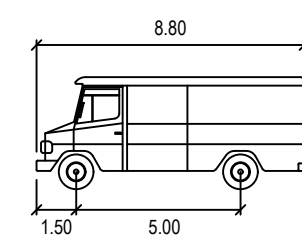


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)		
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019			Date
007	NO CHANGES	M.H	10.07.2019			
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 5B ALBERMARLE STREET AND LIVINGSTONE STREET INTERSECTION	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	15	Issue	011		



SERVICE VEHICLE
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 38.7

DESIGN VEHICLE

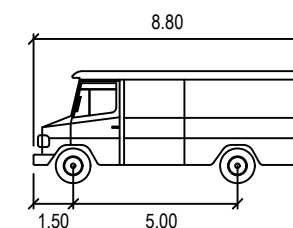
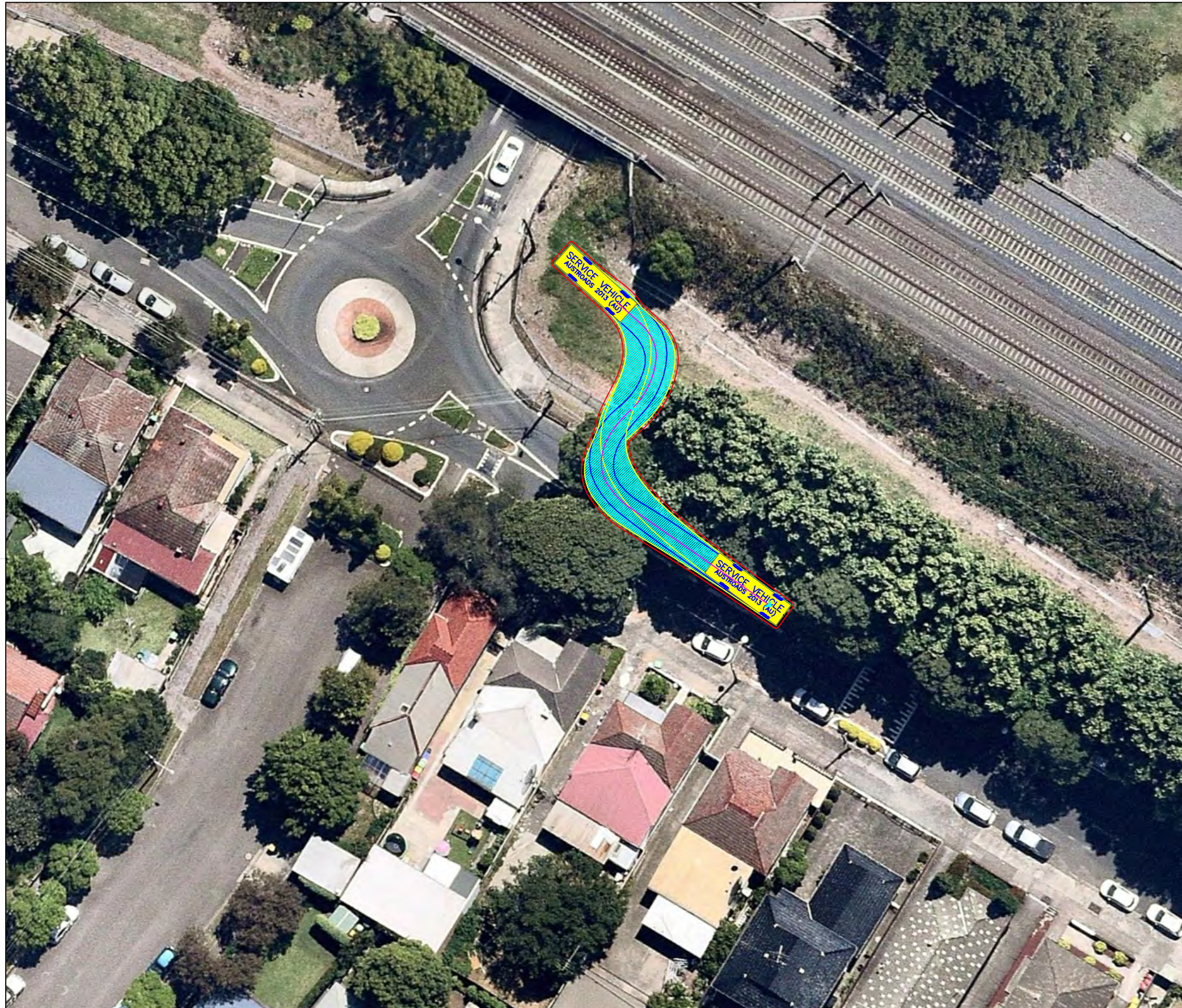


Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	CHANGED VEHICLE TYPE	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS
 Title
 SWEPT PATH
 AREA 7A
 ENTRY MOVEMENT

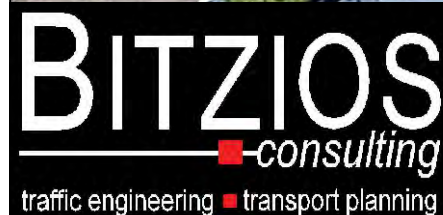
Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					Date
					11.11.2019
Project Number	P3519	Sheet Number	16	Issue	011



SERVICE VEHICLE

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

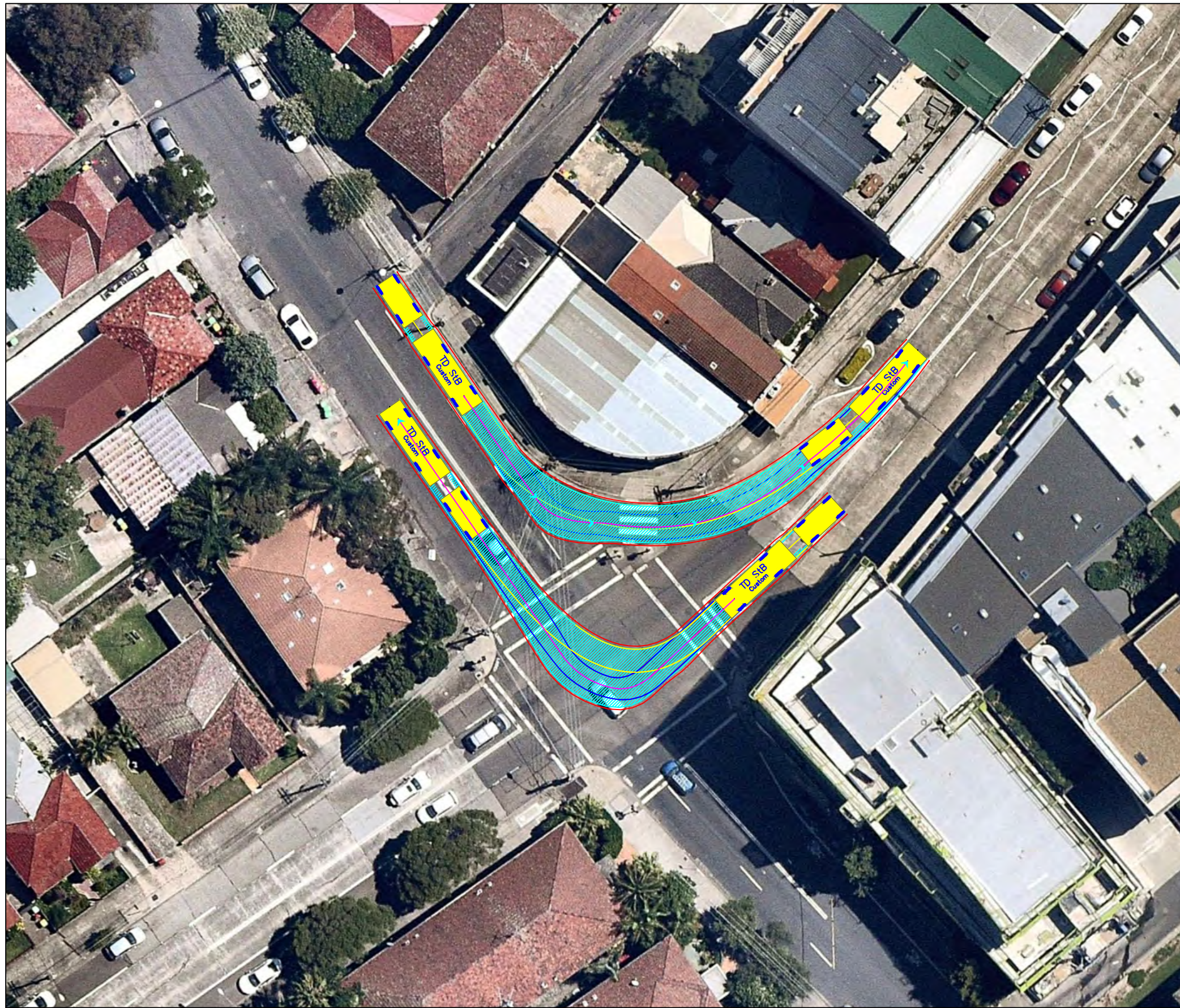


Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	CHANGED VEHICLE TYPE	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 7A EXIT MOVEMENT 1

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	17	Issue	011	



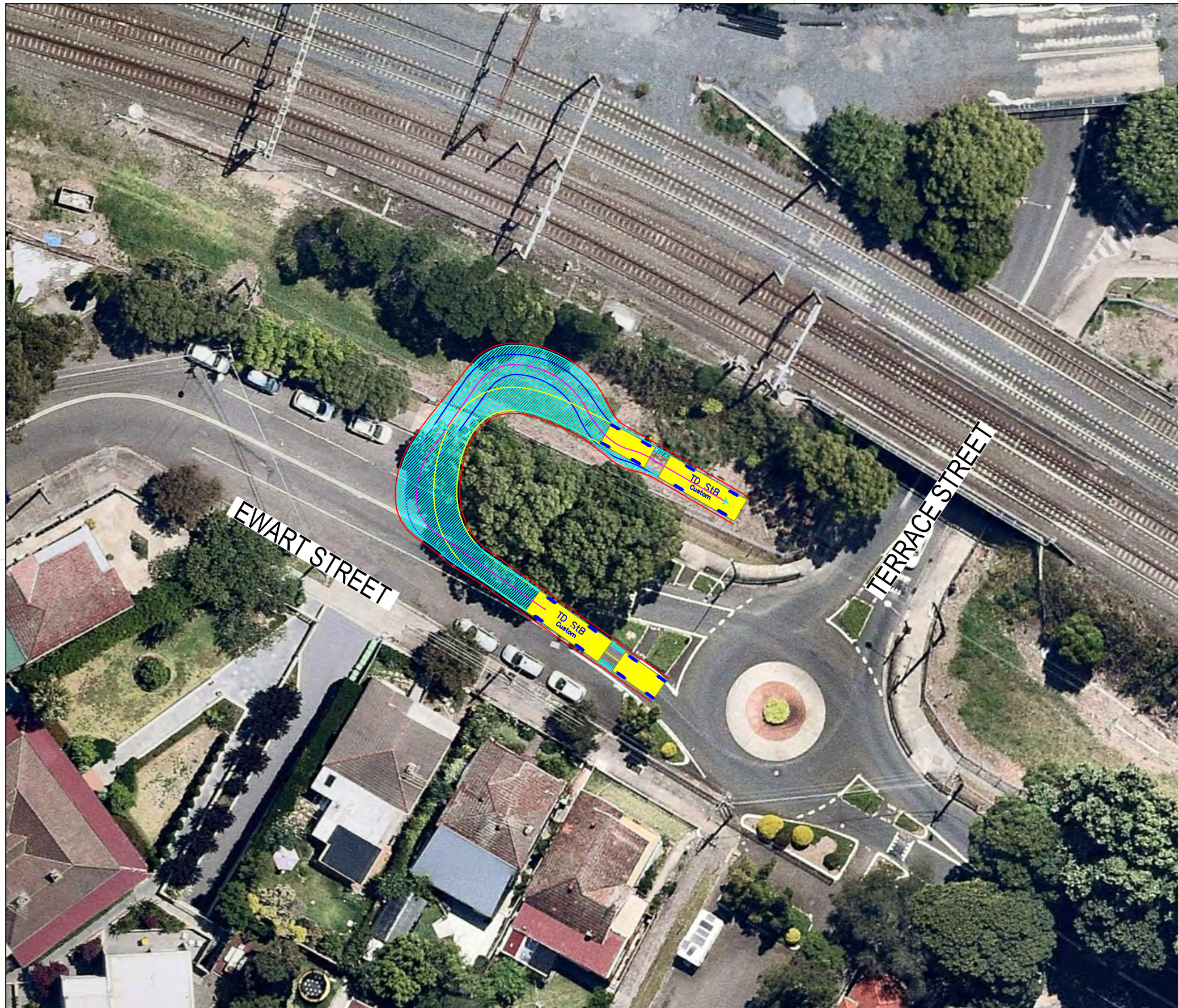
TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 7A EXIT MOVEMENT 2		
Project Number	P3519	Sheet Number	18
Issue	011		

NOT FOR CONSTRUCTION



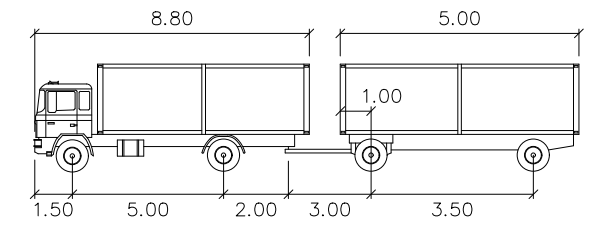
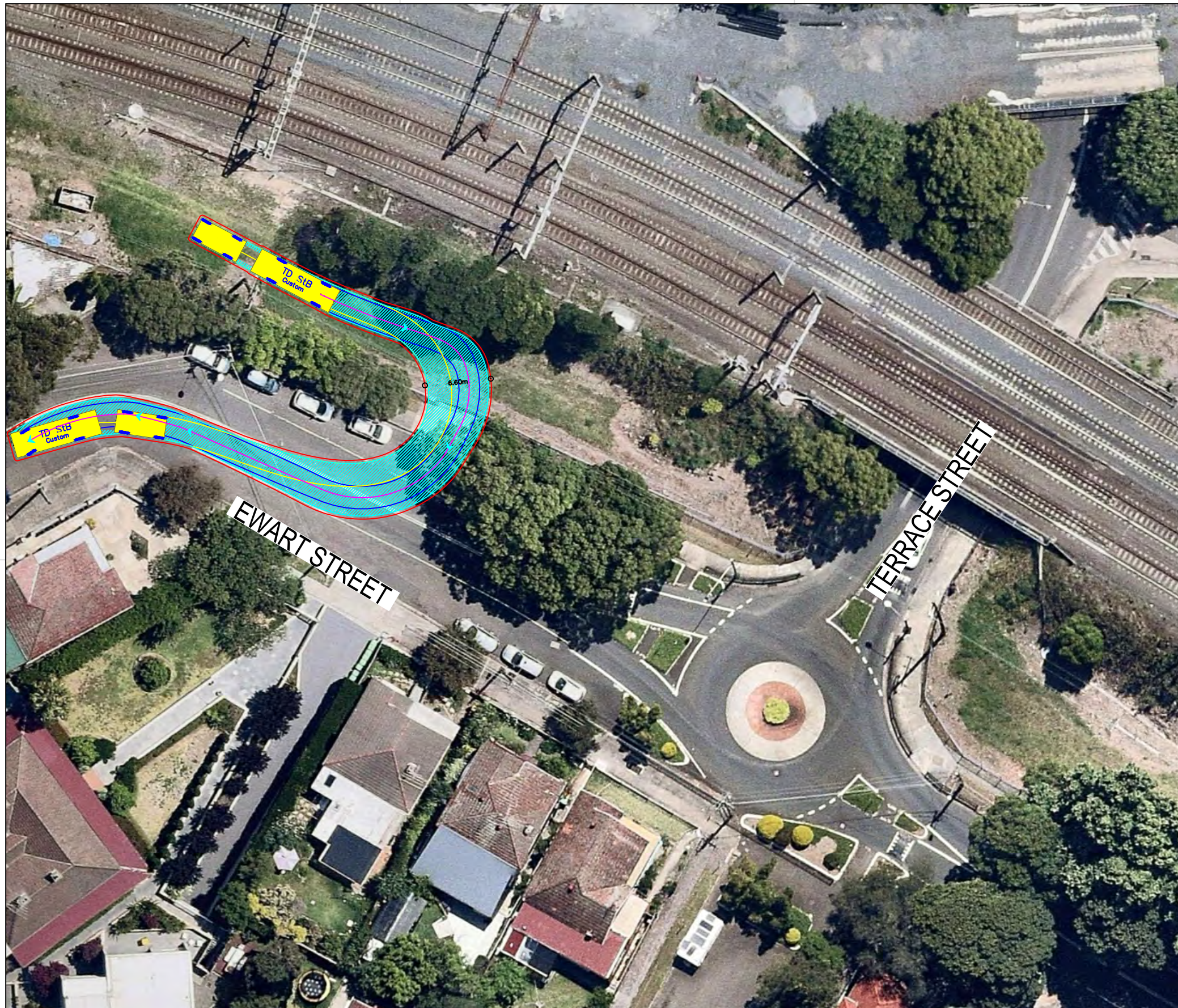
TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

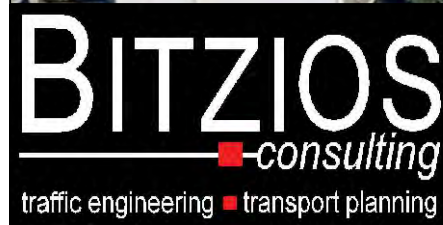
Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		
Date	11.11.2019		
Title	SWEPT PATH AREA 7B ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	19
Issue	011		

NOT FOR CONSTRUCTION



TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

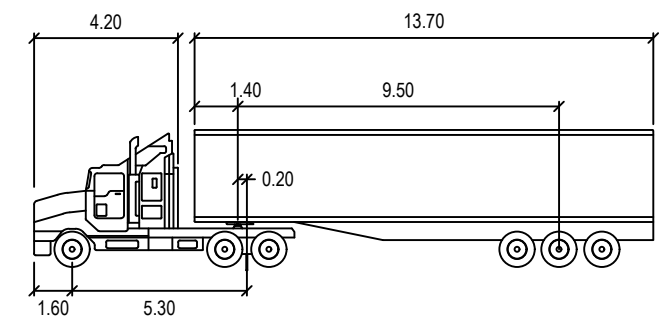
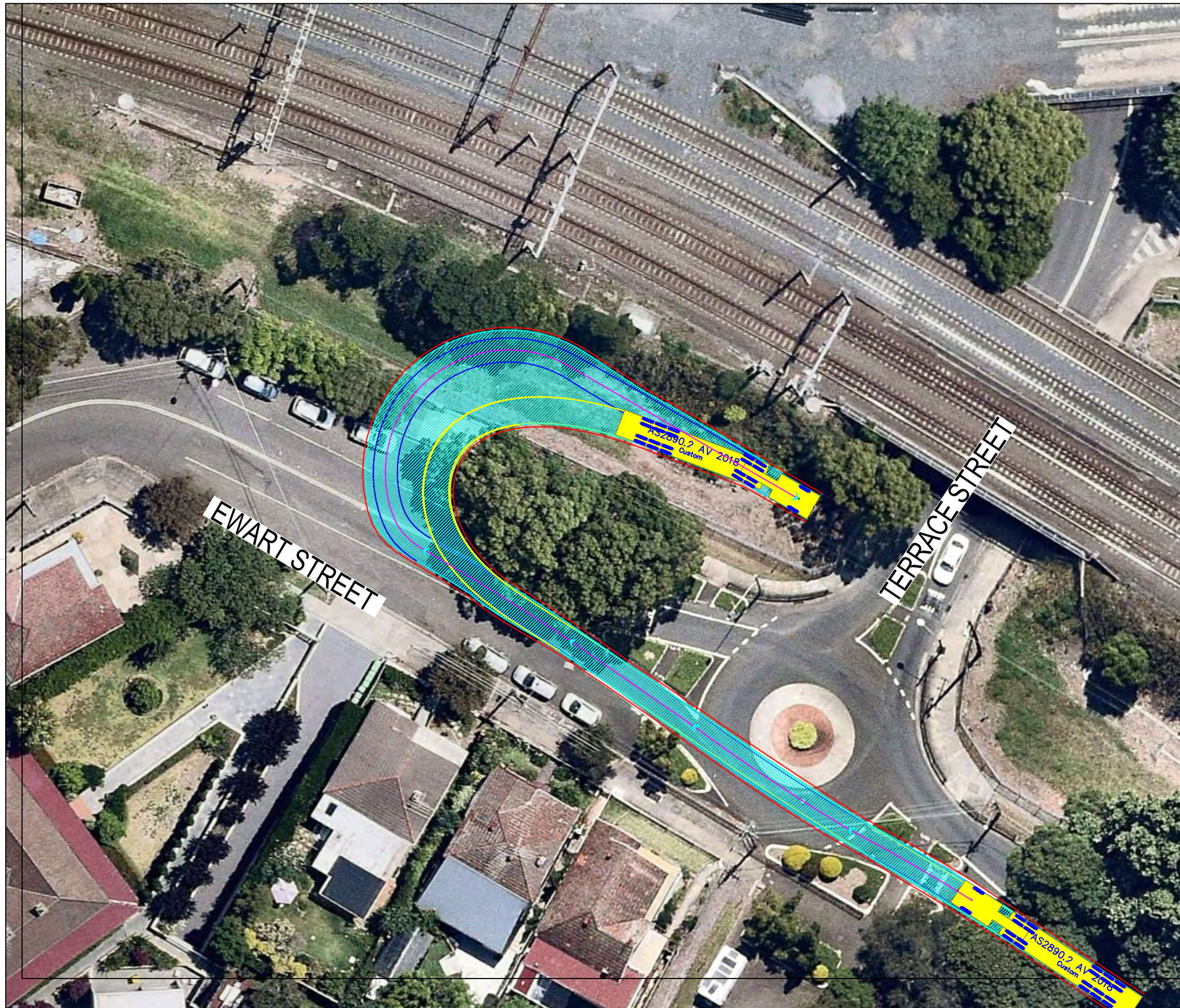
DESIGN VEHICLE



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		Drawn	Date	Issue	Description	M.H	Date
009	NO CHANGE			009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE			010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES			011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 7B EXIT MOVEMENT		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	20	Issue	011			



S ARTICULATED 19M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.7
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

DESIGN VEHICLE

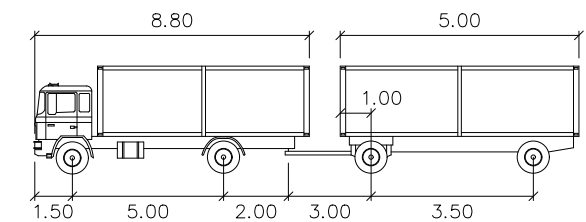
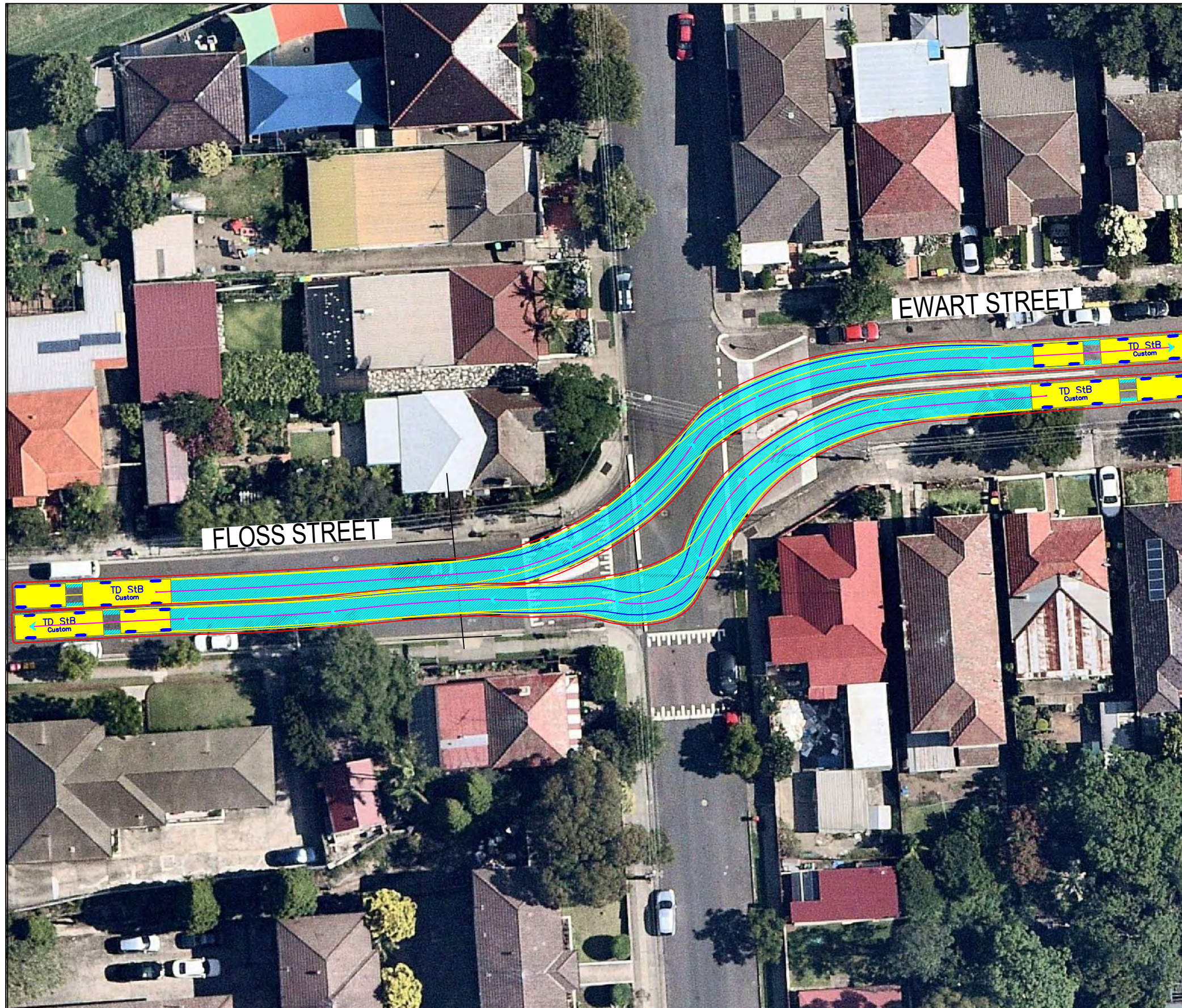
BITZIOS
consulting
traffic engineering ■ transport planning

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		Drawn	Date	Issue	Description	M.H.	Date
009	NO CHANGE					M.H.	23.08.2019
010	NO CHANGE					M.H.	08.11.2019
011	NO CHANGES					M.H.	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H.	Drawn	M.H.
Checked	T.W.		Date
			11.11.2019
Title	SWEPT PATH AREA 7B ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	21
Issue	011		

NOT FOR CONSTRUCTION

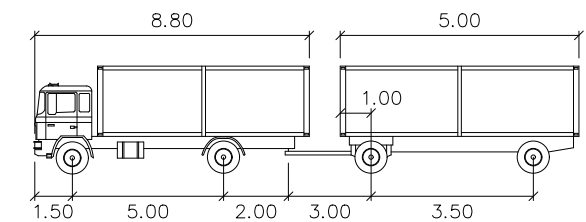
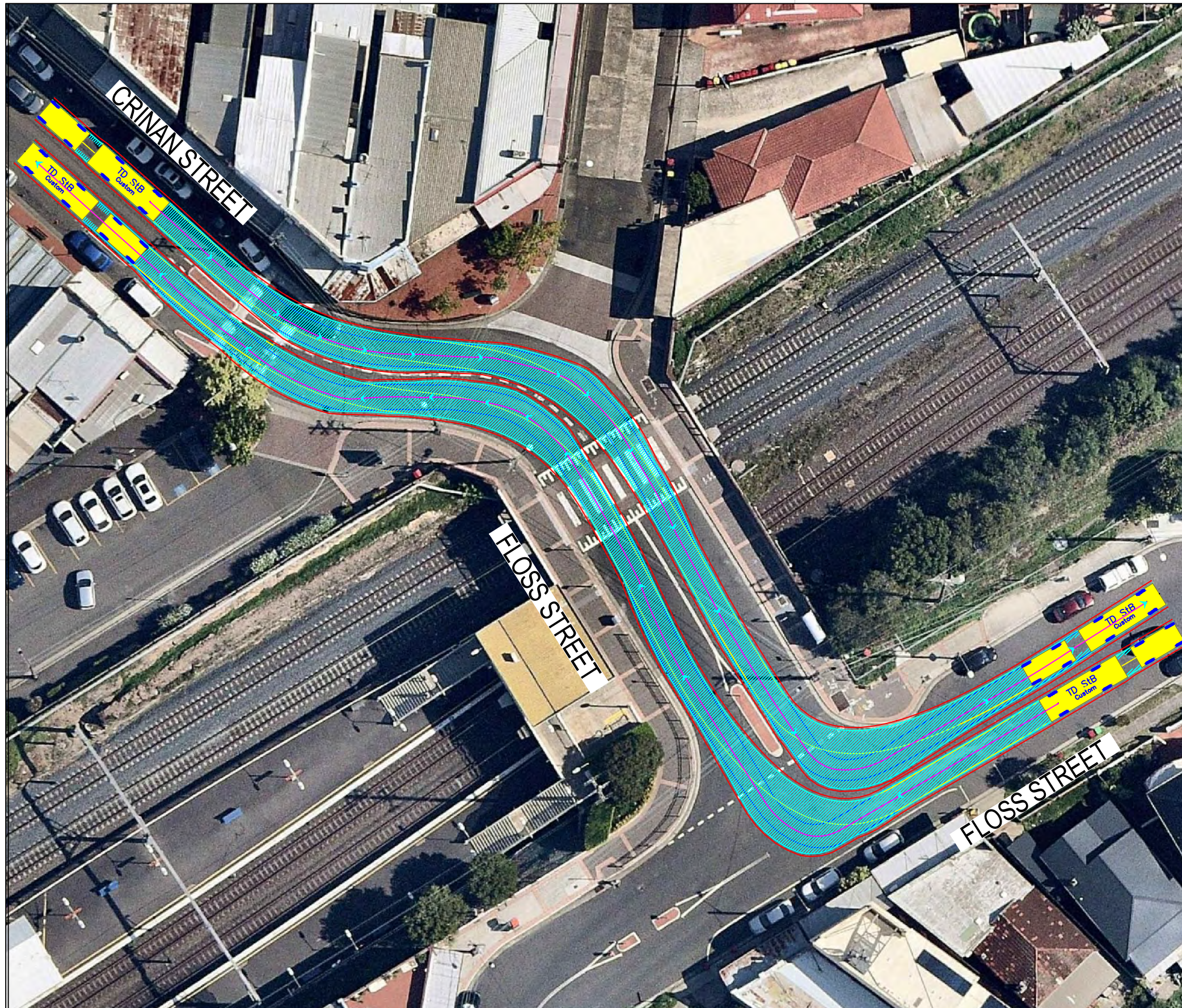


TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	M.H	23.08.2019
001	SWEPT PATH	M.H	27.02.2019	010	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019			
004	MINOR AMENDMENTS	M.H	01.04.2019			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	ENGINEERING CERTIFICATION (RPEQ)		
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.
007	NO CHANGES	M.H	10.07.2019			Date
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project	Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	M.H	M.H	T.W
Title	NOT FOR CONSTRUCTION		
SWEPT PATH AREA 7B HAULAGE ROUTE 1	Project Number	Sheet Number	Date
	P3519	22	11.11.2019
			Issue
			011



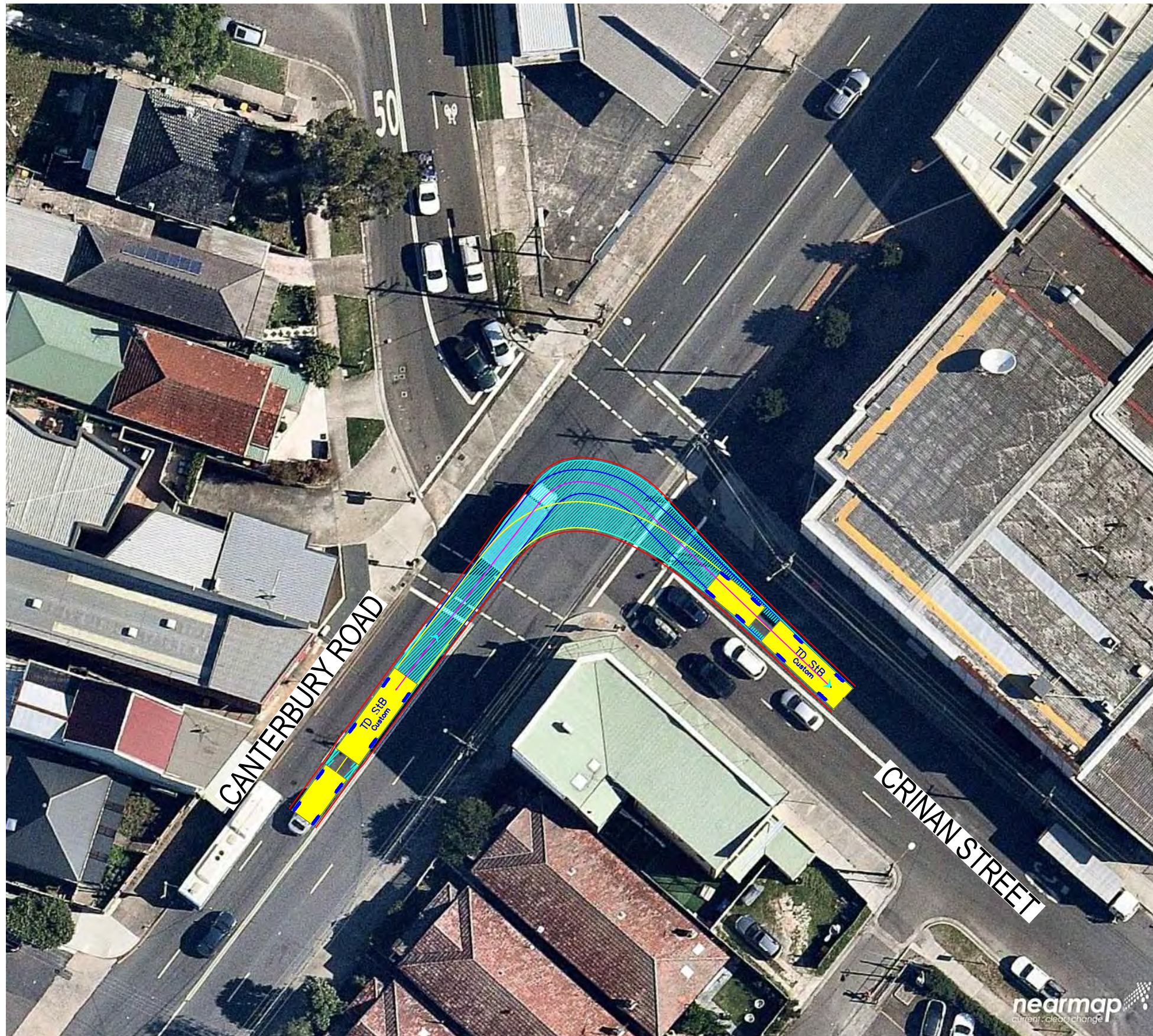
TD StB	units	meters		
First Unit Width	:	2.50	Lock to Lock Time	: 6.0
Trailer Width	:	2.30	Steering Angle	: 37.9
First Unit Track	:	2.50	Articulating Angle	: 70.0
Trailer Track	:	2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date		M.H	23.08.2019	
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 7B HAULAGE ROUTE 2		
Project Number	P3519	Sheet Number	23
Issue			011

NOT FOR CONSTRUCTION



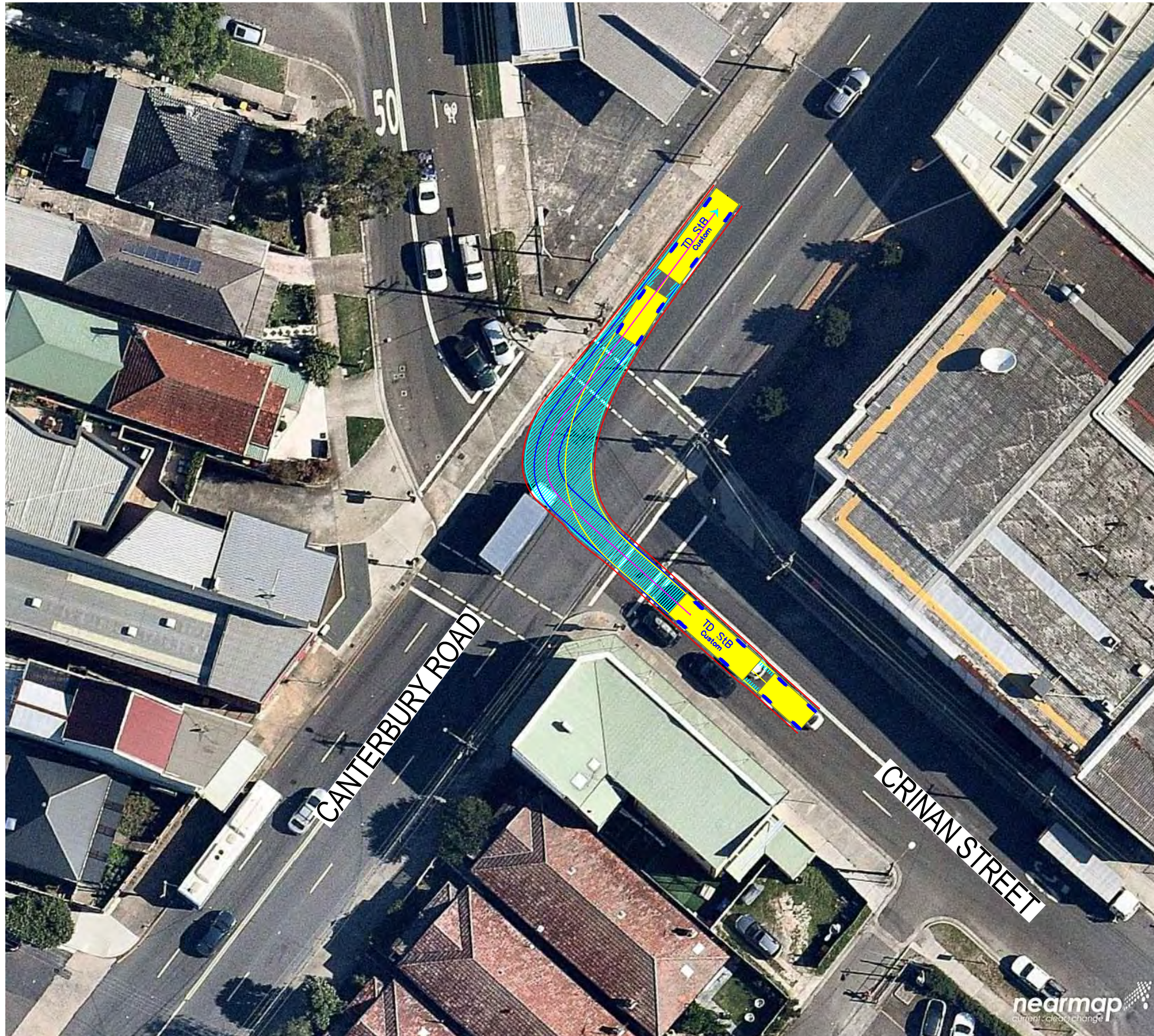
TD StB	meters			
First Unit Width	: 2.50	Lock to Lock Time	: 6.0	
Trailer Width	: 2.30	Steering Angle	: 37.9	
First Unit Track	: 2.50	Articulating Angle	: 70.0	
Trailer Track	: 2.30			

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	M.H	M.H	T.W
Title			Date
SWEPT PATH AREA 7B CANTERBURY ROAD AND CRINAN STREET			11.11.2019
Project Number	Sheet Number	Issue	
P3519	24	011	

NOT FOR
CONSTRUCTION

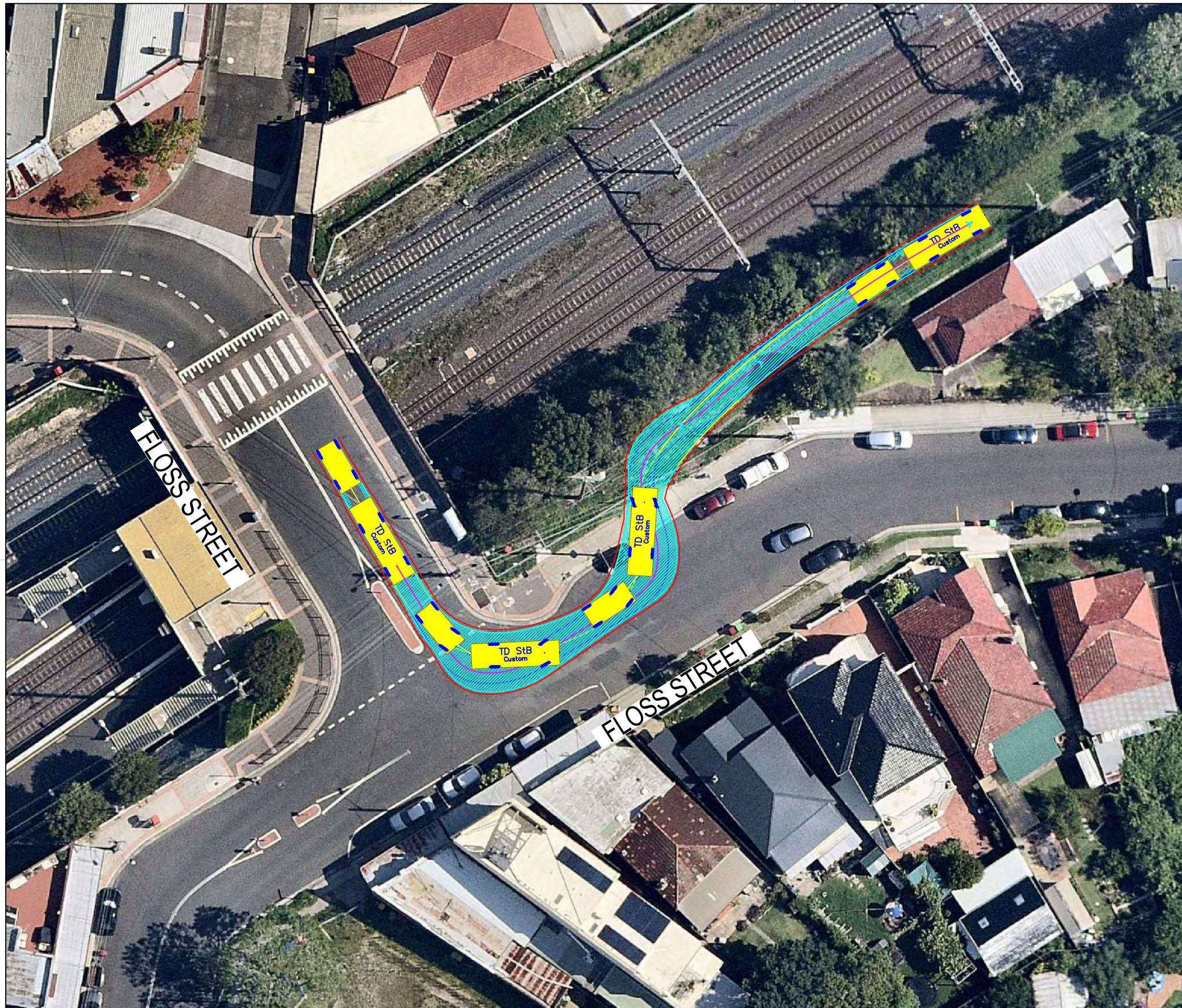


TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		
Title	SWEPT PATH AREA 7B CANTERBURY ROAD AND CRINAN STREET		
Project Number	P3519	Sheet Number	25
Date	11.11.2019		
Issue	011		



REQUIRES REMOVAL OF 1 PARKING SPACE
SEE MAIN CTMP



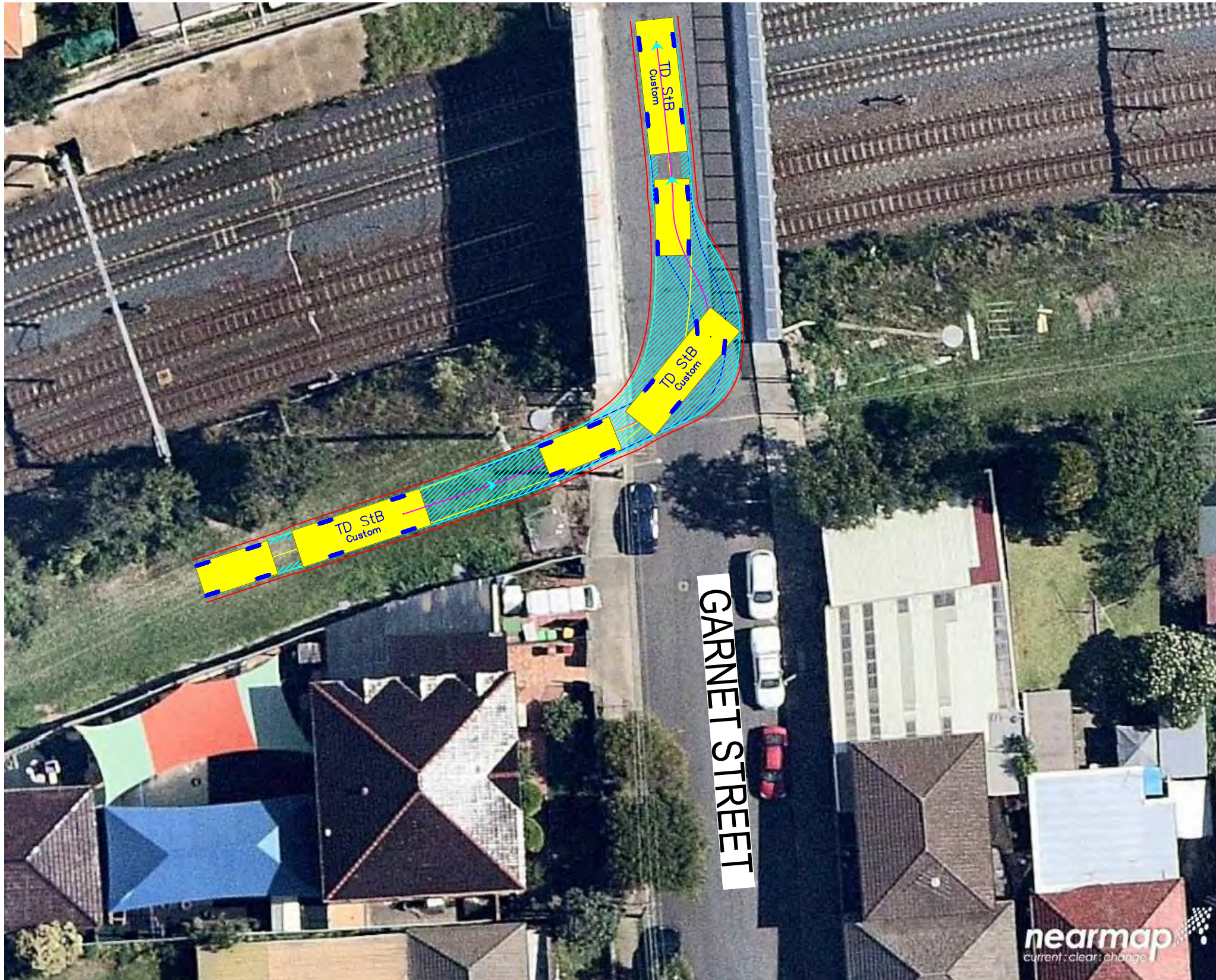
TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

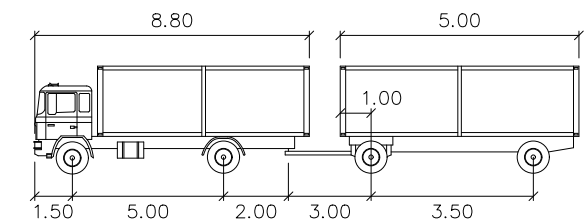
REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 7C ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	26
Issue			011

NOT FOR CONSTRUCTION



REQUIRES REMOVAL OF 3 PARKING SPACES
SEE MAIN CTMP

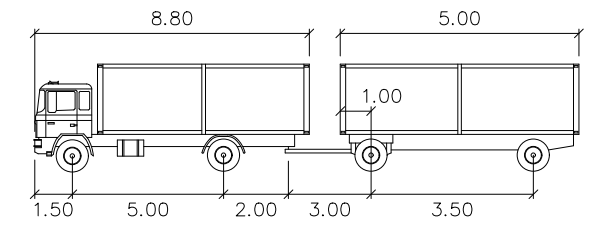
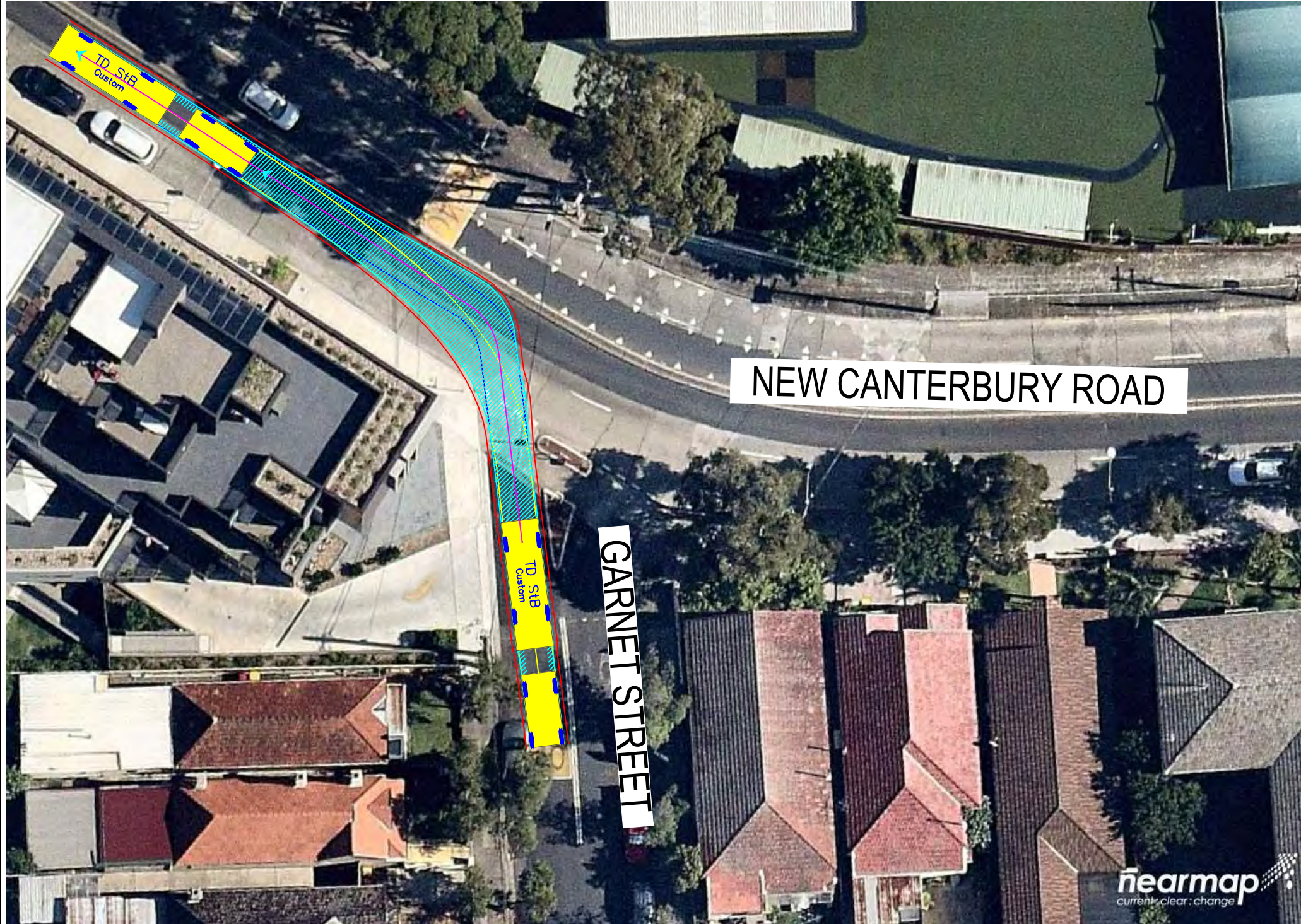


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	M.H	M.H	T.W
	NOT FOR CONSTRUCTION		
Title	SWEPT PATH AREA 7C EXIT MOVEMENT		Date 11.11.2019
Project Number	P3519	Sheet Number	27
Issue			011

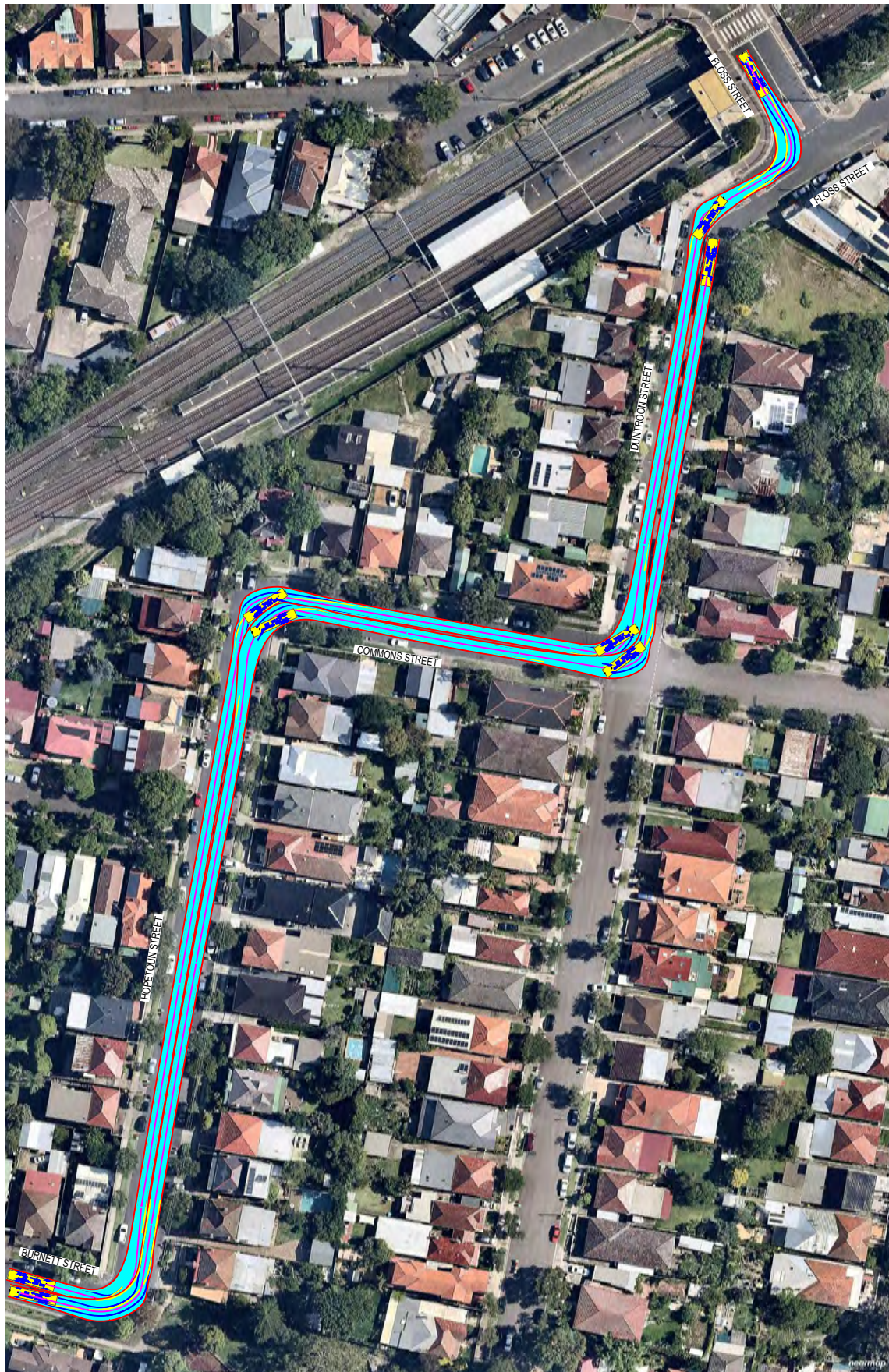


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH	M.H	27.02.2019	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
Title			11.11.2019
SWEPT PATH AREA 7C GARNET STREET AND NEW CANTERBURY ROAD INTERSECTION			
Project Number	P3519	Sheet Number	28
Issue			011



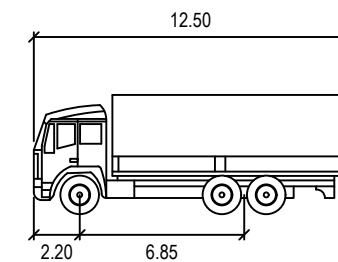
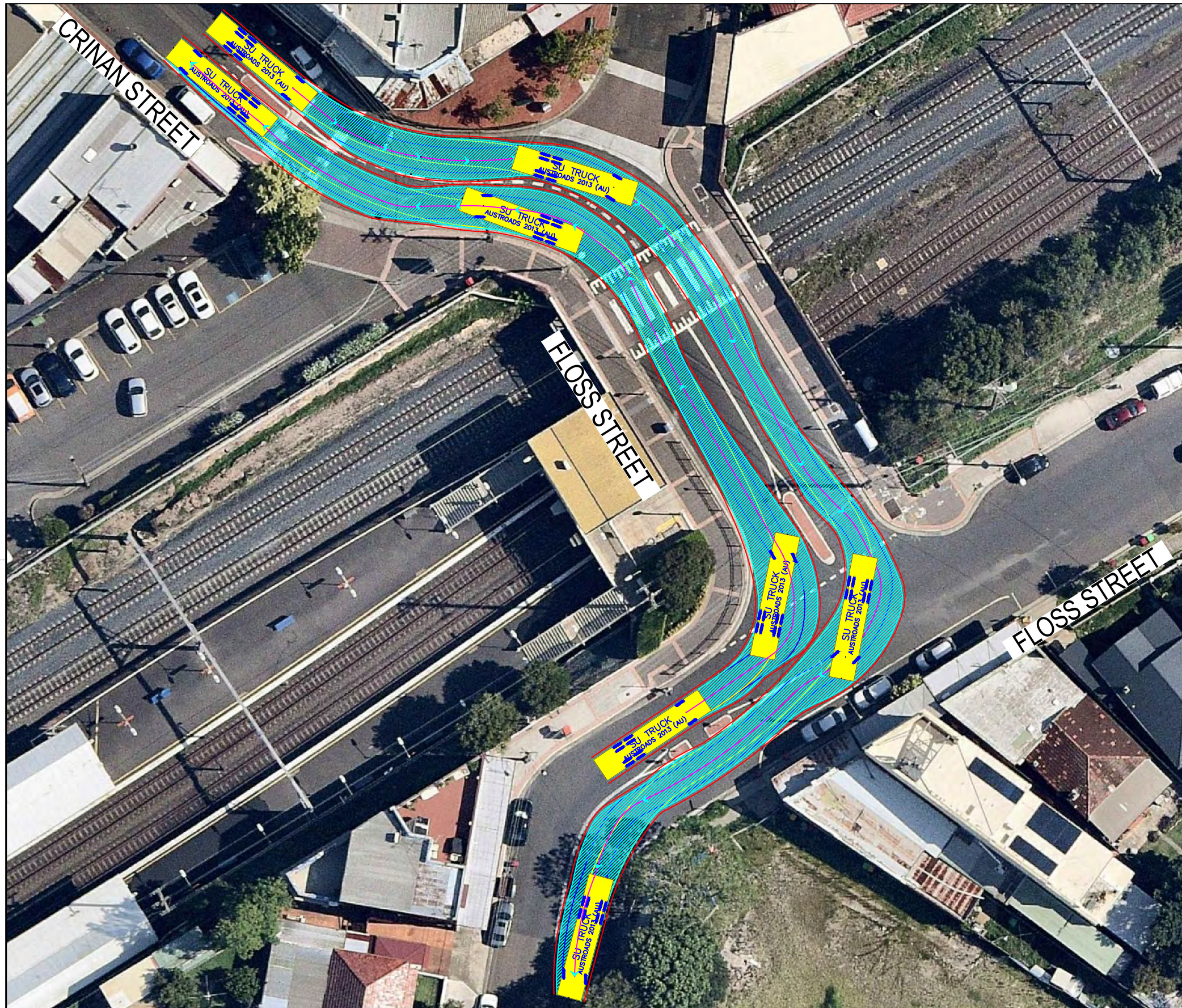
SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	T.W
Title		NOT FOR CONSTRUCTION		
		Date	11.11.2019	
SWEPT PATH AREA 9A ENTRY AND EXIT ROUTE 1		Project Number	Sheet Number	Issue
		P3519	29	011



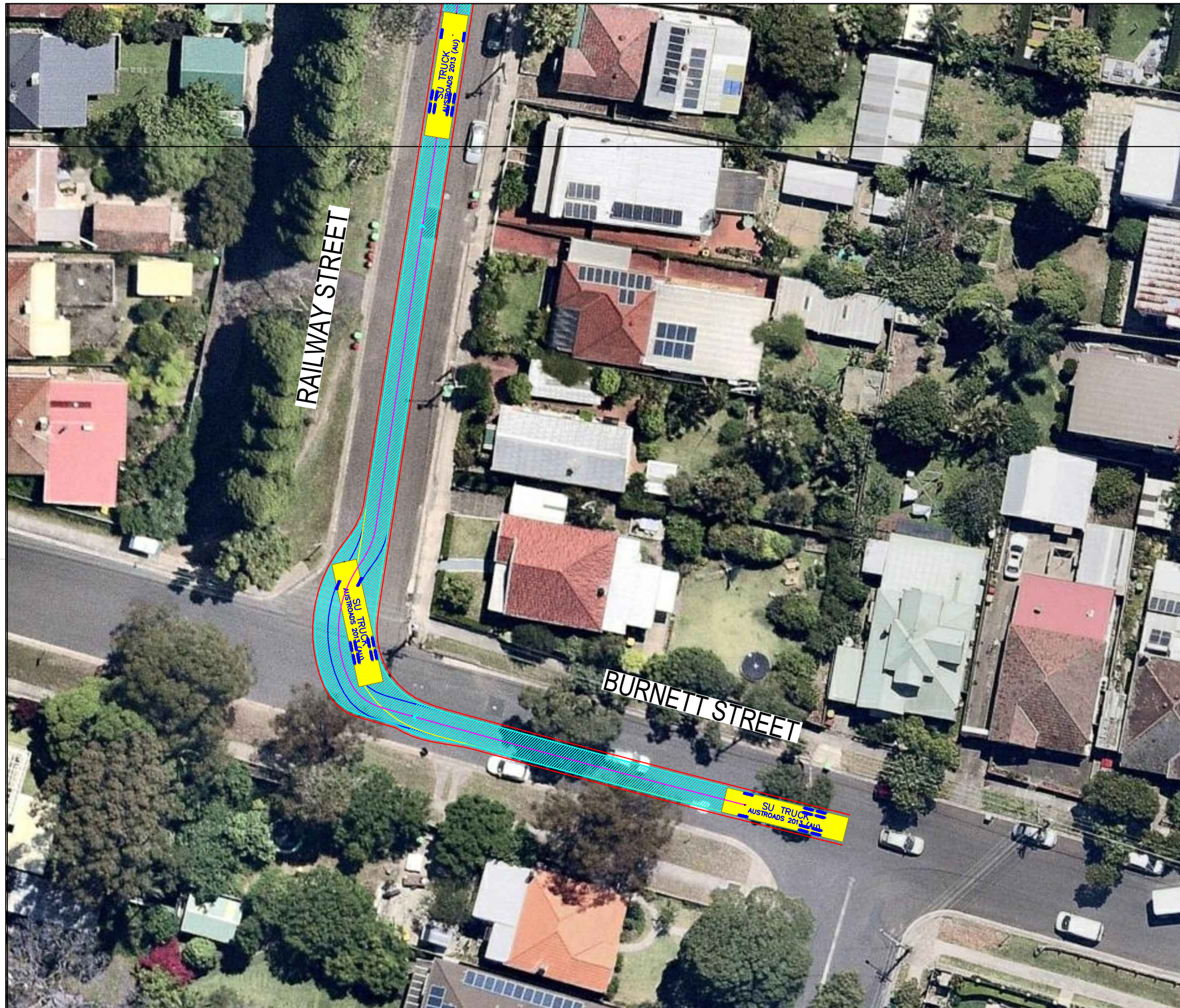
SU TRUCK meters
 Width : 12.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Title	SWEPT PATH AREA 9A ENTRY AND EXIT ROUTE 2		

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	30	Date	11.11.2019
				Issue	011



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

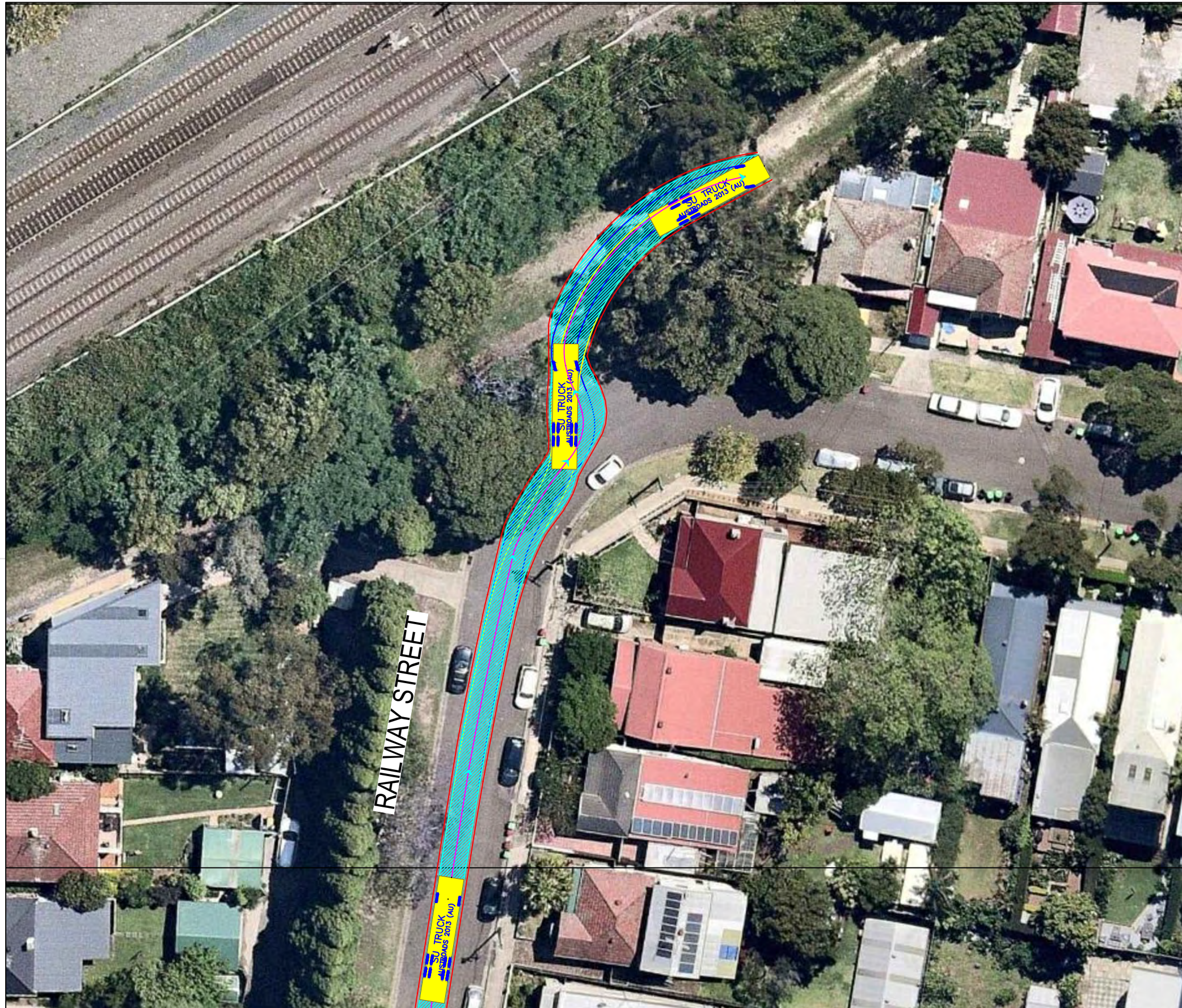
DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	T.W
Title		NOT FOR CONSTRUCTION		Date
SWEPT PATH AREA 9A ENTRY MOVEMENT 1				11.11.2019
Project Number	Sheet Number	Issue		
P3519	31	011		



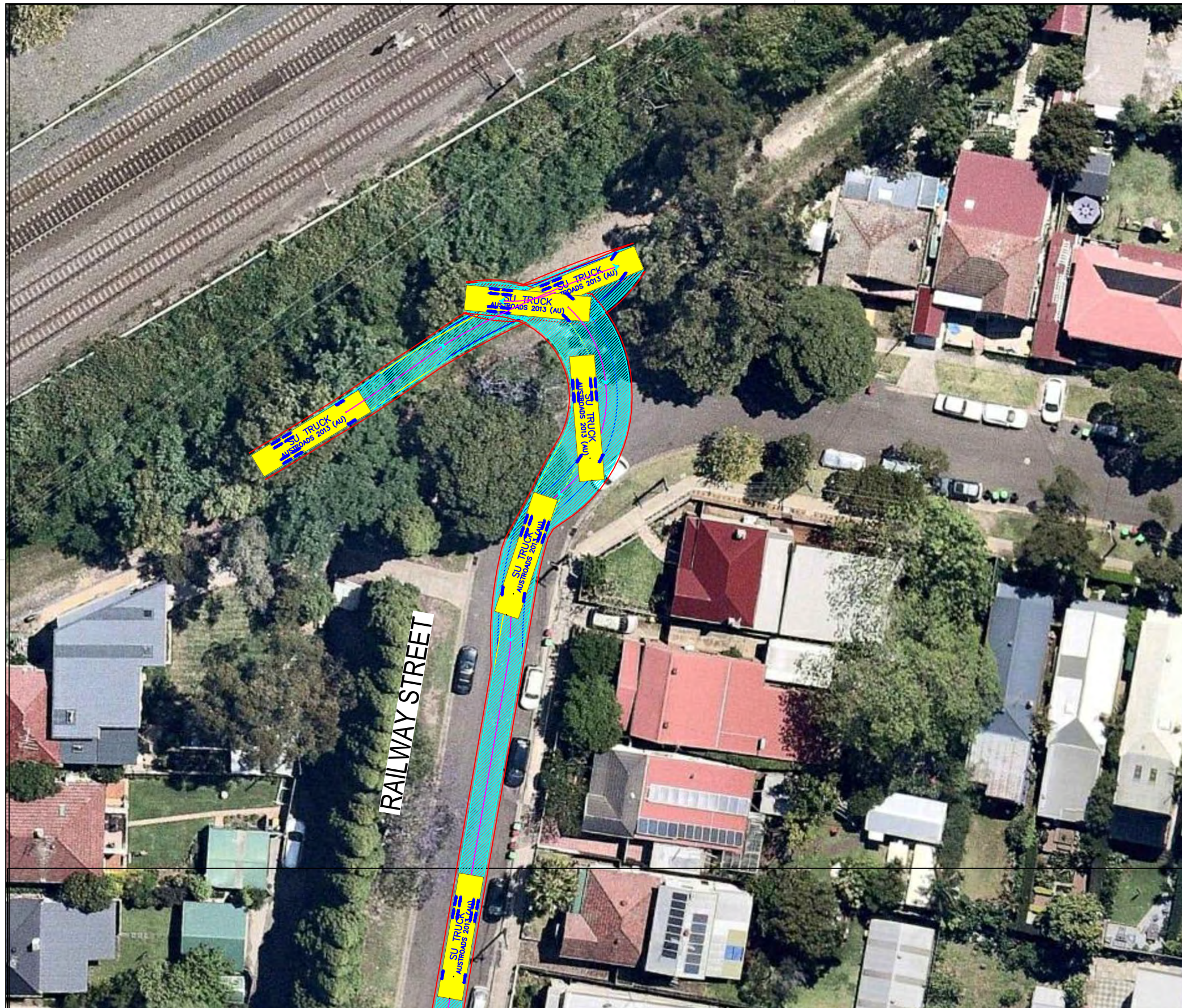
SU TRUCK meters

Width : 12.50
 Track : 2.20
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

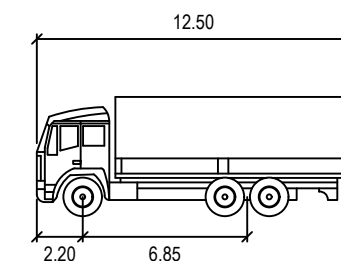
DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	T.W
Title		NOT FOR CONSTRUCTION		
		Date	11.11.2019	
SWEPT PATH AREA 9A ENTRY MOVEMENT 2		Project Number	Sheet Number	Issue
		P3519	32	011



REQUIRES REMOVAL OF 1 PARKING SPACE
SEE MAIN CTMP



SU TRUCK meters
 Width : 12.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	010	011	M.H	23.08.2019
001	NOT USED	-	-	NO CHANGE	NO CHANGE	NO CHANGES	M.H <td>08.11.2019</td>	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019					
003	MINOR AMENDMENTS	M.H	27.03.2019					
004	MINOR AMENDMENTS	M.H	01.04.2019					
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	ENGINEERING CERTIFICATION (RPEQ)				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date	
007	NO CHANGES	M.H	10.07.2019					
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019					

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 9A EXIT MOVEMENT 1

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	33	Issue	011	



SU TRUCK meters

Width : 12.50

Track : 6.85

Lock to Lock Time : 6.0

Steering Angle : 36.6

DESIGN VEHICLE

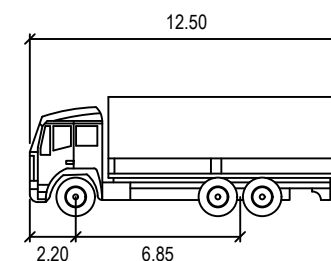
BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 9A EXIT MOVEMENT 2		
Project Number	P3519	Sheet Number	34
Issue	011		

NOT FOR CONSTRUCTION



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

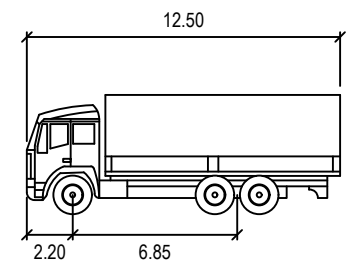
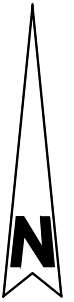
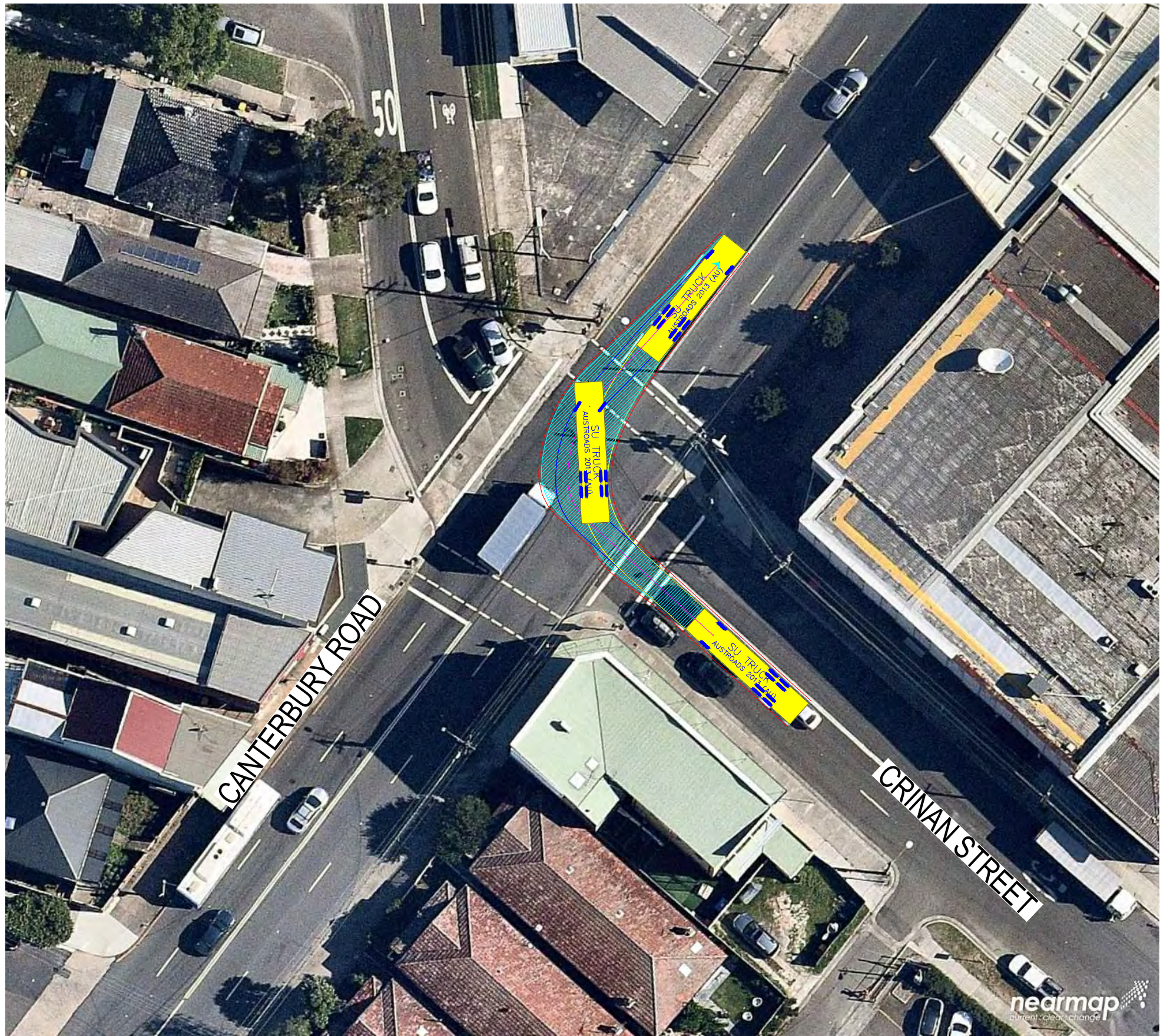
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

Issue	Revisions/Descriptions	Drawn	Date				
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEPT PATH
 AREA 9A
 ENTRY MOVEMENT 3

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		
Project Number	Sheet Number	Issue
P3519	35	011
		Date 11.11.2019



SU TRUCK meters

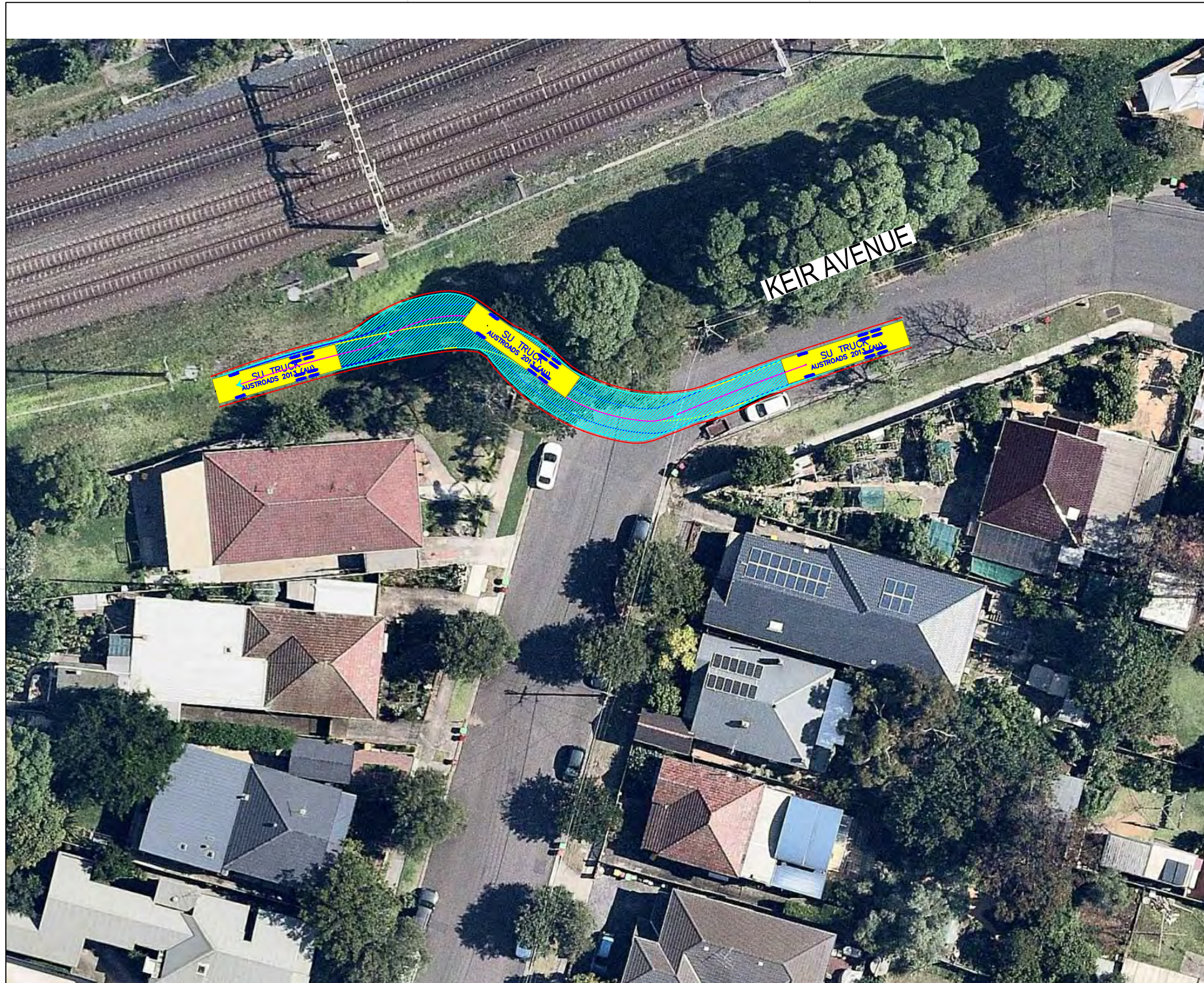
Width : 12.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
Title			11.11.2019
SWEPT PATH AREA 9A EXIT MOVEMENT 3			Issue
Project Number	P3519	Sheet Number	36
Issue		011	

NOT FOR CONSTRUCTION



SU TRUCK meters

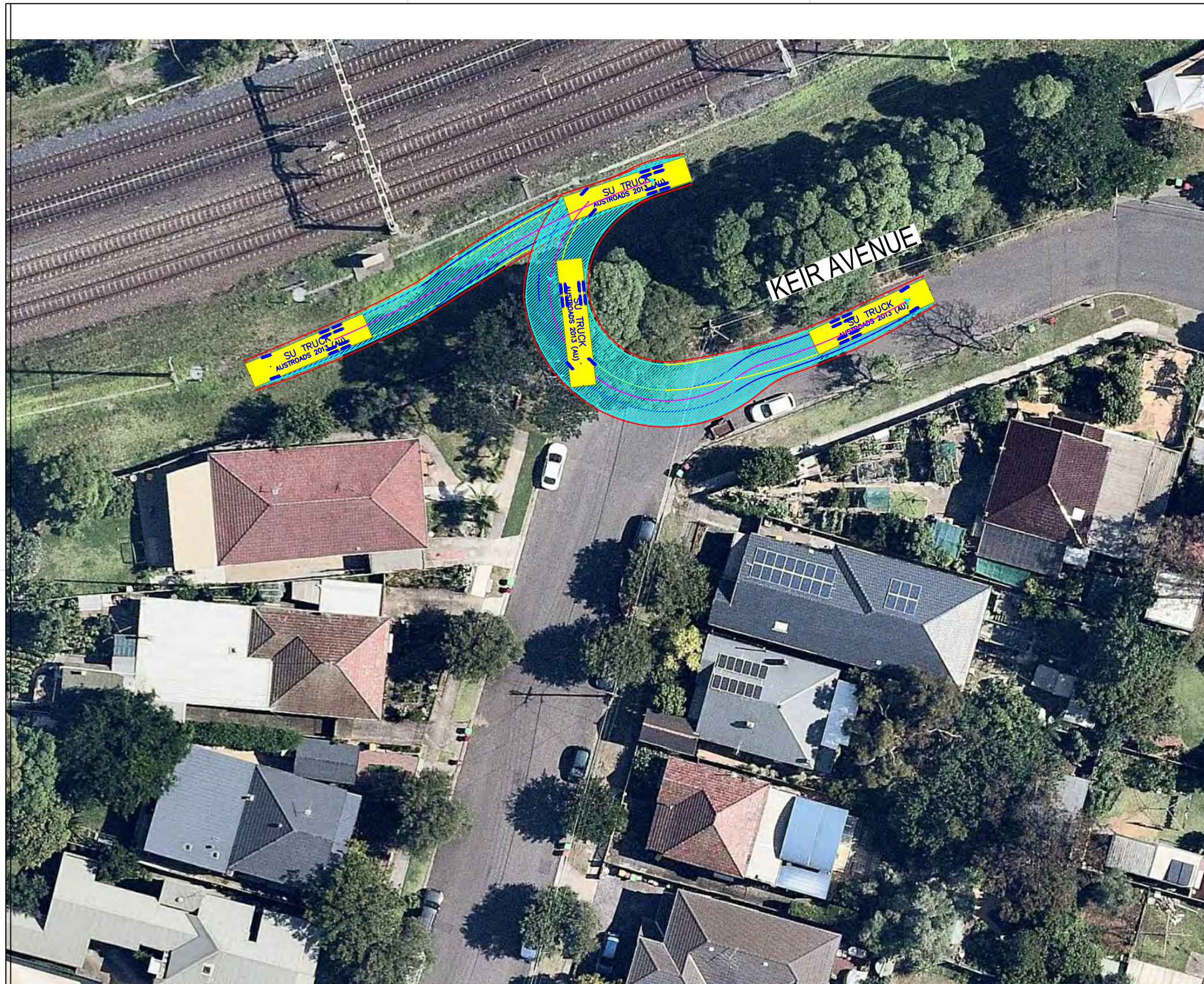
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	009	NO CHANGE	M.H	23.08.2019
Issue	Revisions/Descriptions			010	NO CHANGE	M.H	08.11.2019
001	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019				
003	MINOR AMENDMENTS	M.H	27.03.2019				
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 9B ENTRY MOVEMENT 1		
Project Number	P3519	Sheet Number	37
Issue	011		

NOT FOR CONSTRUCTION



SU TRUCK meters

Width : 12.50
 Track : 2.20
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 9B EXIT MOVEMENT1		
Project Number	P3519	Sheet Number	38
Issue	011		

NOT FOR CONSTRUCTION



TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date		M.H	23.08.2019
001	NOT USED	-	-	009	NO CHANGE	M.H
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)		
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019			
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.
007	NO CHANGES	M.H	10.07.2019			Date
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 9B ENTRY MOVEMENT 2	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	39	Issue	011		

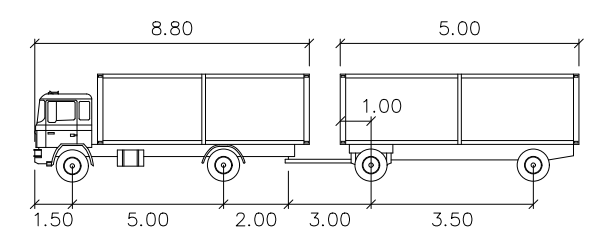


TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

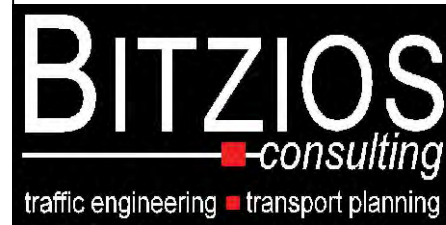
Issue	Revisions/Descriptions	Drawn	Date			M.H	23.08.2019
001	NOT USED	-	-	009	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	M.H	M.H	T.W
Title	NOT FOR CONSTRUCTION		
SWEPT PATH AREA 9B EXIT MOVEMENT 2	Project Number	Sheet Number	Date
	P3519	40	11.11.2019
			Issue
			011



TD StB	meters			
First Unit Width	: 2.50	Lock to Lock Time	: 6.0	
Trailer Width	: 2.30	Steering Angle	: 37.9	
First Unit Track	: 2.50	Articulating Angle	: 70.0	
Trailer Track	: 2.30			

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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 9C ENTRY MOVEMENT		
Project Number	P3519	Sheet Number	41
Issue	011		

NOT FOR CONSTRUCTION



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

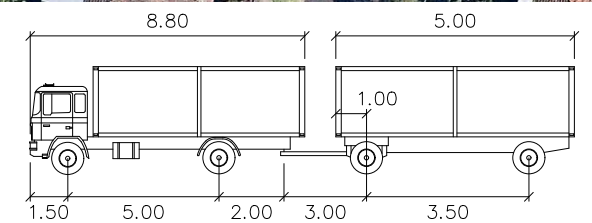
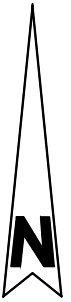
DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

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

Issue	Revisions/Descriptions	Drawn	Date				
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
	Name	Signature	No.	Date			
001	NOT USED	-	-				
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019				
003	MINOR AMENDMENTS	M.H	27.03.2019				
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 9C EXIT MOVEMENT	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	42	Issue	011		

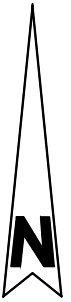


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name Signature No. Date			
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 9C ENTRY ROUTE		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	43	Issue	011			

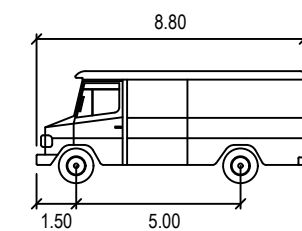
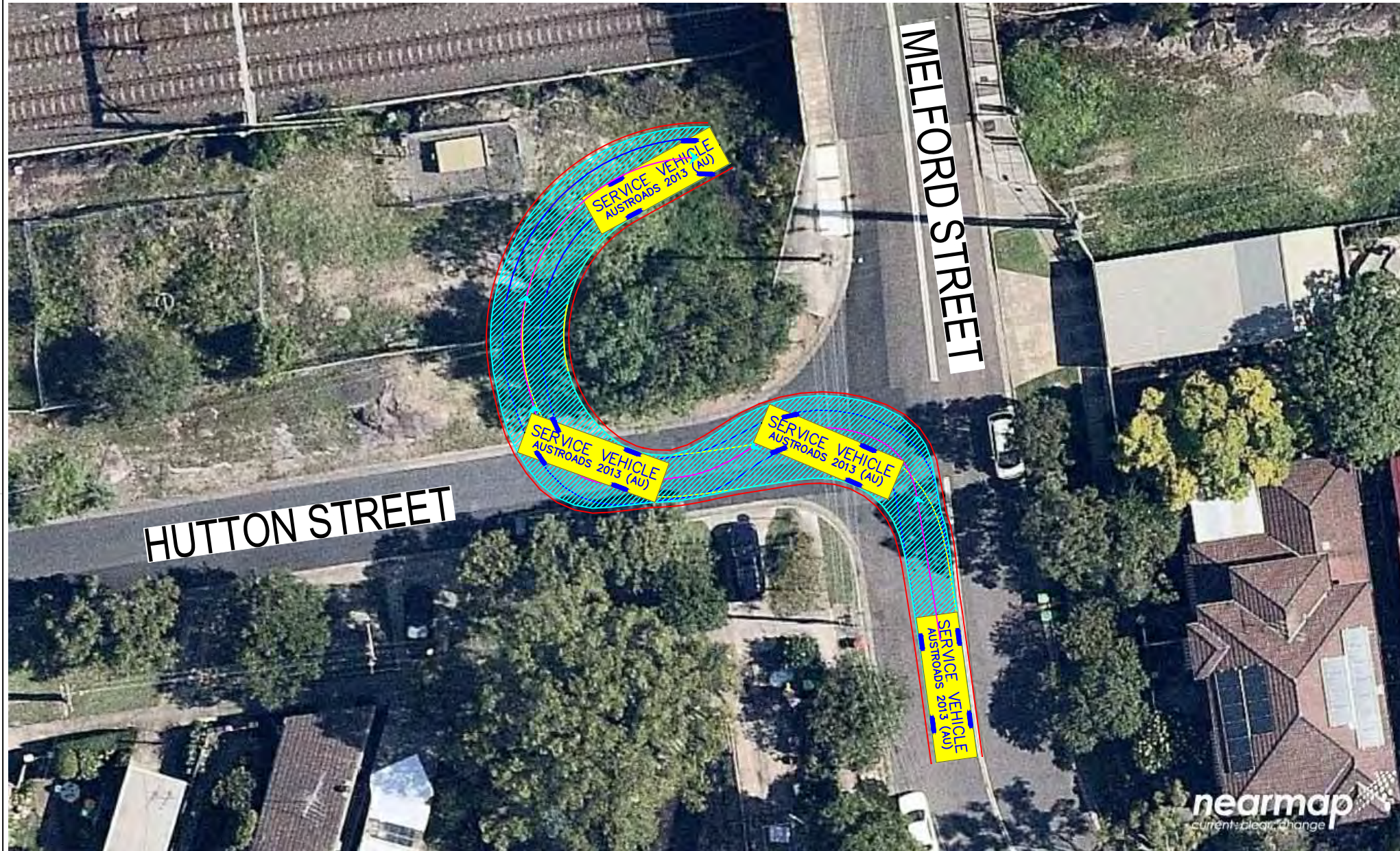
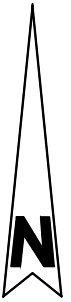


TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	009	NO CHANGE	M.H	23.08.2019
Issue	Revisions/Descriptions			010	NO CHANGE	M.H	08.11.2019
001	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019				
003	MINOR AMENDMENTS	M.H	27.03.2019				
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 9C EXIT ROUTE - CRINAN STREET AND MELFORD STREET ROUNDABOUT		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	44	Issue	011			



SERVICE VEHICLE

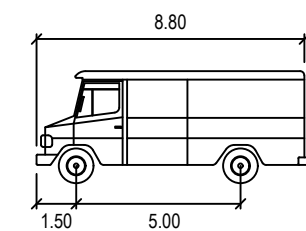
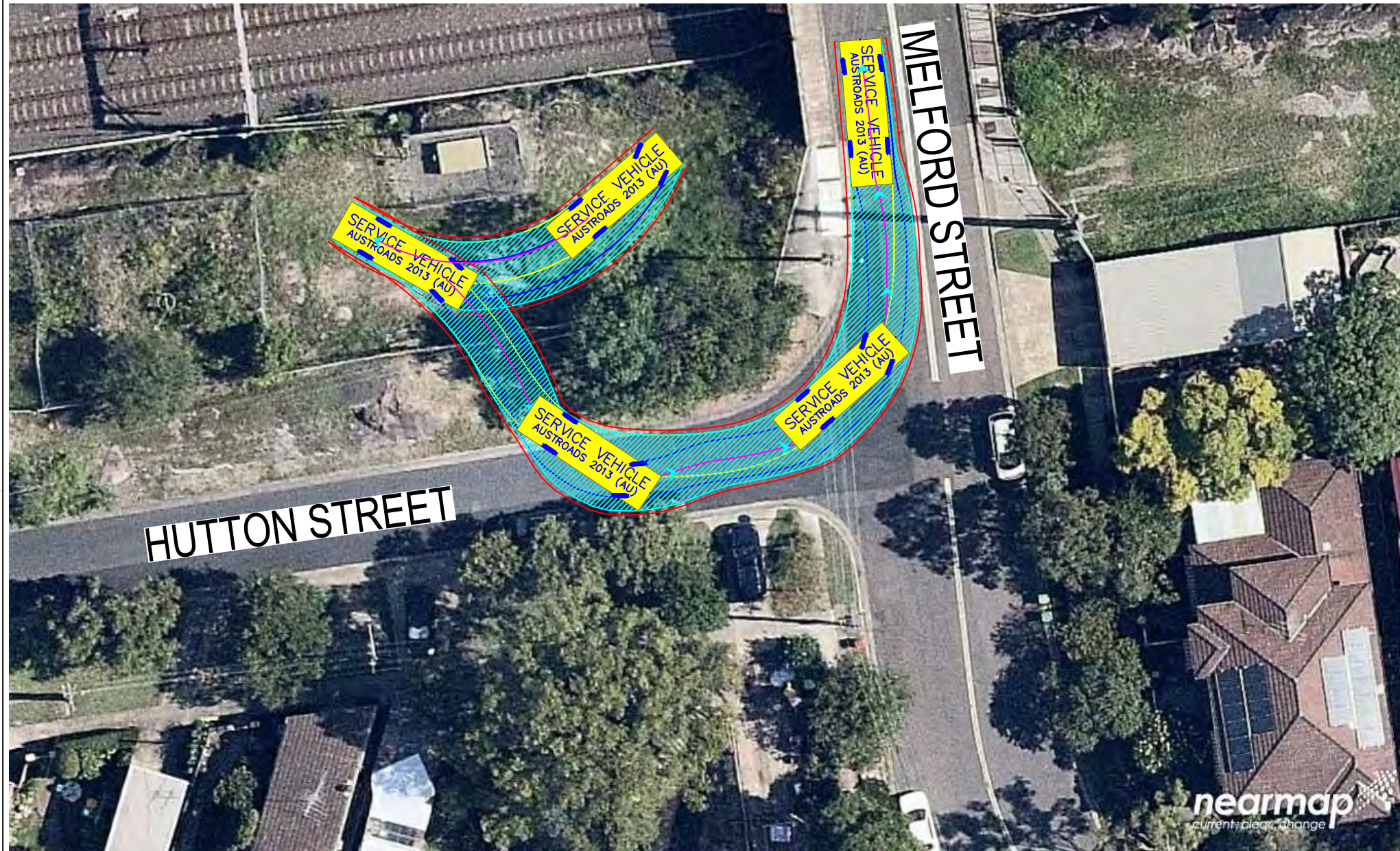
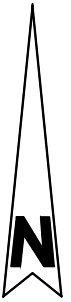
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 9D ENTRY		
Project Number	P3519	Sheet Number	45
Issue			011

NOT FOR CONSTRUCTION



SERVICE VEHICLE

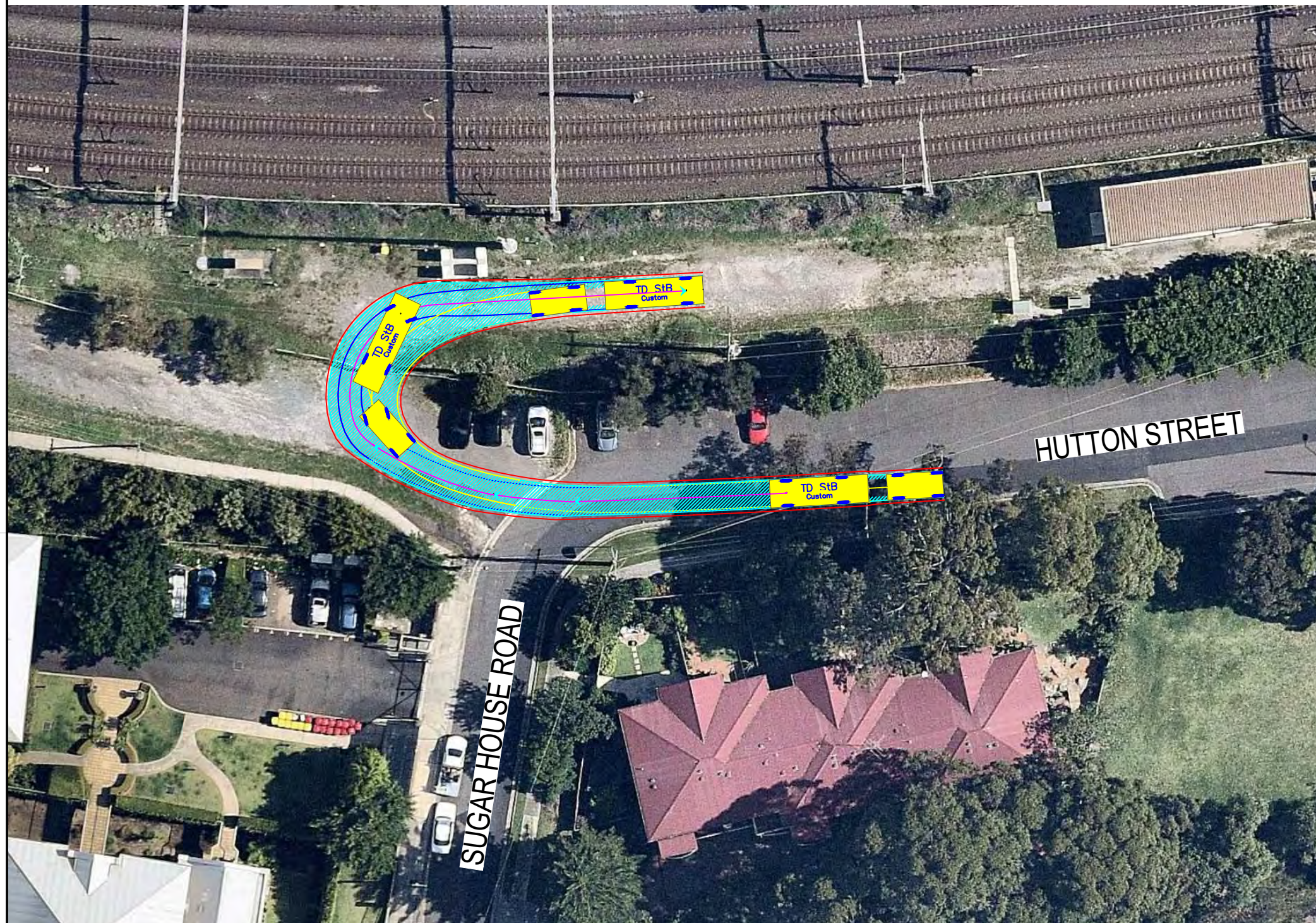
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 9D EXIT		
Project Number	P3519	Sheet Number	46
Issue	011		

NOT FOR CONSTRUCTION



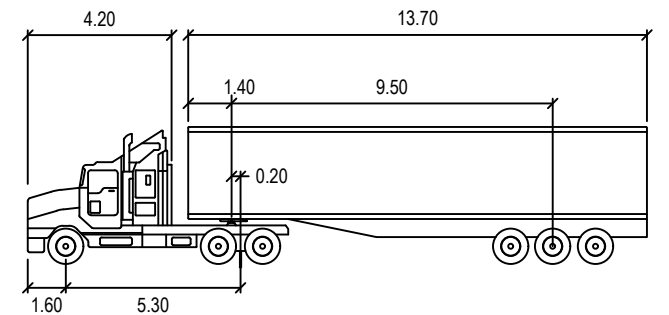
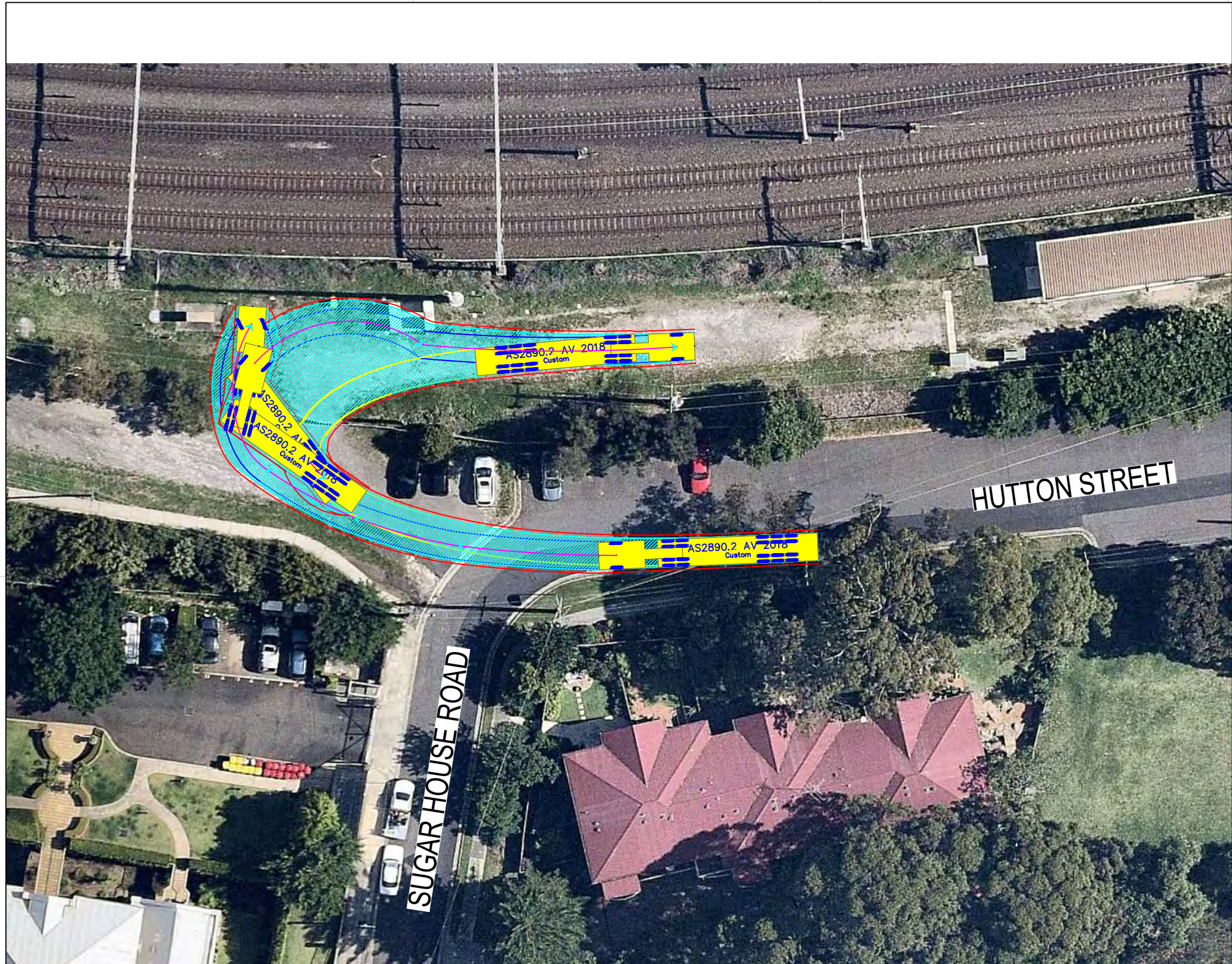
TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS				Issue	Drawn	Date	009	010	011	M.H	23.08.2019
Revisions/Descriptions											
001	NOT USED	-	-							M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019							M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019								
004	MINOR AMENDMENTS	M.H	01.04.2019								
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019								
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019								
007	NO CHANGES	M.H	10.07.2019								
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019								

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
Title			11.11.2019
SWEPT PATH AREA 11A ENTRY			Issue
Project Number	P3519	Sheet Number	47
		Issue	011

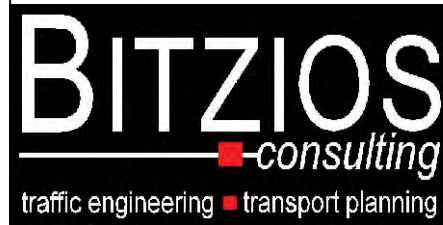
NOT FOR CONSTRUCTION



S ARTICULATED 19M meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.7
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

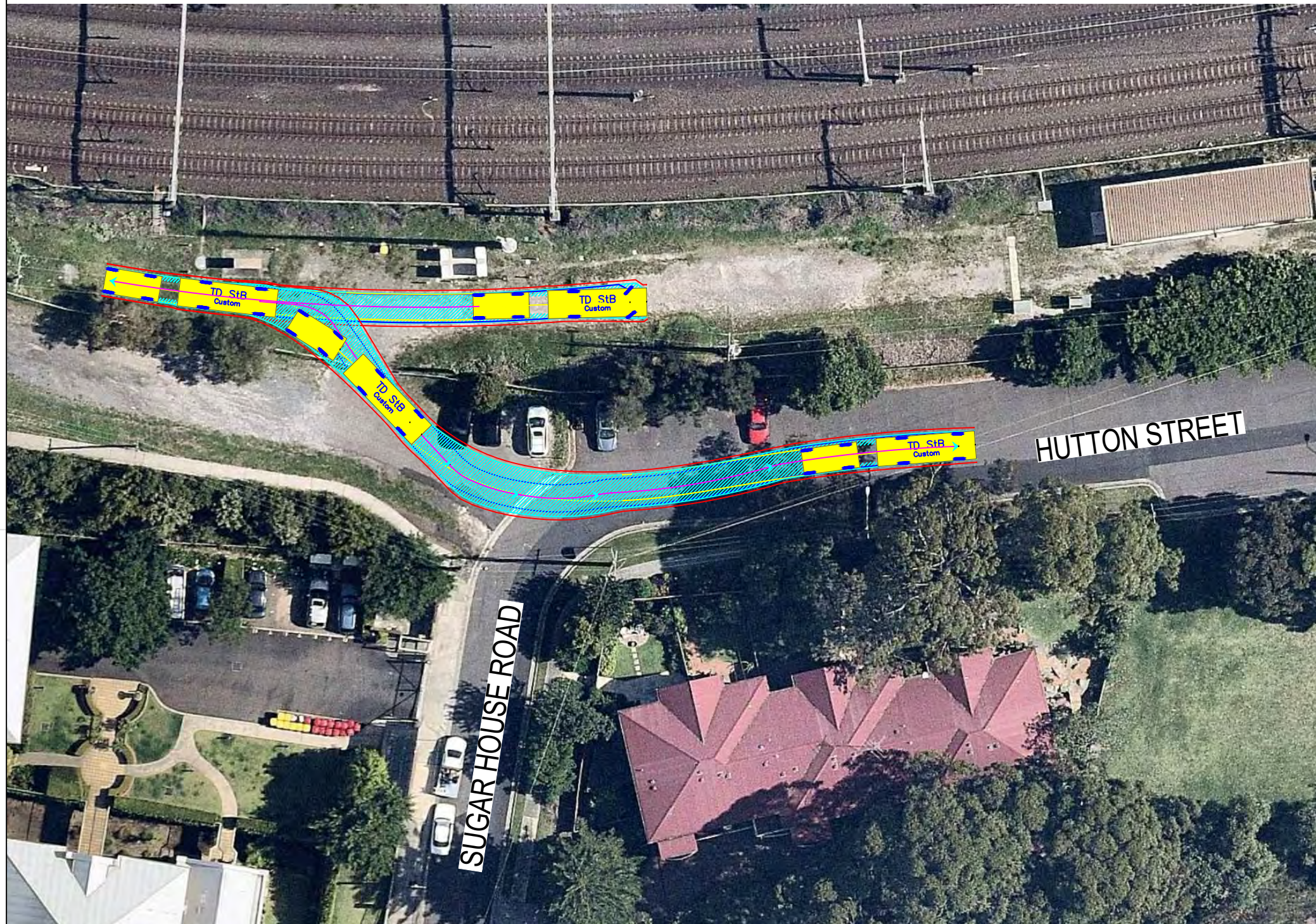
DESIGN VEHICLE



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		Drawn	Date	009	NO CHANGE	M.H	23.08.2019
Issue	Revisions/Descriptions			010	NO CHANGE	M.H	08.11.2019
001	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
002	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ)			
003	NOT USED	-	-				
004	NOT USED	-	-				
005	NOT USED	-	-				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
Title		SWEPT PATH AREA 11A ENTRY	
NOT FOR CONSTRUCTION		Date	11.11.2019
Project Number	P3519	Sheet Number	48
Issue	011		

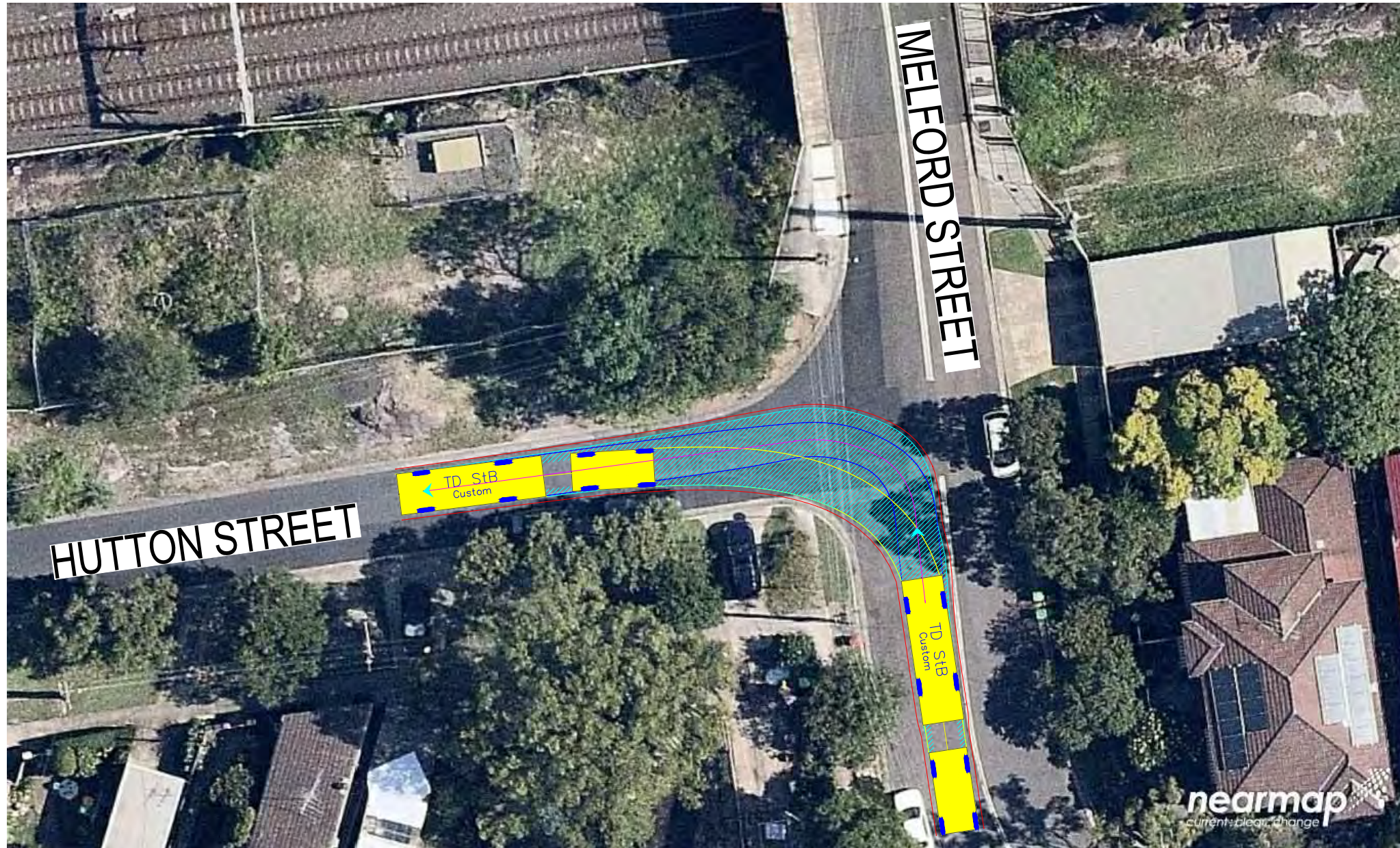
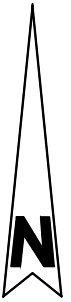


TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 11A EXIT		
Project Number	P3519	Sheet Number	49
Issue	011		



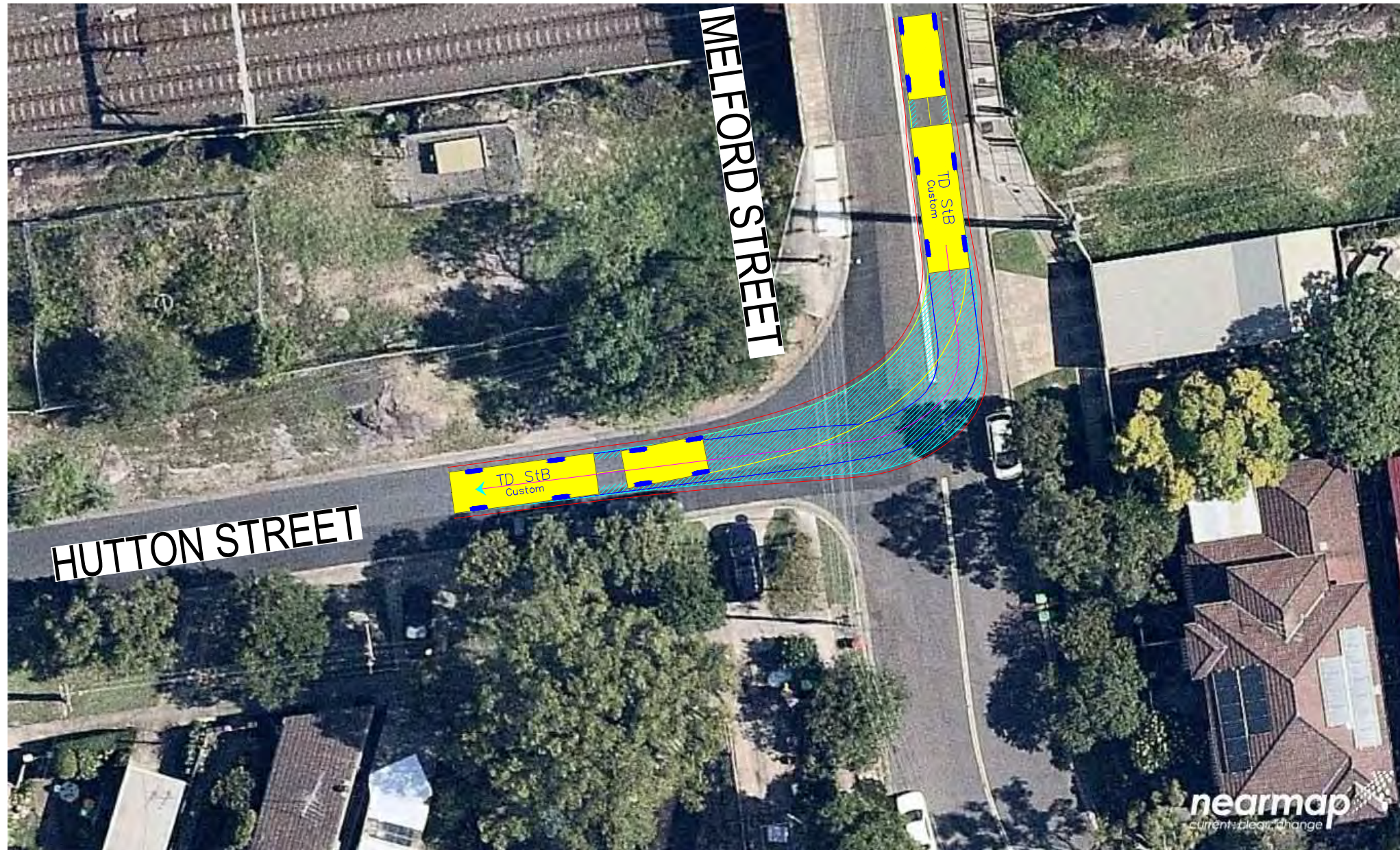
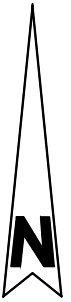
TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 11A ENTRY ROUTE 1		
Project Number	P3519	Sheet Number	50
Issue	011		

NOT FOR CONSTRUCTION

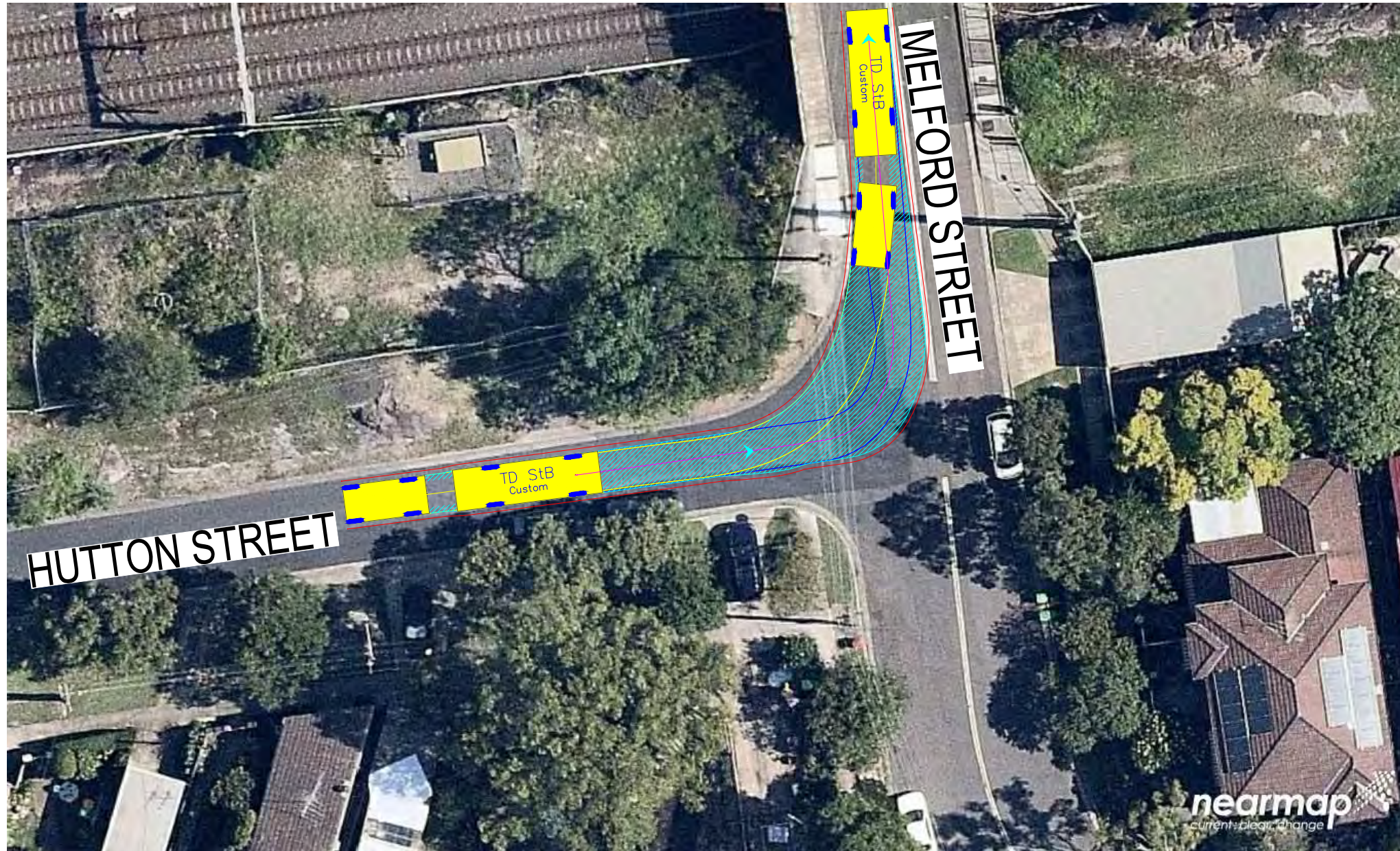
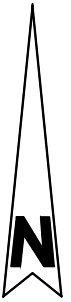


TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title	SWEPT PATH AREA 11A ENTRY ROUTE 2		
NOT FOR CONSTRUCTION		Date	11.11.2019
Project Number	P3519	Sheet Number	51
Issue	011		

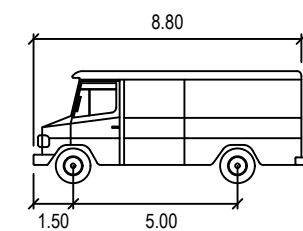


TD StB	units	TD StB	units
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
	P3519		11.11.2019
Title	SWEPT PATH AREA 11A EXIT ROUTE		
Project Number	Sheet Number	Issue	
P3519	52	011	



SERVICE VEHICLE

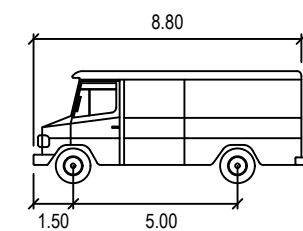
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
	11.11.2019		Issue
	011		
Title	SWEPT PATH AREA 11B ENTRY		
Project Number	P3519	Sheet Number	53

NOT FOR CONSTRUCTION



SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
	11.11.2019		Issue
	011		
Title	SWEPT PATH AREA 11B EXIT		
Project Number	P3519	Sheet Number	54

NOT FOR CONSTRUCTION



SU TRUCK meters

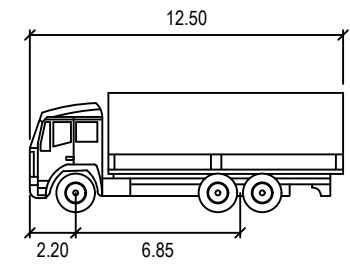
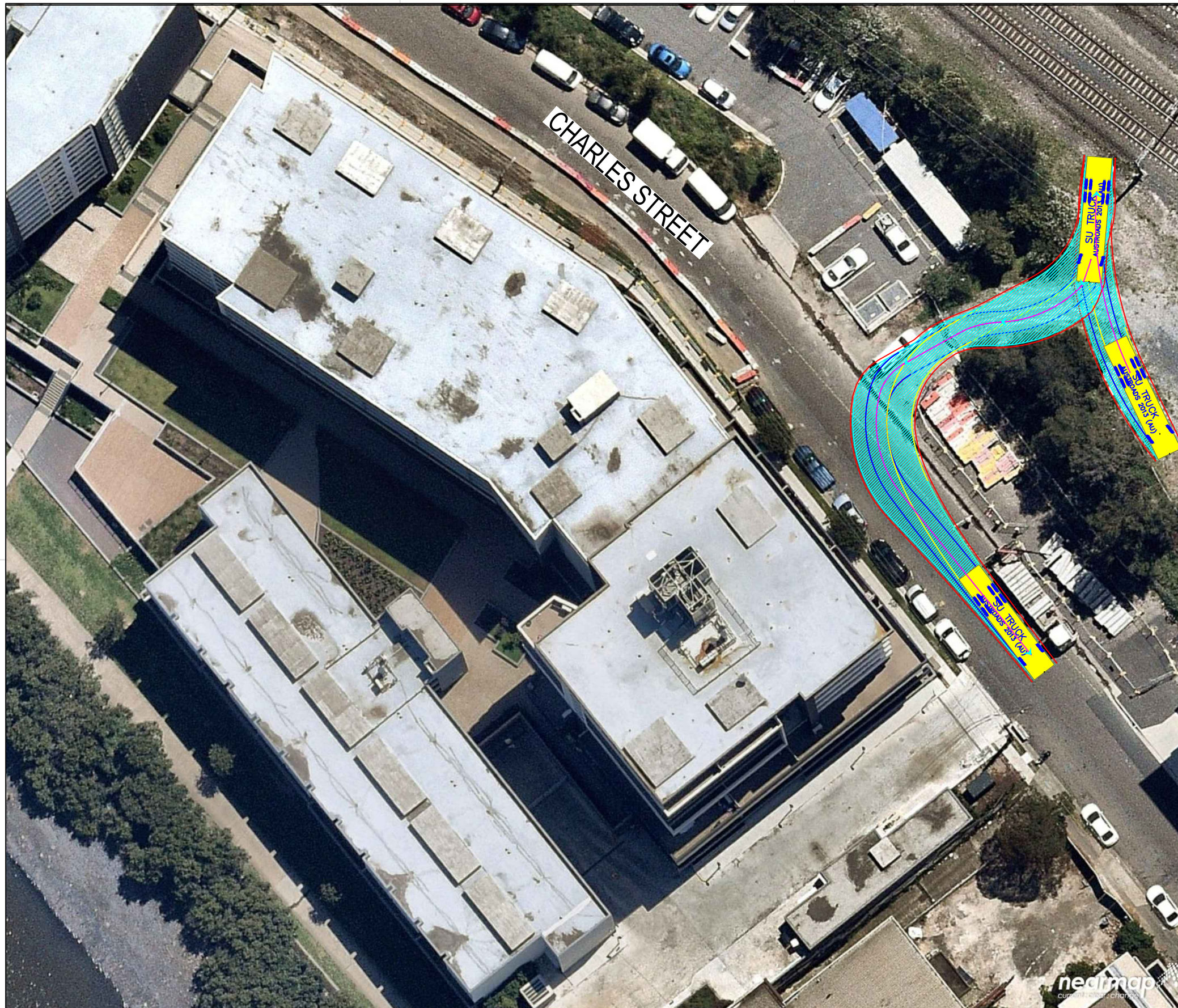
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13A ENTRY

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	55	Issue	011	



SU TRUCK meters

Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
-consulting
traffic engineering ■ transport planning

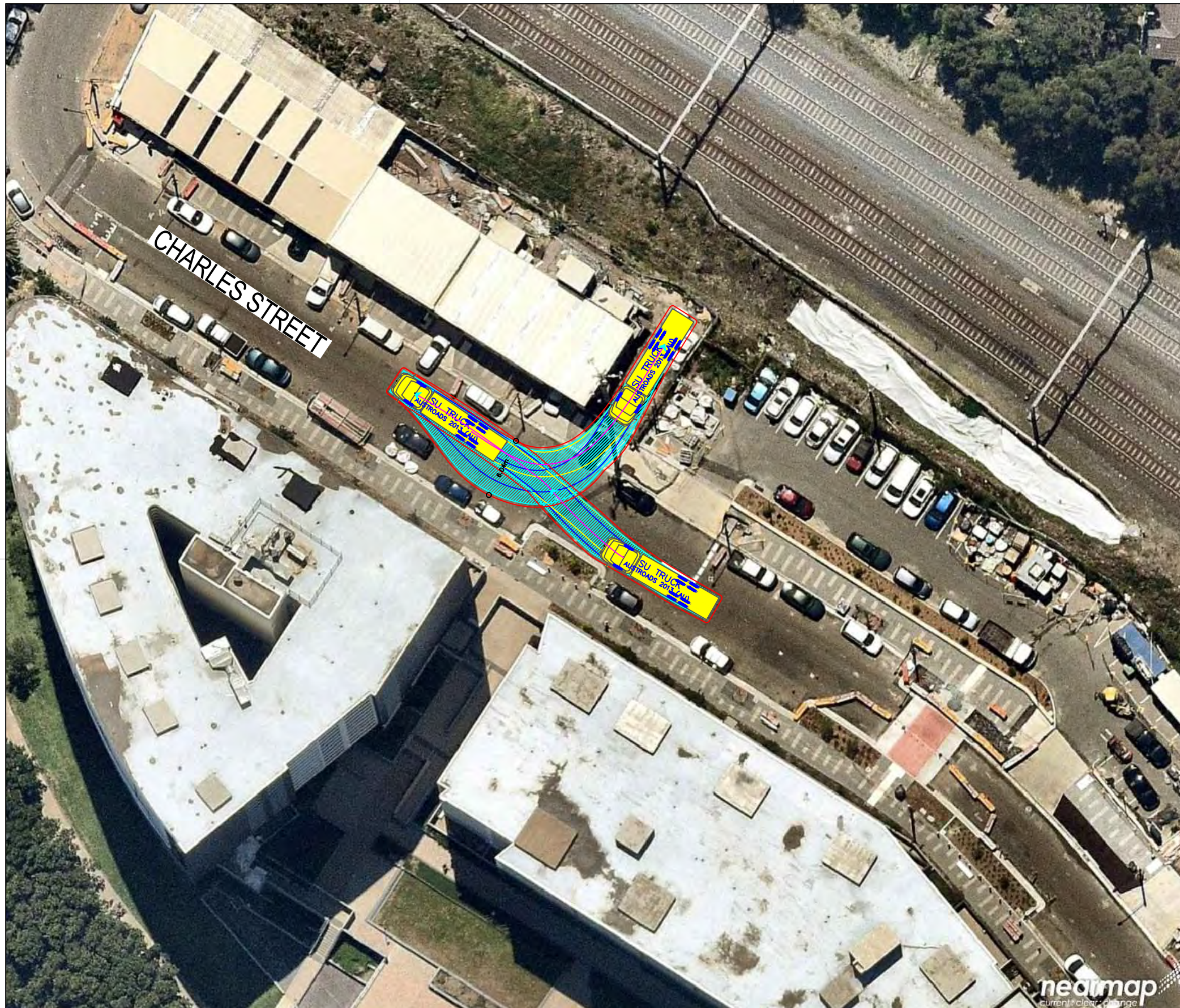
Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000.
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042.
P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

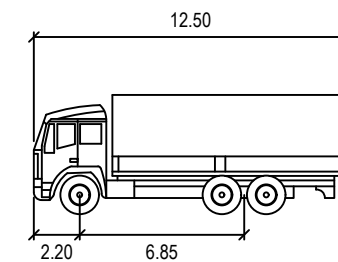
Project
SYDNEY METRO CITY & SOUTHWEST
SOUTHWEST METRO EARLY WORKS

Title
SWEPT PATH
AREA 13A
EXIT

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		
Project Number	Sheet Number	Date
P3519	56	11.11.2019
		Issue
		011



REQUIRES TRAFFIC CONTROLLER TO HOLD WESTBOUND TRAFFIC WHILE TRUCK COMPLETES TURNING MANOEUVRE



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

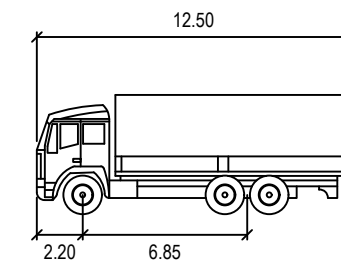
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	009	NOT USED	-	-
Issue	Revisions/Descriptions			010	INITIAL SWEEP PATH	M.H	08.11.2019
001	NOT USED	-	-	011	CHANGE TO 20 CHARLES ST	M.H	11.11.2019
002	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ) Name Signature No. Date			
003	NOT USED	-	-				
004	NOT USED	-	-				
005	NOT USED	-	-				
006	NOT USED	-	-				
007	NOT USED	-	-				
008	NOT USED	-	-				

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	A.G
Title		NOT FOR CONSTRUCTION		
SWEEP PATH ACCESS V - 20 CHARLES STREET ENTRY		Date	11.11.2019	
Project Number	Sheet Number	Issue		
P3519	57	011		



REQUIRES TRAFFIC CONTROLLER TO HOLD WESTBOUND TRAFFIC WHILE TRUCK COMPLETES TURNING MANOEUVRE



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	009	NOT USED	-	-
Issue	Revisions/Descriptions			010	INITIAL SWEEP PATH	M.H	08.11.2019
001	NOT USED	-	-	011	CHANGE TO 20 CHARLES ST	M.H	11.11.2019
002	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ) Name Signature No. Date			
003	NOT USED	-	-				
004	NOT USED	-	-				
005	NOT USED	-	-				
006	NOT USED	-	-				
007	NOT USED	-	-				
008	NOT USED	-	-				

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	A.G
Title		NOT FOR CONSTRUCTION		
SWEEP PATH ACCESS V - 20 CHARLES STREET EXIT		Date	11.11.2019	
Project Number	Sheet Number	Issue		
P3519	58	011		



SU TRUCK meters

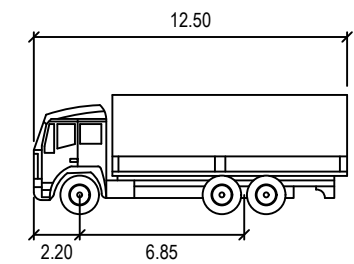
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019	010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019	011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13A ACCESS ROUTE

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	59	Issue	011	



SU TRUCK meters

Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

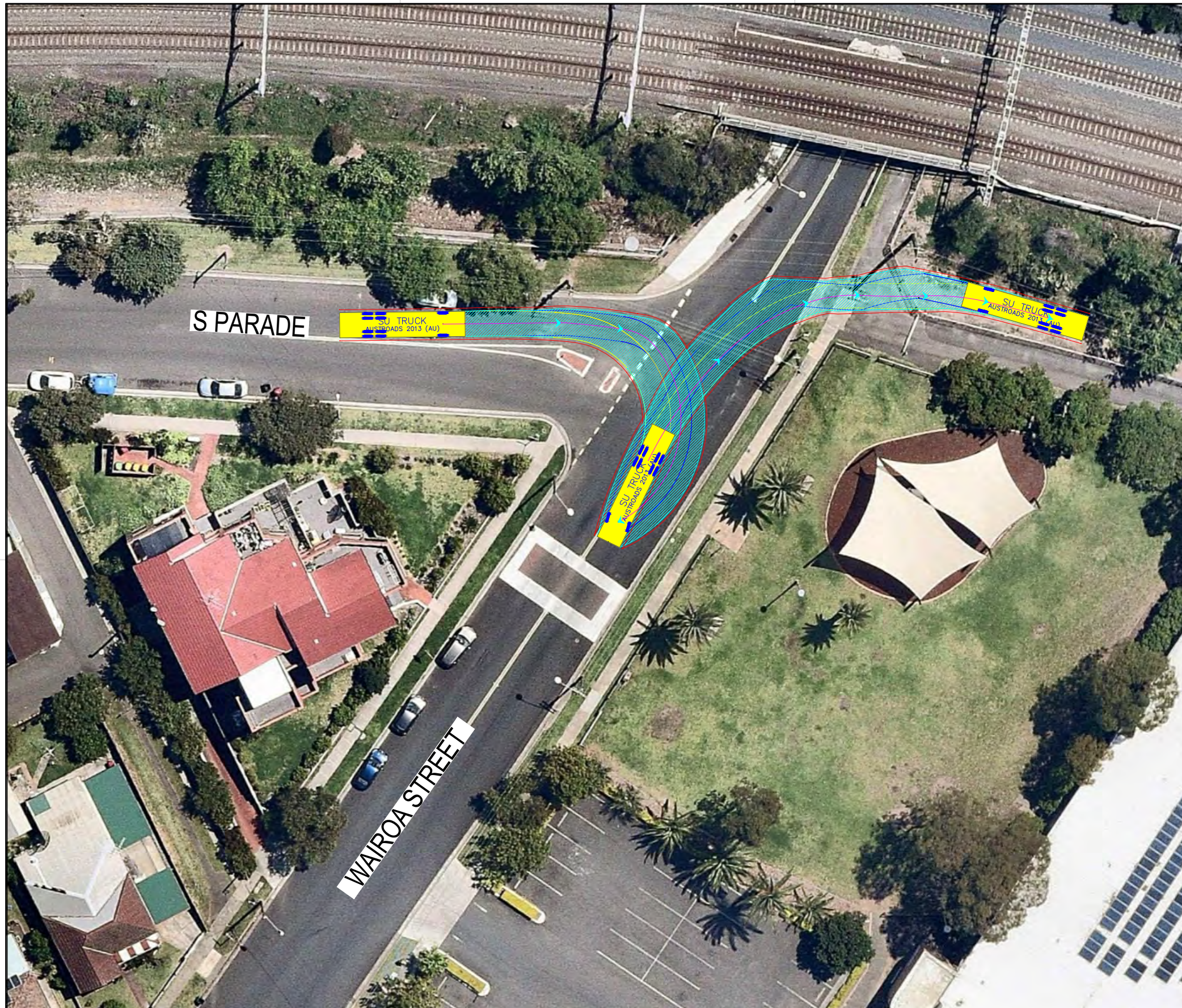
Steering Angle : 36.6

DESIGN VEHICLE

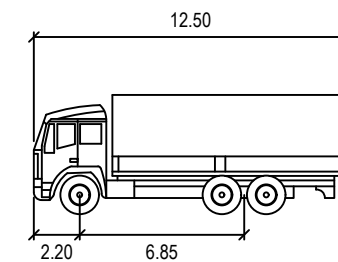
Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13A EGRESS ROUTE

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	60	Issue	011	



REQUIRES TRAFFIC CONTROL
SEE TCP FOR THESE MANOEUVRES



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

ISSUES		REVISIONS		Drawn	Date	M.H	Date
Issue	Revisions/Descriptions	Drawn	Date				
001	NOT USED	-	-			M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019			M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019			M.H	11.11.2019
004	CHANGE VEHICLE TYPE	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13B REVERSE ENTRY TO GATE

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Date	11.11.2019				
Project Number	P3519	Sheet Number	61	Issue	011



REQUIRES TRAFFIC CONTROL
SEE TCP FOR THESE MANOEUVRES



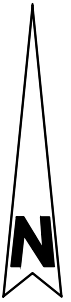
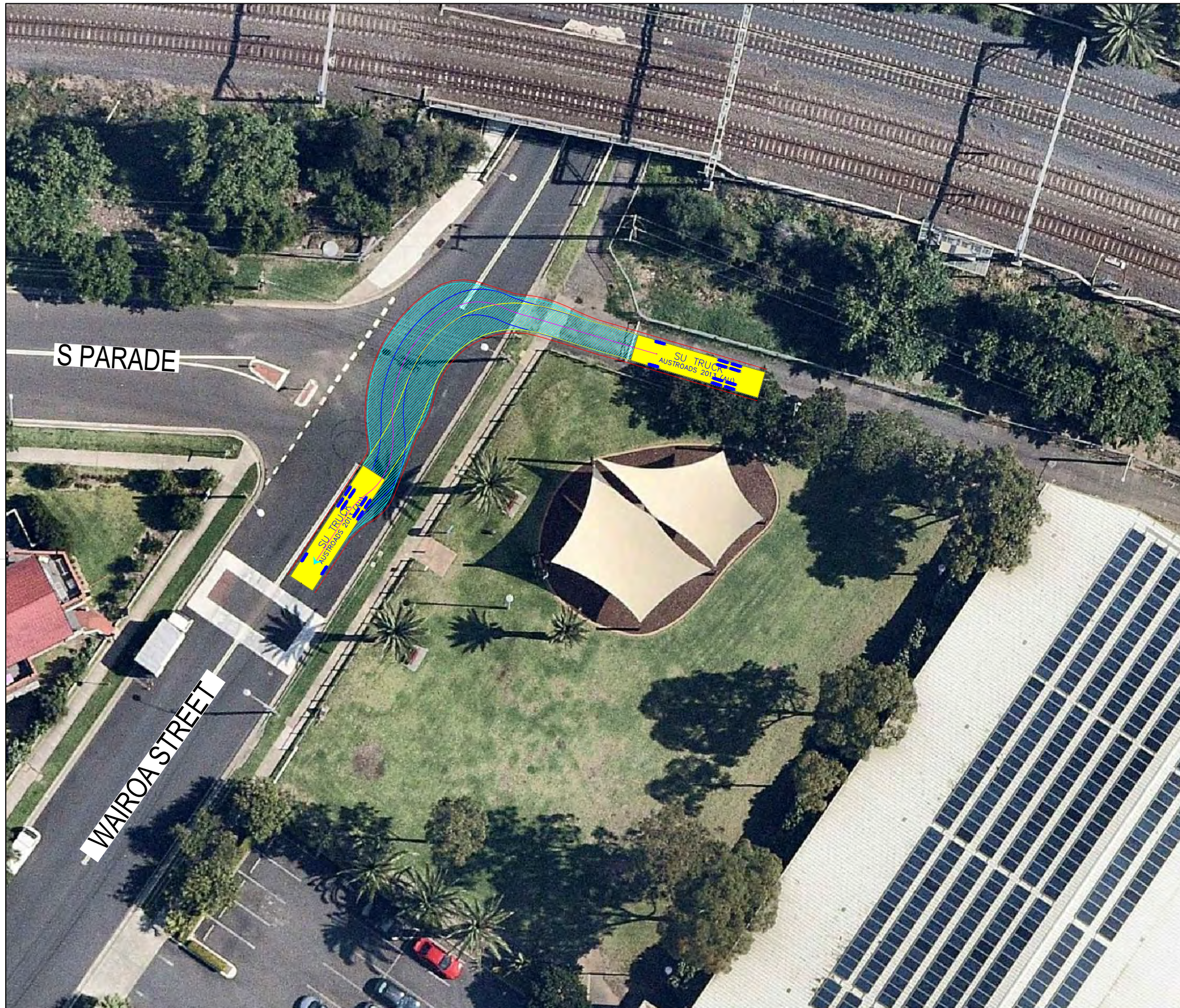
SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

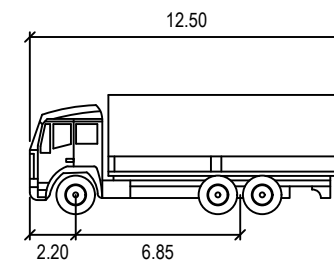
REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	001	NOT USED	-	-
010	NO CHANGE	M.H	08.11.2019	002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019
011	NO CHANGES	M.H	11.11.2019	003	MINOR AMENDMENTS	M.H	27.03.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		
004	CHANGE VEHICLE TYPE	M.H	01.04.2019	005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	007	NO CHANGES	M.H	10.07.2019
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13B REVERSE ENTRY TO COOKS RIVER PATH

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	62	Date	11.11.2019
				Issue	011



REQUIRES TRAFFIC CONTROL
SEE TCP FOR THIS MANOEUVRE



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

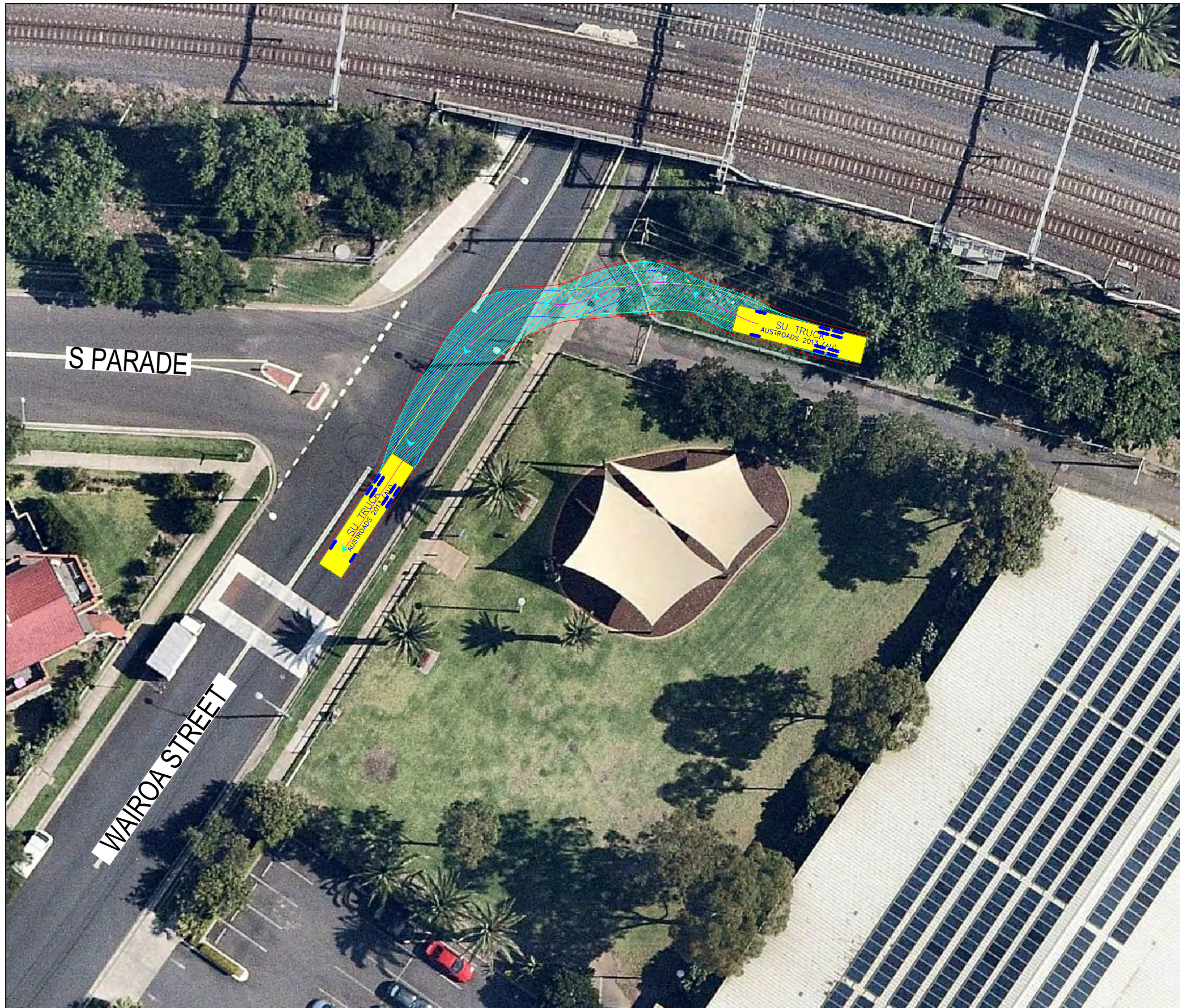
BITZIOS
 consulting
 traffic engineering ■ transport planning

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

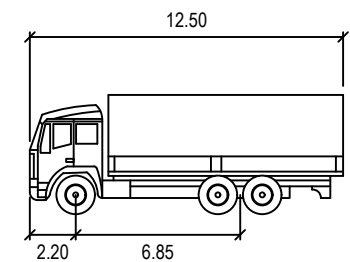
REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS
 Title
 SWEPT PATH
 AREA 13B
 COOKS RIVER PATH EXIT

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		
Date	11.11.2019	
Project Number	Sheet Number	Issue
P3519	63	003



REQUIRES TRAFFIC CONTROL
SEE TCP FOR THIS MANOEUVRE



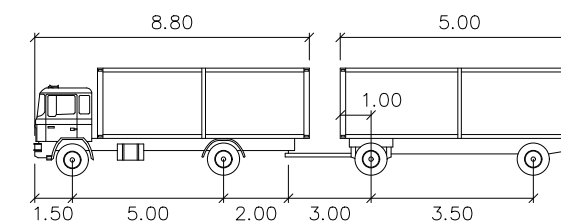
SU TRUCK meters
 Width : 12.50
 Track : 2.20
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13B GATE EXIT

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	64	Issue	011



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 13B ENTRY/EXIT ROUTE 1		
Project Number	P3519	Sheet Number	65
Issue	011		



SU TRUCK meters

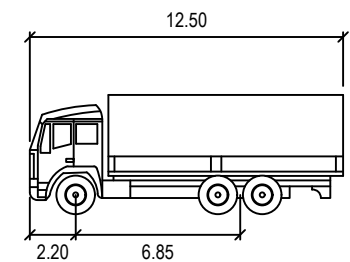
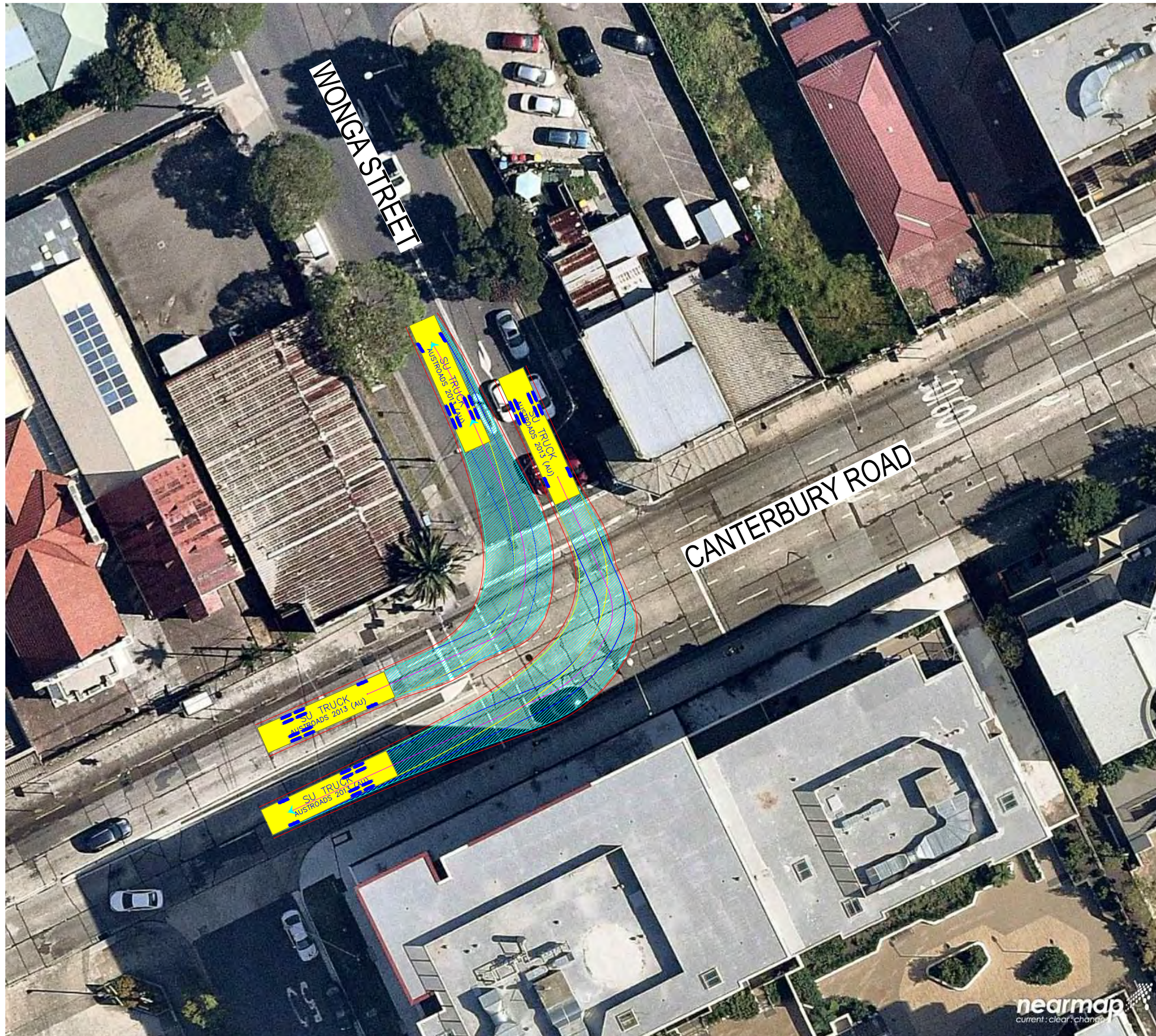
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019				
010	NO CHANGE	M.H	08.11.2019				
011	NO CHANGES	M.H	11.11.2019				
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 13B ENTRY/EXIT ROUTE 1	NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	66	Issue	011		

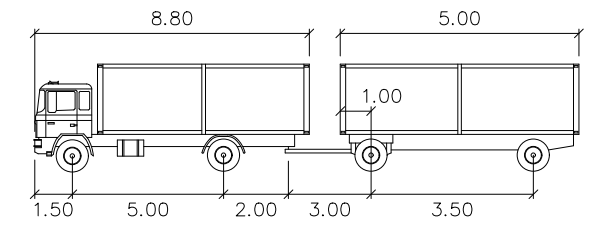
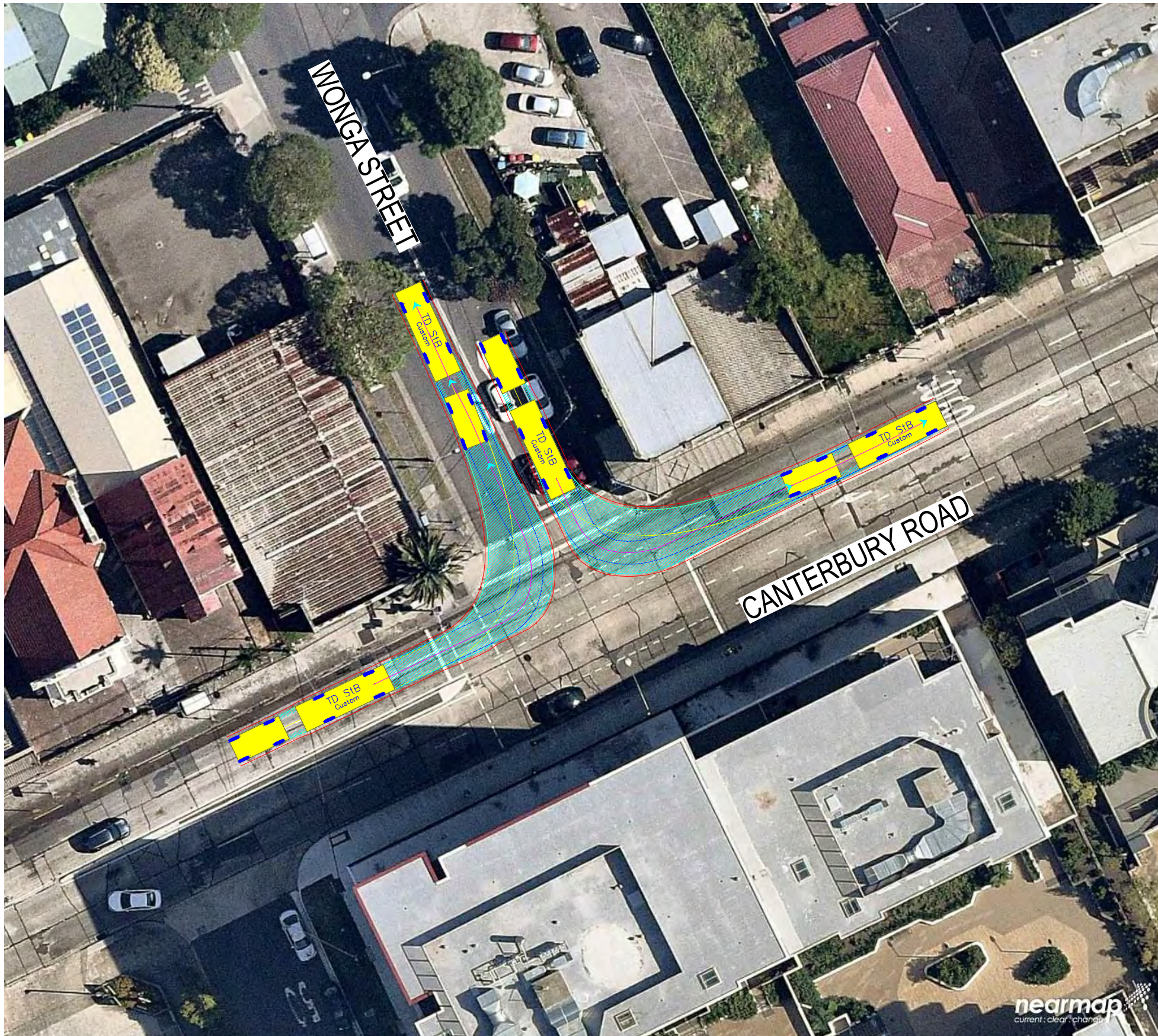


SU TRUCK		units
Width	: 2.50	meters
Track	: 2.50	
Lock to Lock Time	: 6.0	
Steering Angle	: 36.6	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	By	Date	
001	NOT USED	-	-	009	NO CHANGE	M.H 23.08.2019	
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H 08.11.2019	
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H 11.11.2019	
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	T.W
Title		NOT FOR CONSTRUCTION		
SWEPT PATH AREA 13B ENTRY/EXIT ROUTE 2		Date	11.11.2019	
Project Number	Sheet Number	Issue		
P3519	67	011		



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

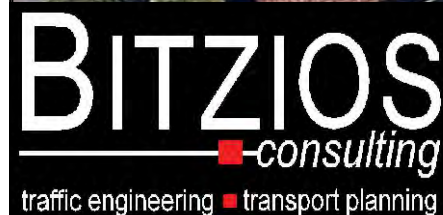
REVISIONS		Drawn	Date				
Issue	Revisions/Descriptions						
009	NO CHANGE	M.H	23.08.2019				
010	NO CHANGE	M.H	08.11.2019				
011	NO CHANGES	M.H	11.11.2019				
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 13B ENTRY/EXIT ROUTE 2		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	68	Issue	011			



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

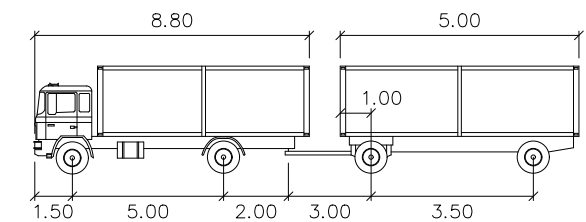


Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019	010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019	011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13C KERBSIDE

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Date	11.11.2019				
Project Number	P3519	Sheet Number	69	Issue	011

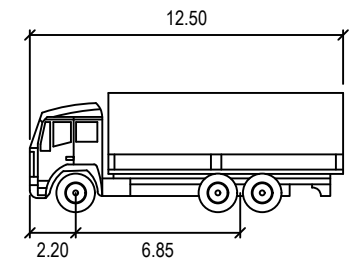
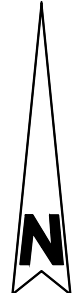


TD StB	units	meters
First Unit Width	: 2.50	
Trailer Width	: 2.30	
First Unit Track	: 2.50	
Trailer Track	: 2.30	
Lock to Lock Time	: 6.0	
Steering Angle	: 37.9	
Articulating Angle	: 70.0	

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
002	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
003	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ)			
004	MINOR AMENDMENTS	M.H	01.04.2019	Name	Signature	No.	Date
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

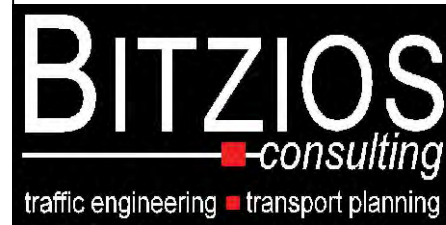
Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title	SWEPT PATH AREA 13C ENTRY		
Project Number	P3519	Sheet Number	70
Date	11.11.2019		
Issue	011		



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

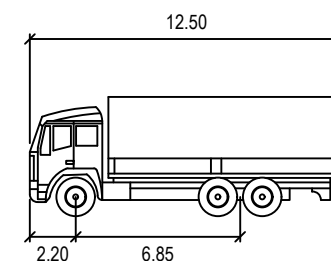


Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

ISSUES		REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019		
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019		
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)					
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date		
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019						
007	NO CHANGES	M.H	10.07.2019						
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019						

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 13C ENTRY ROUTE 1		
Project Number	P3519	Sheet Number	71
Issue	011		

NOT FOR CONSTRUCTION



SU TRUCK meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

ISSUES		REVISIONS		Drawn	Date	009	010	011	M.H	23.08.2019	
Issue	Revisions/Descriptions	Drawn	Date								
001	NOT USED	-	-								
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019								
003	MINOR AMENDMENTS	M.H	27.03.2019								
004	MINOR AMENDMENTS	M.H	01.04.2019								
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019								
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019								
007	NO CHANGES	M.H	10.07.2019								
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019								
				ENGINEERING CERTIFICATION (RPEQ)							
				Name	Signature	No.	Date				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13C ENTRY ROUTE 2

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Date	11.11.2019				
Project Number	P3519	Sheet Number	72	Issue	011



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

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		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEPT PATH
 AREA 13C
 EXIT

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		
Project Number	Sheet Number	Issue
P3519	73	011
		Date 11.11.2019



SU TRUCK meters

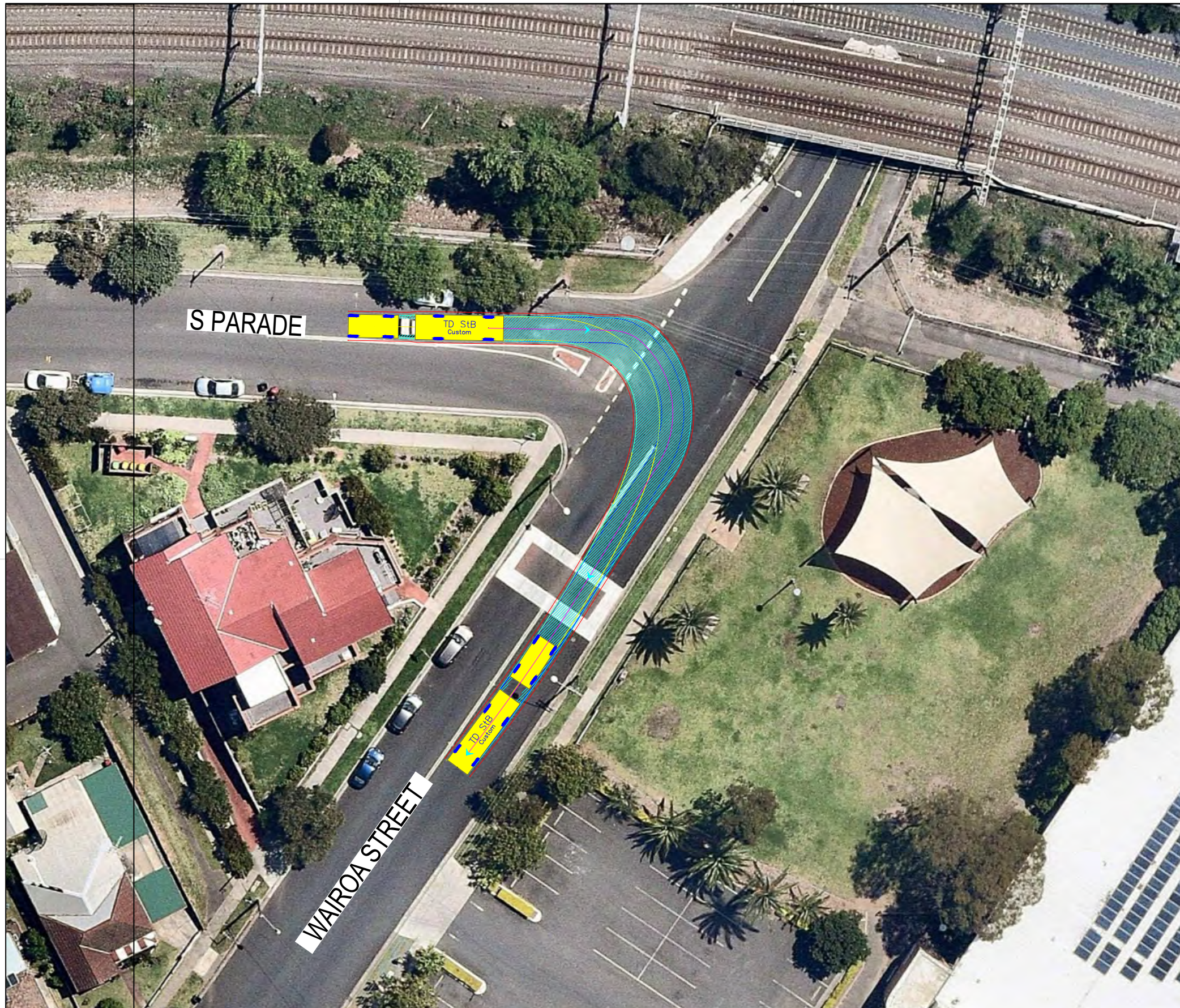
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Author	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 13C EXIT ROUTE 1

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	74	Issue	011	



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date				
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 13C EXIT ROUTE 1		
Project Number	P3519	Sheet Number	75
Issue			011

NOT FOR CONSTRUCTION



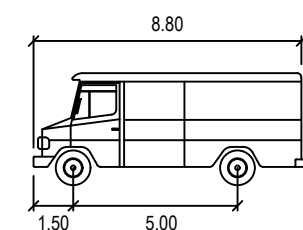
TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	27.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 13D ENTRY ROUTE		
Project Number	P3519	Sheet Number	76
Issue	011		

NOT FOR CONSTRUCTION



SERVICE VEHICLE

	units
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE



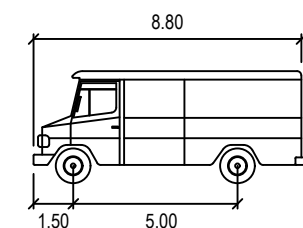
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	001	NOT USED	-	-
010	NO CHANGE	M.H	08.11.2019	002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019
011	NO CHANGES	M.H	11.11.2019	003	MINOR AMENDMENTS	M.H	27.03.2019
				004	MINOR AMENDMENTS	M.H	01.04.2019
				005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019
				006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019
				007	NO CHANGES	M.H	10.07.2019
				008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
Title			11.11.2019
SWEPT PATH AREA 13D ENTRY			Issue
Project Number	P3519	Sheet Number	77
Issue		011	

NOT FOR CONSTRUCTION



SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019	010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019	011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 13D EXIT		
Project Number	P3519	Sheet Number	78
Issue			011

NOT FOR CONSTRUCTION



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

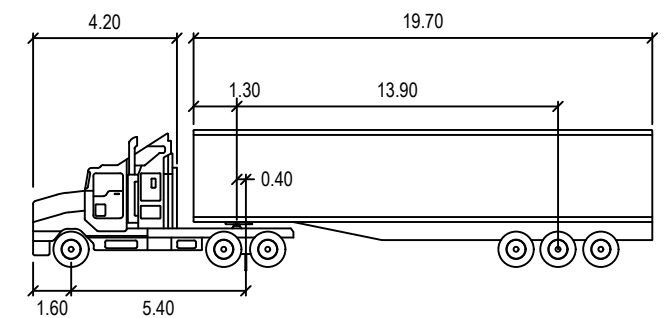
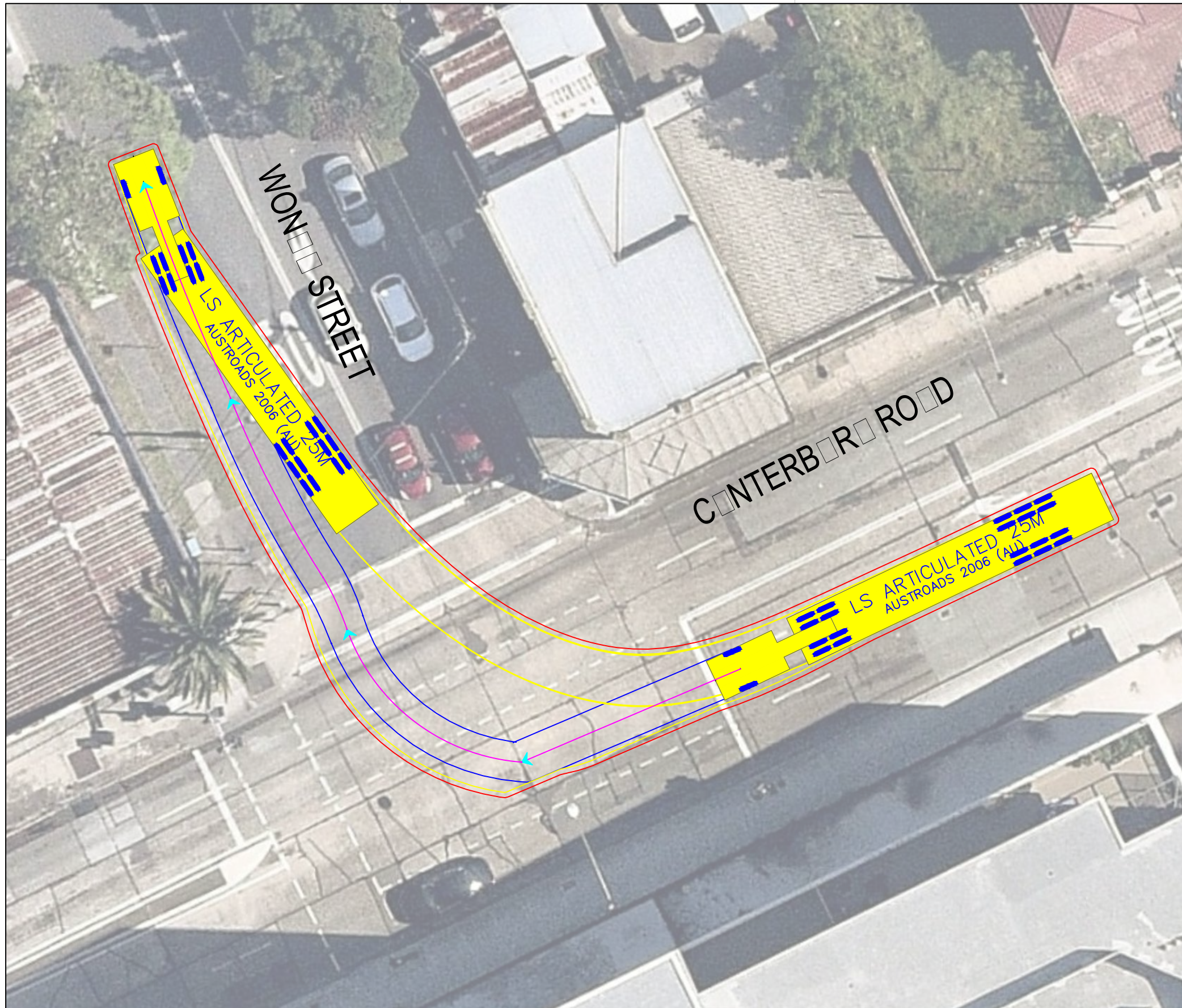
DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

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

Issue	Revisions/Descriptions	Drawn	Date				
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title	SWEPT PATH AREA 13D KERBSIDE STOP		
Project Number	P3519	Sheet Number	79
Date			11.11.2019
Issue			011

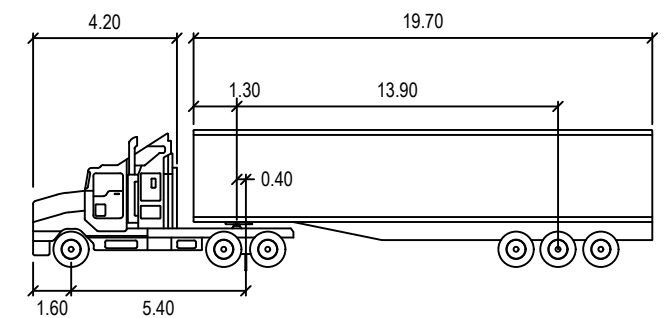
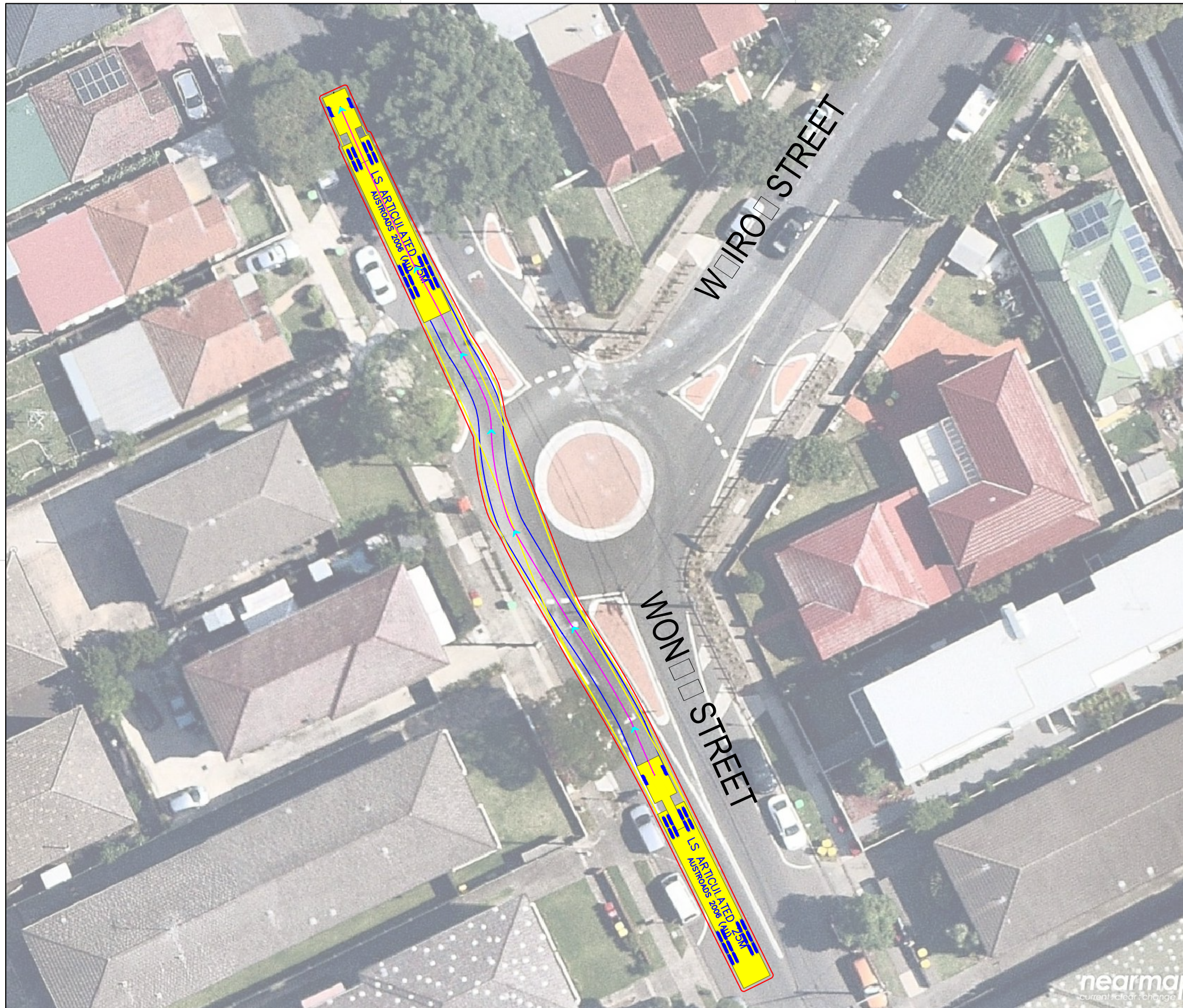


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	04.12.2019

Project SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		Date 04.12.2019
Title ENTRY CANTERBURY ROAD TO WONGA STREET	Project Number P3519	Sheet Number 1	Issue 001

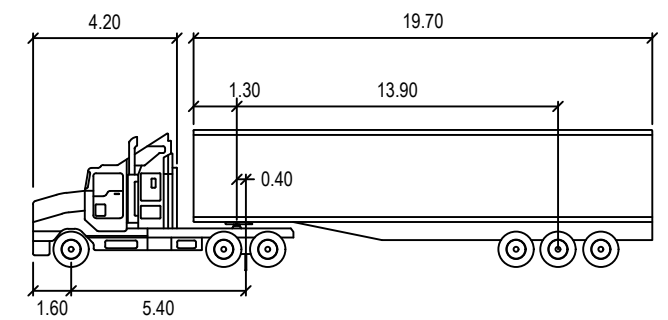
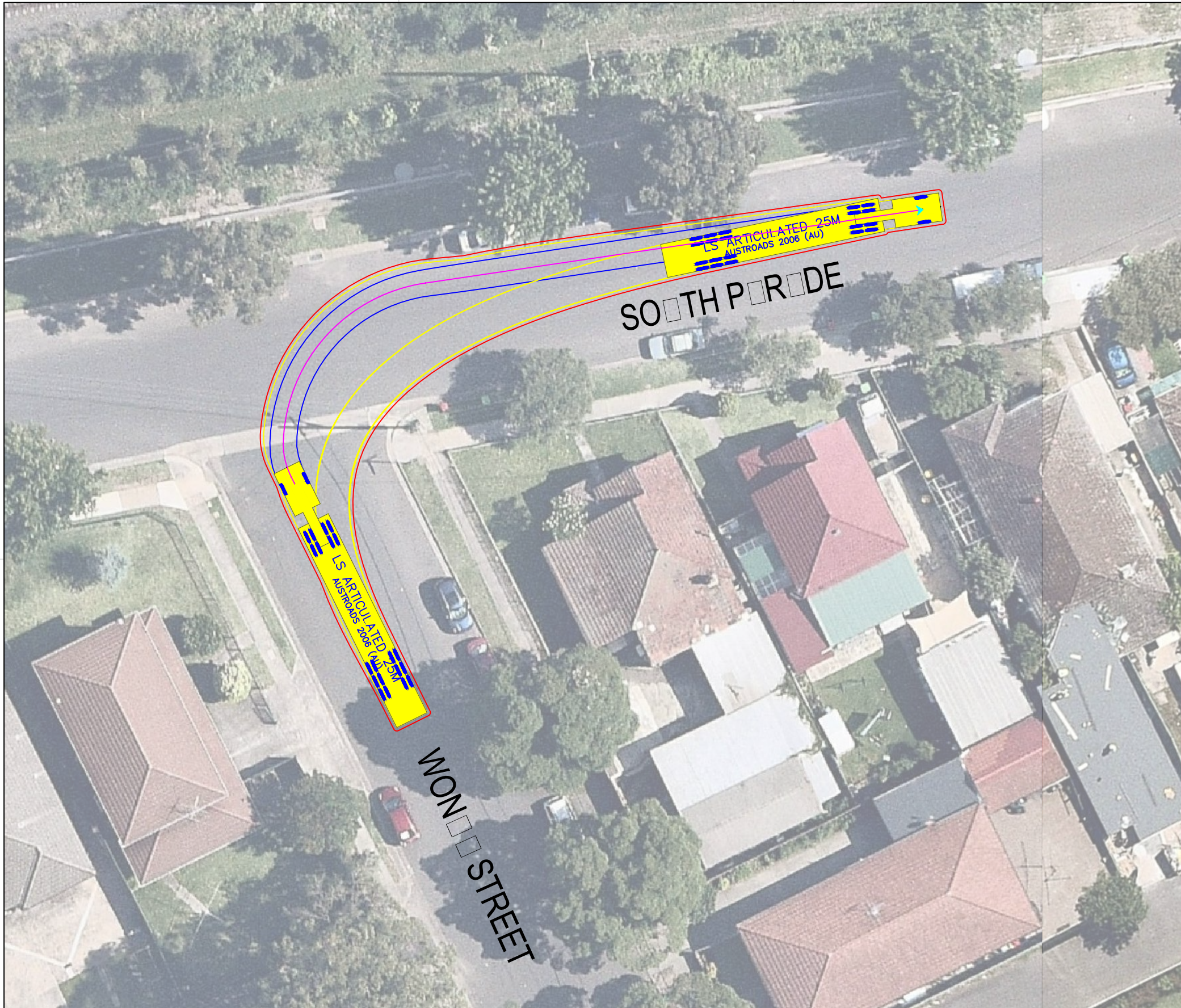


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	04.12.2019

Project	SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design	M.H	Drawn	M.H	Checked	A.G
Title	ENTRY WONGA STREET THROUGH ROUNDABOUT	NOT FOR CONSTRUCTION		Date	04.12.2019		
Project Number	P3519	Sheet Number	2	Issue	001		

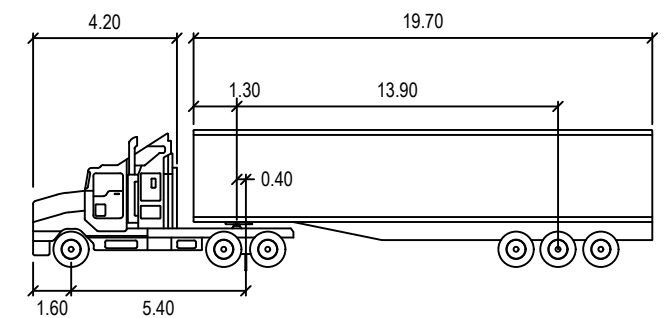
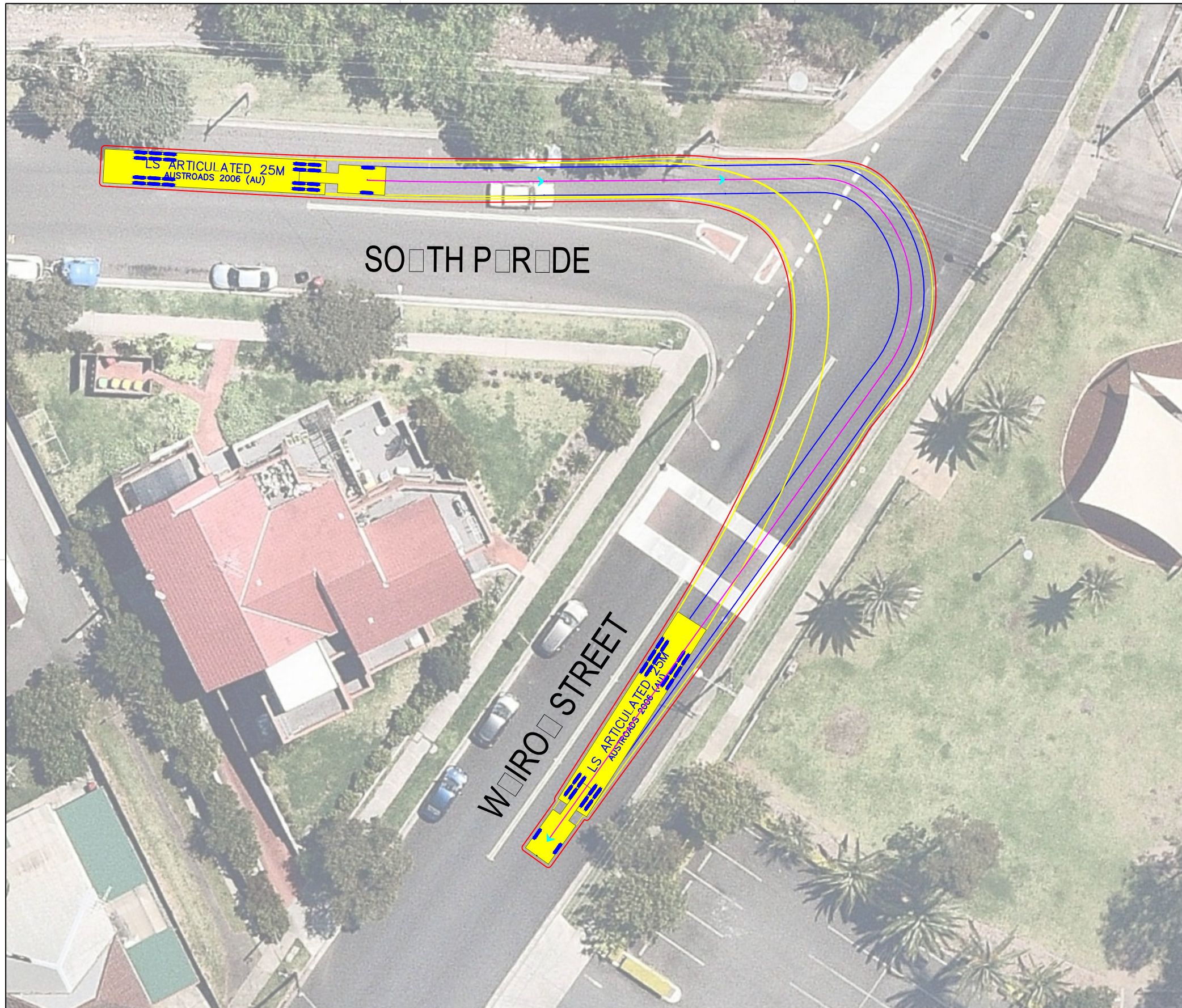


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	04.12.2019

Project	SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design	M.H	Drawn	M.H	Checked	A.G
Title	ENTRY WONGA STREET RIGHT TO SOUTH PARADE	NOT FOR CONSTRUCTION		Date	04.12.2019		
		Project Number	P3519	Sheet Number	3	Issue	001

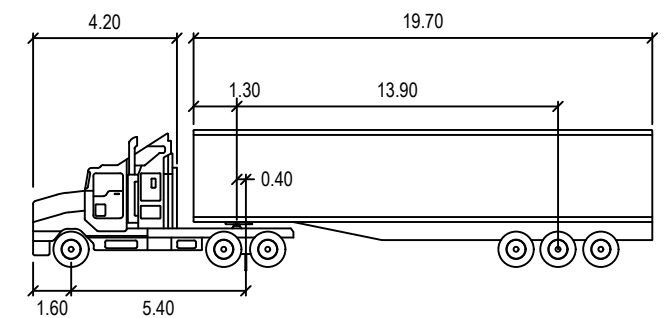
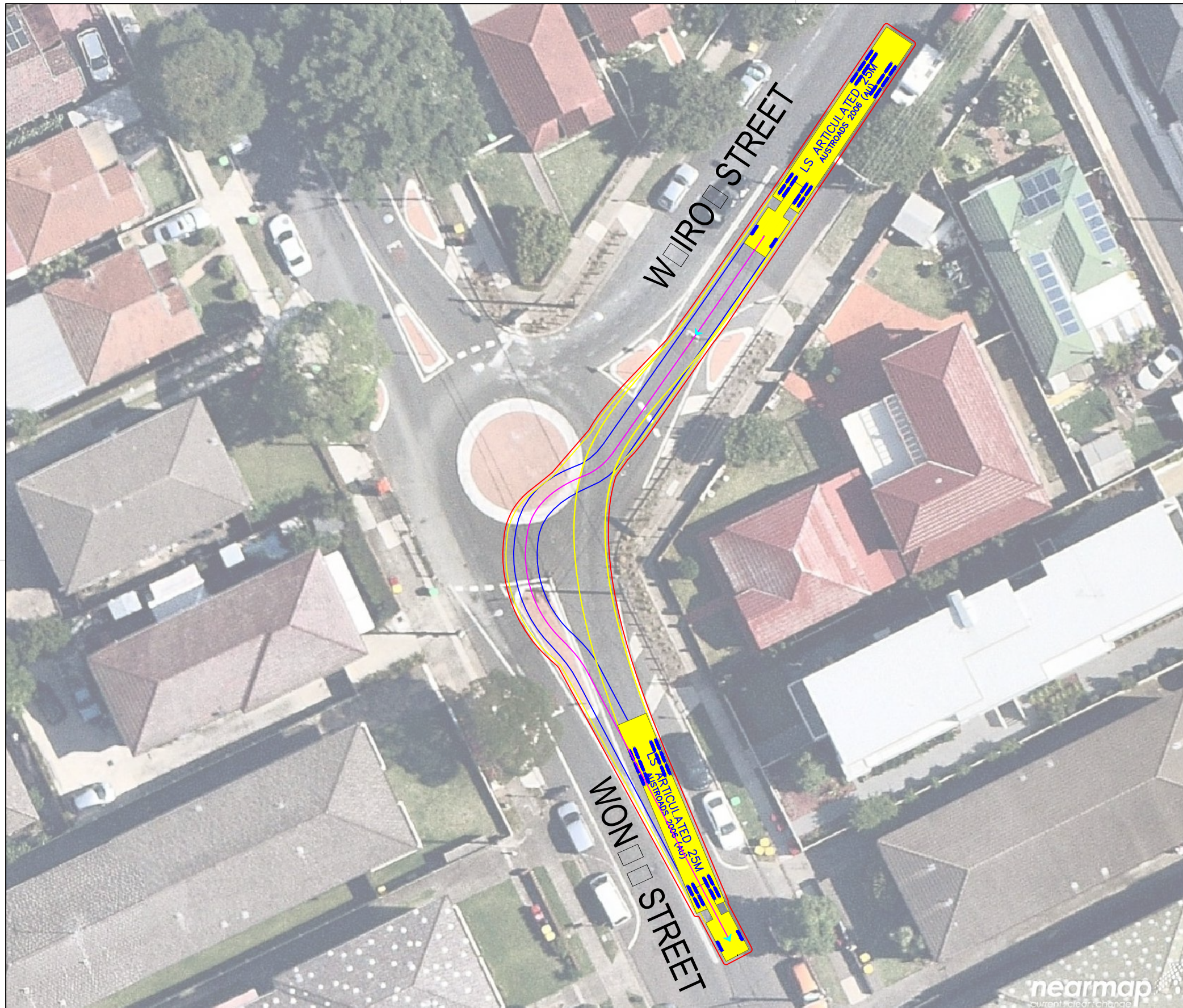


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	04.12.2019

Project	SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design	M.H	Drawn	M.H	Checked	A.G
Title	ENTRY SOUTH PARADE RIGHT TO WAIROA AVENUE	NOT FOR CONSTRUCTION		Date	04.12.2019		
		Project Number	P3519	Sheet Number	4	Issue	001

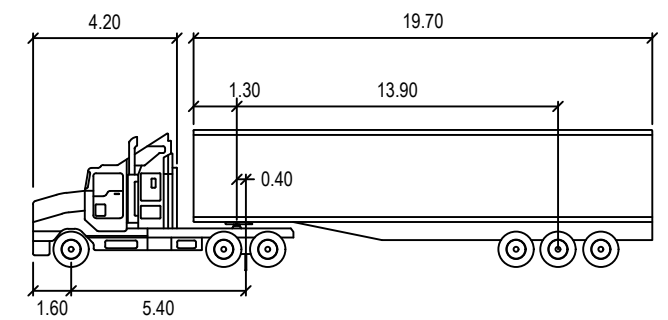
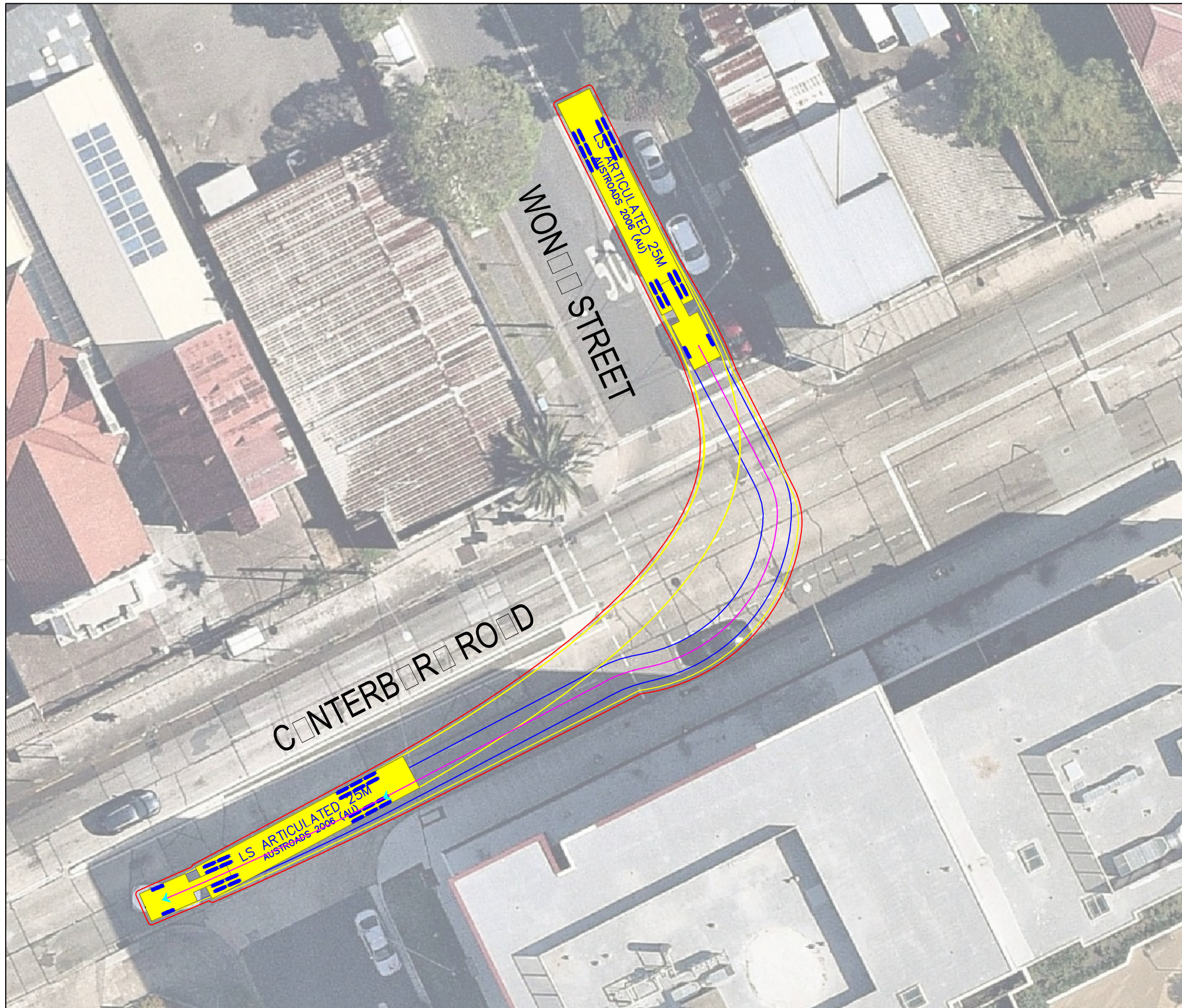


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATH	M.H	04.12.2019

Project	SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design	M.H	Drawn	M.H	Checked	A.G
Title	EGRESS WAIROA AVENUE LEFT TO WONGA STREET	NOT FOR CONSTRUCTION		Date	04.12.2019		
Project Number	P3519	Sheet Number	5	Issue	001		

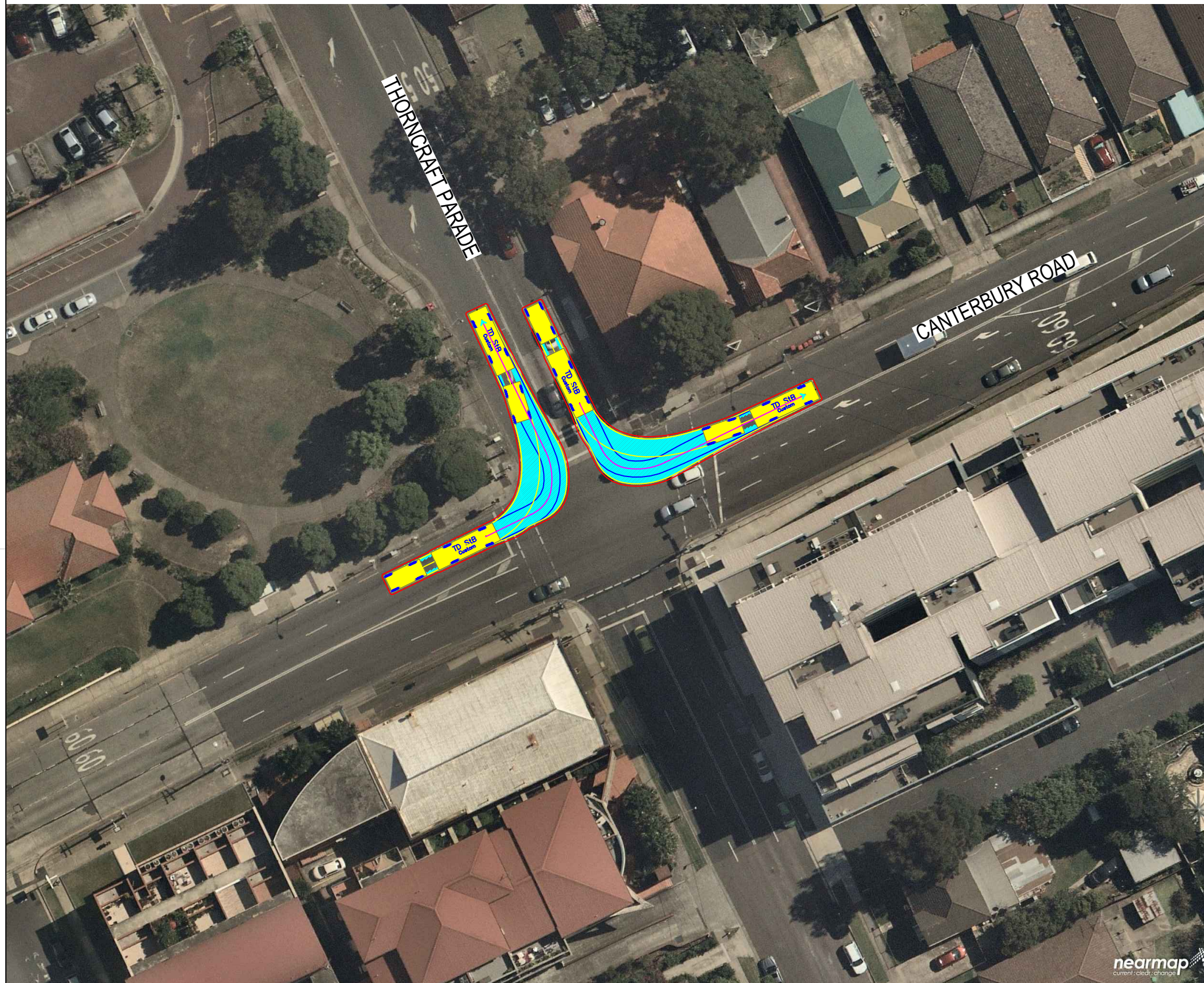


LS ARTICULATED 25M		meters	
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 3.00	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 3.00		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEPT PATH	M.H	04.12.2019

Project	SYDNEY METRO CITY AND SOUTHWEST SYDENHAM TO BANKSTOWN	Design	M.H	Drawn	M.H	Checked	A.G
Title	EGRESS WONGA STREET RIGHT TO CANTERBURY ROAD	NOT FOR CONSTRUCTION		Date	04.12.2019		
		Project Number	P3519	Sheet Number	6	Issue	001



TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	M.H	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019	Name	Signature	No.	Date
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 15 START/END OF ROUTE		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	80	Issue	011			



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

BITZIOS
-consulting
traffic engineering ■ transport planning

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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019				
010	NO CHANGE	M.H	08.11.2019				
011	NO CHANGES	M.H	11.11.2019				
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title	SWEPT PATH AREA 15 ENTRY 1		
Project Number	P3519	Sheet Number	81
Issue			011

NOT FOR CONSTRUCTION



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

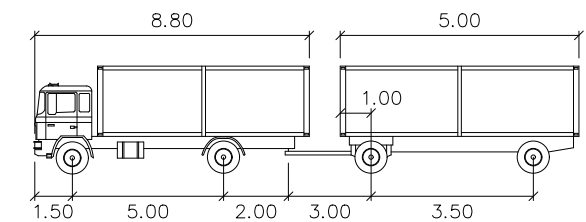
DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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		Drawn	Date				
Issue	Revisions/Descriptions						
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title	SWEPT PATH AREA 15 ENTRY 2		
Project Number	P3519	Sheet Number	82
Date	11.11.2019		
Issue	011		



TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
009	NO CHANGE	M.H	23.08.2019	009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019	010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019	011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 15 EXIT 1		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	83	Issue	011			



TD StB	meters			
First Unit Width	: 2.50	Lock to Lock Time	: 6.0	
Trailer Width	: 2.30	Steering Angle	: 37.9	
First Unit Track	: 2.50	Articulating Angle	: 70.0	
Trailer Track	: 2.30			

DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

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		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.	Date
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 15 EXIT 2		
Project Number	P3519	Sheet Number	84
Issue	011		

NOT FOR CONSTRUCTION



TD StB	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date		M.H	23.08.2019
001	NOT USED	-	-	009	NO CHANGE	M.H 08.11.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H 11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)		
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019	Name	Signature	No.
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019			Date
007	NO CHANGES	M.H	10.07.2019			
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 15 ENTRY/EXIT ROUTE 1		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	85	Issue	011			

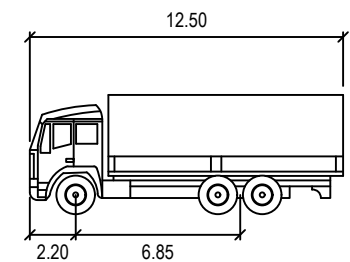
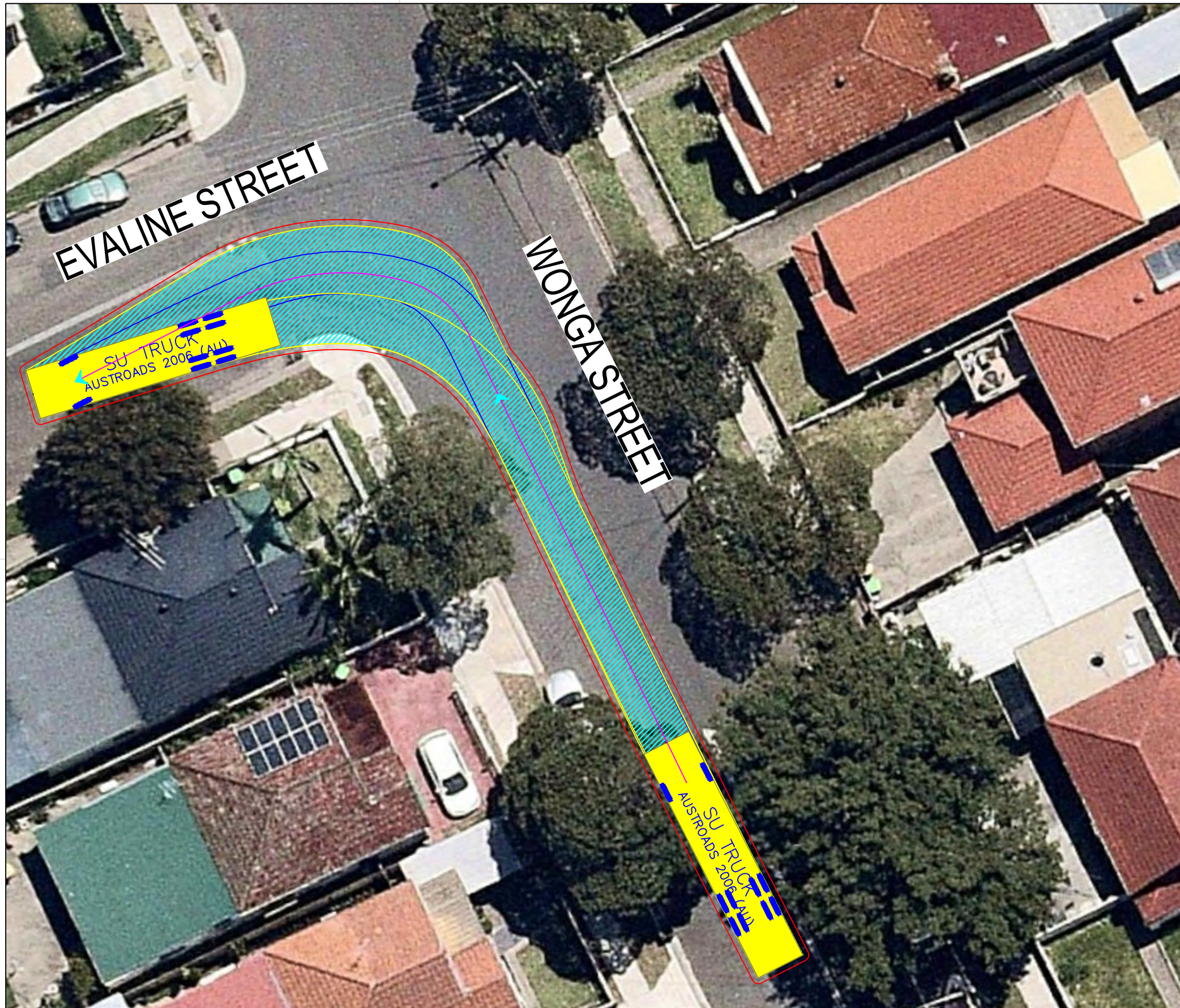


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	SWEPT PATH - PRECONSTRUCTION CTMP	M.H	04.03.2019	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project		Design	Drawn	Checked
SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		M.H	M.H	T.W
Title		NOT FOR CONSTRUCTION		
		Date	11.11.2019	
SWEPT PATH AREA 15 ENTRY/EXIT ROUTE 2		Project Number	Sheet Number	Issue
		P3519	86	011



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

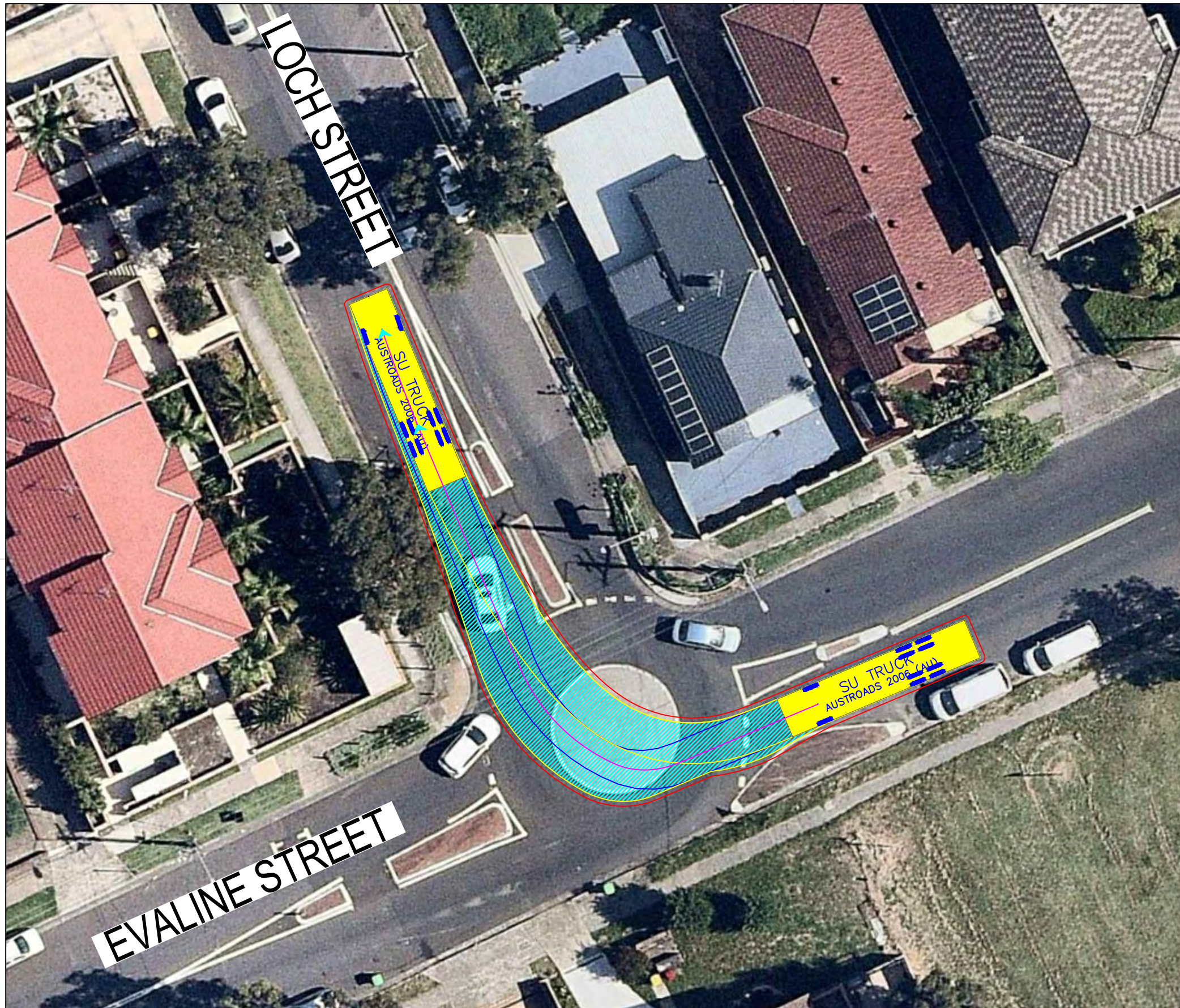
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

Issue	REVISIONS Revisions/Descriptions	Drawn	Date		M.H	23.08.2019
001	NOT USED	-	-	009	NO CHANGE	M.H
002	NOT USED	-	-	010	NO CHANGE	M.H
003	NOT USED	-	-	011	NO CHANGES	M.H
004	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ)		
005	NOT USED	-	-	Name	Signature	No.
006	NOT USED	-	-			Date
007	NOT USED	-	-			
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019			

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEPT PATH
 AREA 15
 ENTRY ROUTE 1

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		Date
		11.11.2019
Project Number	Sheet Number	Issue
P3519	87	011

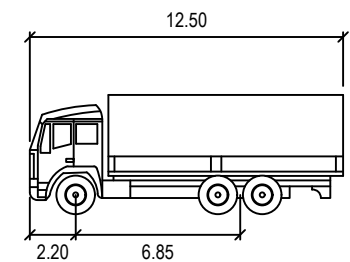
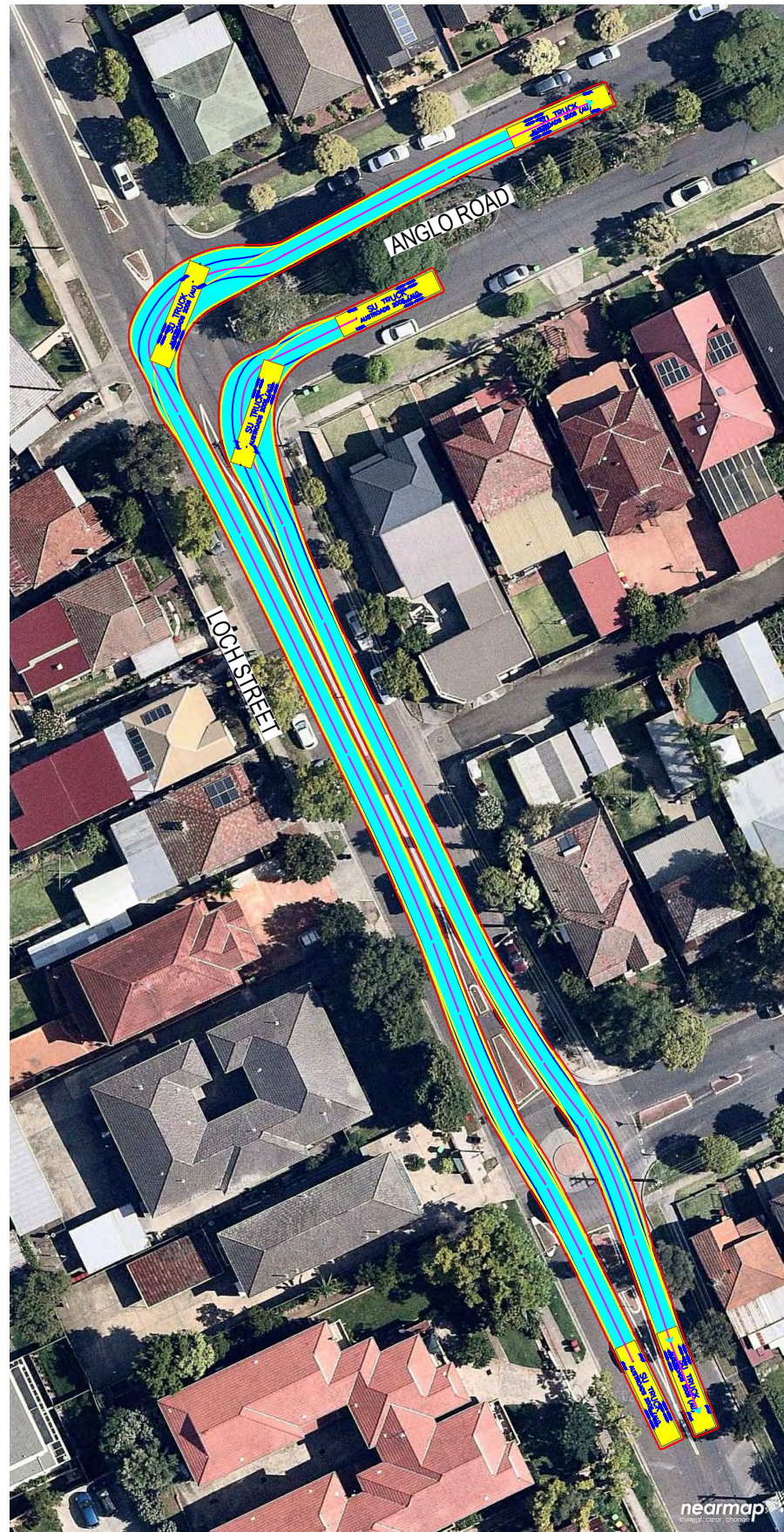


TD StB	meters	
First Unit Width	: 2.50	Lock to Lock Time : 6.0
Trailer Width	: 2.30	Steering Angle : 37.9
First Unit Track	: 2.50	Articulating Angle : 70.0
Trailer Track	: 2.30	

DESIGN VEHICLE

Issue	REVISIONS	Drawn	Date				
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
003	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
004	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ)			
005	NOT USED	-	-	Name	Signature	No.	Date
006	NOT USED	-	-				
007	NOT USED	-	-				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		Design	M.H	Drawn	M.H	Checked	T.W
Title	SWEPT PATH AREA 15 ENTRY ROUTE 2		NOT FOR CONSTRUCTION		Date	11.11.2019		
Project Number	P3519	Sheet Number	88	Issue	011			



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Revisions/Descriptions	M.H	Date
009	NO CHANGE					M.H	23.08.2019
010	NO CHANGE					M.H	08.11.2019
011	NO CHANGES					M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 15 ENTRY/EXIT ROUTE 1

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	89	Issue	011	



SU TRUCK		units
Width	: 2.50	meters
Track	: 2.50	
Lock to Lock Time	: 6.0	
Steering Angle	: 36.6	

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	By	Date
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		
005	NOT USED						
006	NOT USED						
007	NOT USED						
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
			Date
			11.11.2019
Title		Project Number	Issue
SWEPT PATH AREA 15 ENTRY/EXIT ROUTE 2		P3519	011
		Sheet Number	90

NOT FOR CONSTRUCTION



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
003	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
004	NOT USED	-	-	ENGINEERING CERTIFICATION (RPEQ)			
005	NOT USED	-	-	Name	Signature	No.	Date
006	NOT USED	-	-				
007	NOT USED	-	-				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked	T.W		Date
			11.11.2019
Title	SWEPT PATH AREA 15 GATE ENTRY		
Project Number	P3519	Sheet Number	91
Issue	011		

NOT FOR CONSTRUCTION



SU TRUCK		units
Width	: 2.50	meters
Track	: 2.50	meters
Lock to Lock Time	: 6.0	seconds
Steering Angle	: 36.6	degrees

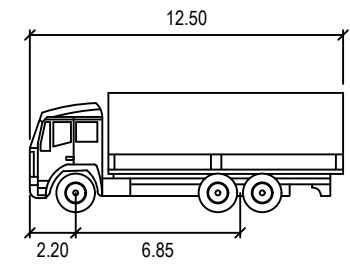
DESIGN VEHICLE

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	NOT USED	-	-
007	NOT USED	-	-
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019

No.	Date	Name	Signature	No.	Date
009	NO CHANGE			M.H	23.08.2019
010	NO CHANGE			M.H	08.11.2019
011	NO CHANGES			M.H	11.11.2019

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH AREA 15 GATE EXIT

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	92	Date	11.11.2019
				Issue	011



SU TRUCK meters

Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

Steering Angle : 36.6

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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

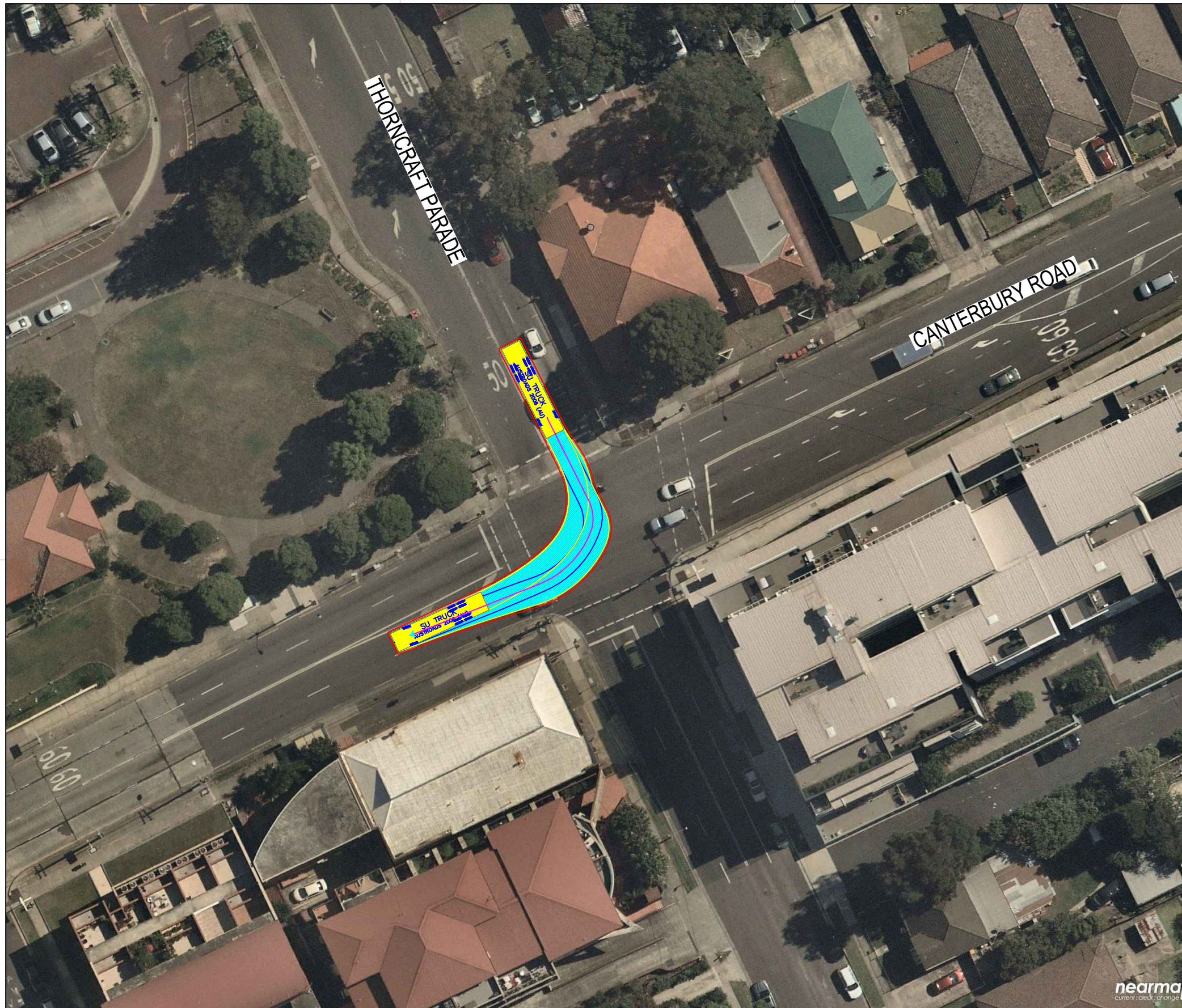
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
009	NO CHANGE			M.H	23.08.2019		
010	NO CHANGE			M.H	08.11.2019		
011	NO CHANGES			M.H	11.11.2019		
ENGINEERING CERTIFICATION (RPEQ)							
		Name	Signature	No.	Date		

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEPT PATH
 AREA 15
 EXIT ROUTE 2

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		Date
		11.11.2019
Project Number	Sheet Number	Issue
P3519	93	011



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

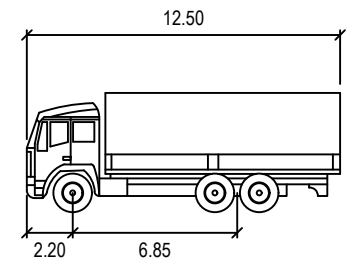
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
009	NO CHANGE	M.H	23.08.2019
010	NO CHANGE	M.H	08.11.2019
011	NO CHANGES	M.H	11.11.2019
ENGINEERING CERTIFICATION (RPEQ)			
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	NOT USED	-	-
007	NOT USED	-	-
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEPT PATH
 AREA 15
 EXIT ROUTE

Design	Drawn	Checked
M.H	M.H	T.W
NOT FOR CONSTRUCTION		Date
P3519		11.11.2019
Project Number	Sheet Number	Issue
P3519	94	011



SU TRUCK meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

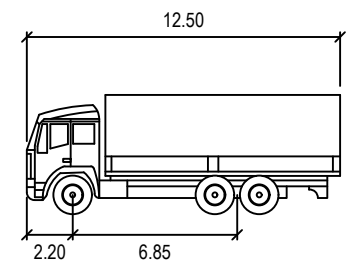
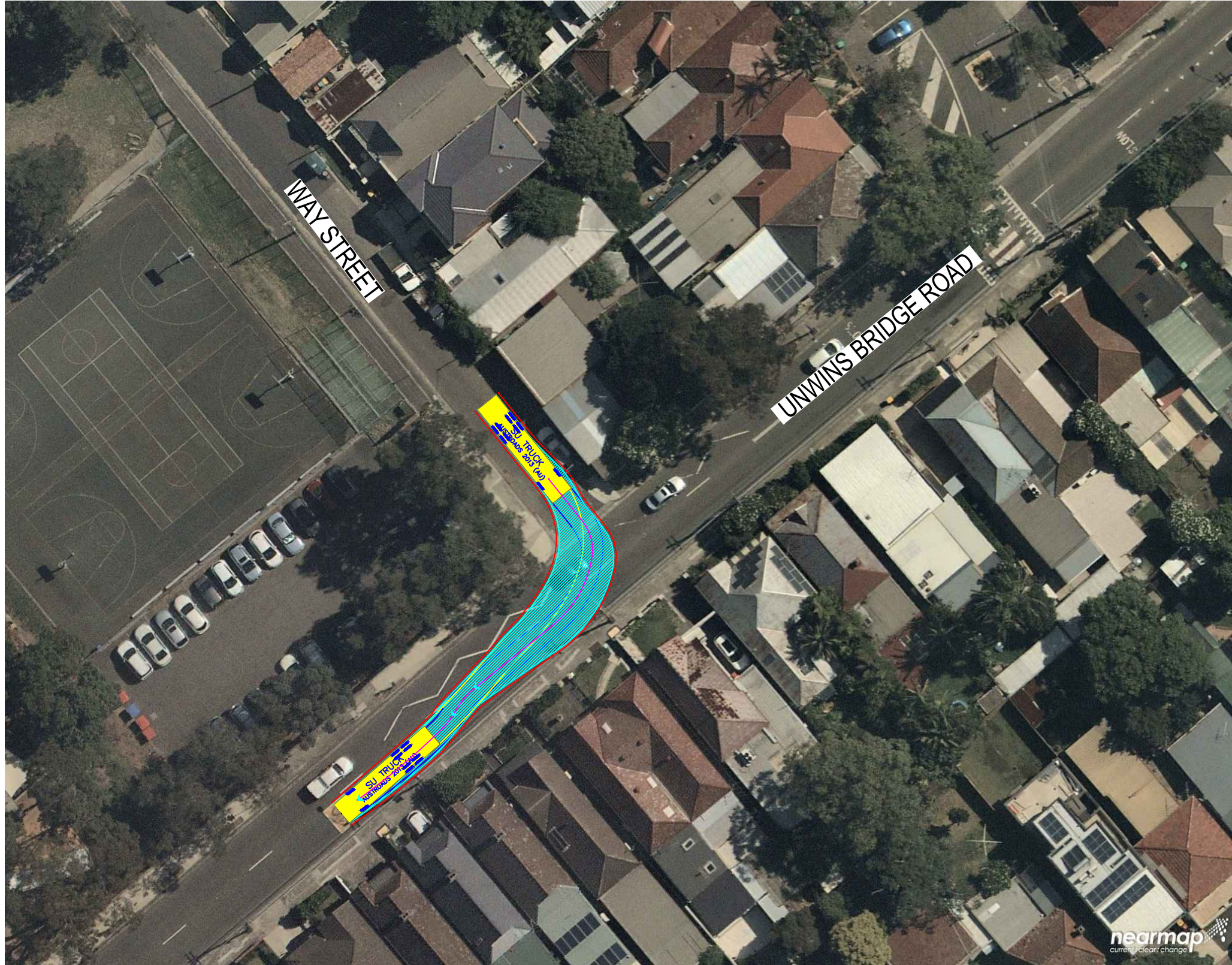
DESIGN VEHICLE

REVISIONS		Drawn	Date	009	NO CHANGE	M.H	23.08.2019
Issue	Revisions/Descriptions			010	NO CHANGE	M.H	08.11.2019
001	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
002	NOT USED	-	-				
003	MINOR AMENDMENTS	M.H	27.03.2019				
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH WAY STREET LAYDOWN ENTRY

Design	M.H	Drawn	M.H	Checked	T.W
NOT FOR CONSTRUCTION					
Date	11.11.2019				
Project Number	P3519	Sheet Number	95	Issue	011



SU TRUCK meters

Width : 12.50
 Track : 6.85
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH WAY STREET LAYDOWN EXIT

Design	M.H	Drawn	M.H	Checked	T.W	
NOT FOR CONSTRUCTION					Date	11.11.2019
Project Number	P3519	Sheet Number	96	Issue	011	



Edit Vehicle Details

General Data
 Name: AV 20m Rear Steer
 Library: Custom
 Region: Local
 Type: Special Wind Blade Trailer
 Class: Transport - Special
 Lock to Lock Time: 6.0 sec.
 Steering Lock Angle: 40.0 deg.

Creation Units: meters

Overall Vehicle Length: 20.40 m

Current Part Data (1/2)

Tractor: Pin Behind
 Width: 2.50

Steering: Front Only

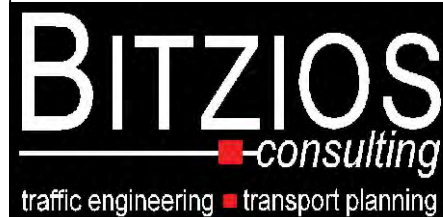
Front Axle Group
 Axles: 1
 Wheels: 2
 Track: 2.50 m

Rear Axle Group
 Axles: 2
 Wheels: 4
 Track: 2.50 m

Dimensions: 4.20, 0.20, 1.60, 5.40

Buttons: OK, Cancel, Help

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		Drawn	Date	Issue	Description	Drawn	Date
001	NOT USED	-	-	009	NO CHANGE	M.H	23.08.2019
002	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	011	NO CHANGES	M.H	11.11.2019
004	MINOR AMENDMENTS	M.H	01.04.2019	ENGINEERING CERTIFICATION (RPEQ)			
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019	Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
		Date	11.11.2019
NOT FOR CONSTRUCTION		Project Number	P3519
		Sheet Number	97
		Issue	011
Title: SWEEP PATH WAY STREET LAYDOWN ENTRY			



Edit Vehicle Details

General Data
 Name: AV 20m Rear Steer
 Library: Custom
 Region: Local
 Type: Special Wind Blade Trailer WisDO
 Class: Transport - Special
 Lock to Lock Time: 6.0 sec.
 Steering Lock Angle: 40.0 deg.

Creation Units: meters
 Overall Vehicle Length: 20.40 m

Current Part Data (1/2)

Tractor: Pin Behind
 Width: 2.50

Steering: Front Only
 Front Axle Group: Axles: 1, Wheels: 2, Track: 2.50 m
 Rear Axle Group: Axles: 2, Wheels: 4, Track: 2.50 m

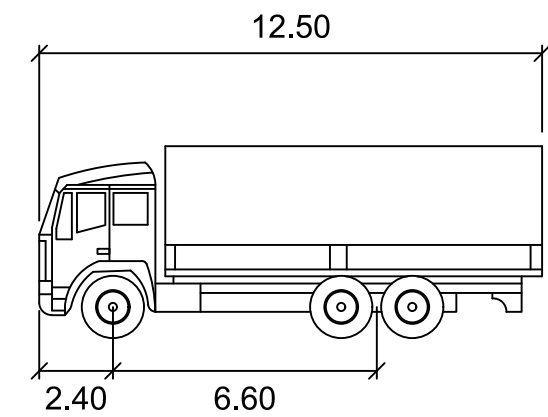
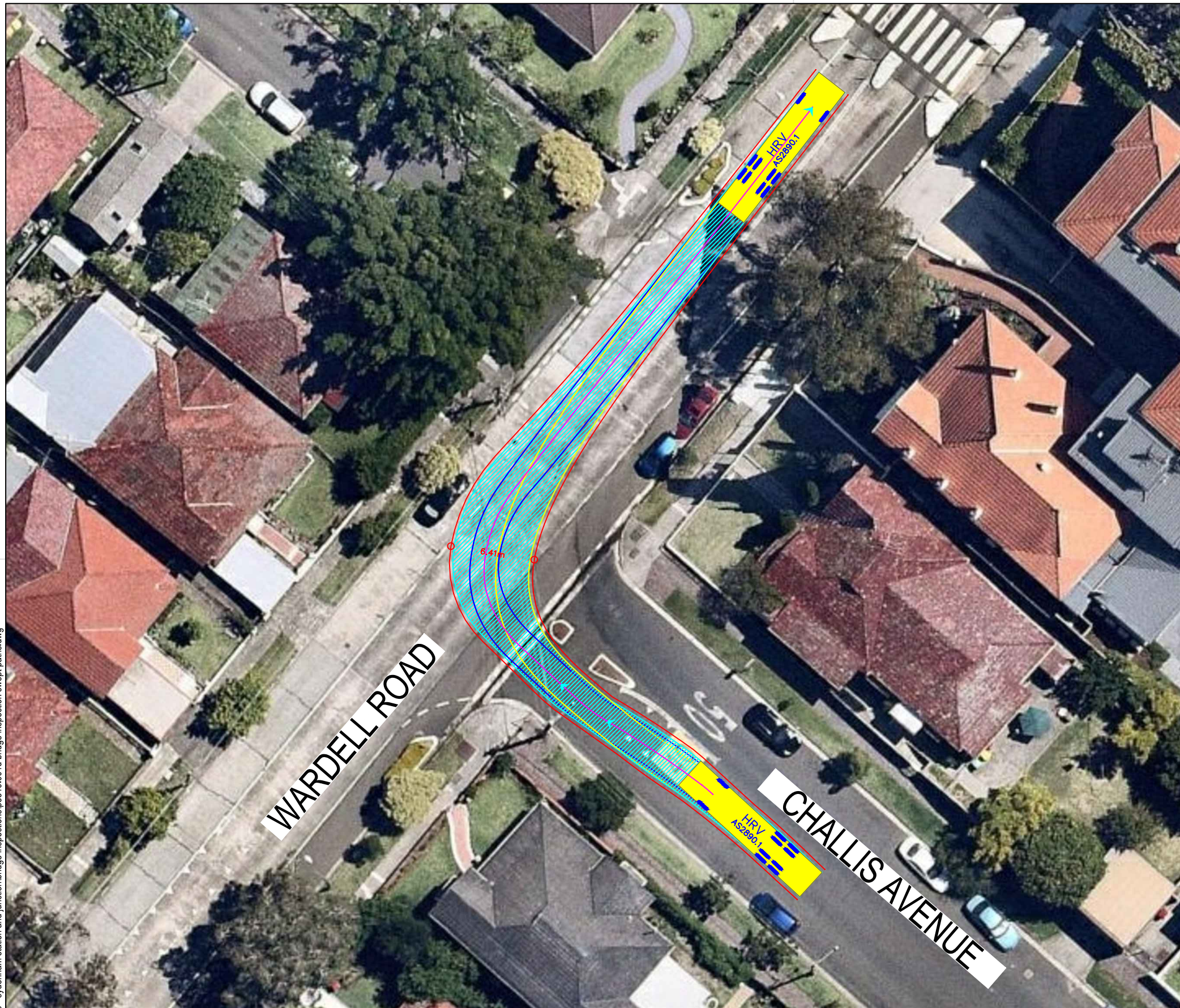
Dimensions: 4.20, 0.20, 1.60, 5.40

OK Cancel Help

DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date	009	NO CHANGE	M.H	23.08.2019
001	NOT USED	-	-	010	NO CHANGE	M.H	08.11.2019
002	NOT USED	-	-	011	NO CHANGES	M.H	11.11.2019
003	MINOR AMENDMENTS	M.H	27.03.2019	ENGINEERING CERTIFICATION (RPEQ) Name Signature No. Date			
004	MINOR AMENDMENTS	M.H	01.04.2019				
005	AMENDMENTS TO REV 1 CTMP COMMENTS	M.H	12.04.2019				
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	M.H	18.04.2019				
007	NO CHANGES	M.H	10.07.2019				
008	ADD HRV ROUTE TO AREA 15	M.H	30.07.2019				

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS		
Design	M.H	Drawn	M.H
Checked			T.W
Title		SWEPT PATH WAY STREET LAYDOWN EXIT	
Project Number		P3519	
Sheet Number		98	
Date		11.11.2019	
Issue		011	



HRV	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6

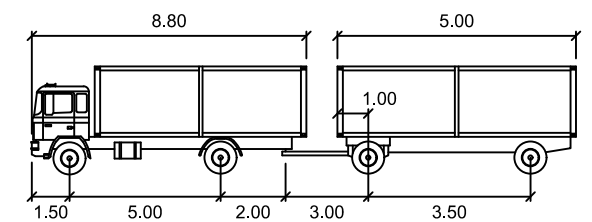
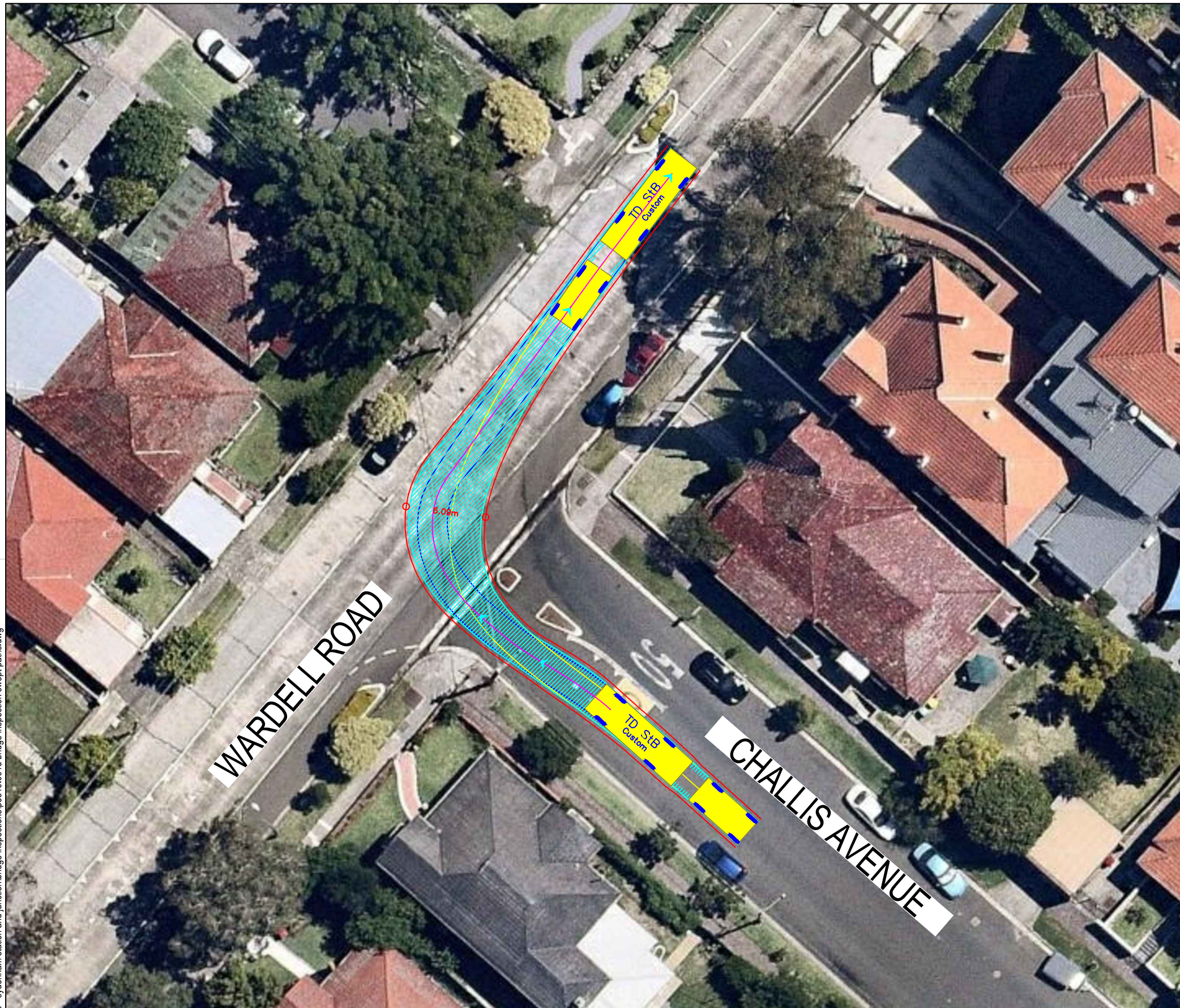
DESIGN VEHICLE

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	J.Y	23.04.2019

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS	Design J.Y	Drawn J.Y	Checked T.W
	NOT FOR CONSTRUCTION		Date 23.04.2019
Title SWEEP PATH TRENCHING - ALBERMARLE BRIDGE CLOSURE CHALLIS AVENUE RIGHT TURN INTO WARDELL ROAD	Project Number P3519	Sheet Number 111	Issue 006

c:\users\jeffrey\documents\p3519 - sydenham station and junction\bridge inspections\p3519_001d bridge inspection swept paths.dwg



TD StB	units	values
First Unit Width	metres	: 2.50
Trailer Width	metres	: 2.30
First Unit Track	metres	: 2.50
Trailer Track	metres	: 2.30
Lock to Lock Time	seconds	: 6.0
Steering Angle	degrees	: 37.9
Articulating Angle	degrees	: 70.0

DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

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

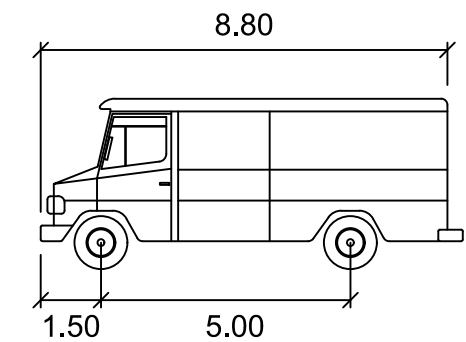
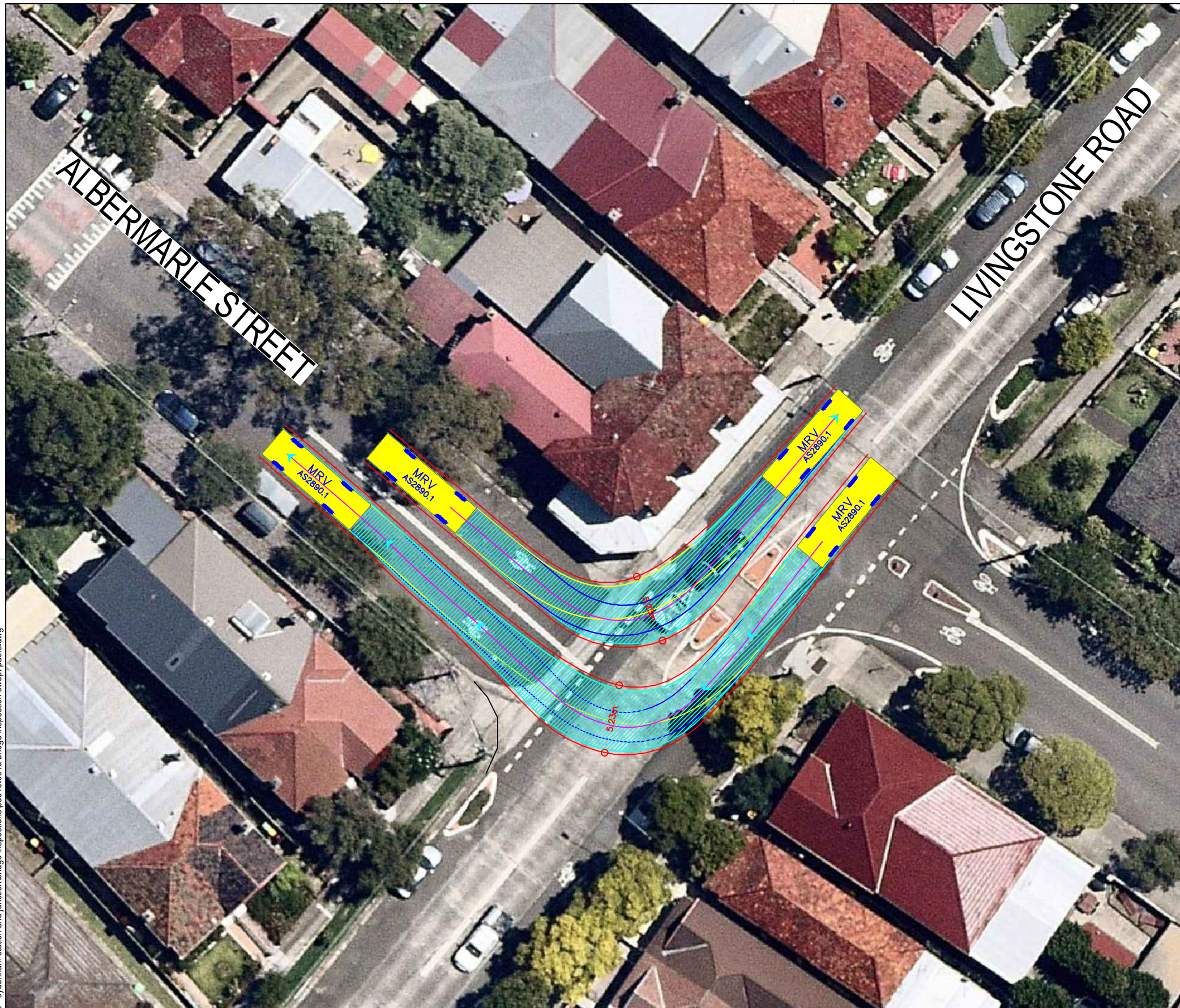
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	J.Y	23.04.2019

ENGINEERING CERTIFICATION (RPEQ)			
Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH TRENCHING - ALBERMARLE BRIDGE CLOSURE CHALLIS AVENUE RIGHT TURN INTO WARDELL ROAD

Design	J.Y	Drawn	J.Y	Checked	T.W
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	113	Date	23.04.2019
				Issue	006

c:\users\jeffrey\documents\inspections\p3519 - sydenham station and junction\bridge inspections\p3519_001d bridge inspection swept paths.dwg



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

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		Drawn	Date
Issue	Revisions/Descriptions		
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	J.Y	23.04.2019

ENGINEERING CERTIFICATION (RPEQ)

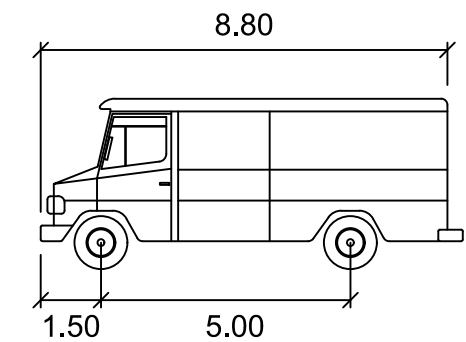
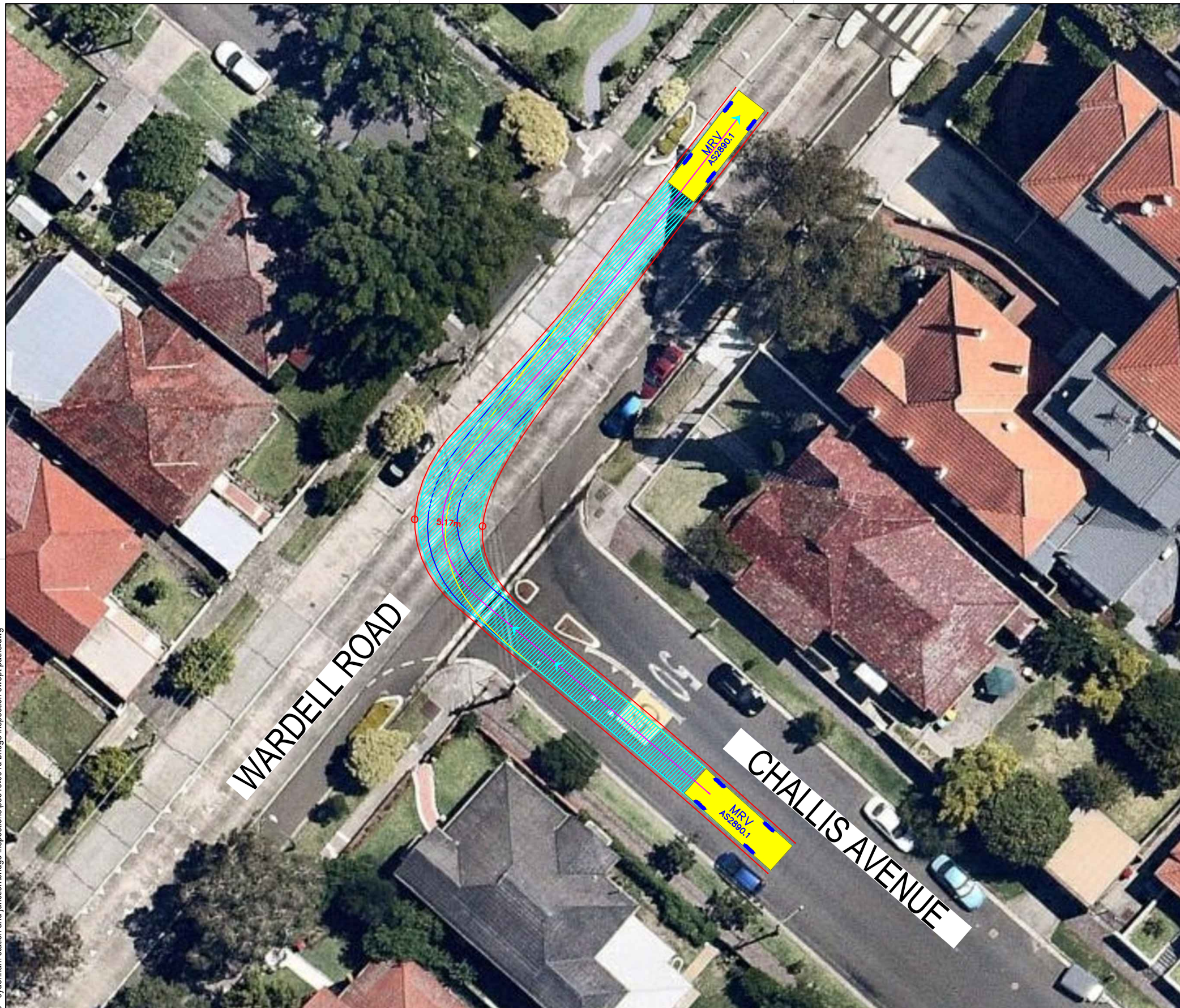
Name	Signature	No.	Date

Project
 SYDNEY METRO CITY & SOUTHWEST
 SOUTHWEST METRO EARLY WORKS

Title
 SWEEP PATH
 TRENCHING - ALBERMARLE BRIDGE CLOSURE
 LIVINGSTONE ROAD
 RIGHT TURN INTO ALBERMARLE STREET

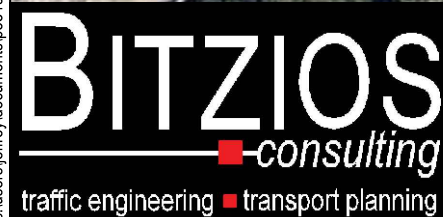
Design	Drawn	Checked
J.Y	J.Y	T.W
NOT FOR CONSTRUCTION		
Project Number	Sheet Number	Issue
P3519	114	006
Date		23.04.2019

c:\users\jeffrey\documents\p3519 - sydenham station and junction\bridge inspections\p3519_001d bridge inspection swept paths.dwg



MRV		meters
Width	: 2.50	
Track	: 2.50	
Lock to Lock Time	: 6.0	
Steering Angle	: 34.0	

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		Drawn	Date
Issue	Revisions/Descriptions		
001	NOT USED	-	-
002	NOT USED	-	-
003	NOT USED	-	-
004	NOT USED	-	-
005	NOT USED	-	-
006	AMENDMENTS TO FURTHER REV 1 CTMP COMMENTS	J.Y	23.04.2019

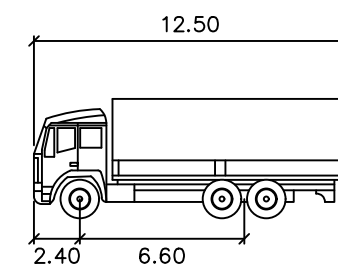
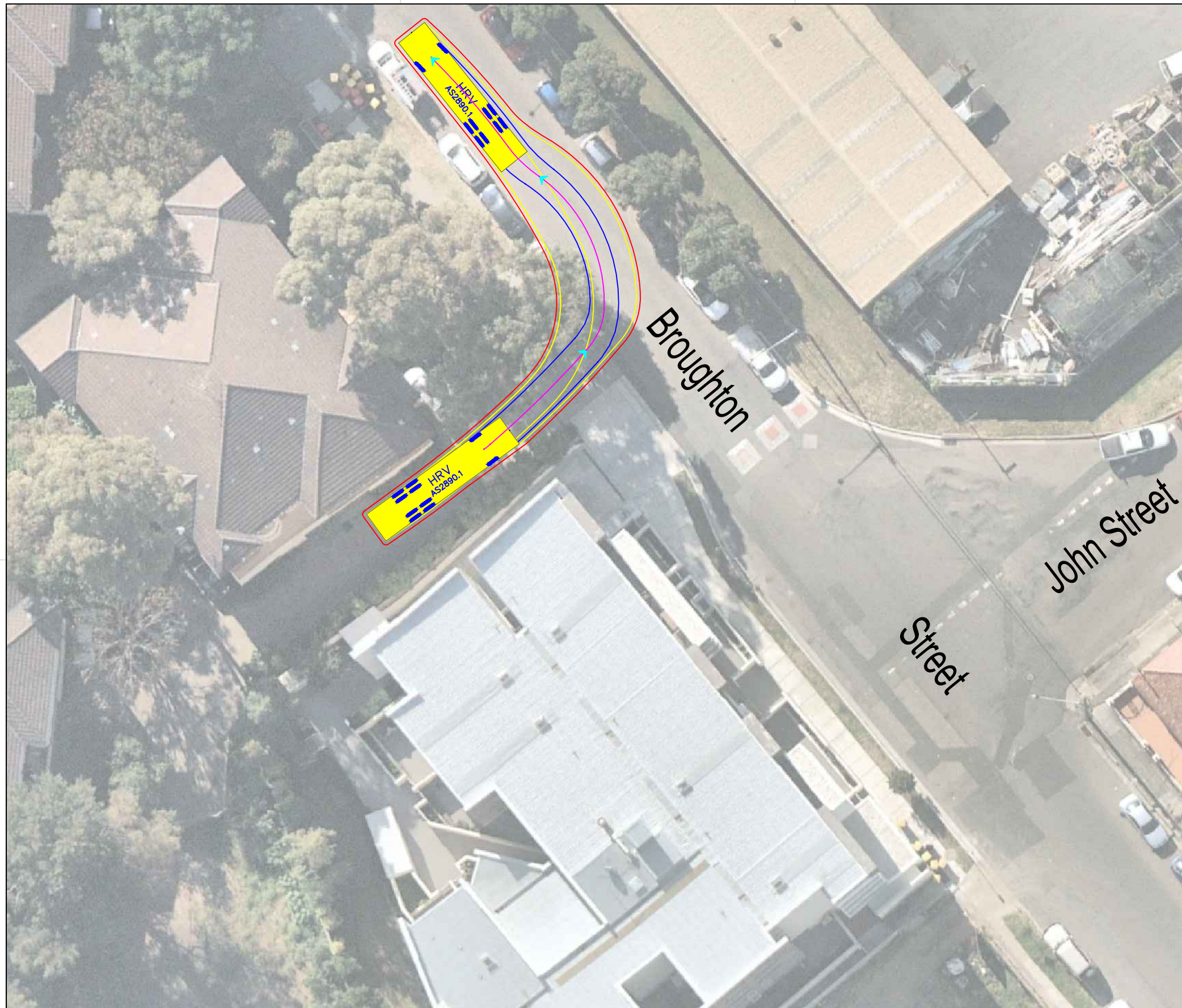
ENGINEERING CERTIFICATION (RPEQ)

Name	Signature	No.	Date

Project	SYDNEY METRO CITY & SOUTHWEST SOUTHWEST METRO EARLY WORKS
Title	SWEPT PATH TRENCHING - ALBERMARLE BRIDGE CLOSURE CHALLIS AVENUE RIGHT TURN INTO WARDELL ROAD

Design	J.Y	Drawn	J.Y	Checked	T.W
NOT FOR CONSTRUCTION					
Date	23.04.2019				
Project Number	P3519	Sheet Number	116	Issue	006

c:\users\jeffrey\documents\inspections\p3519 - sydenham station and junction\bridge inspections\p3519_001d bridge inspection swept paths.dwg



HRV

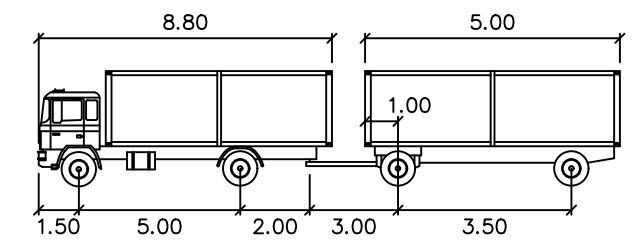
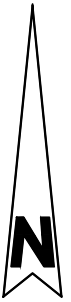
meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project	Broughton Street Access Gate	Design	M.H	Drawn	M.H	Checked	A.G
Title	Swept Path Analysis Broughton Street and John Street HRV - Forward Left Turn Exit	NOT FOR CONSTRUCTION		Date	04.12.2019		
		Project Number	P3519	Sheet Number	120	Issue	006



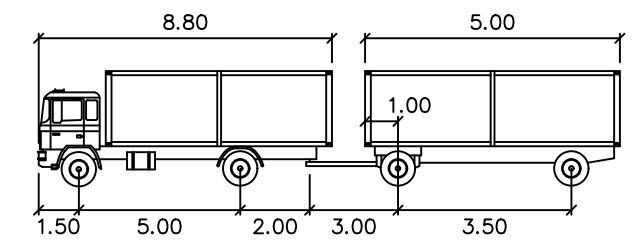
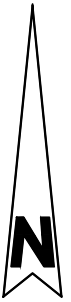
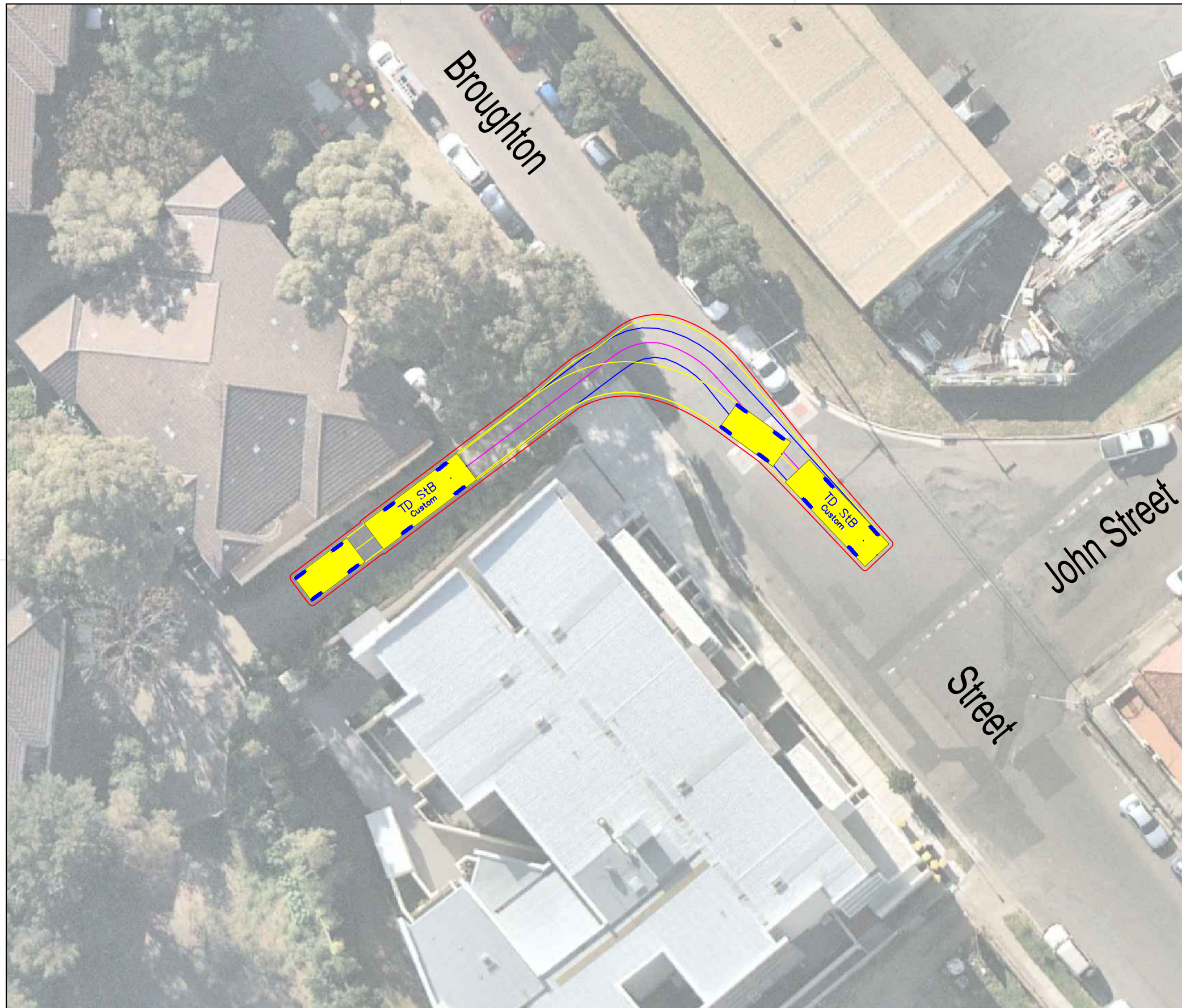
TD StB

	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project Broughton Street Access Gate	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		
Title Swept Path Analysis Broughton Street and John Street MRV with Trailer - Forward Left Turn Entry	Date 04.12.2019	Project Number P3519	Sheet Number 123
	Issue 006		



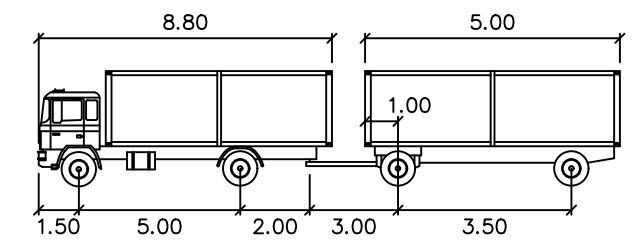
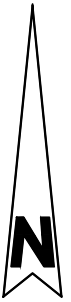
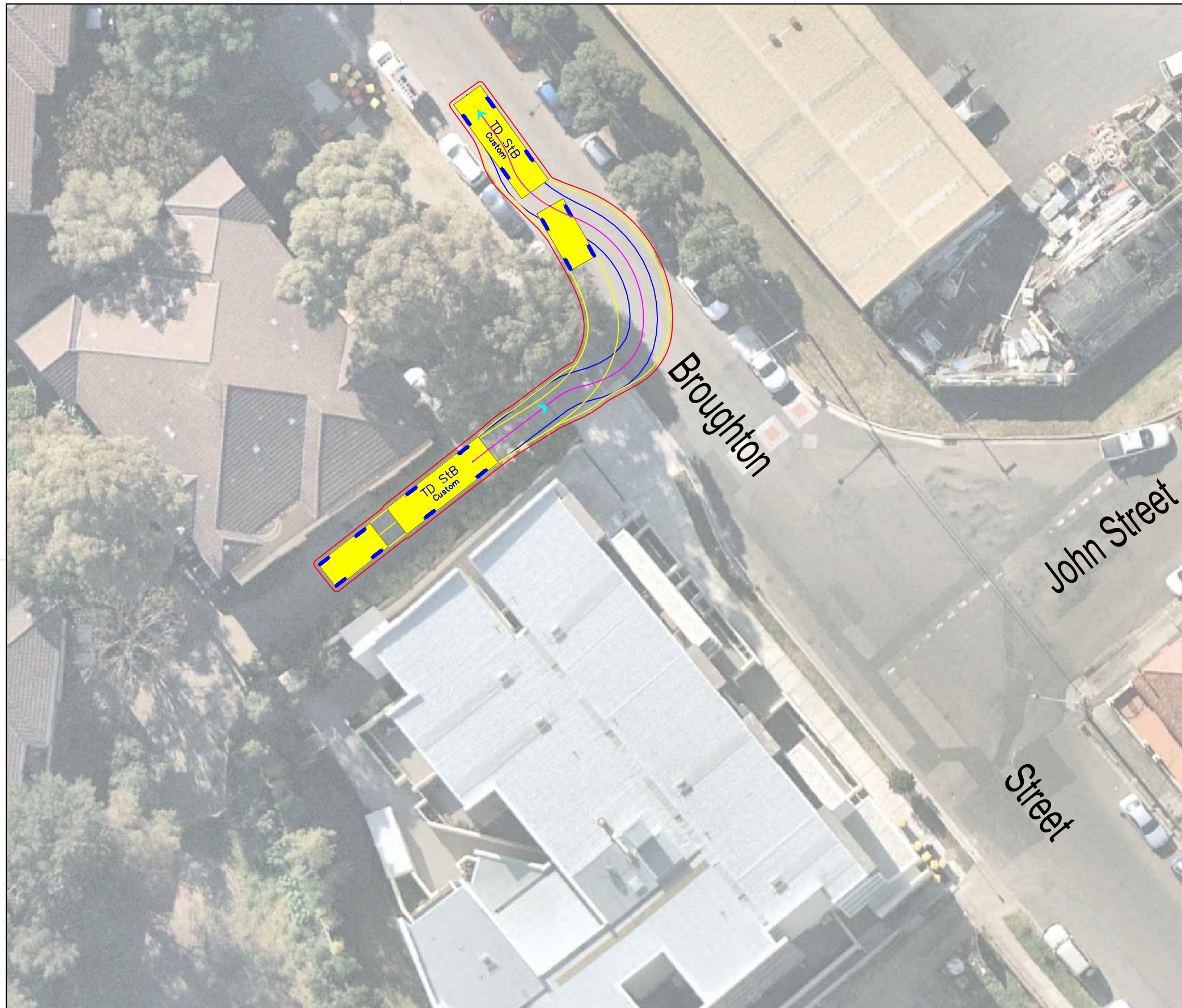
TD StB

		meters	
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project Broughton Street Access Gate	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		
Title Swept Path Analysis Broughton Street and John Street MRV with Trailer - Forward Right Turn Exit	Date 04.12.2019	Project Number P3519	Sheet Number 124
	Issue 006		



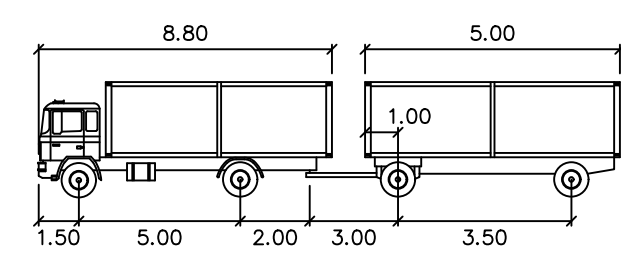
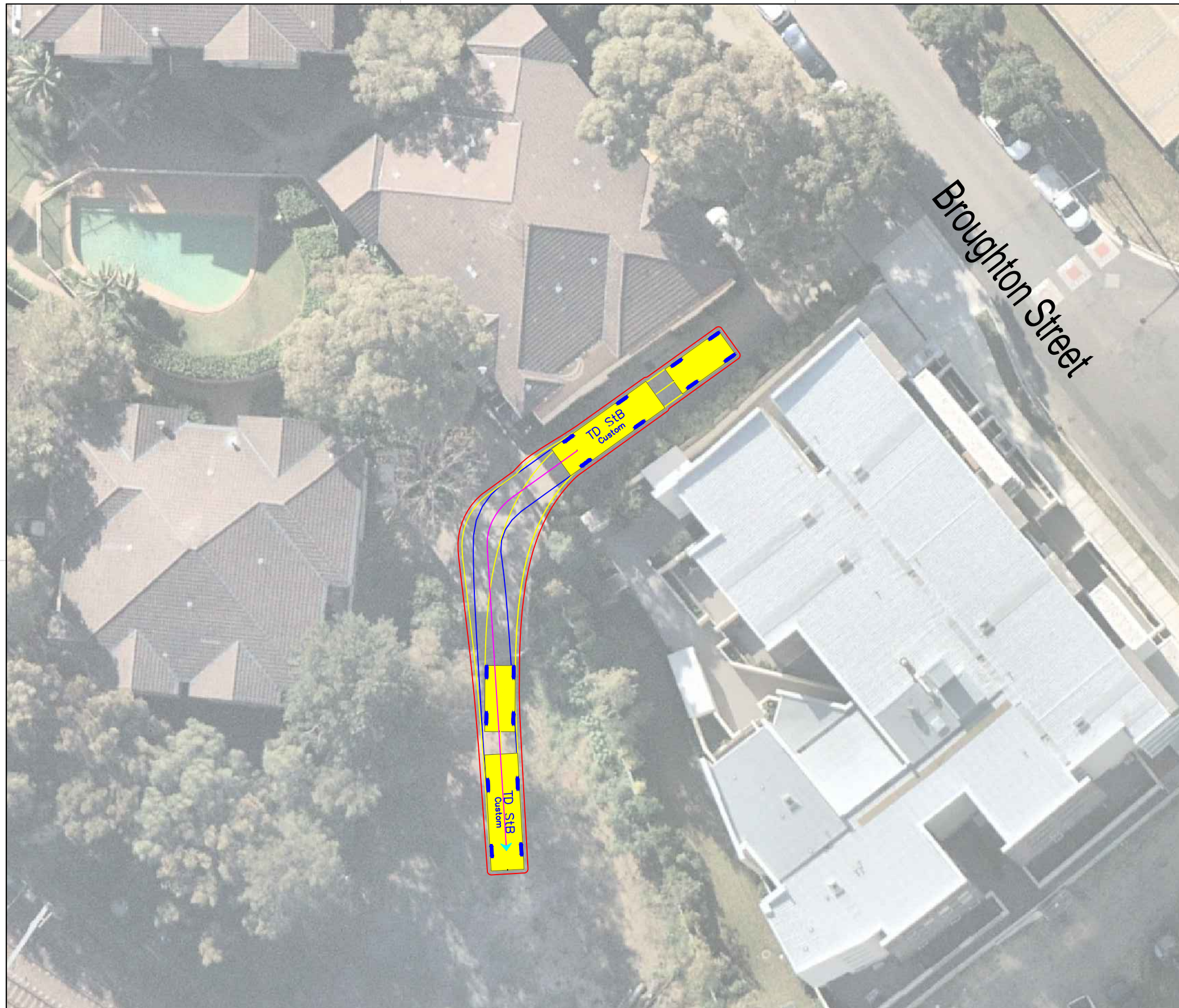
TD StB

	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project Broughton Street Access Gate	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		
Title Swept Path Analysis Broughton Street and John Street MRV with Trailer - Forward Left Turn Exit	Date 04.12.2019	Project Number P3519	Sheet Number 125
	Issue 006		



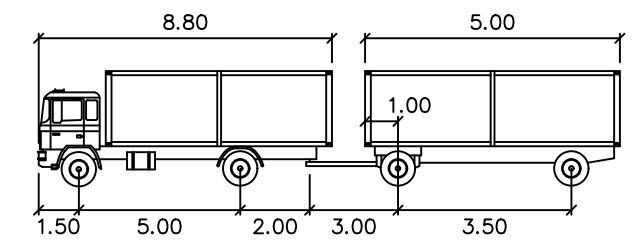
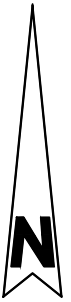
TD StB

	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project Broughton Street Access Gate	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		
Title Swept Path Analysis Broughton Street and John Street MRV with Trailer - Entry Approach Through Gate	Date 04.12.2019	Project Number P3519	Sheet Number 126
	Issue 006		



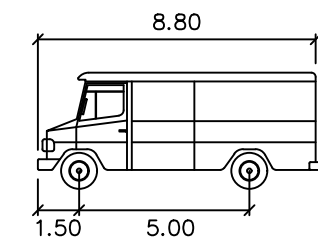
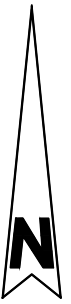
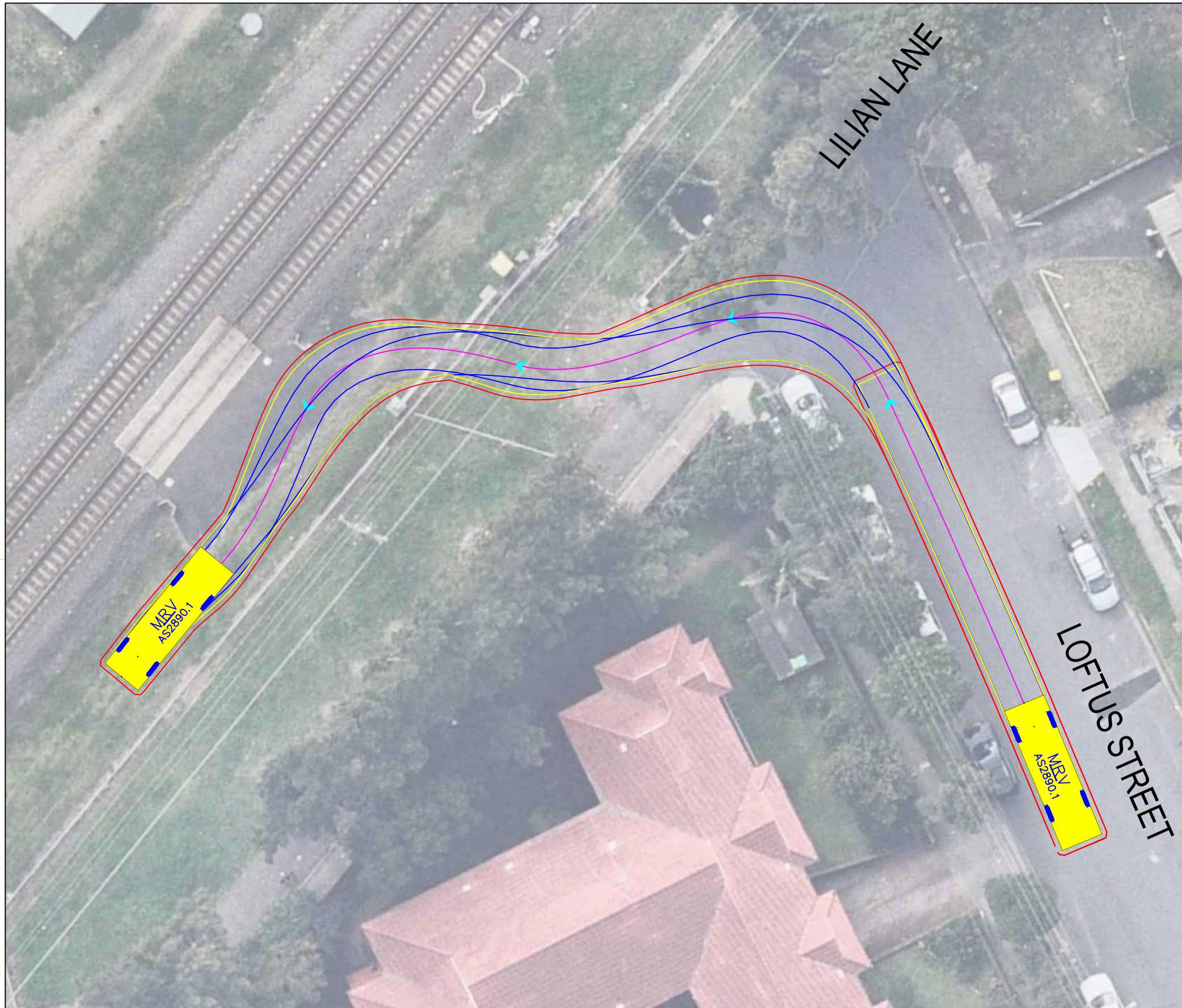
TD StB

	meters		
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.30	Steering Angle	: 37.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.30		

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Analysis	M.H	04.12.2019

Project Broughton Street Access Gate	Design M.H	Drawn M.H	Checked A.G
	NOT FOR CONSTRUCTION		Date 04.12.2019
Title Swept Path Analysis Broughton Street and John Street MRV with Trailer - Exit Approach Through Gate	Project Number P3519	Sheet Number 127	Issue 006

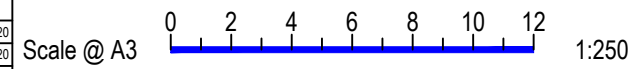


MRV

	width	: 8.80
	Track	: 2.50
	Lock to Lock Time	: 6.0
	Steering Angle	: 34.0
	Design Speed	: 10 km/h

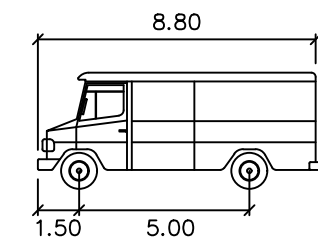
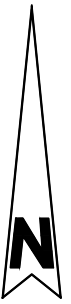
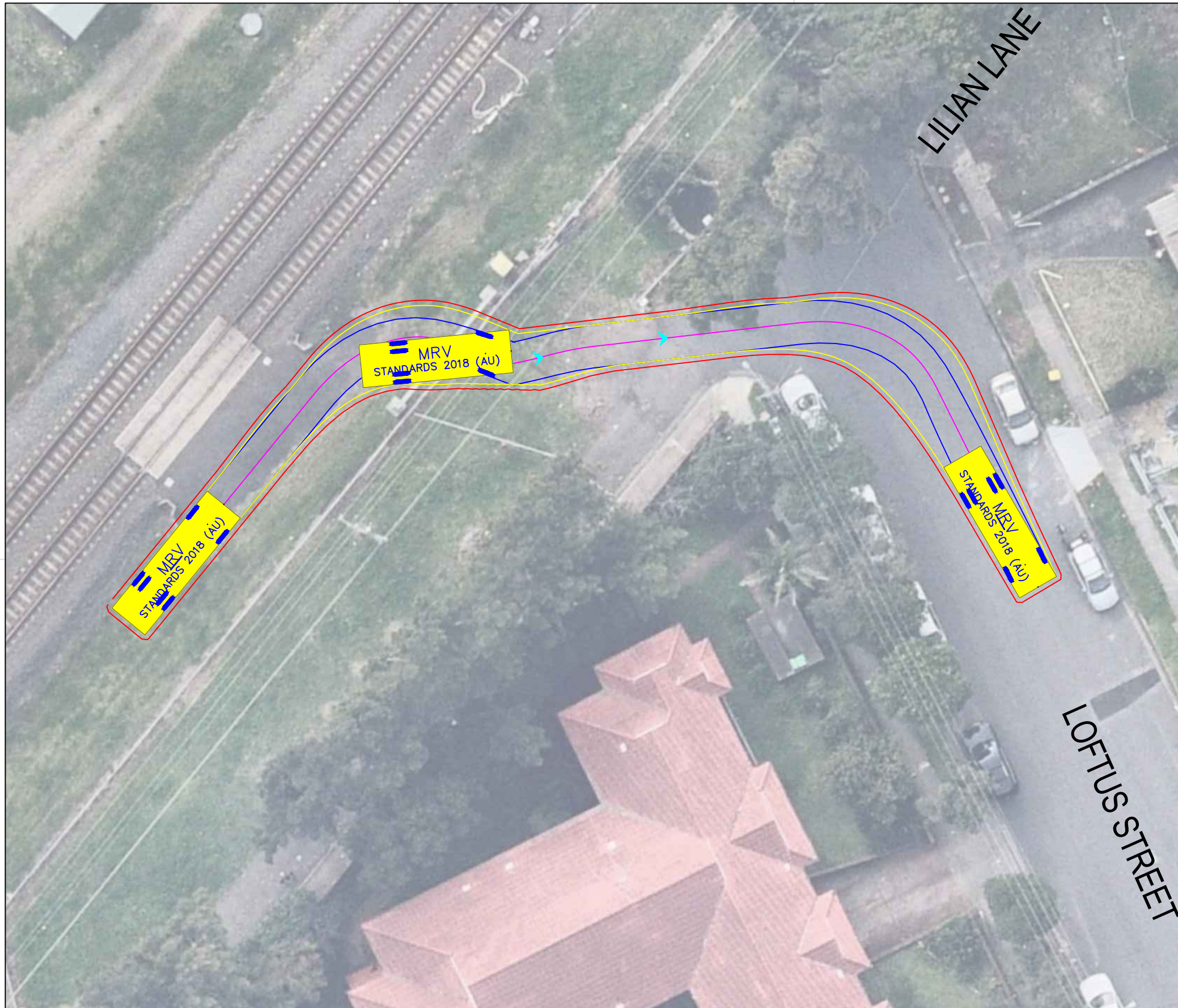
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS
Title	SWEPT PATH ANALYSIS LILIAN LANE / LOFTUS STREET GATE M24 12.408D - MRV FORWARD ENTRY

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	1	Issue	003

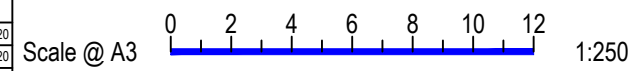


MRV

	units
Width	: 8.80
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

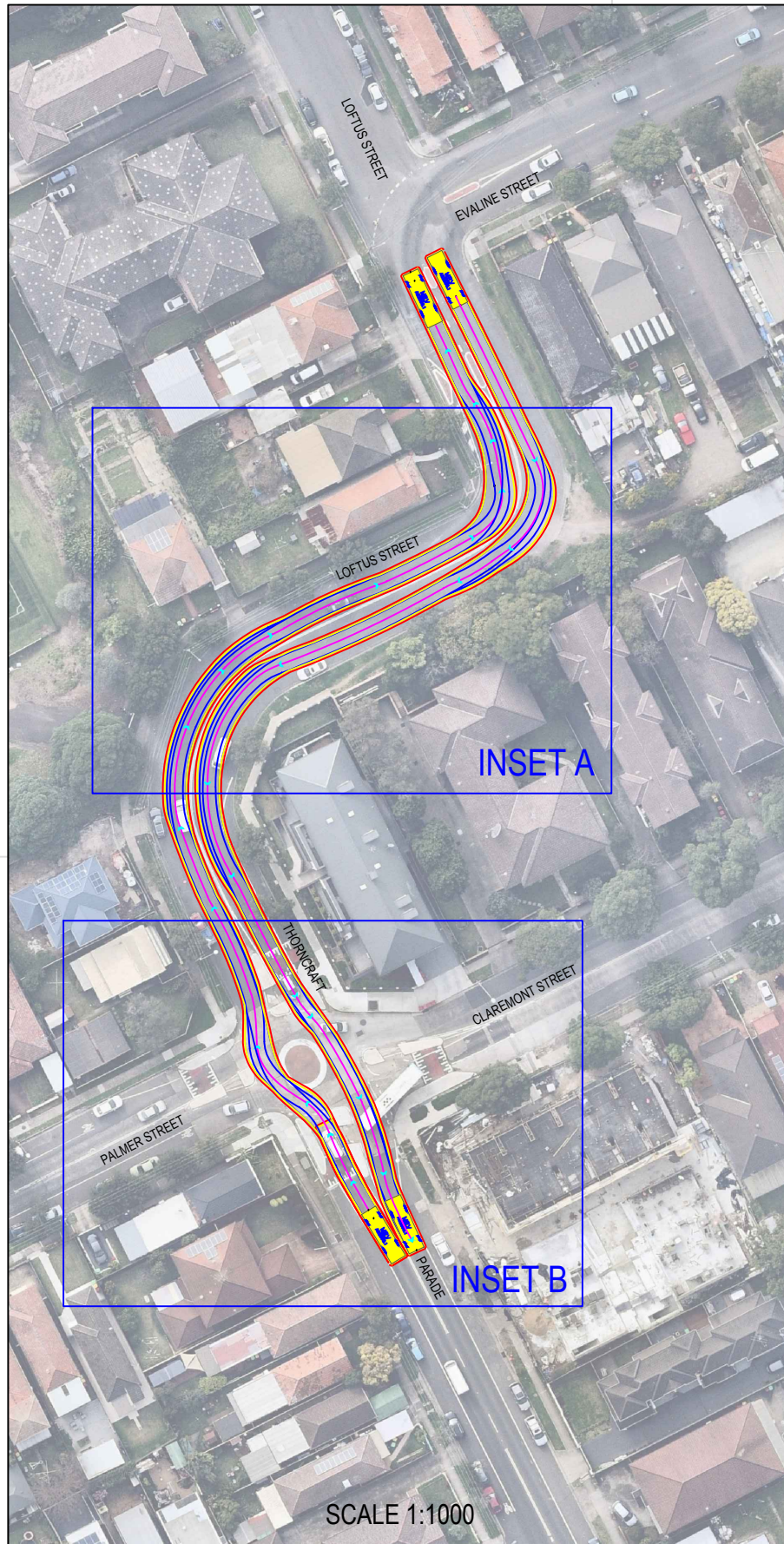
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

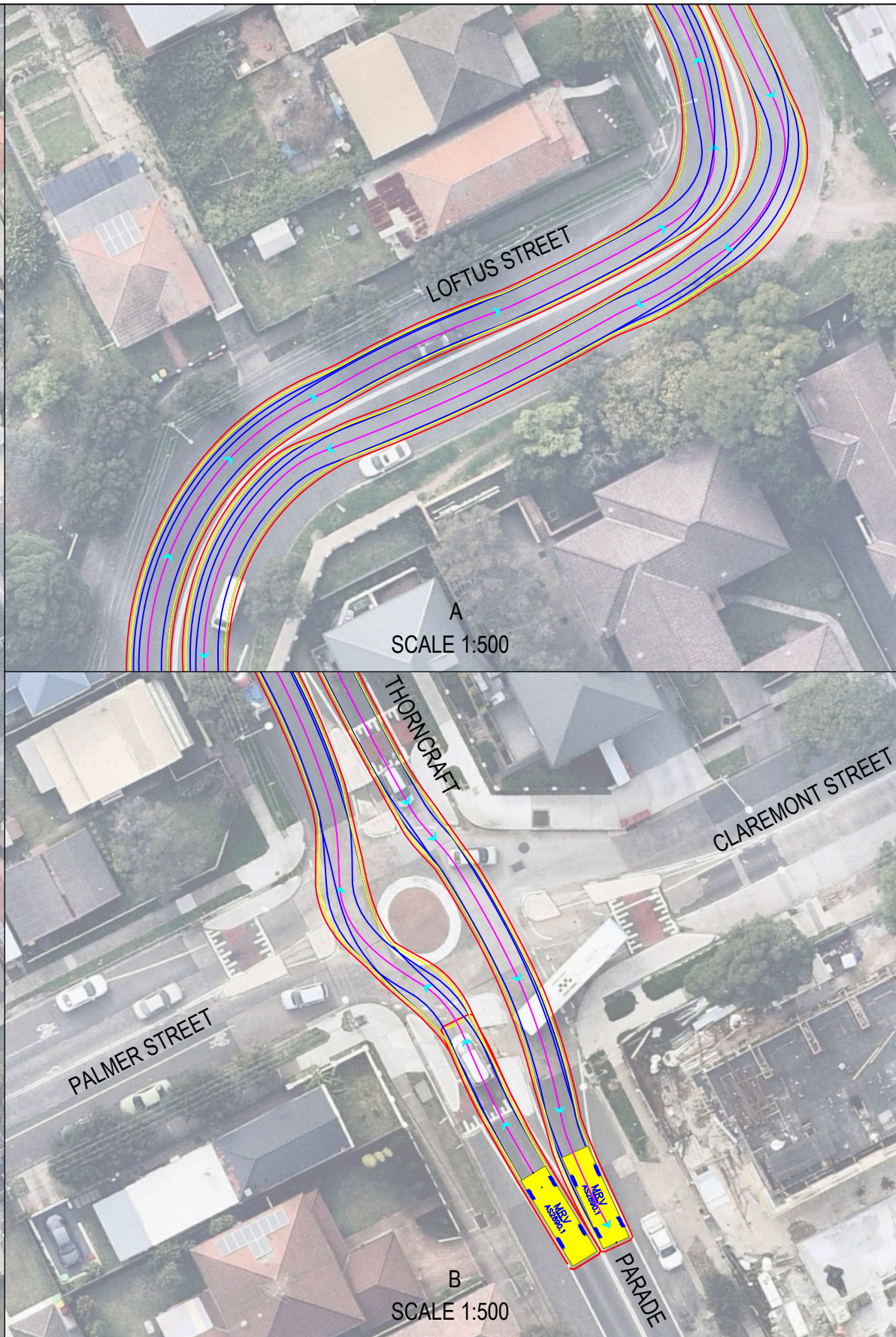


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS LILIAN LANE / LOFTUS STREET GATE M24 12.408D - MRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	2	Date	02.02.2021
Issue					003

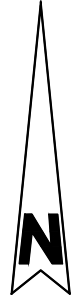


SCALE 1:1000

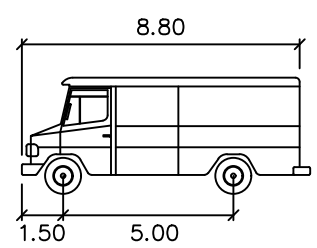


A
SCALE 1:500

B
SCALE 1:500



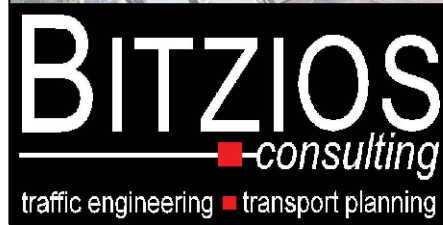
Notes:
- Manoeuvre traverses over roundabout



MRV

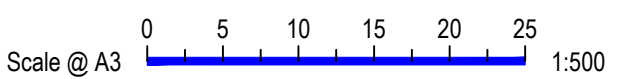
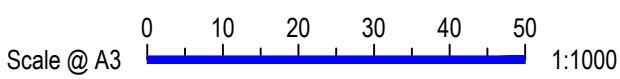
	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

DESIGN VEHICLE



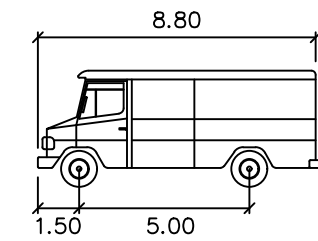
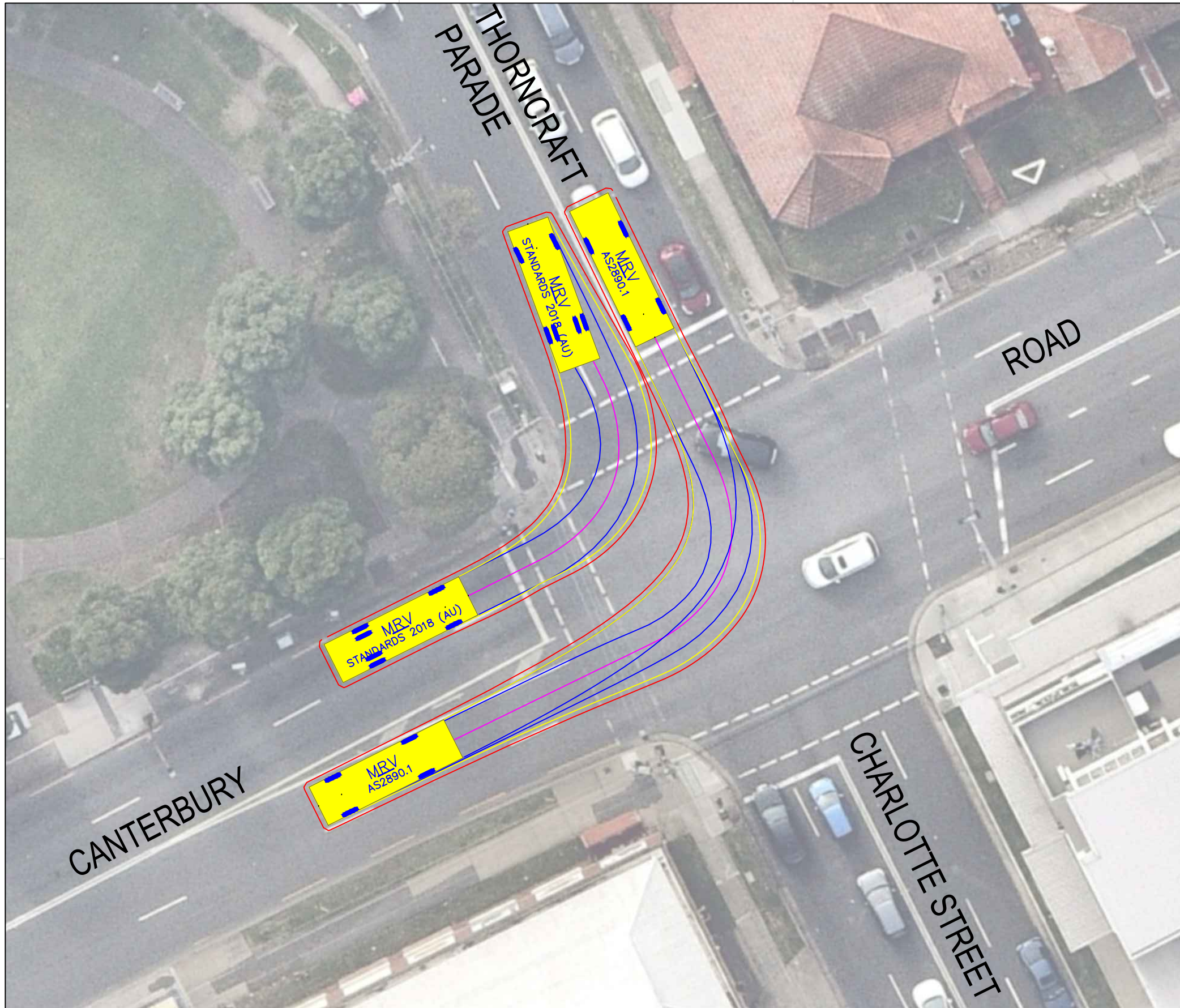
Gold Coast
Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000.
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042.
P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS
Title SWEPT PATH ANALYSIS LOFTUS STREET GATE M24 12.408D HAULAGE ROUTE MRV

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	3	Date	02.02.2021
				Issue	003

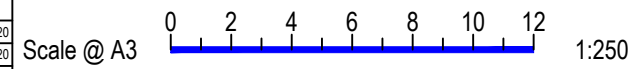


MRV

	8.80
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

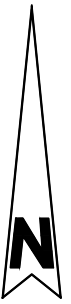
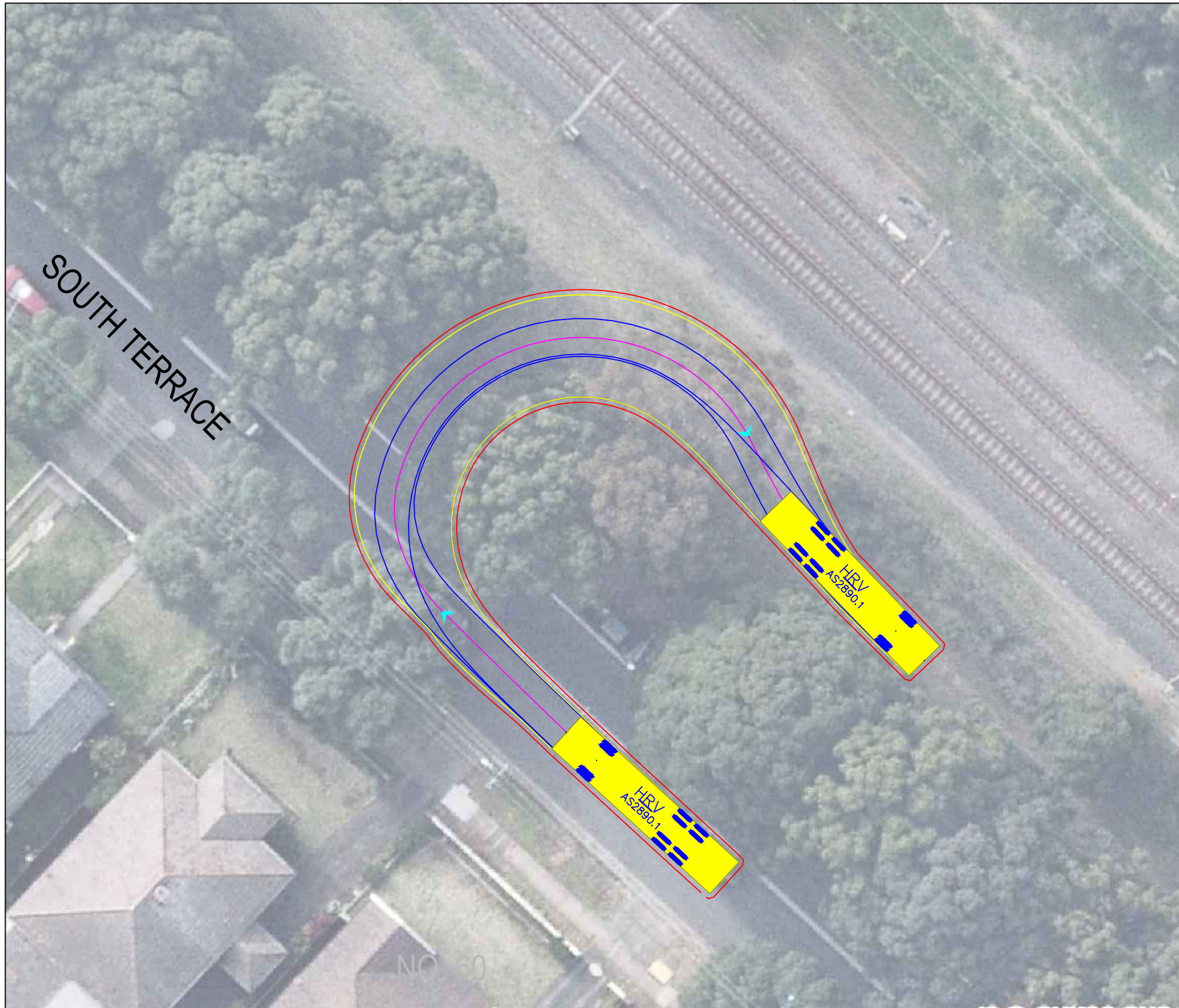
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

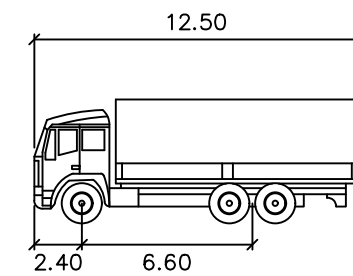


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS
Title	SWEPT PATH ANALYSIS CANTERBURY ROAD / THORNCRAFT PARADE GATE M24 12.408D HAULAGE ROUTE MRV

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	4	Issue	003



Notes:
 - Manoeuvre requires gate width of 6.7m



HRV

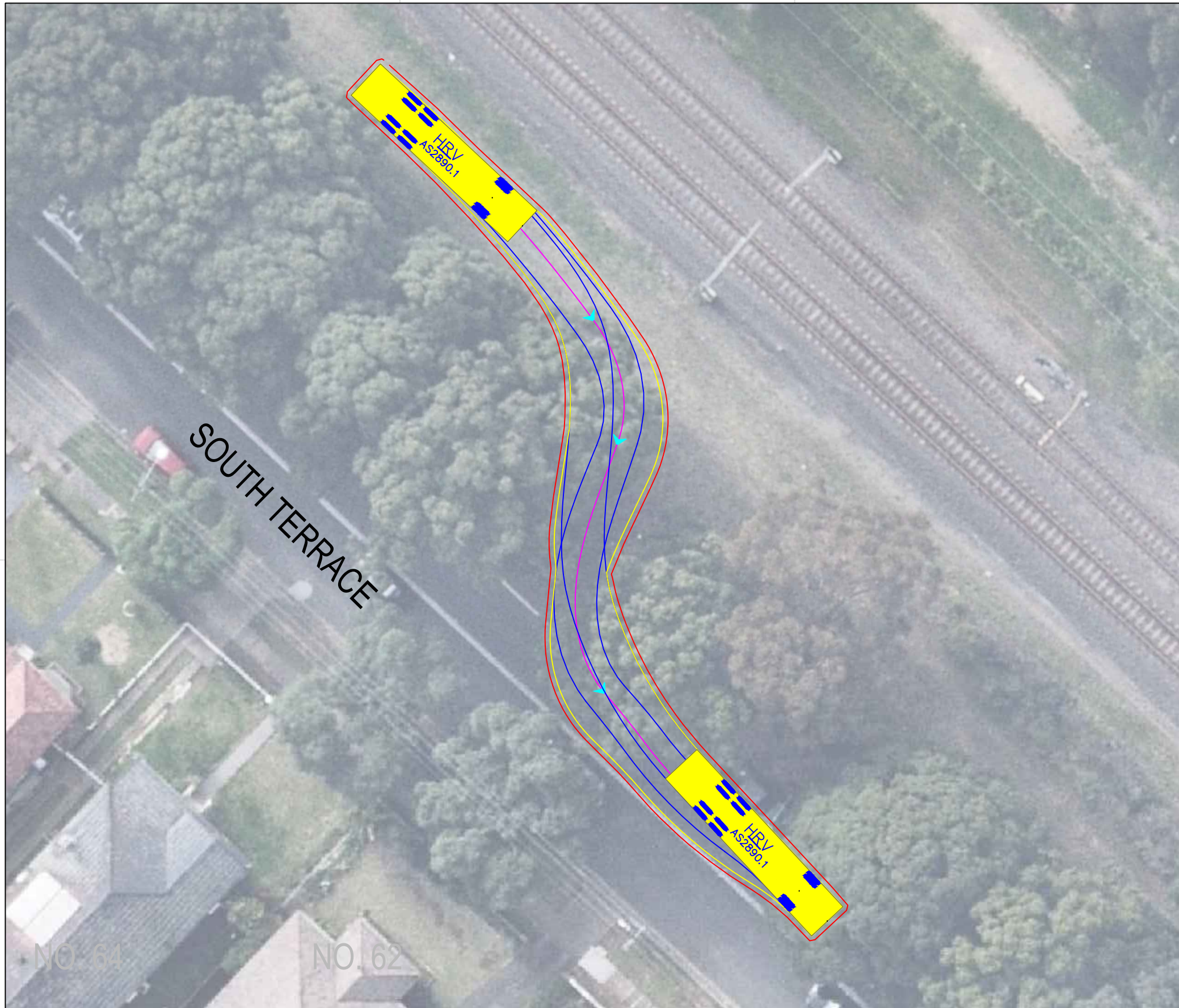
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

DESIGN VEHICLE

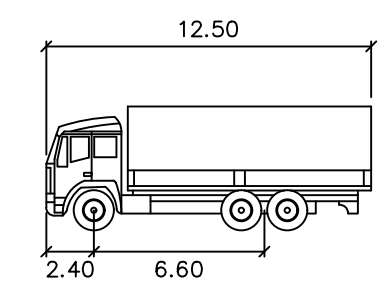
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked S.P
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS SOUTH TERRACE GATE M24 16.995D - HRV ENTRY	Project Number P3519	Sheet Number 5	Date 02.02.2021 Issue 003



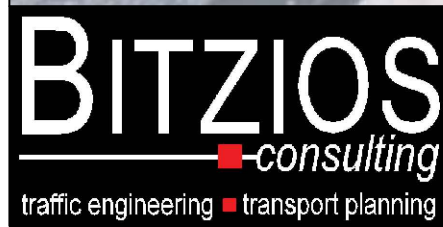
- Notes:**
- Manoeuvre requires gate width of 5.0m
 - Manoeuvre partially occupies kerbside parking lane and roadside



HRV

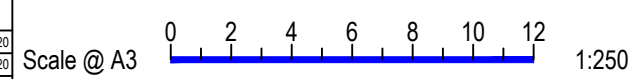
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

DESIGN VEHICLE



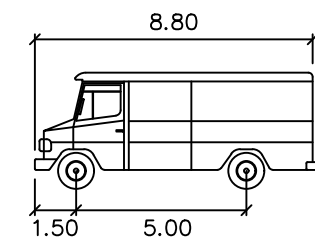
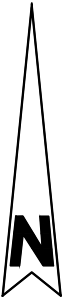
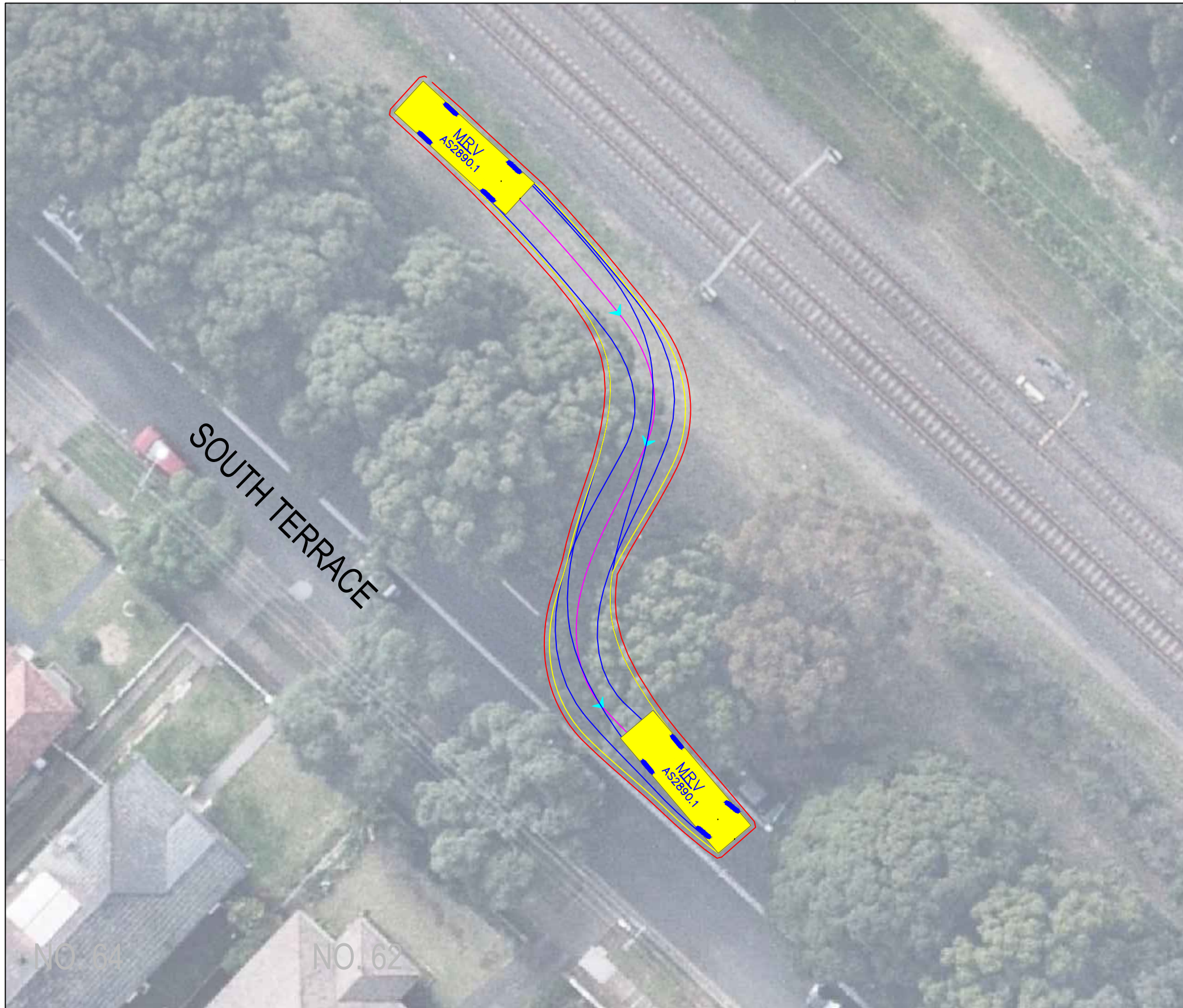
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS SOUTH TERRACE GATE M24 16.995D - HRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	6	Date	02.02.2021
Issue					003



MRV

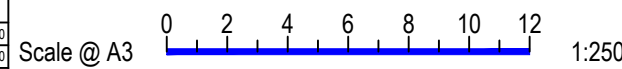
	units
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

DESIGN VEHICLE



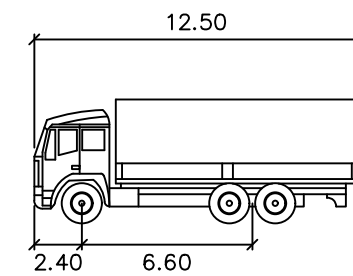
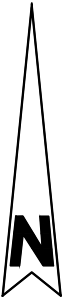
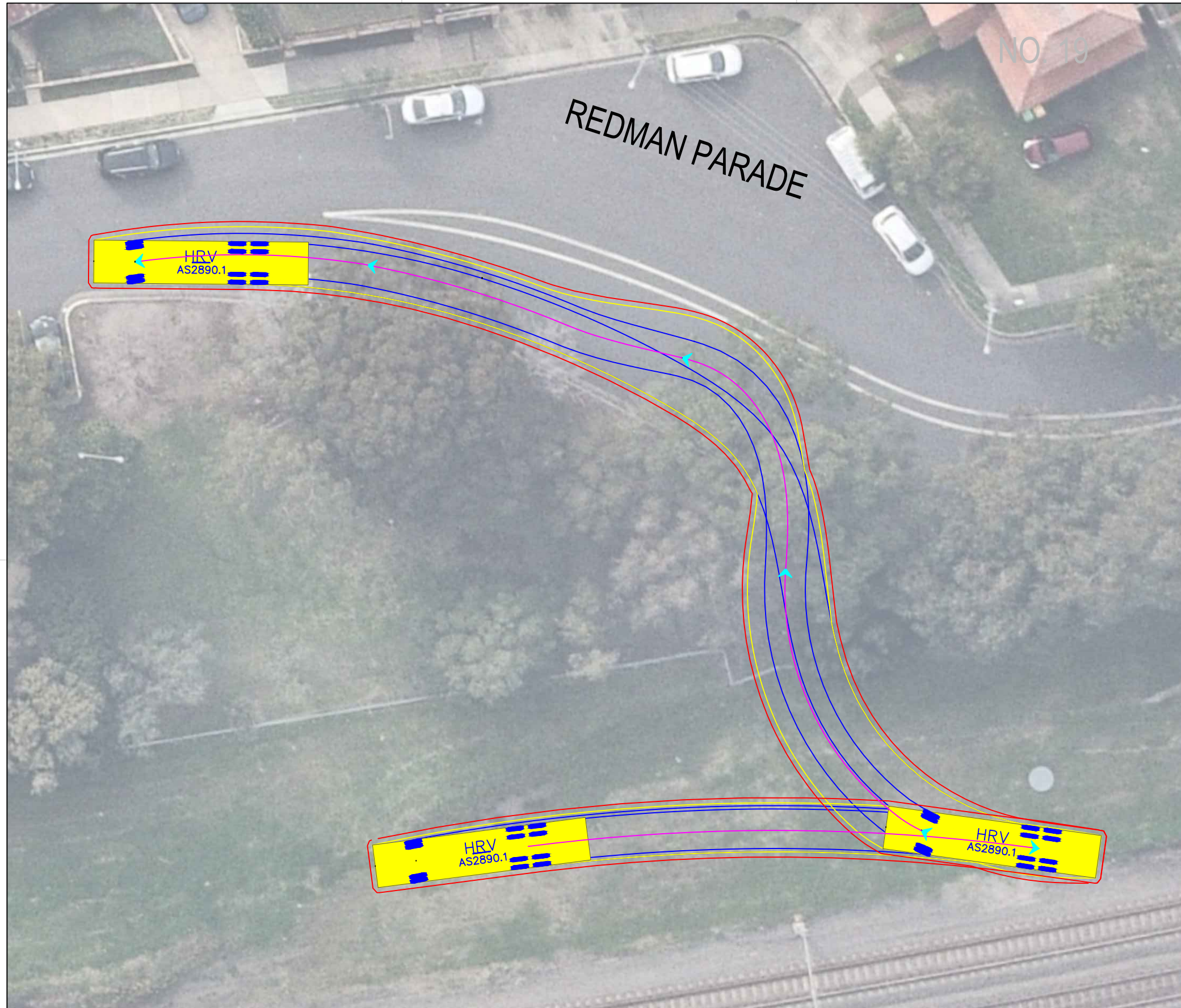
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS SOUTH TERRACE GATE M24 16.995D - MRV EXIT		

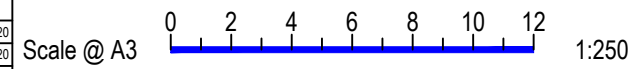
Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	7	Date	02.02.2021
Issue					003



- HRV
- Width : 12.50 meters
 - Track : 2.40
 - Lock to Lock Time : 6.0
 - Steering Angle : 36.6
 - Design Speed : 10 km/h

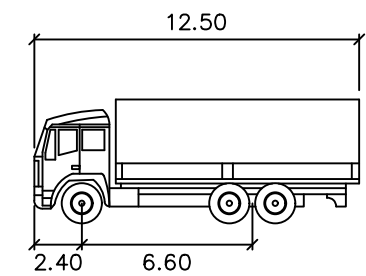
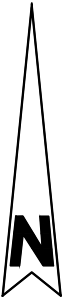
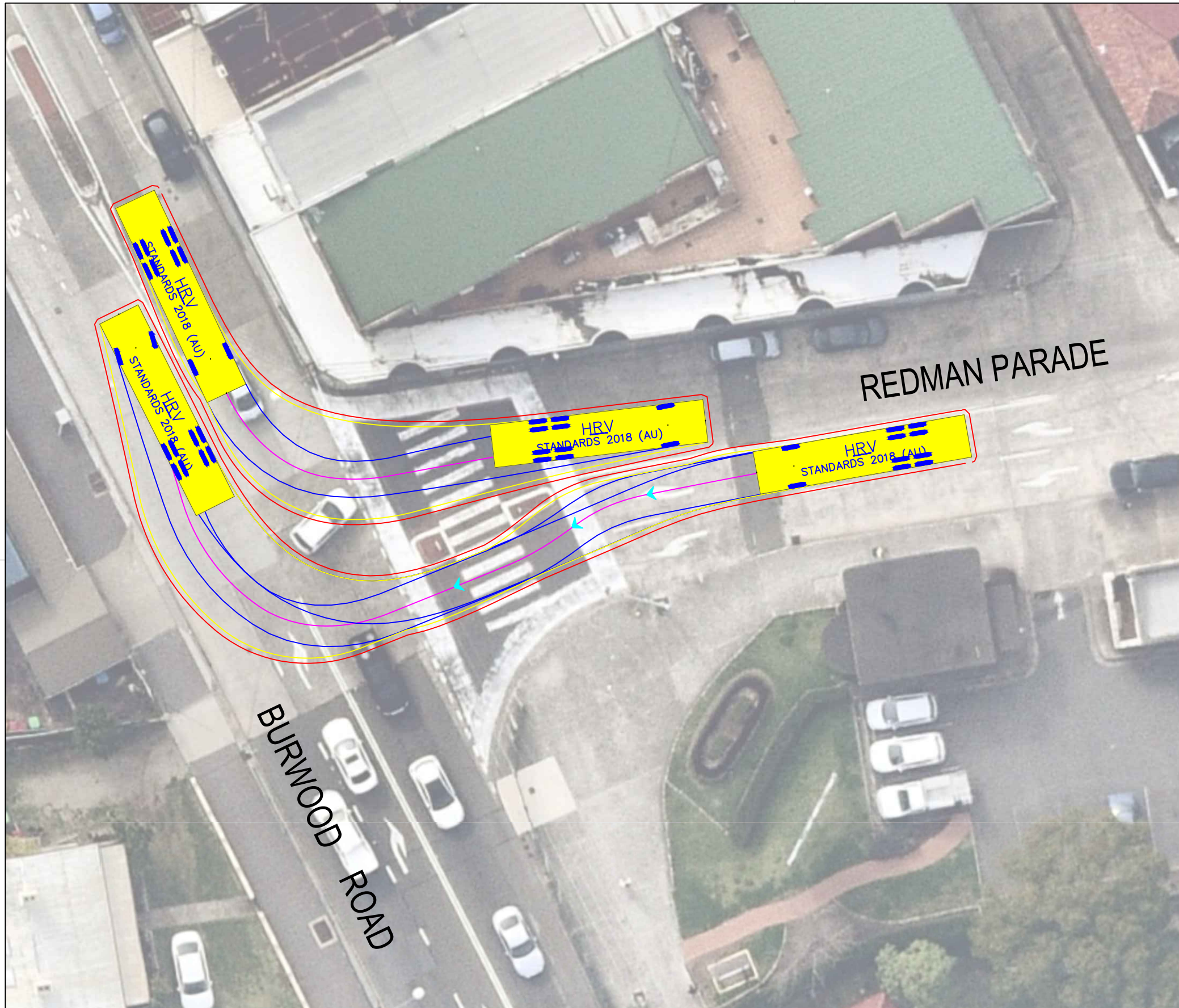
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS REDMAN PARADE GATE M24 13.020U - HRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	10	Date	02.02.2021
Issue					003

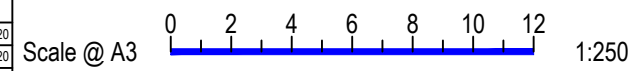


HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

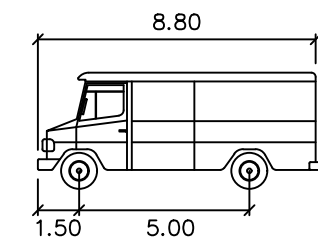
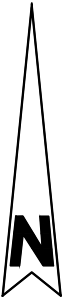
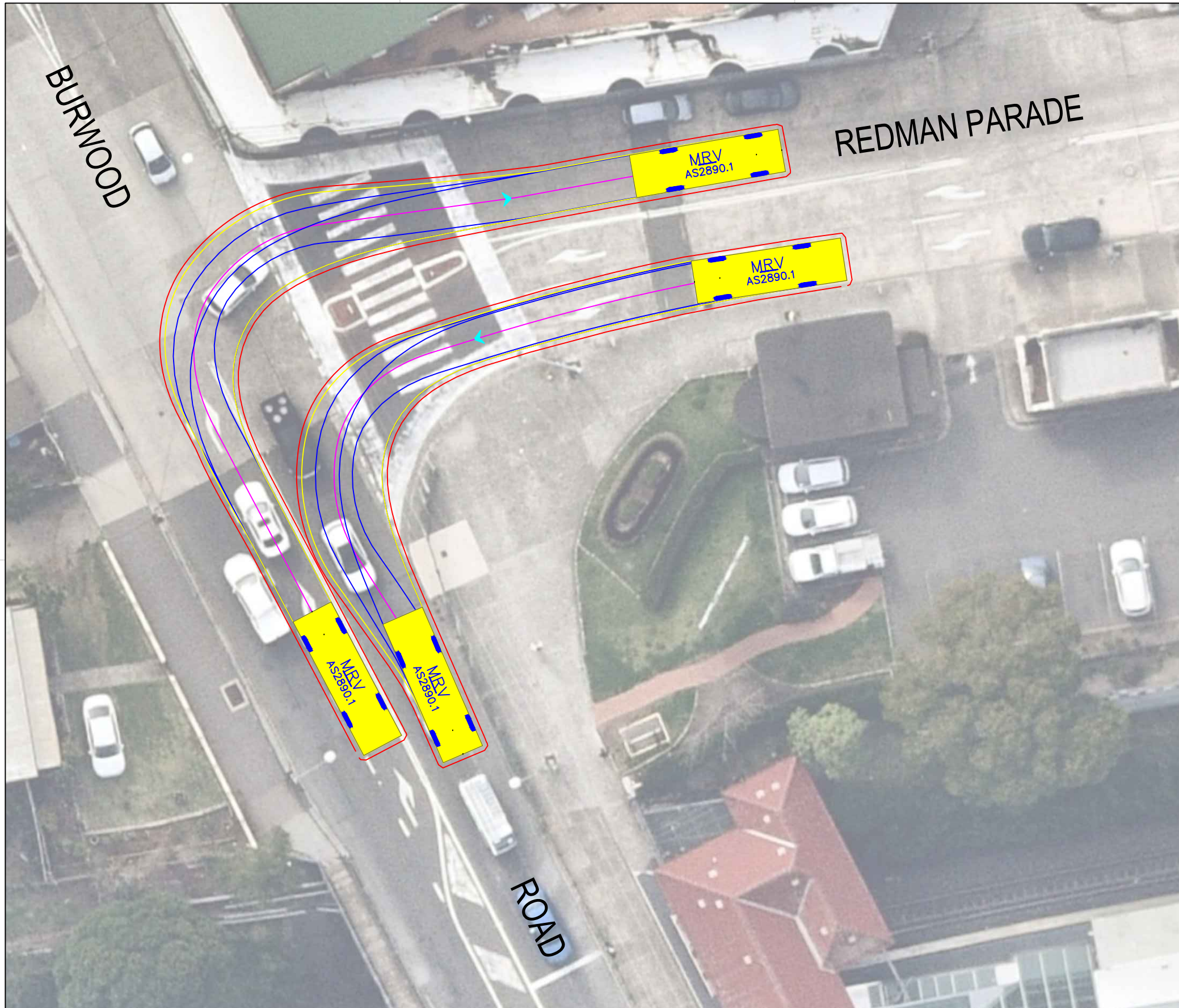
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS BURWOOD ROAD / REDMAN PARADE GATE M24 13.020U HAULAGE ROUTE HRV		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	11	Date	02.02.2021
		Issue			003

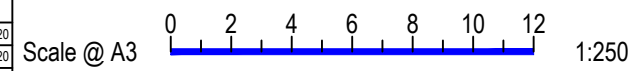


MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

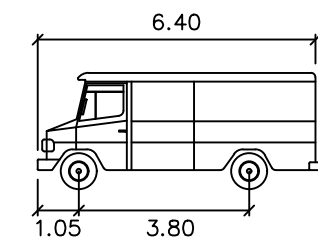
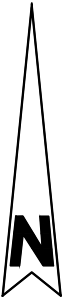
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS BURWOOD ROAD / REDMAN PARADE GATE M24 13.020U HAULAGE ROUTE MRV		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	12	Issue	003



SRV

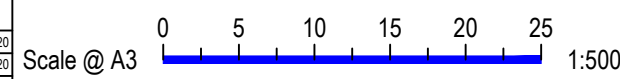
	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE



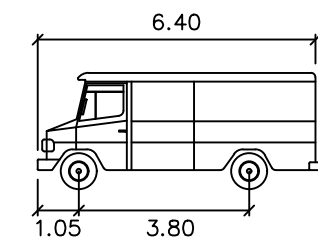
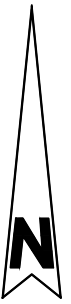
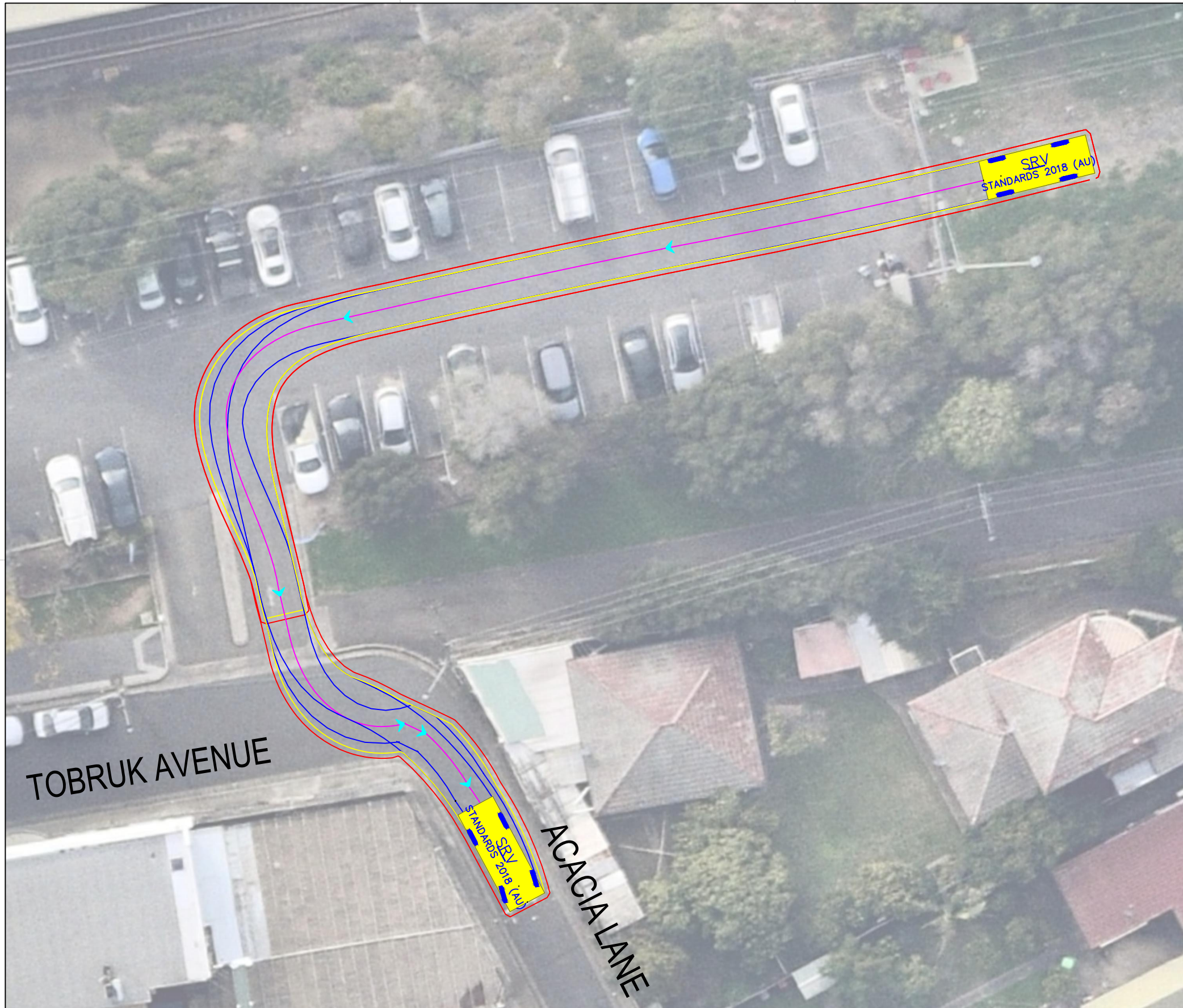
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS BURWOOD ROAD / TOBRUK AVENUE GATE M24 13.193D - SRV ENTRY		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	13	Date	02.02.2021
				Issue	003



SRV

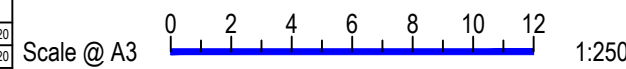
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE



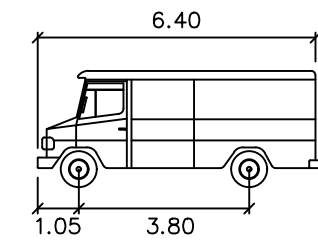
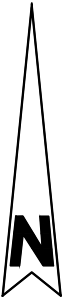
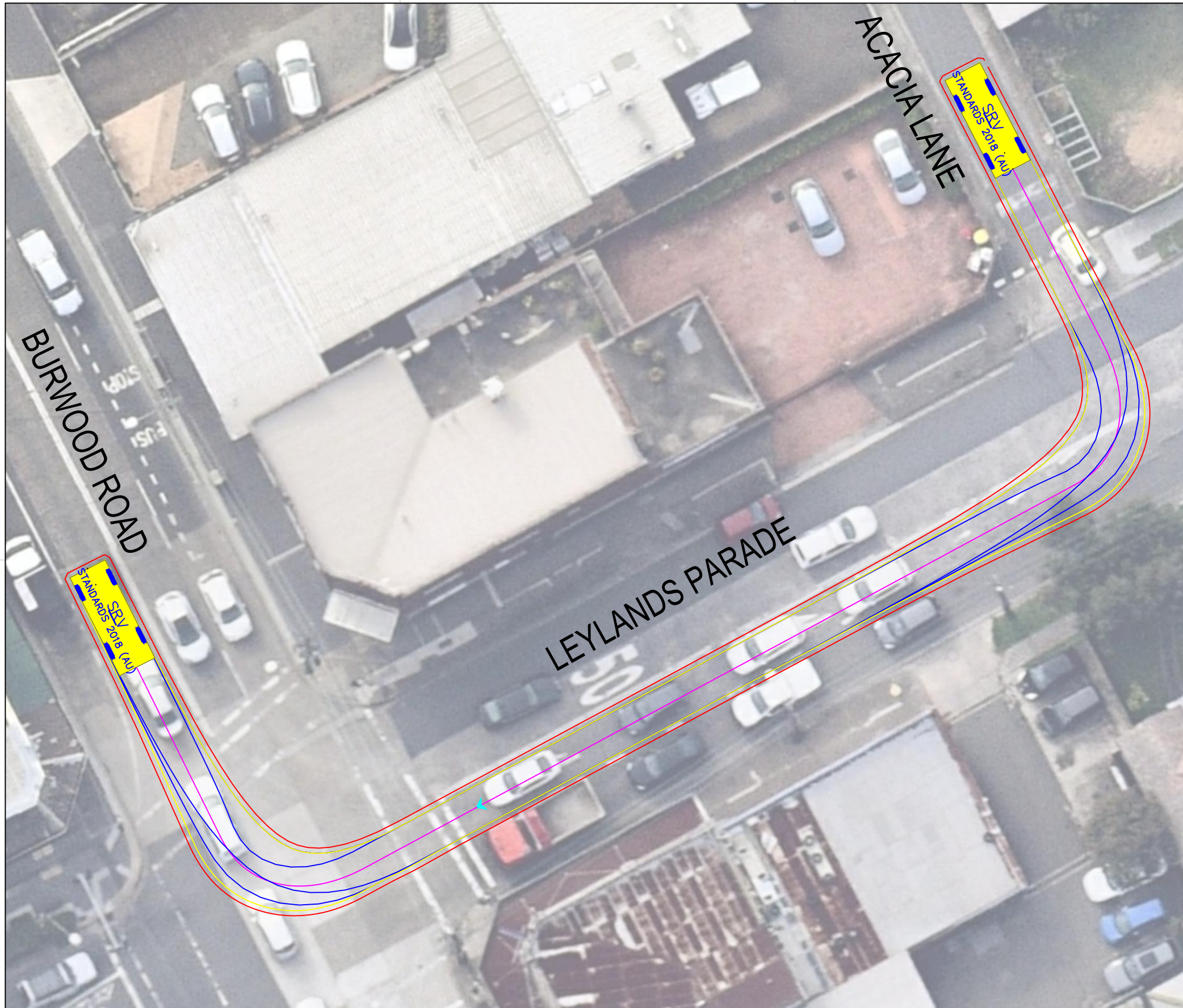
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS TOBRUK AVENUE / ACACIA LANE GATE M24 13.193D - SRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	14	Date	02.02.2021
Issue					003



SRV

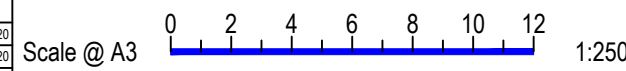
	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE



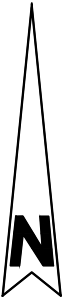
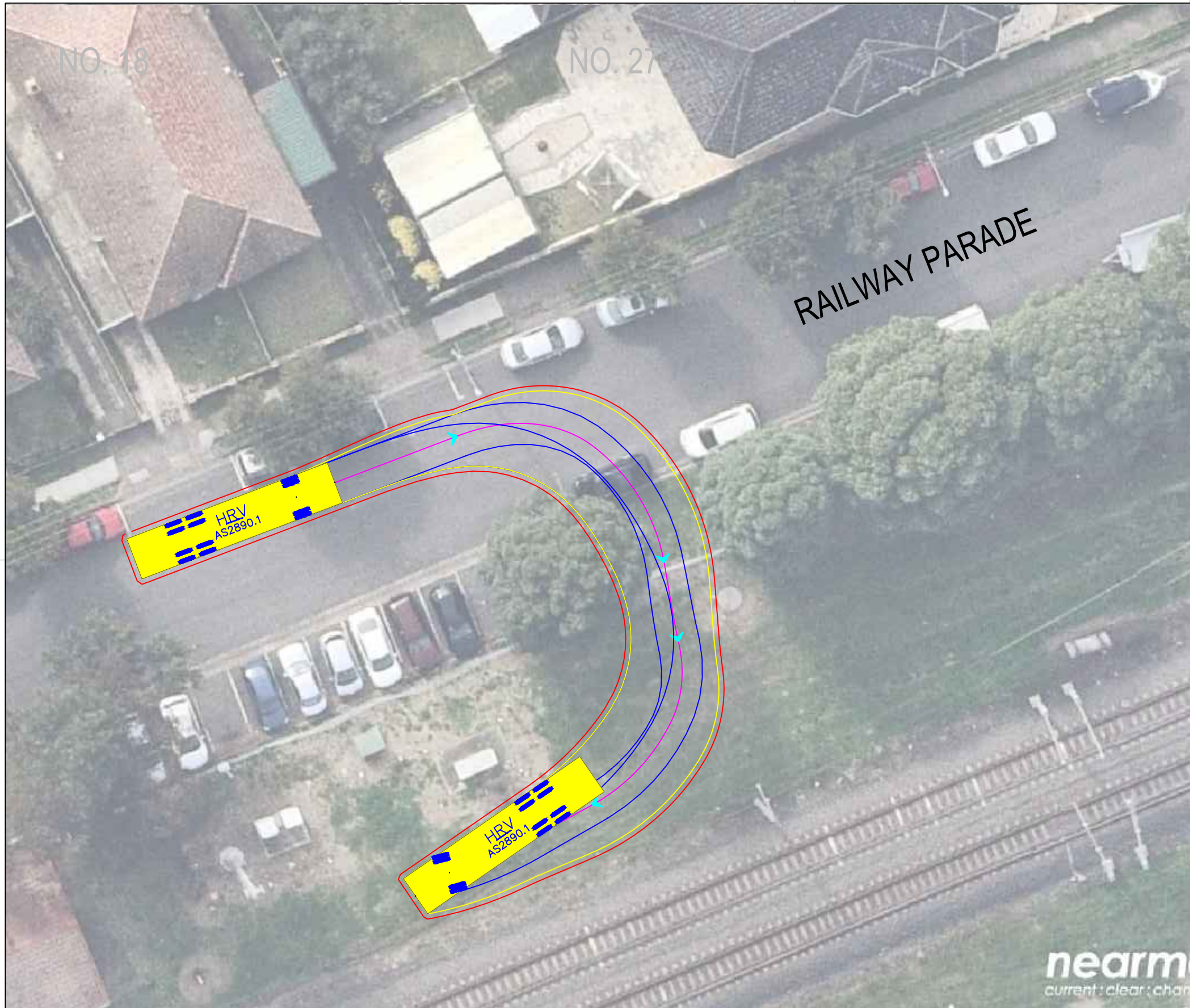
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

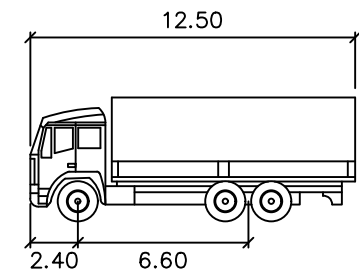


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS BURWOOD ROAD / LEYLANDS PARADE GATE M24 13.193D - SRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	15	Date	02.02.2021
		Issue			003



Notes:
 - Manoeuvre requires gate width of 6.0m

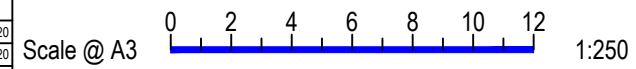


HRV

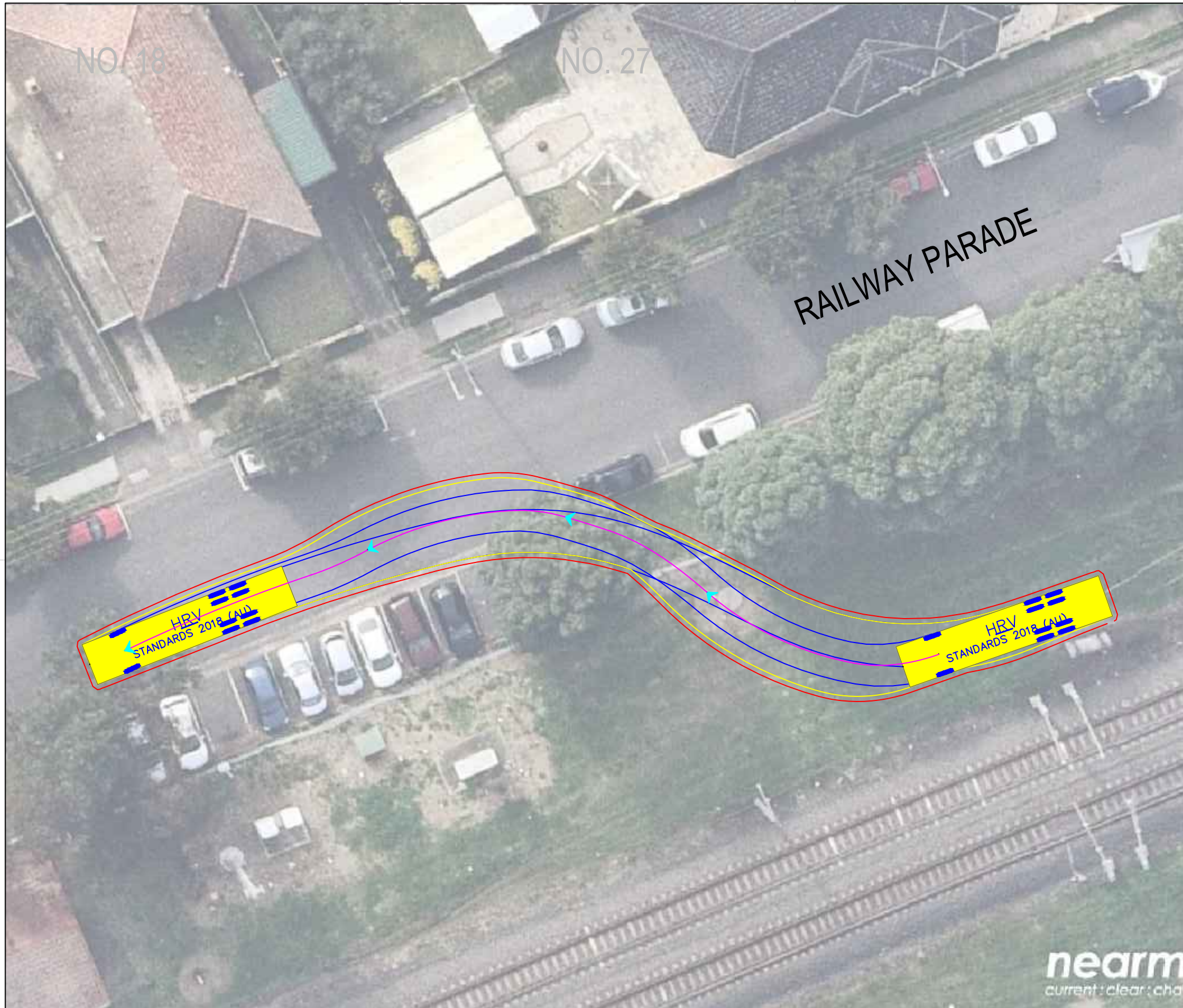
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

DESIGN VEHICLE

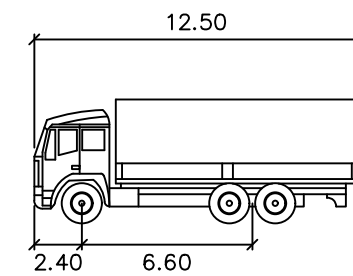
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked S.P
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS RAILWAY PARADE GATE M24 14.229U - HRV ENTRY	Project Number P3519	Sheet Number 20	Date 02.02.2021 Issue 003



Notes:
 - Manoeuvre requires gate width of 5.3m

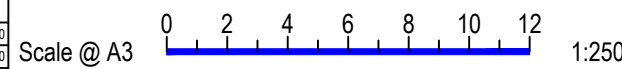


HRV

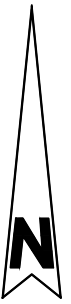
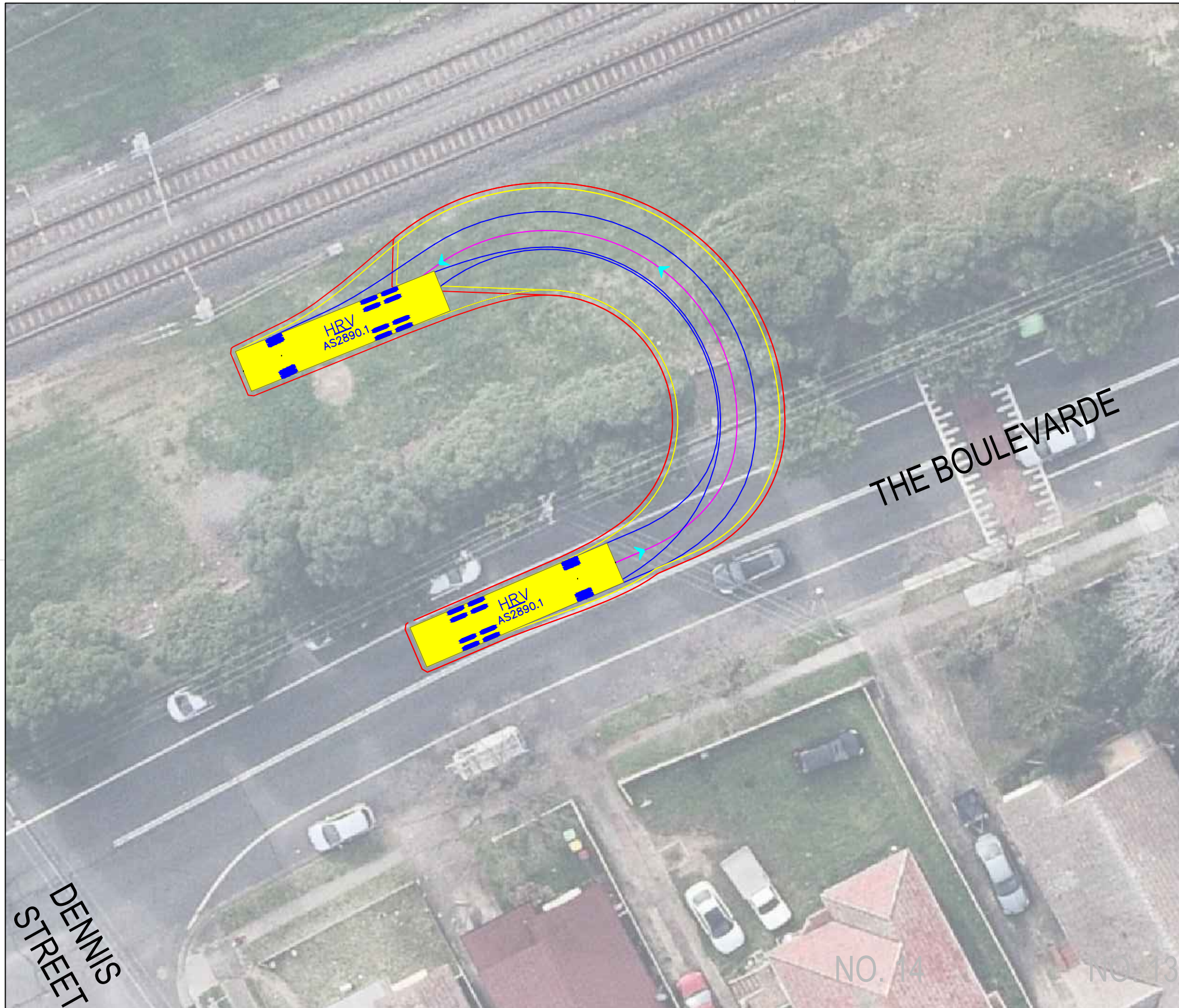
	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

DESIGN VEHICLE

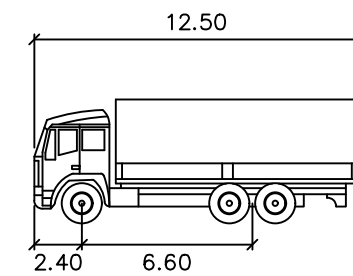
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked S.P
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS RAILWAY PARADE GATE M24 14.229U - HRV EXIT	Project Number P3519	Sheet Number 21	Date 02.02.2021 Issue 003



Notes:
 - Manoeuvre requires gate width of 6.6m



HRV

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

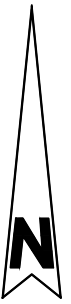
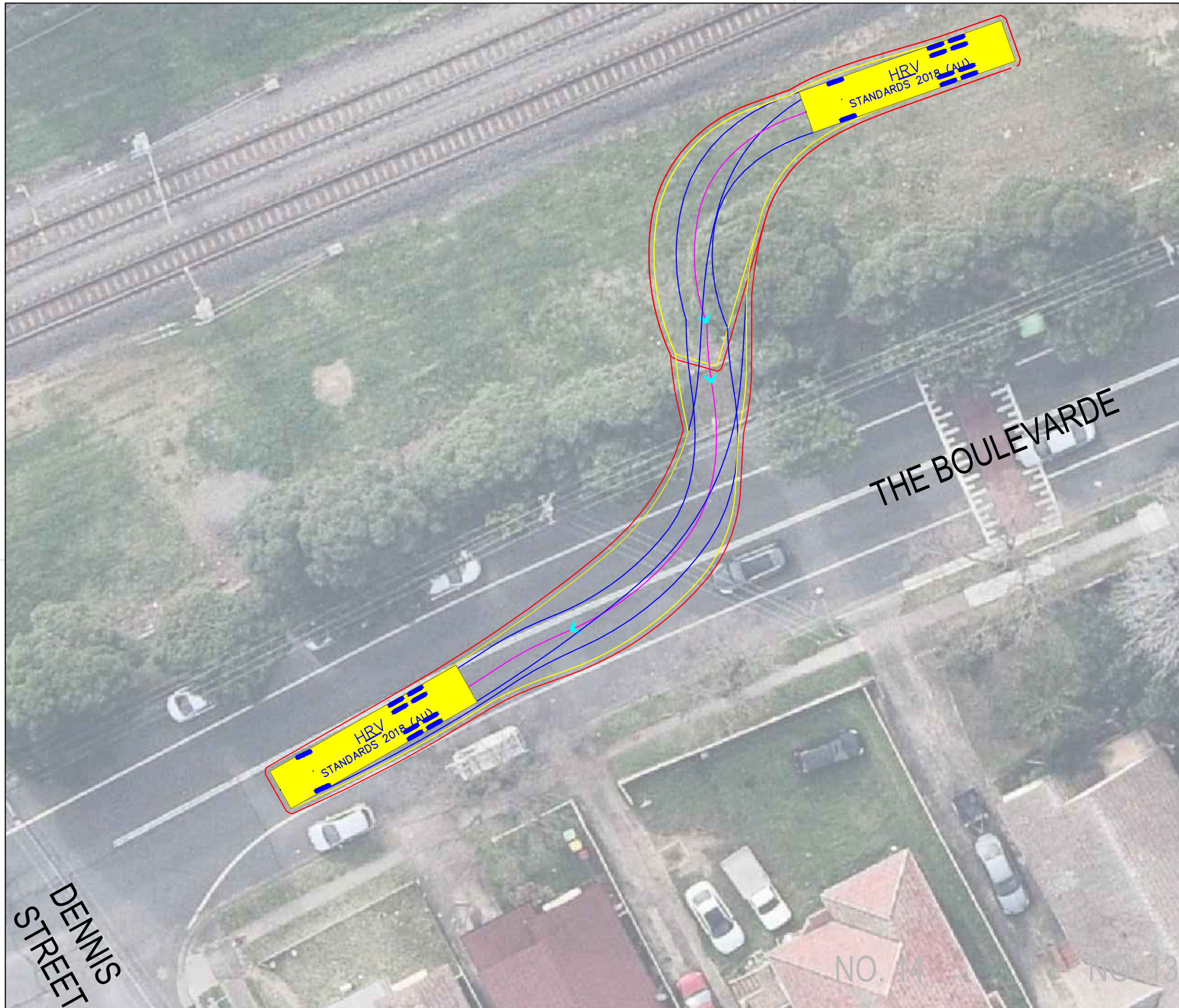
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

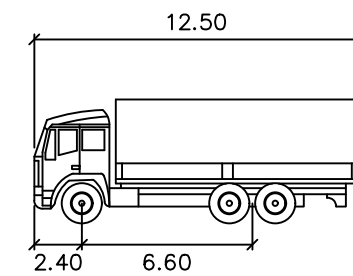


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS THE BOULEVARDE / DENNIS STREET GATE M24 14.086D - HRV ENTRY		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	23	Date	02.02.2021
				Issue	003



Notes:
 - Manoeuvre requires gate width of 5.0m



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

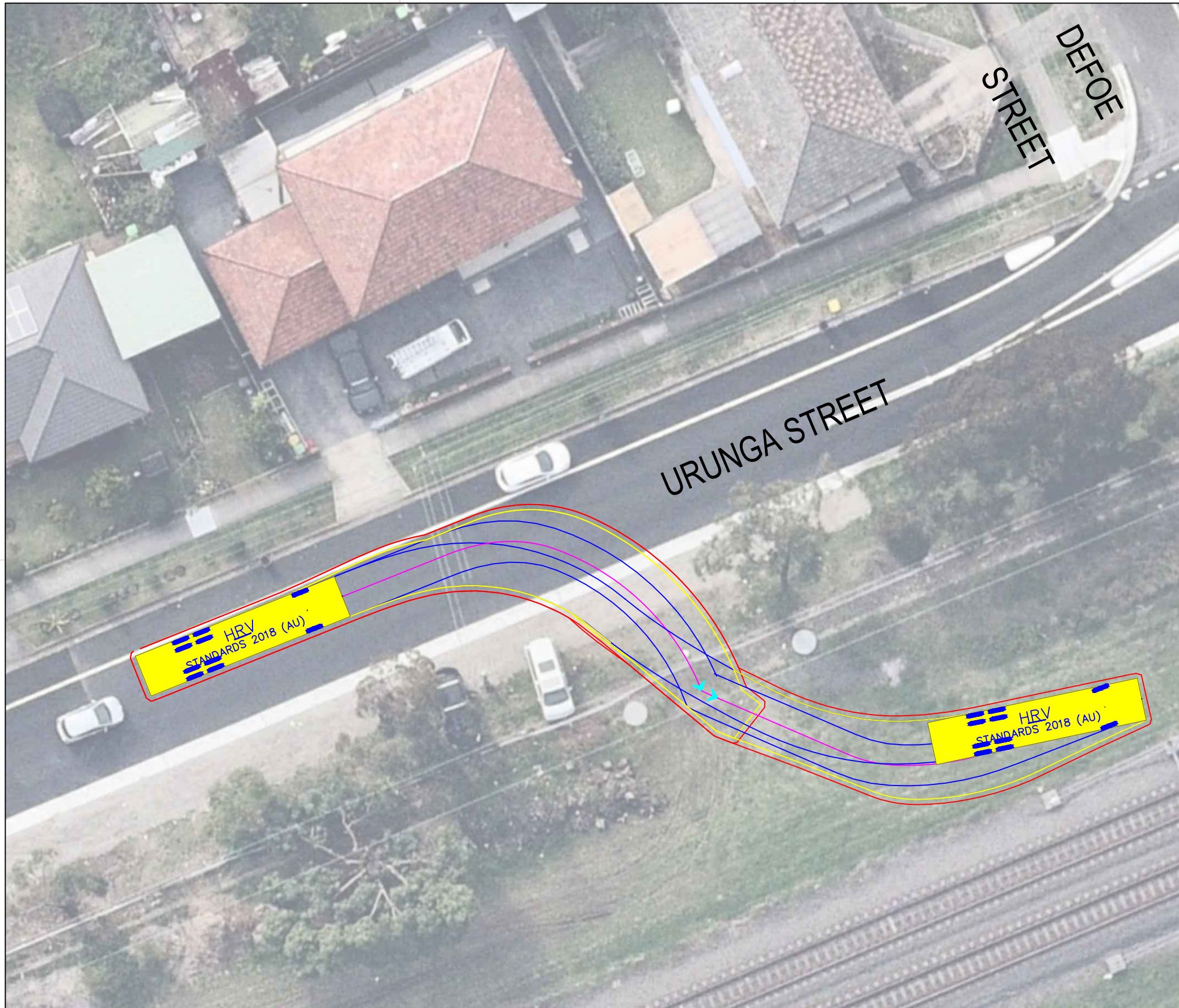
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

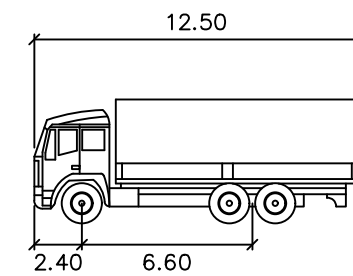


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS THE BOULEVARDE / DENNIS STREET GATE M24 14.086D - HRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	24	Date	02.02.2021
		Issue			003



Notes:
 - Manoeuvre requires gate width of 6.6m

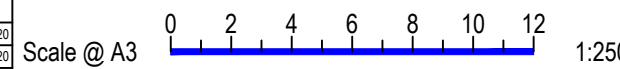


HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

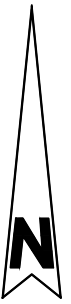
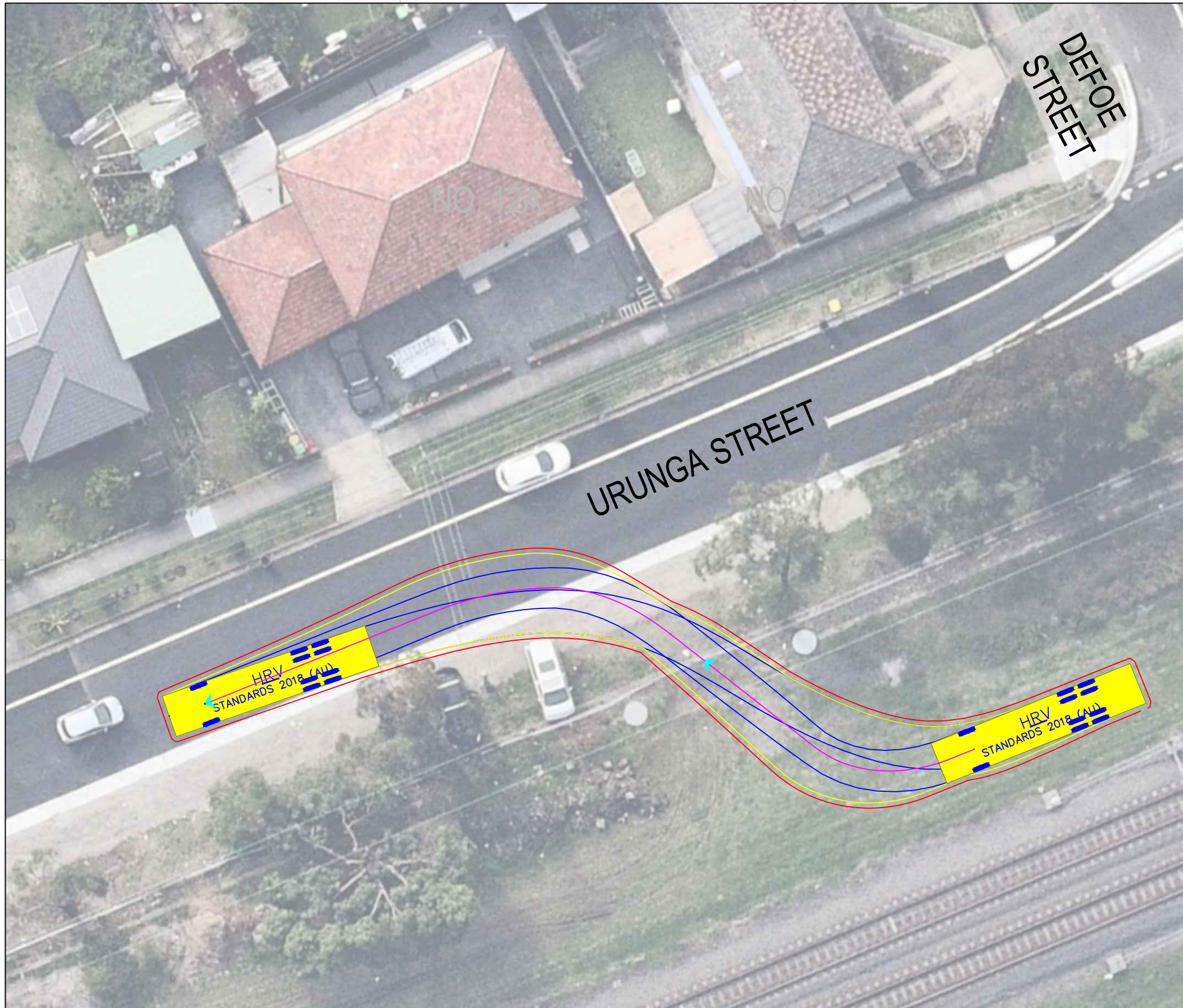
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

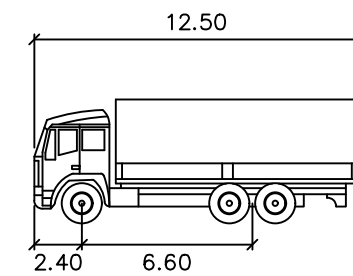


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS URUNGA PARADE / DEFOE STREET GATE M24 15.730U - HRV ENTRY		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	27	Date	02.02.2021
Issue					003



Notes:
 - Manoeuvre requires gate width of 5.2m

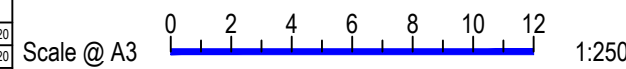


HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

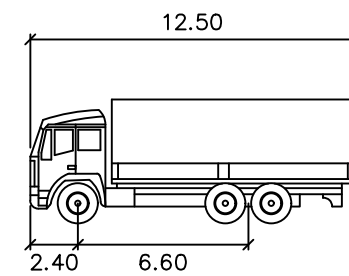
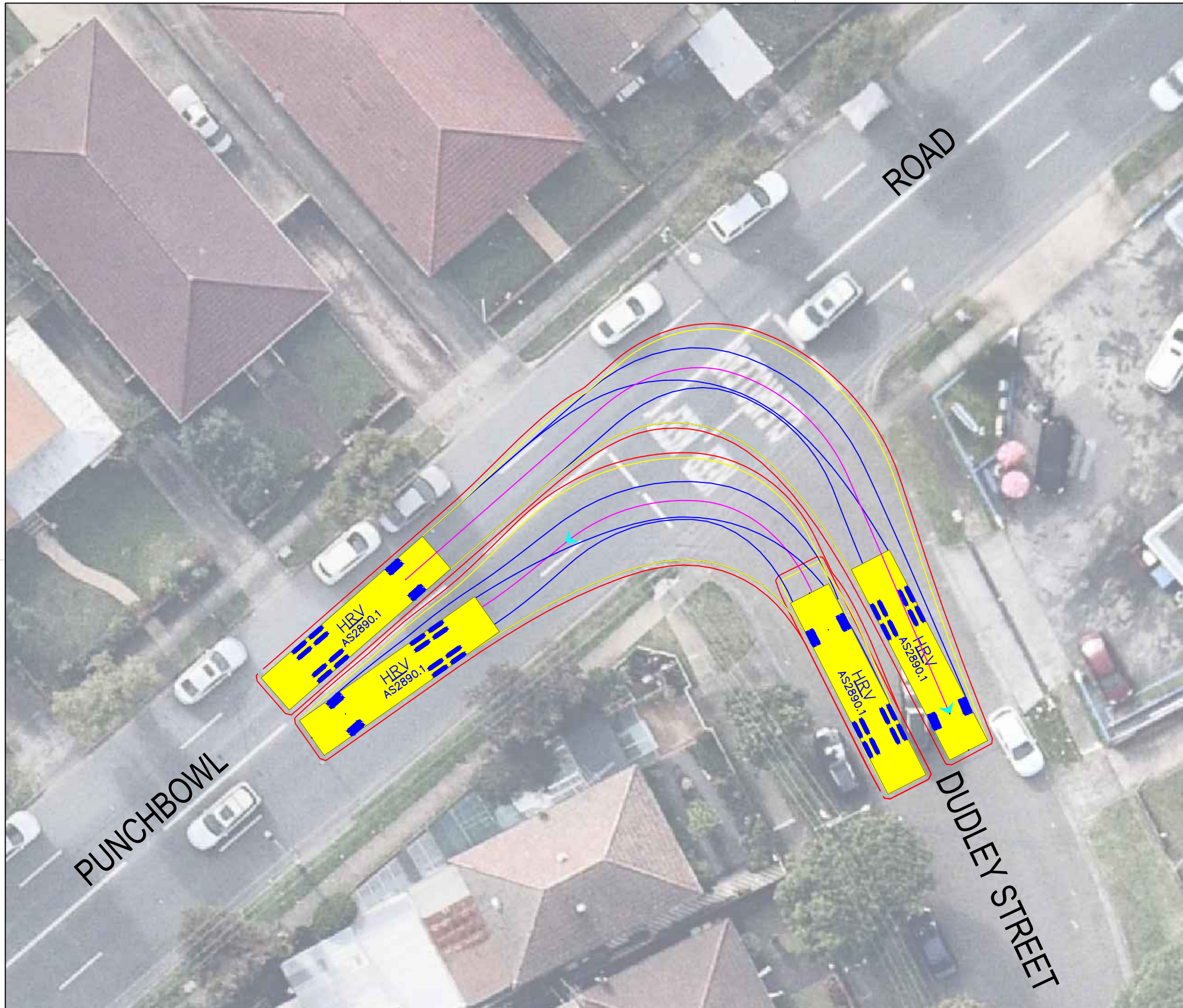
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS URUNGA PARADE / DEFOE STREET GATE M24 15.730U - HRV EXIT		

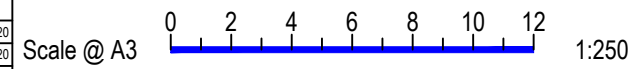
Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	28	Issue	003



- HRV
- Width : 12.50 meters
 - Track : 2.40
 - Lock to Lock Time : 6.0
 - Steering Angle : 36.6
 - Design Speed : 10 km/h

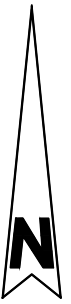
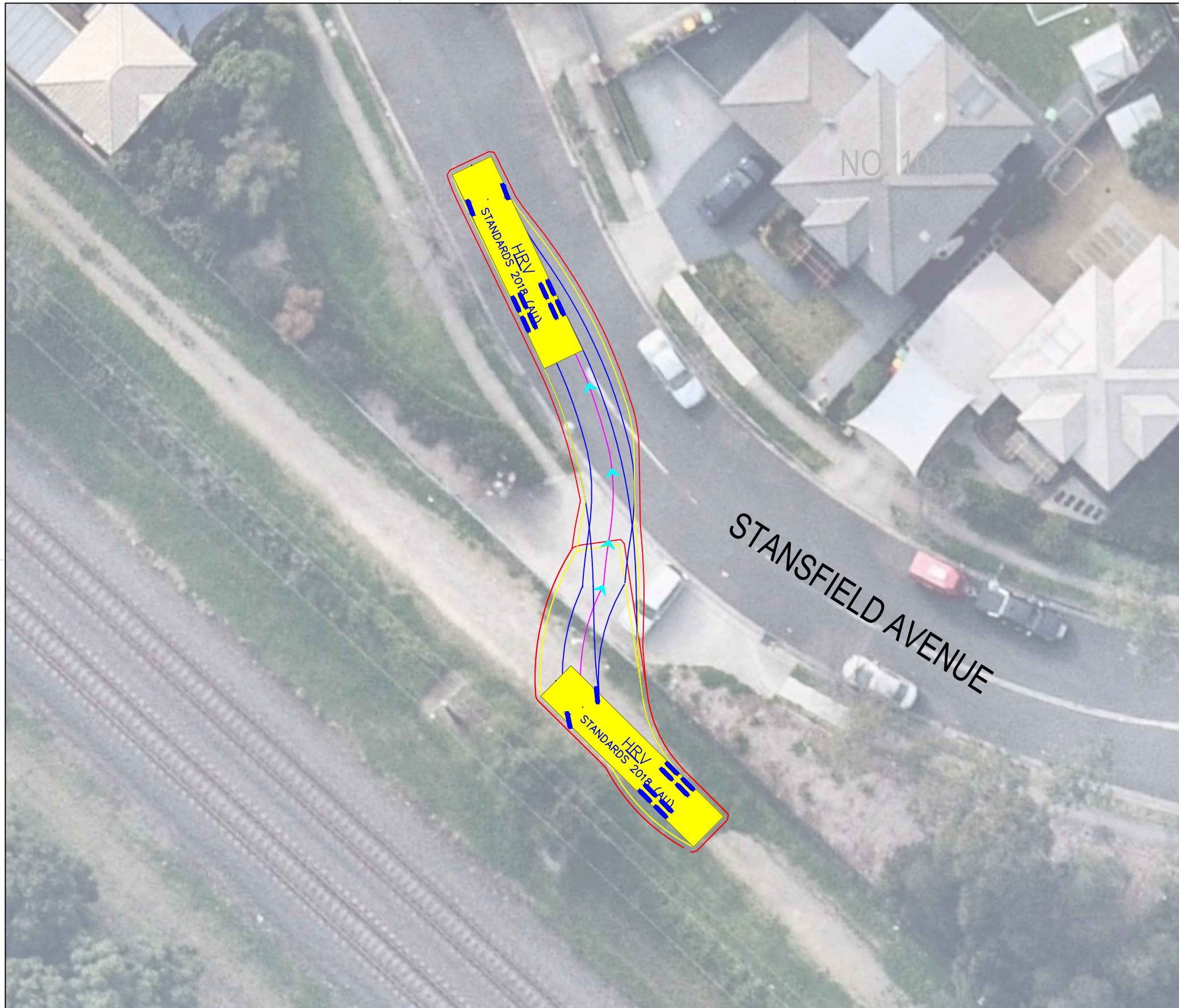
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

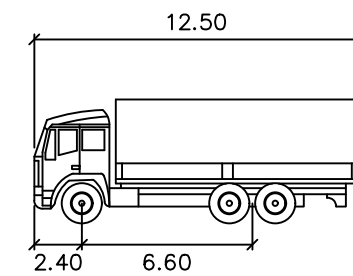


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS PUNCHBOWL ROAD / DUDLEY STREET GATE M24 16.121U HAULAGE ROUTE HRV		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	31	Date	02.02.2021
Issue					003



- Notes:**
- Manoeuvre occupies opposing travel lane



HRV

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

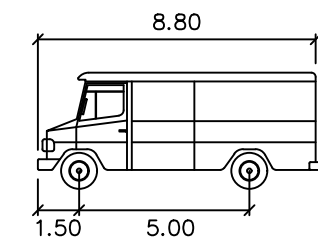
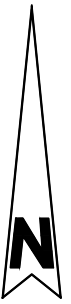
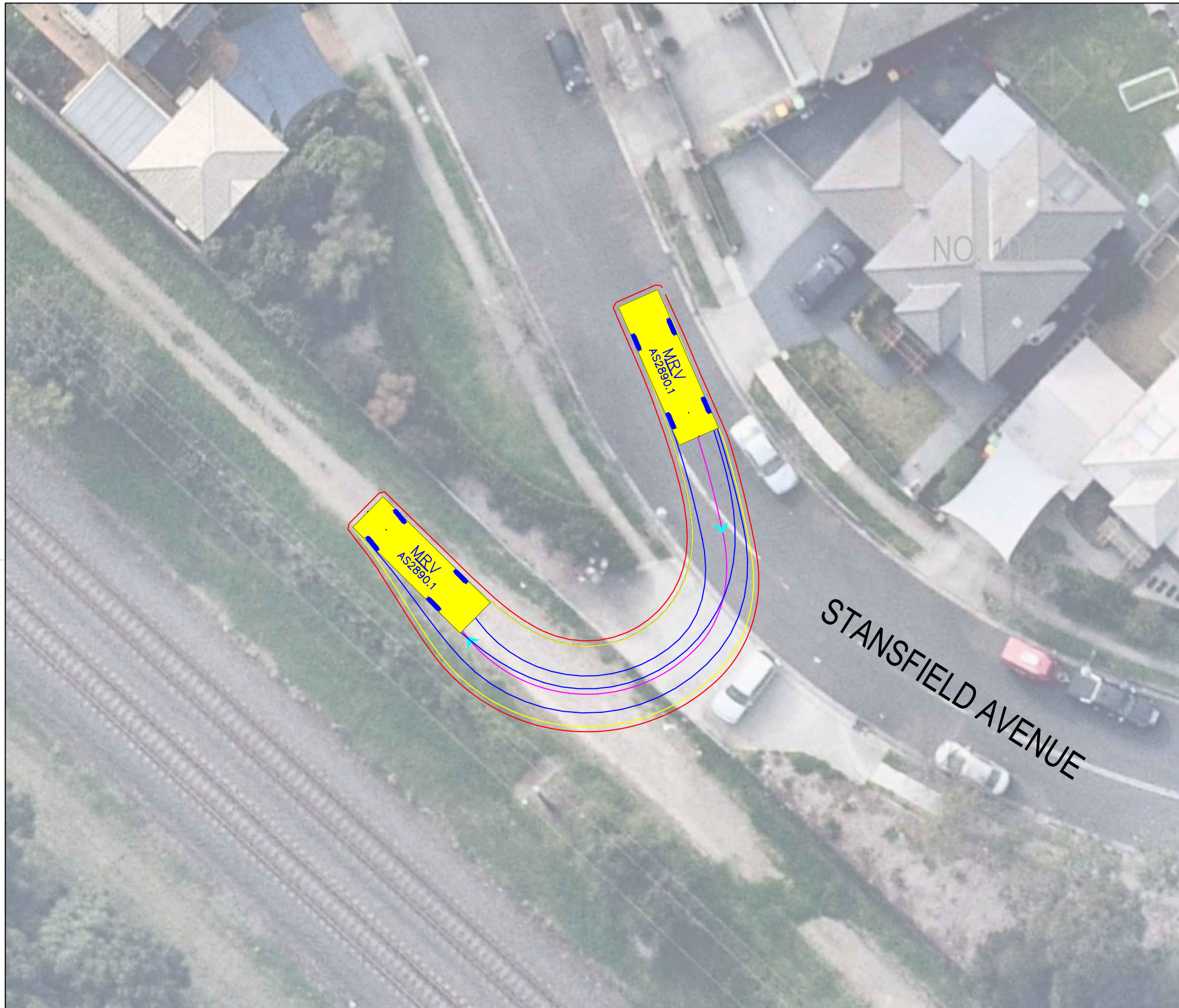
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS STANSFIELD AVENUE GATE M24 17.024U - HRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	33	Issue	003

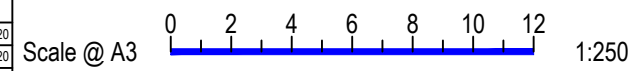


MRV

	units
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

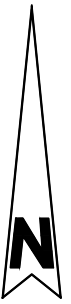
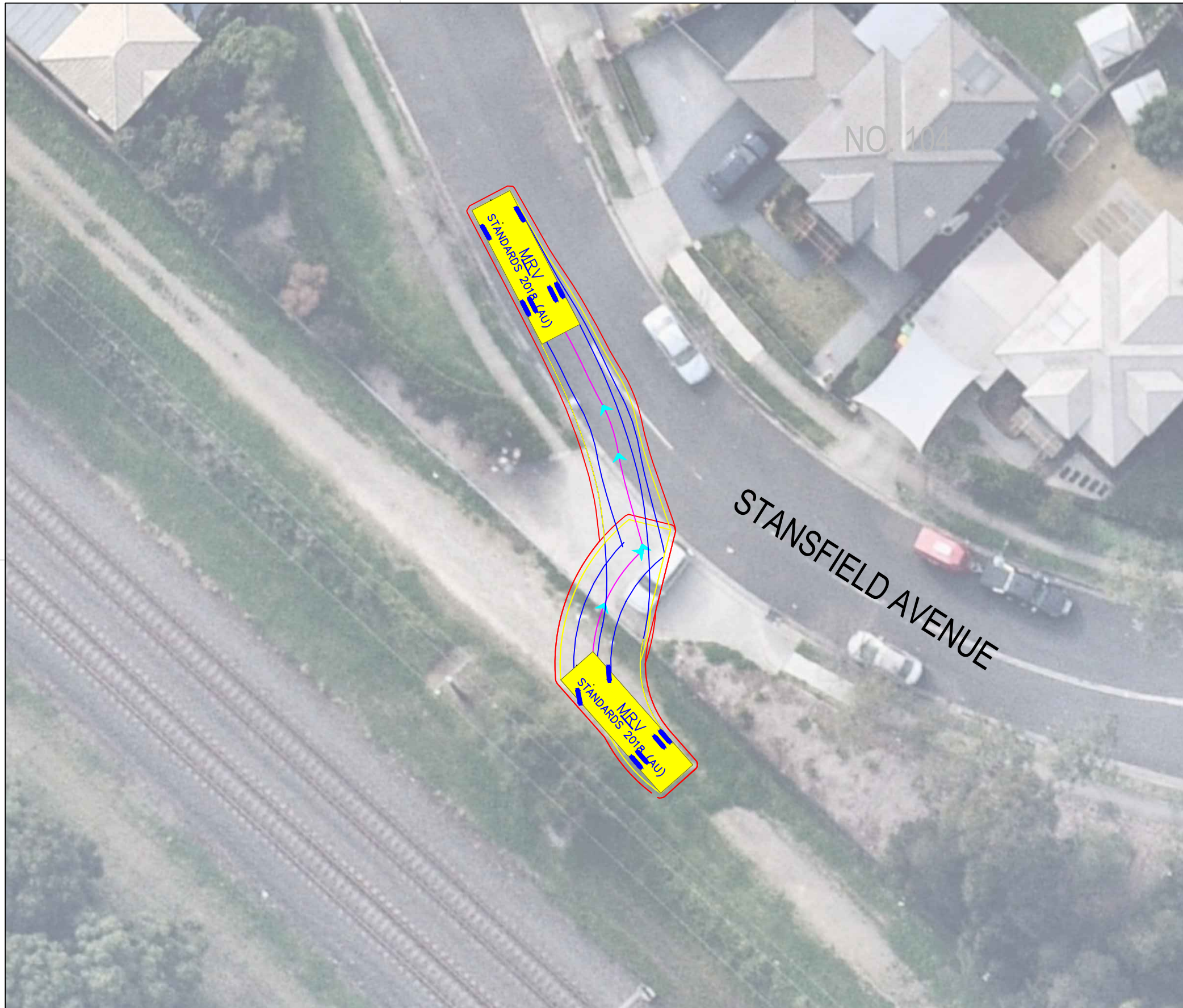
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

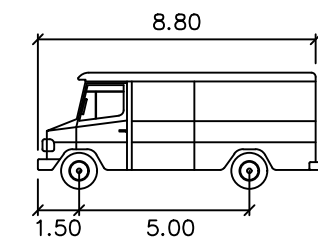


Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS STANSFIELD AVENUE GATE M24 17.024U - MRV ENTRY		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	34	Date	02.02.2021
Issue					003



- Notes:**
- Manoeuvre partially occupies opposing travel lane

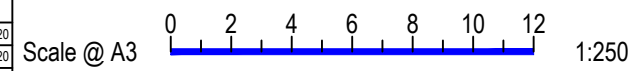


MRV

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

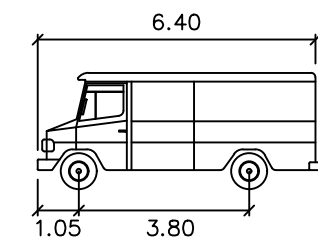
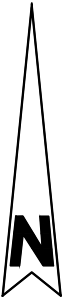
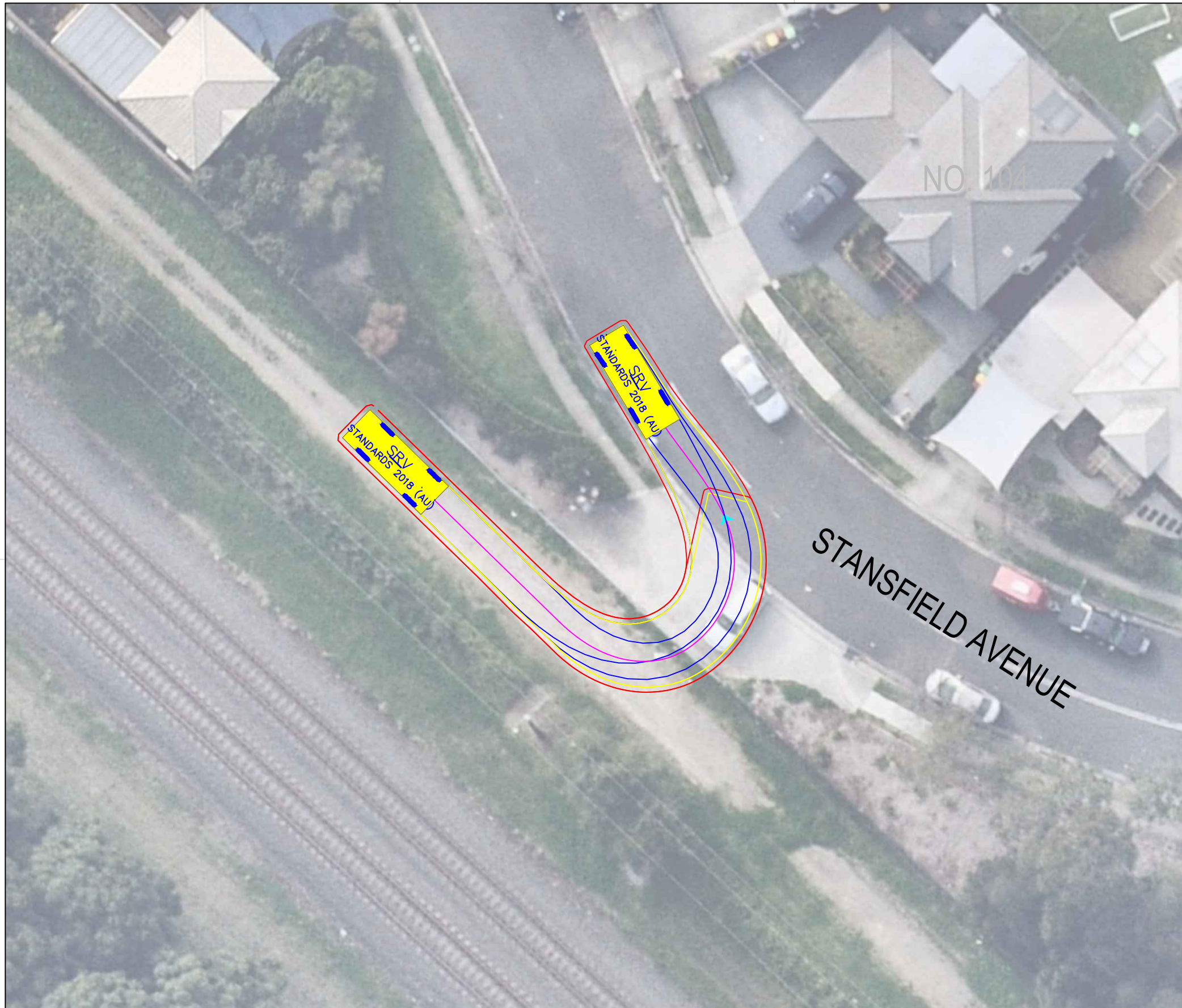
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS STANSFIELD AVENUE GATE M24 17.024U - MRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	35	Date	02.02.2021
Issue					003

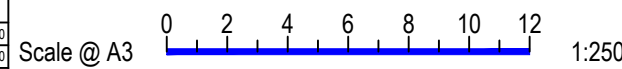


SRV

	meters
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

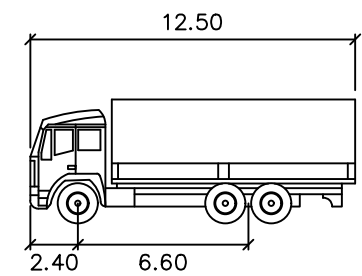
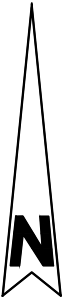
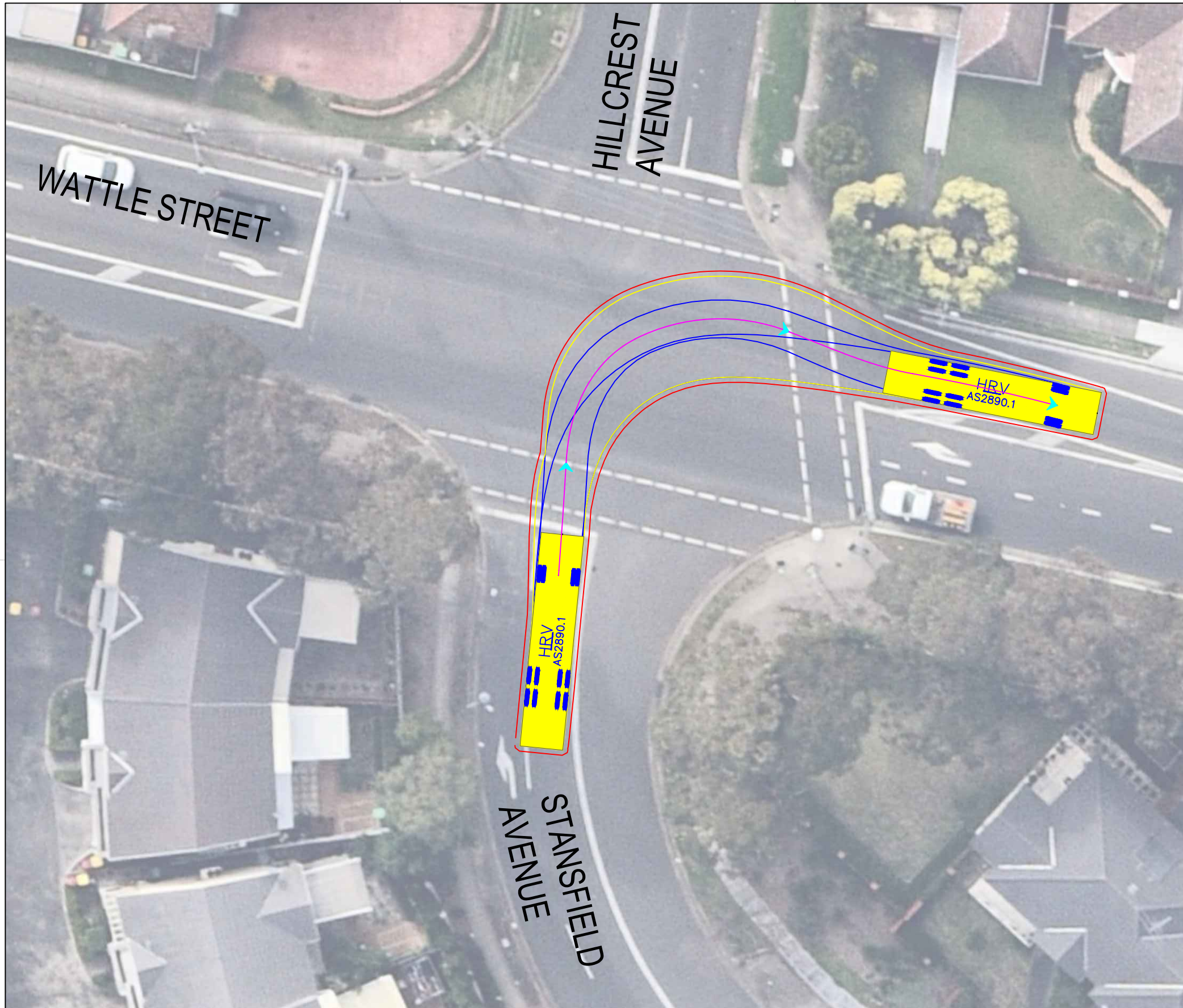
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS STANSFIELD AVENUE GATE M24 17.024U - SRV EXIT		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	36	Date	02.02.2021
		Issue			003

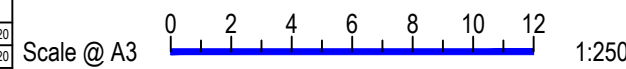


HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Design Speed	: 10 km/h

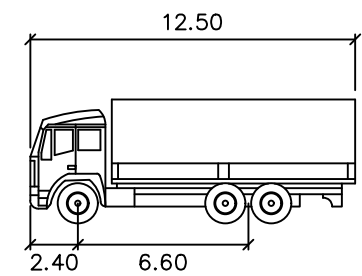
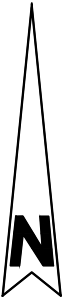
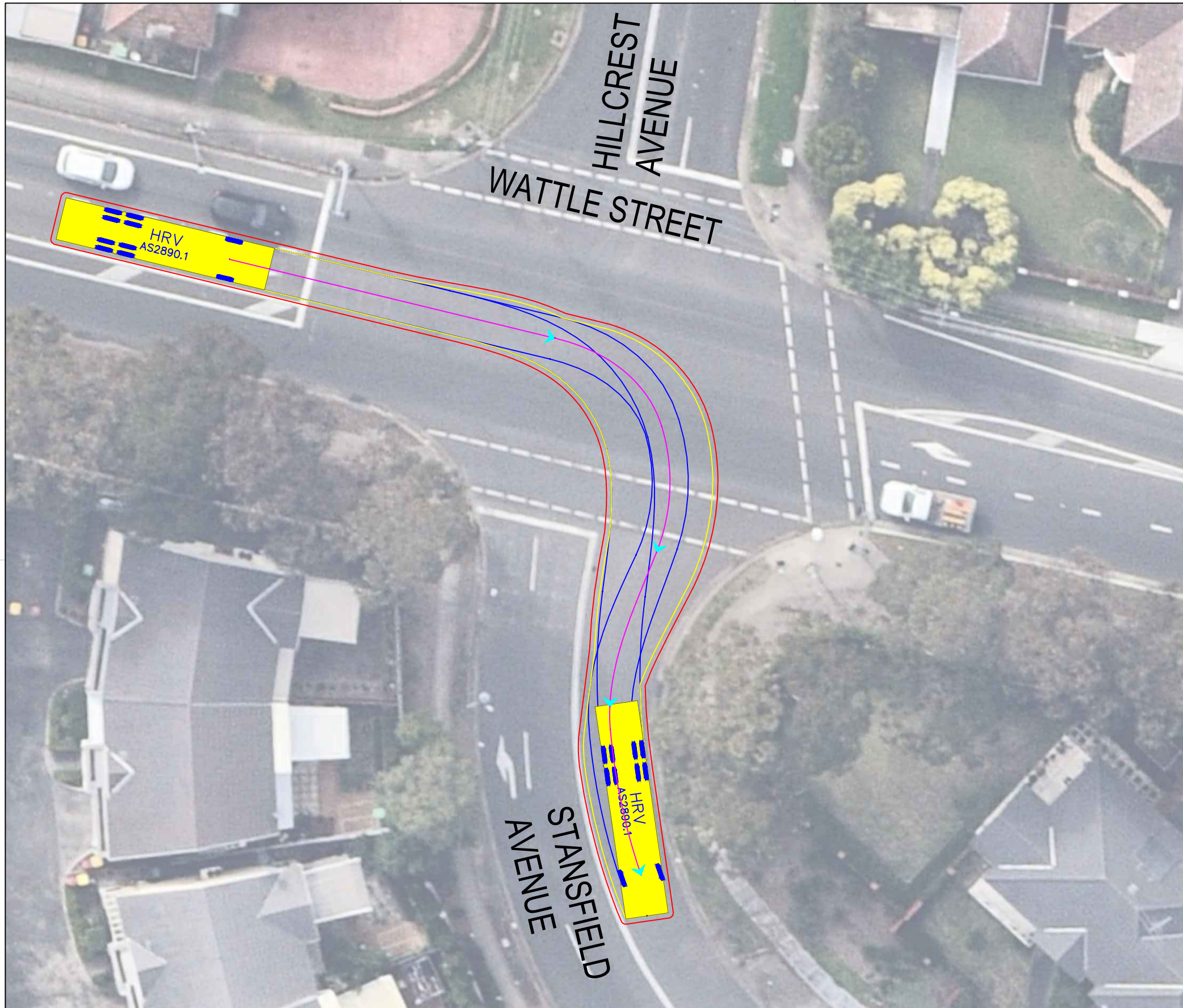
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS		
Title	SWEPT PATH ANALYSIS WATTLE STREET / STANSFIELD AVENUE GATE M24 17.024U HAULAGE ROUTE HRV		

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION		Date	02.02.2021		
Project Number	P3519	Sheet Number	37	Issue	003

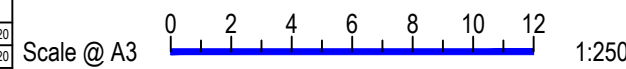


HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6
 Design Speed : 10 km/h

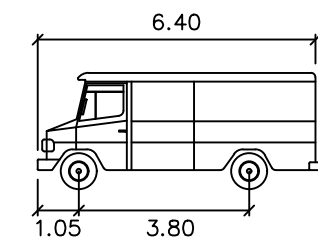
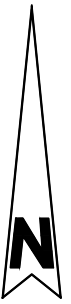
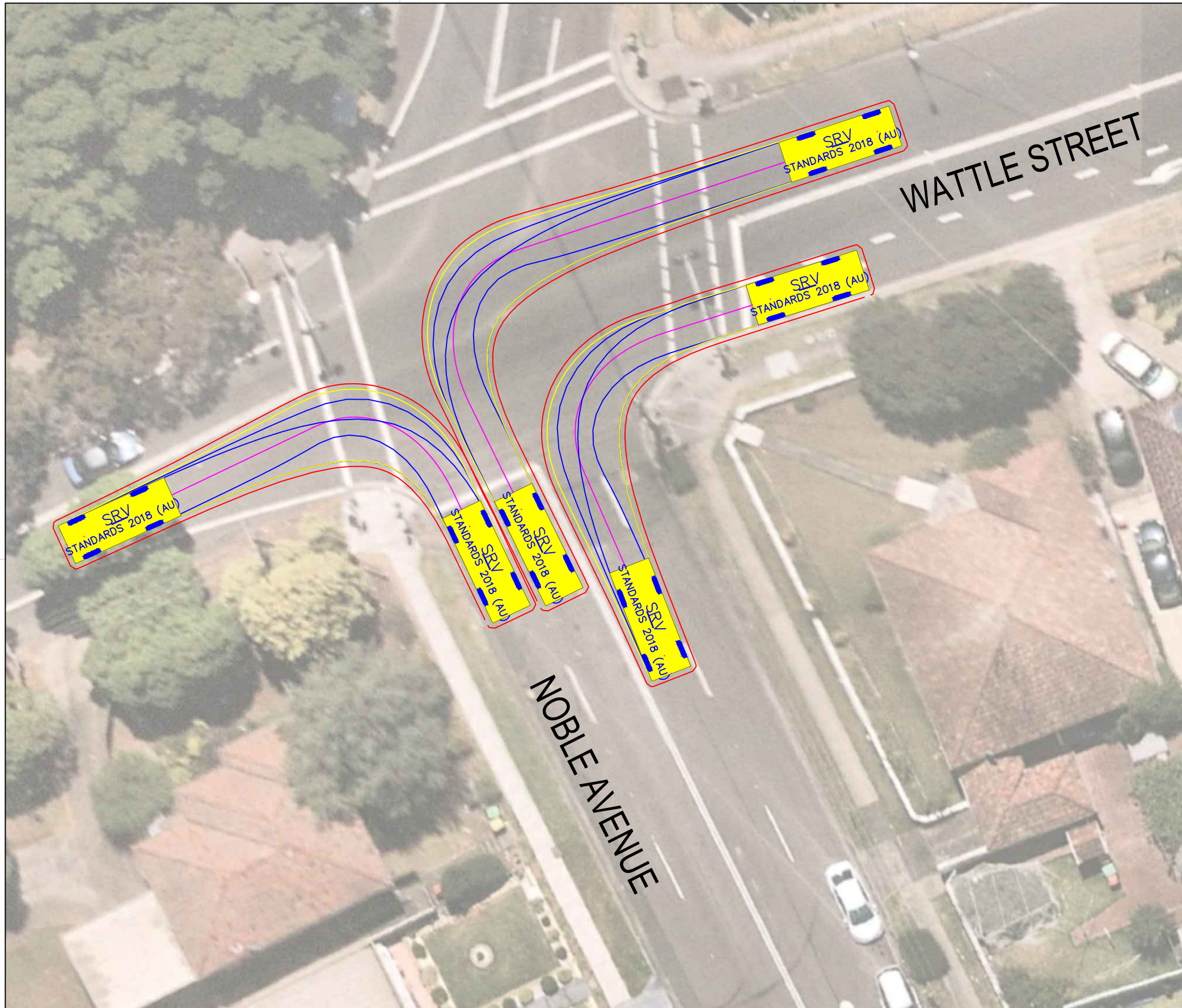
DESIGN VEHICLE

Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021



Project	JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS
Title	SWEPT PATH ANALYSIS WATTLE STREET / STANSFIELD AVENUE GATE M24 17.024U HAULAGE ROUTE HRV

Design	M.H	Drawn	K.W	Checked	S.P
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	38	Date	02.02.2021
				Issue	003



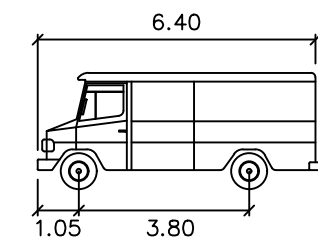
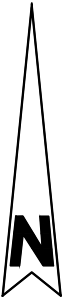
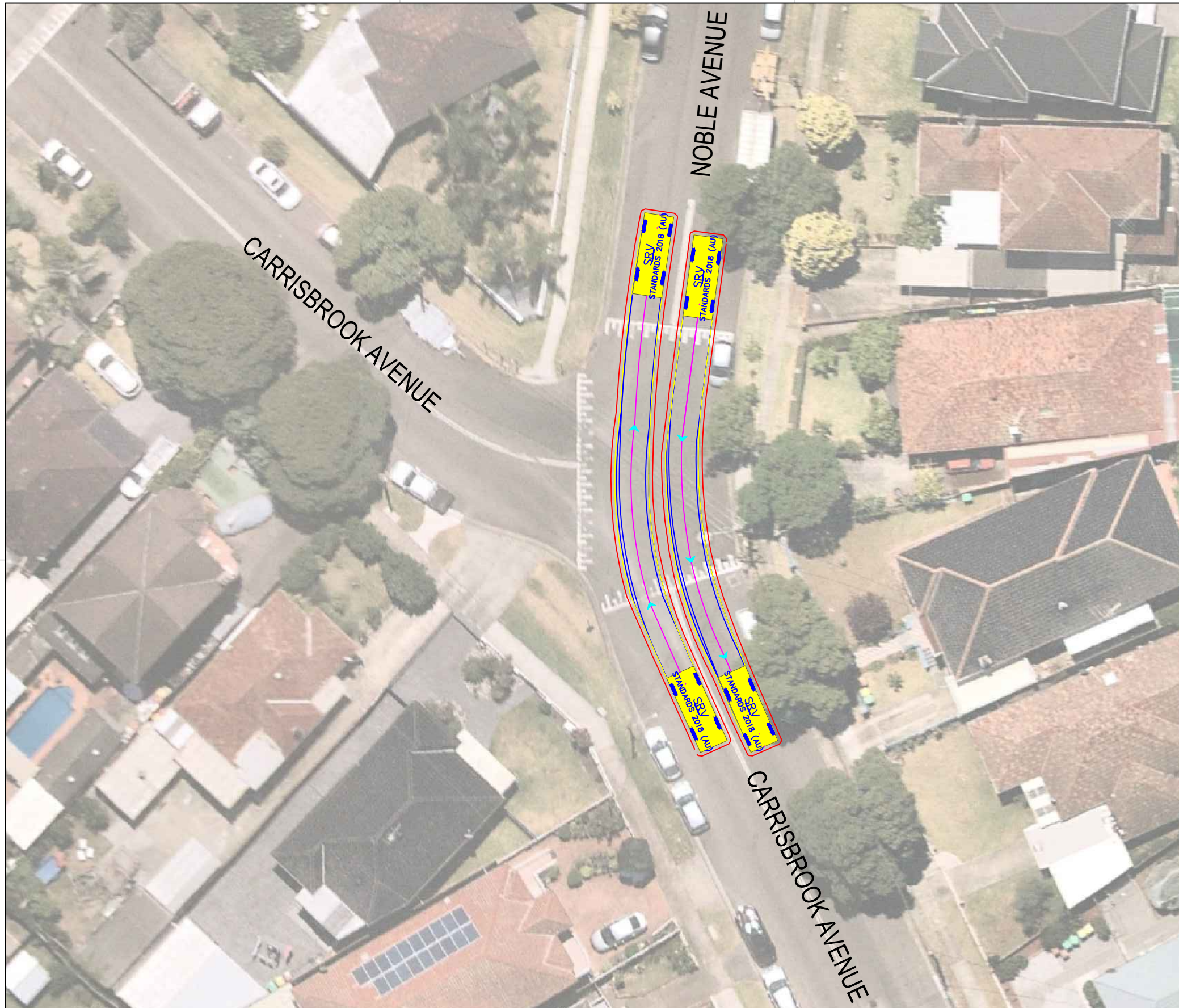
SRV

	meters
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS WATTLE STREET AND NOBLE AVENUE GATE PB-3 - SRV HAULAGE ROUTE	Project Number P3519	Sheet Number 39	Date 02.02.2021
			Issue 003



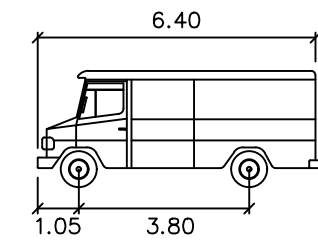
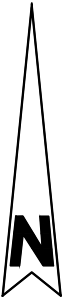
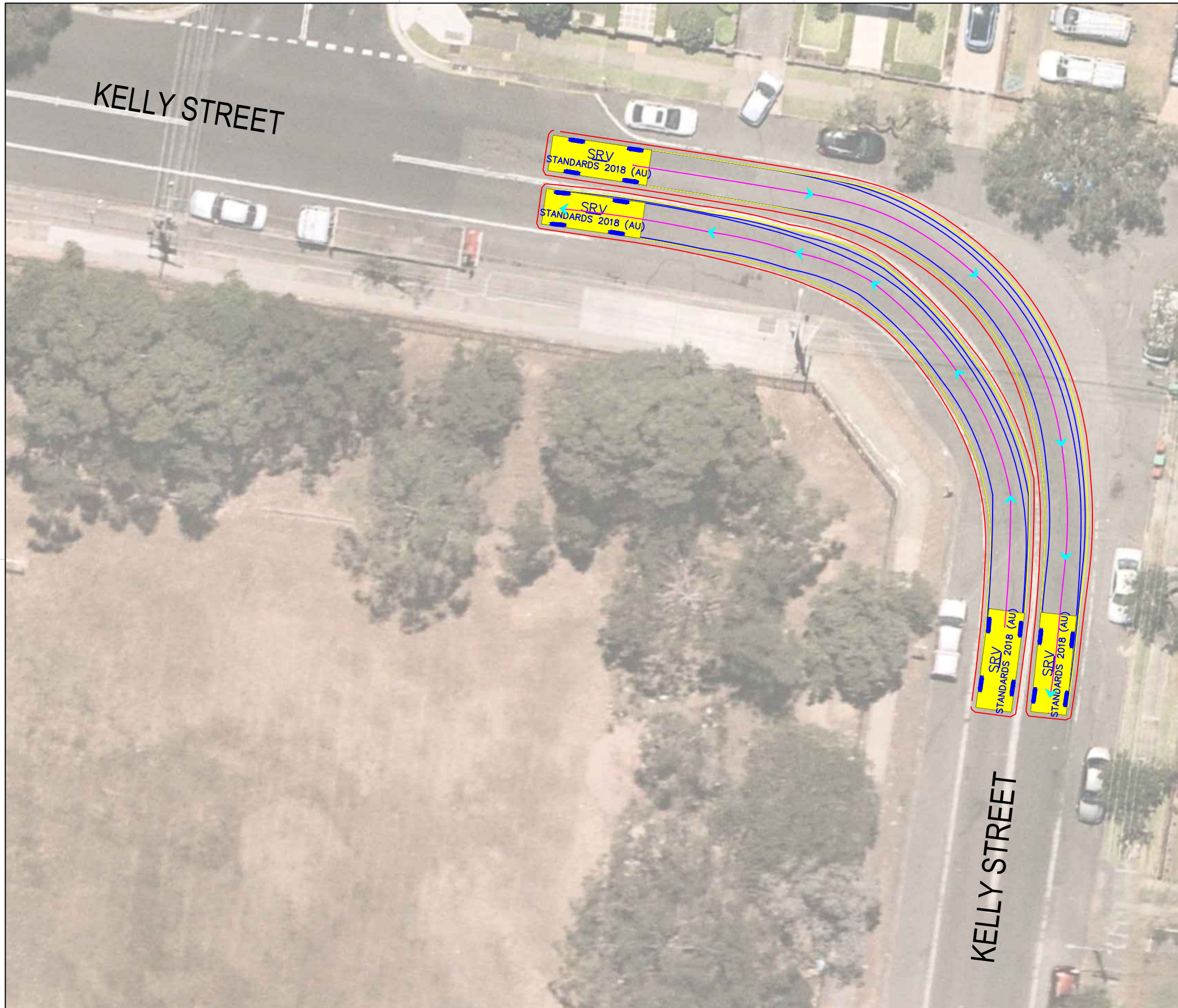
SRV

	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

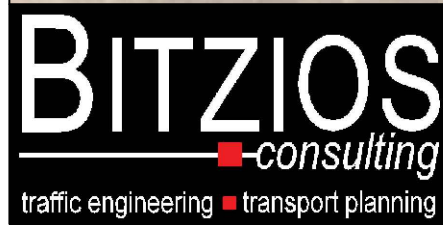
Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS CARRISBROOK AVENUE AND NOBLE AVENUE GATE PB-3 - SRV HAULAGE ROUTE	Project Number P3519	Sheet Number 40	Date 02.02.2021 Issue 003



SRV

	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

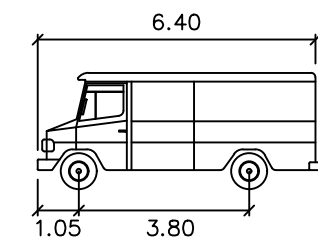
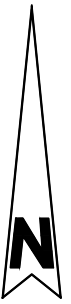
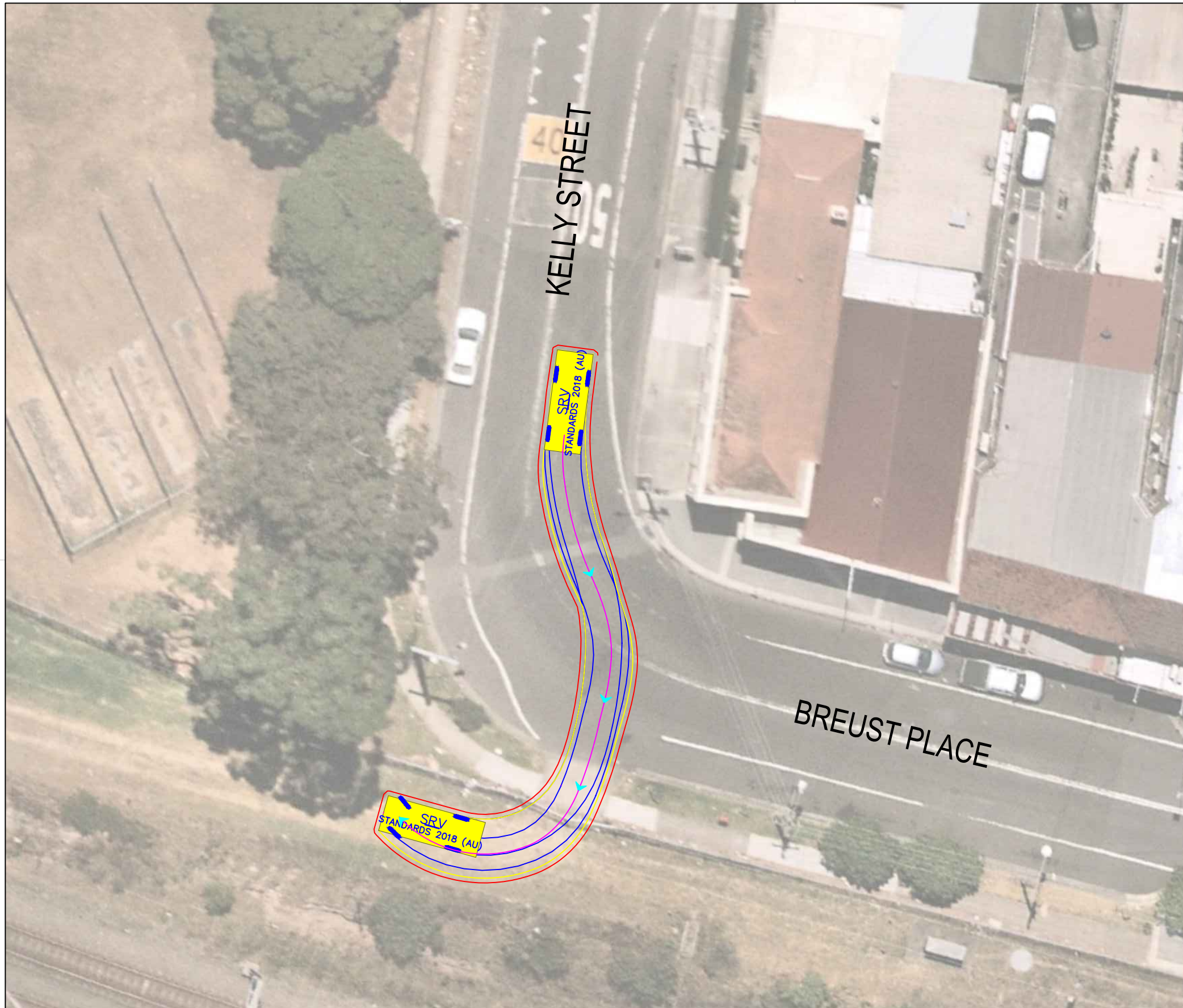
DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS KELLY STREET GATE PB-3 - SRV HAULAGE ROUTE	Project Number P3519	Sheet Number 41	Date 02.02.2021 Issue 003



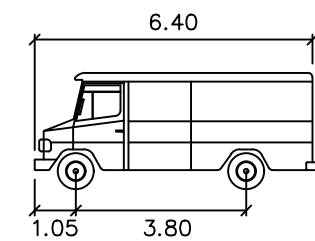
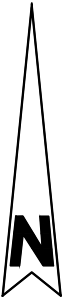
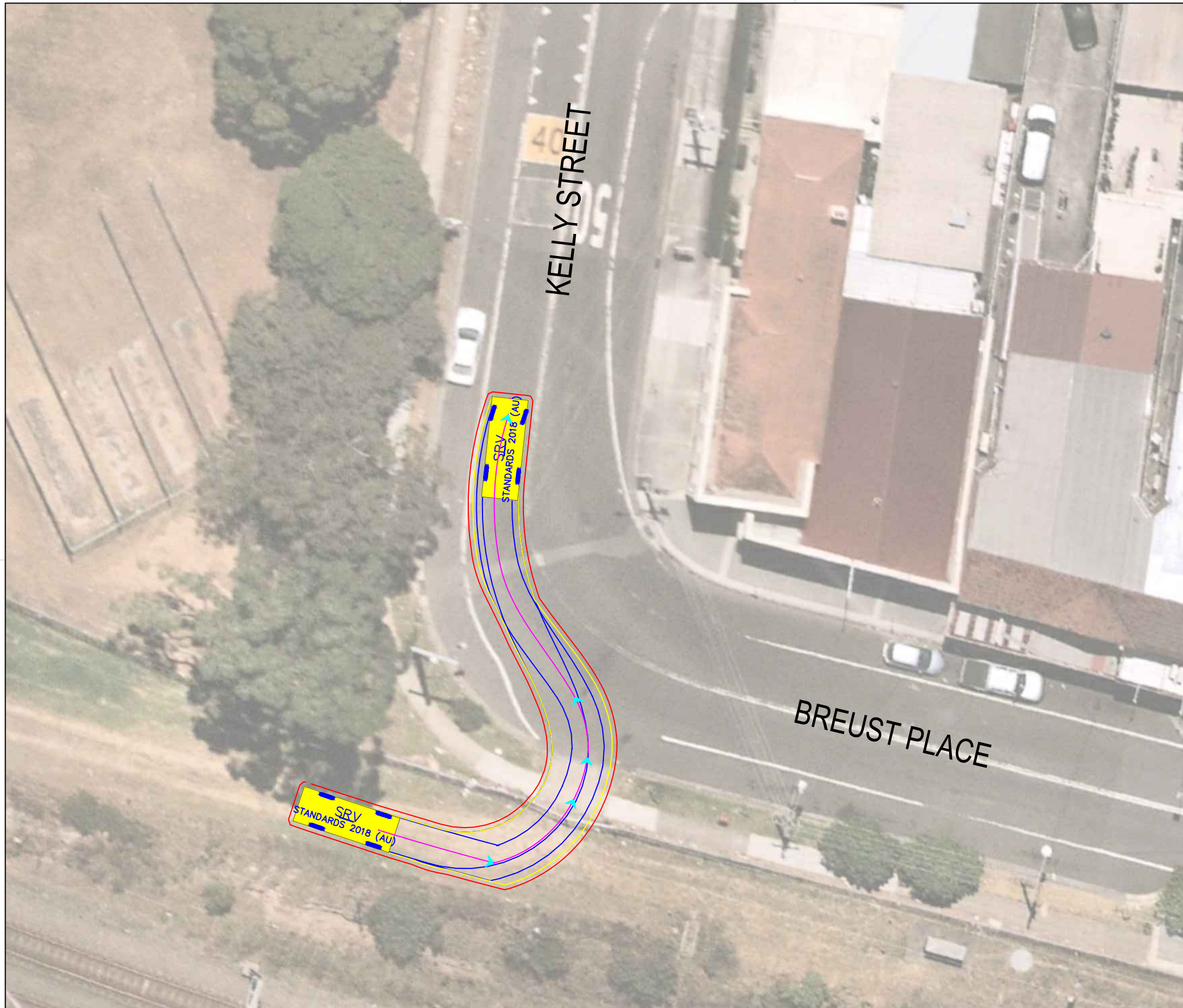
SRV

	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS KELLY STREET GATE PB-3 - SRV GATE ENTRY	Project Number P3519	Sheet Number 42	Date 02.02.2021
			Issue 003



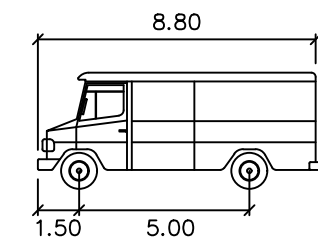
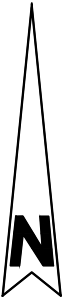
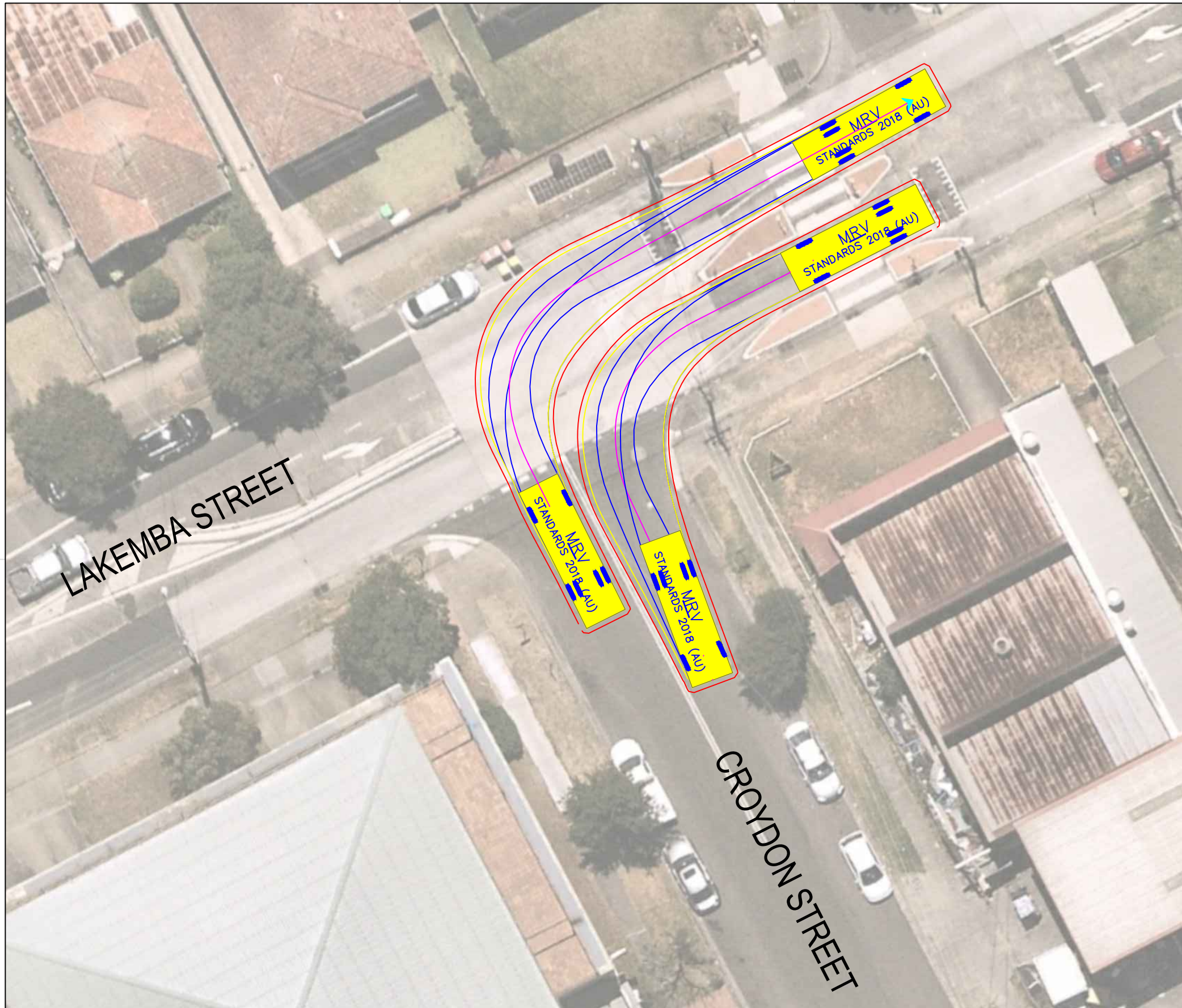
SRV

	meters
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.1
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS KELLY STREET GATE PB-3 - SRV GATE EXIT	Project Number P3519	Sheet Number 43	Date 02.02.2021 Issue 003



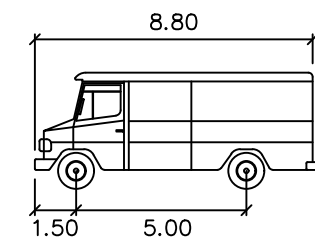
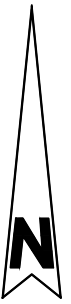
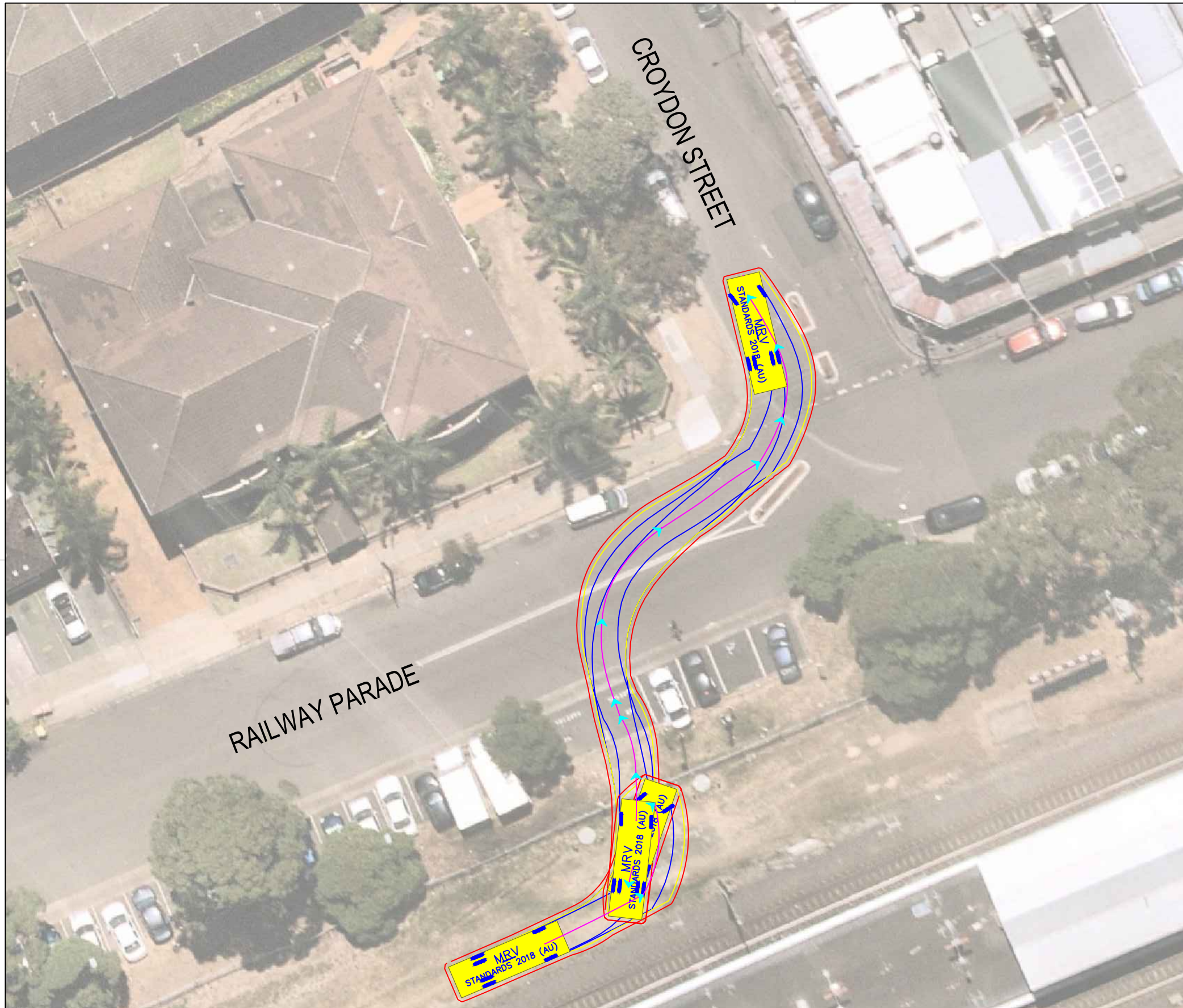
MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS LAKEMBA STREET AND CROYDON STREET GATE LA-1 - MRV HAULAGE ROUTE	Project Number P3519	Sheet Number 44	Date 02.02.2021
	Issue 003		



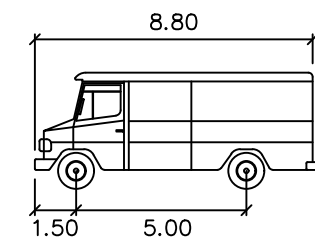
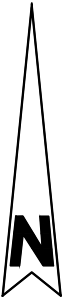
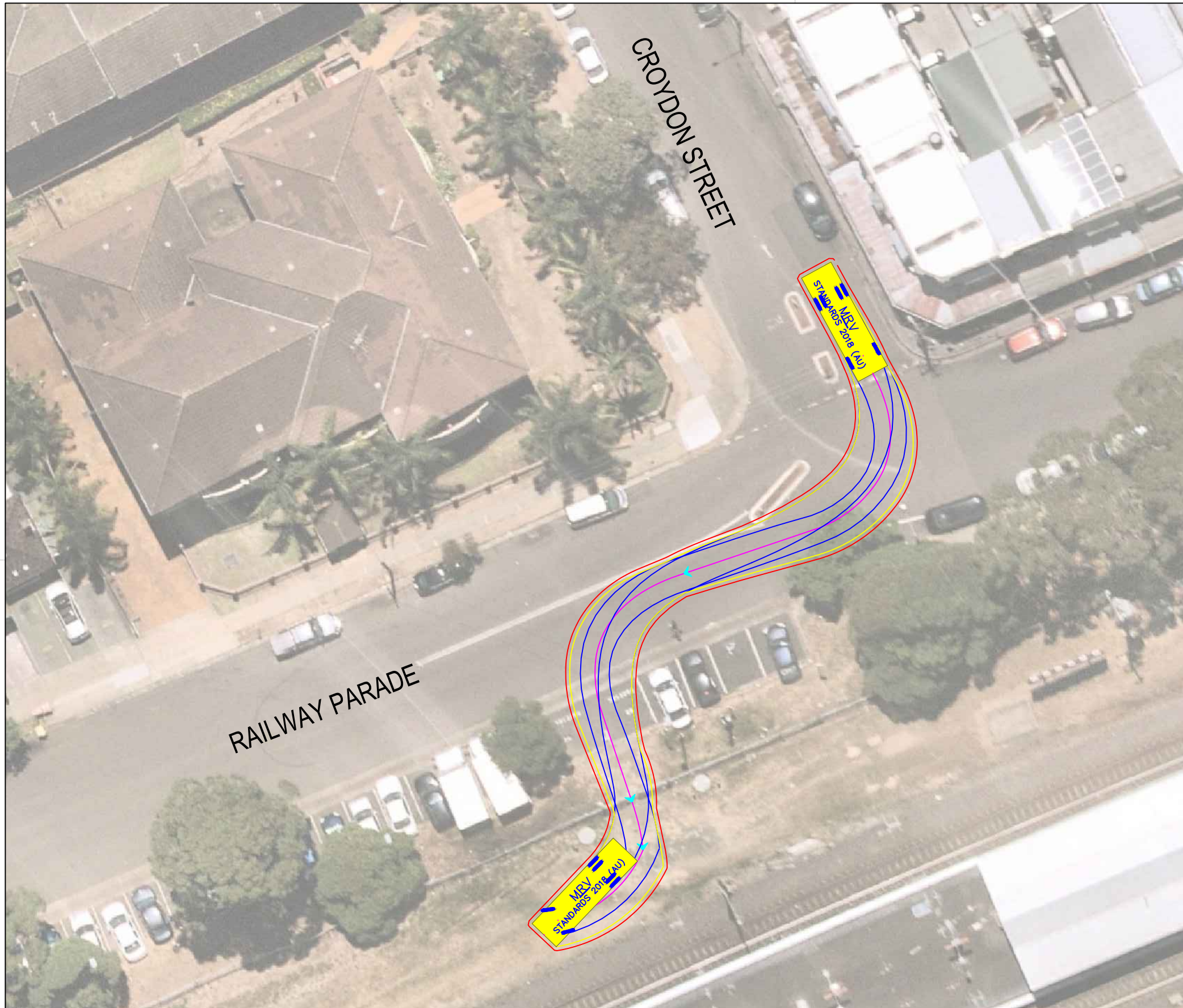
MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS LAKEMBA STREET AND CROYDON STREET GATE LA-1 - MRV ENTRY	Project Number P3519	Sheet Number 45	Date 02.02.2021 Issue 003



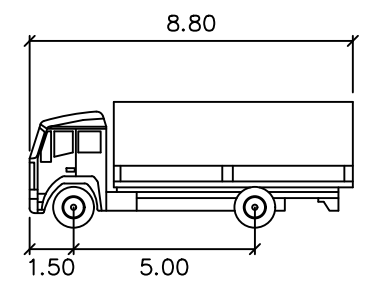
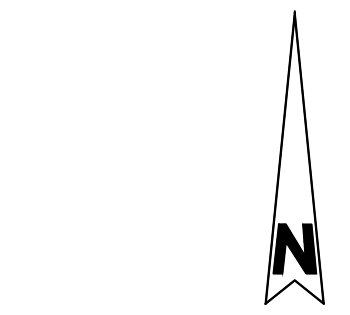
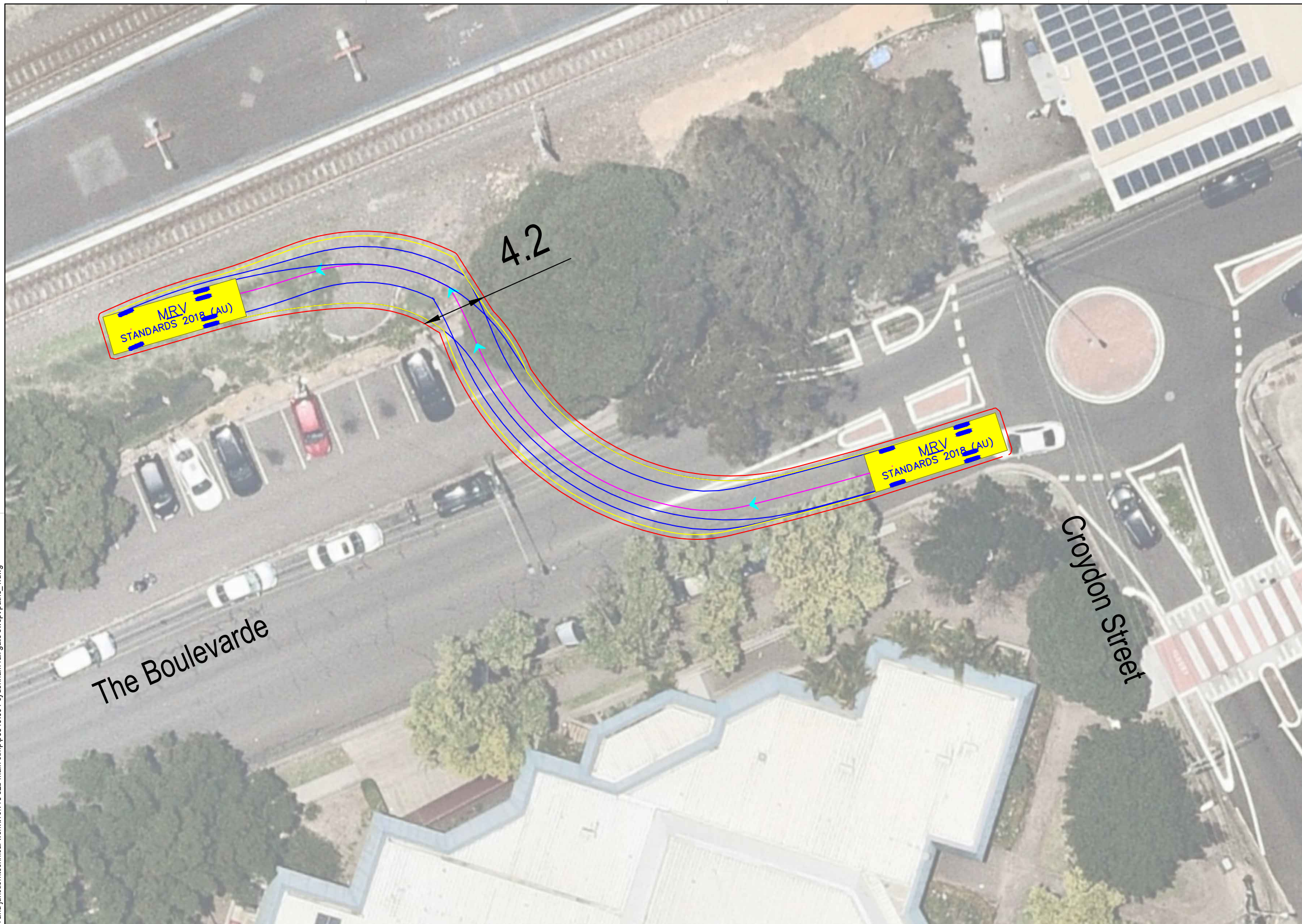
MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Design Speed	: 10 km/h

DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	SWEPT PATH ANALYSIS	K.W	15.09.2020
001	UPDATE TO METRO REVIEW	K.W	14.10.2020
003	ADD 2 ADDITIONAL GATES	M.H	02.02.2021

Project JHLORJV SYDENHAM STATION AND JUNCTION SYDENHAM TO BANKSTOWN EARLY WORKS	Design M.H	Drawn K.W	Checked A.G
	NOT FOR CONSTRUCTION		
Title SWEPT PATH ANALYSIS LAKEMBA STREET AND CROYDON STREET GATE LA-1 - MRV EXIT	Project Number P3519	Sheet Number 46	Date 02.02.2021 Issue 003

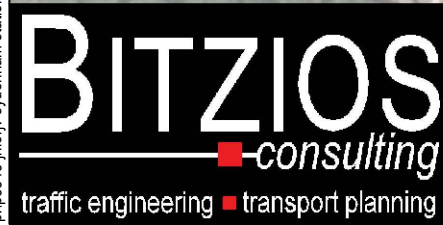


MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

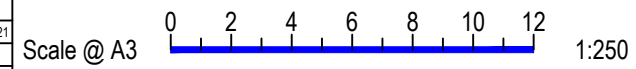
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical\work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

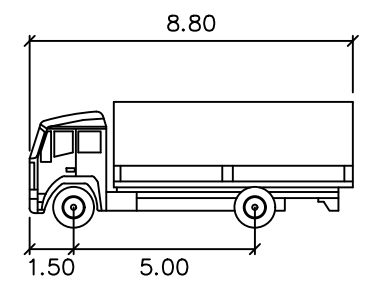
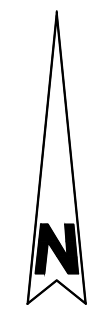
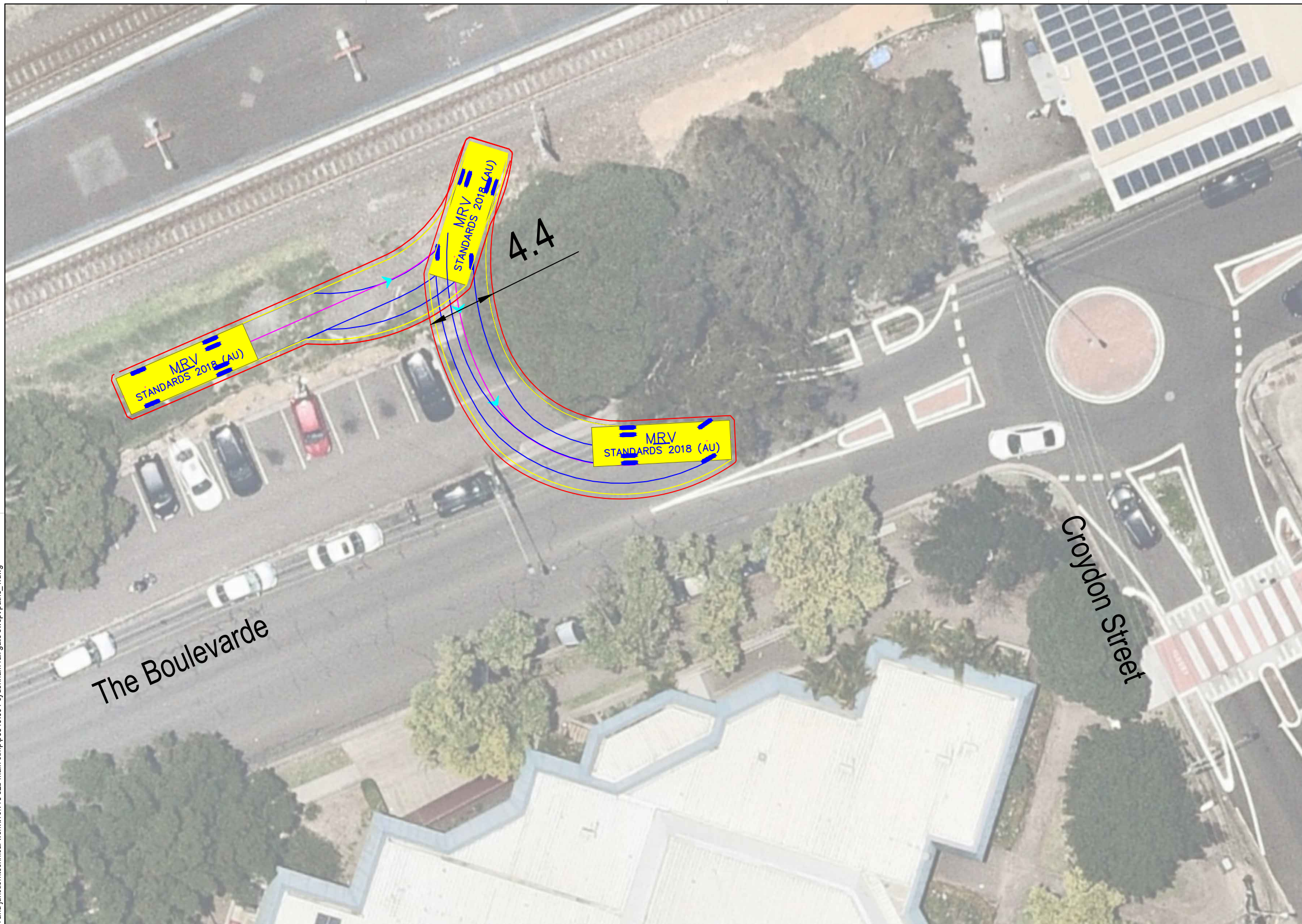
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.533D - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	1	001

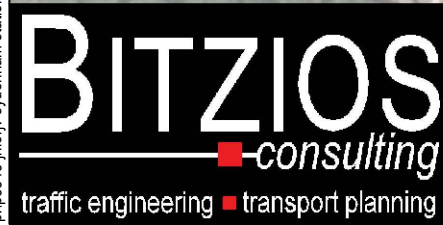


MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

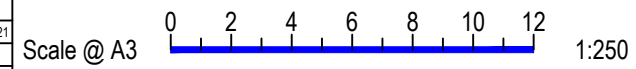
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

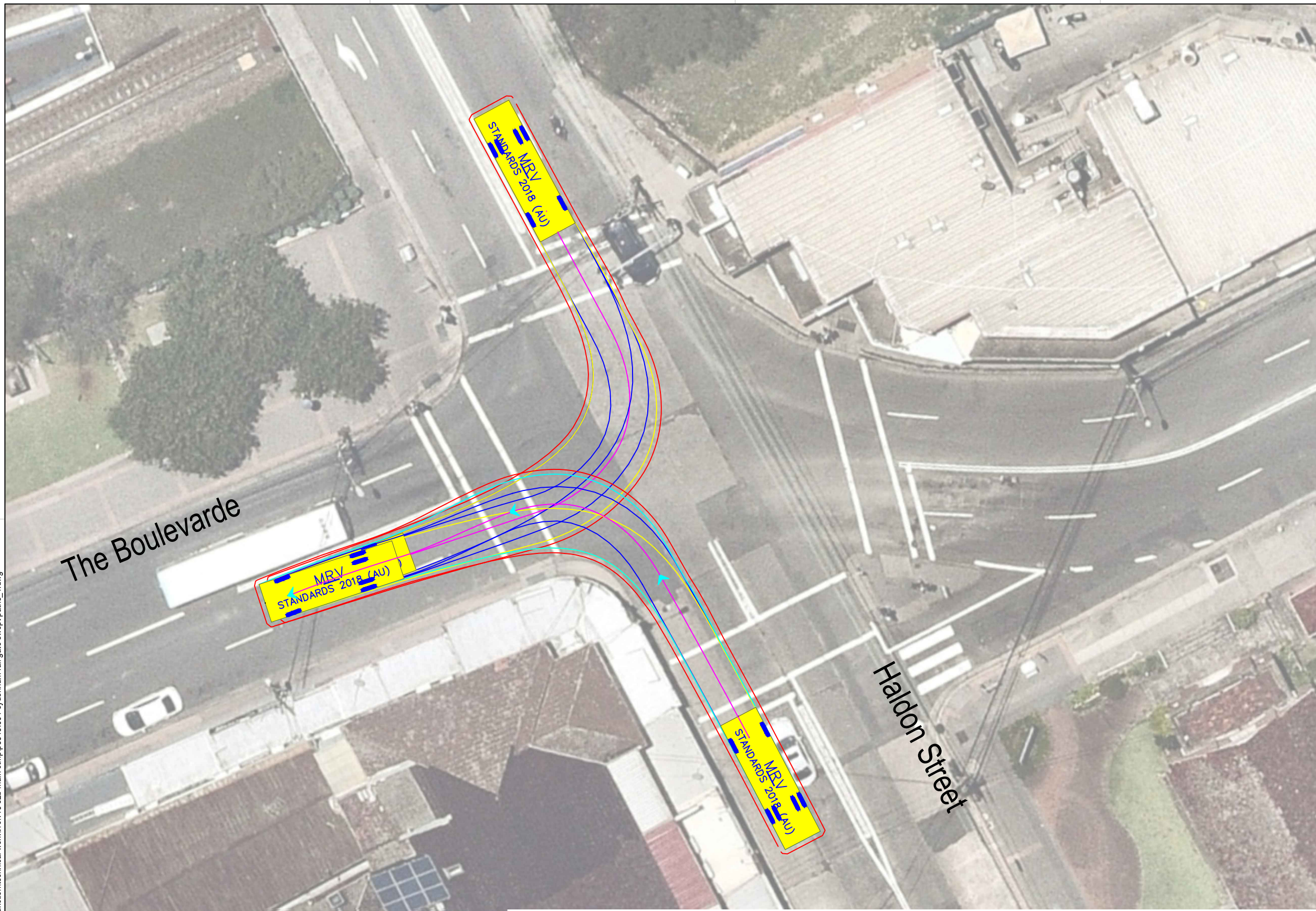
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



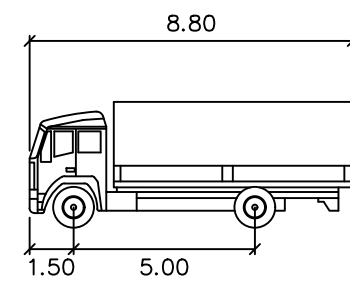
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.533D - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
	2	001



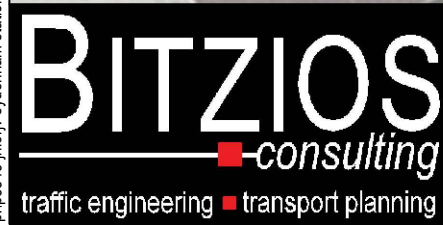
Note: Left turn must begin from straddling both approach lanes



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

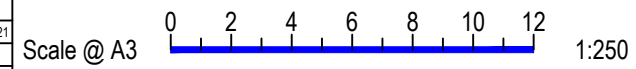
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



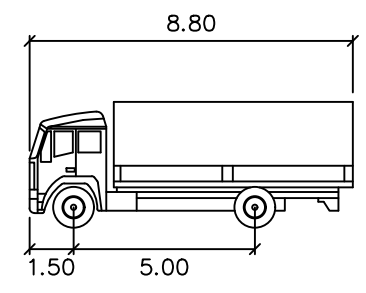
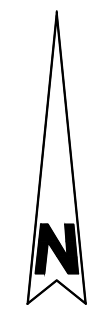
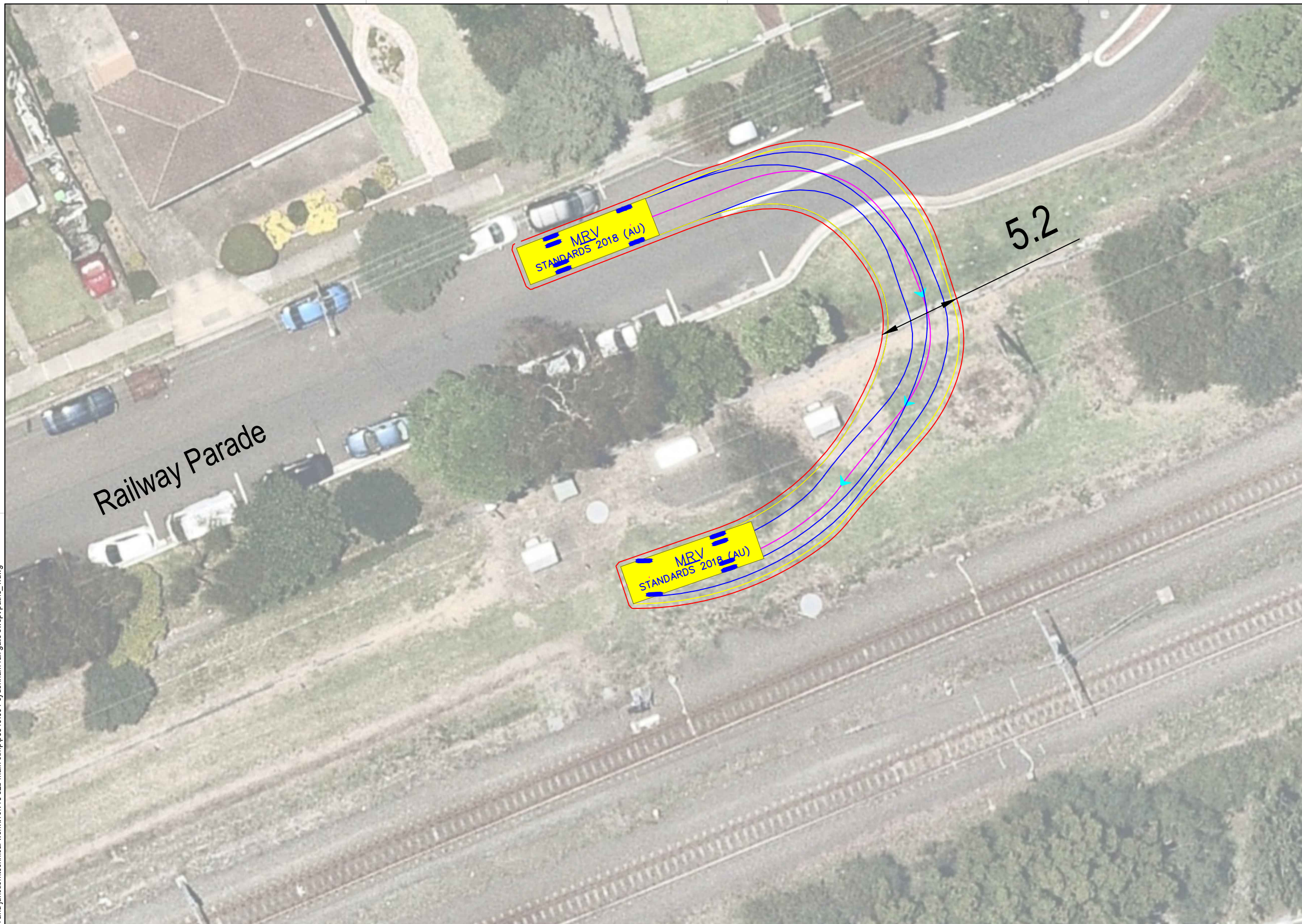
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project	JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP
Title	SWEPT PATH ANALYSIS GATE M24 14.533D - HAULAGE ROUTE MRV

Design	M.H	Drawn	M.H	Checked	A.G	
NOT FOR CONSTRUCTION						
					Date	22.02.2021
Project Number	P3519	Sheet Number	3	Issue	001	



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

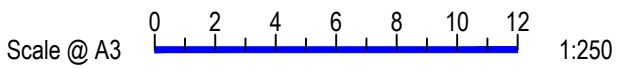
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

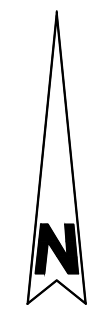
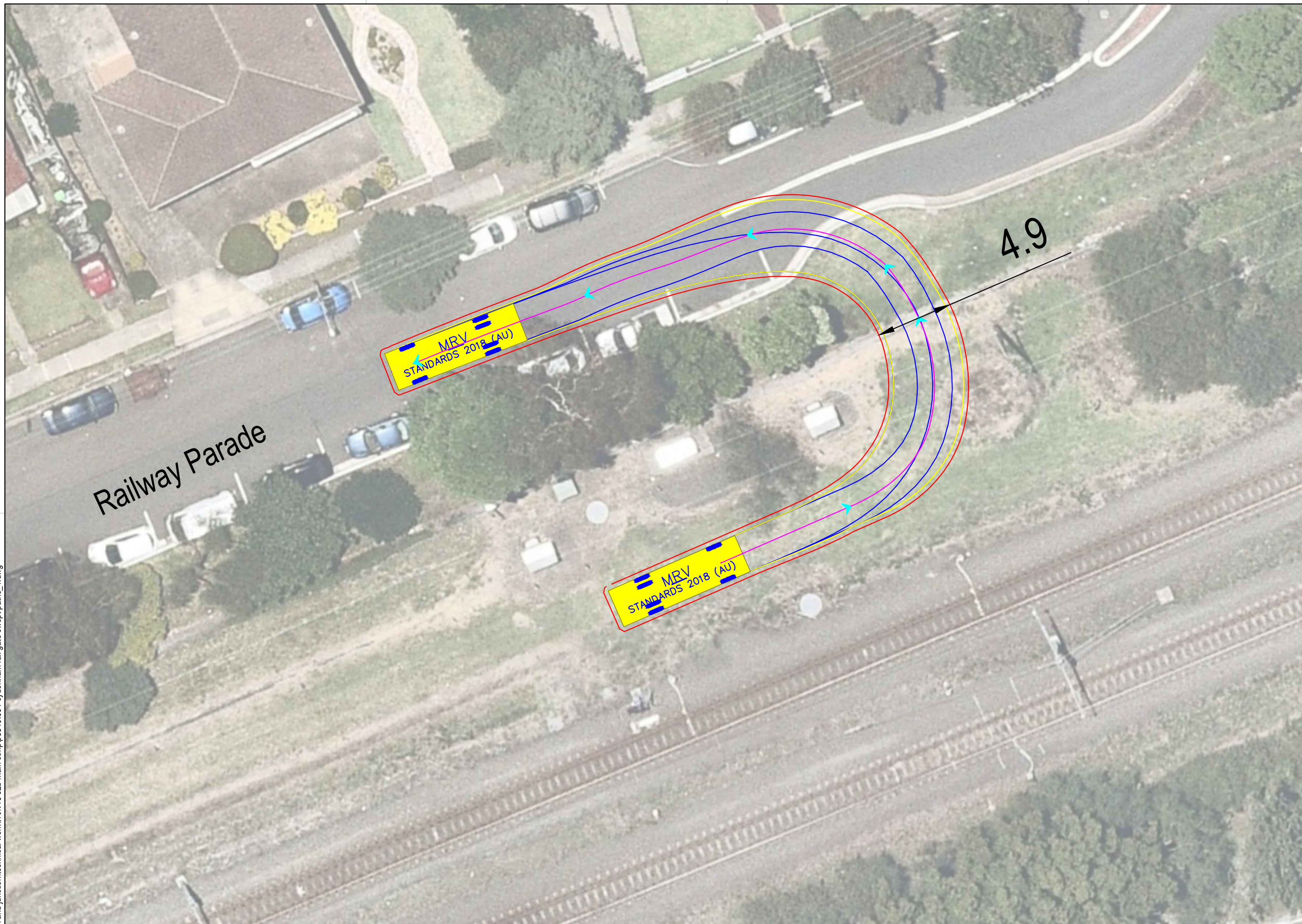
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



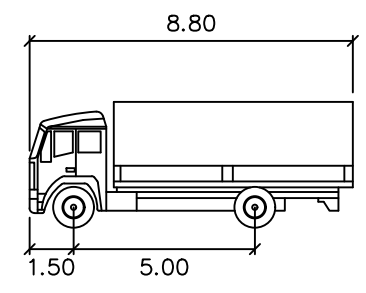
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.867U - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
4	4	001



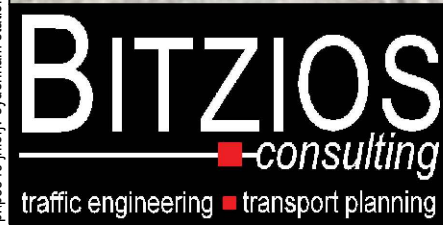
Note: Requires occupation of one (1) parking space west of gate



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

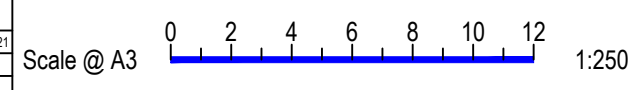
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



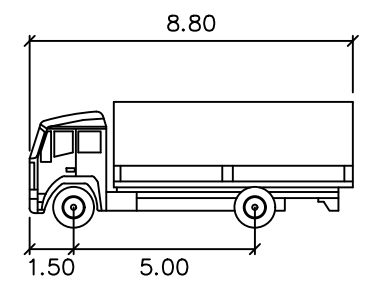
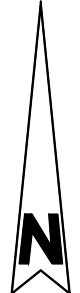
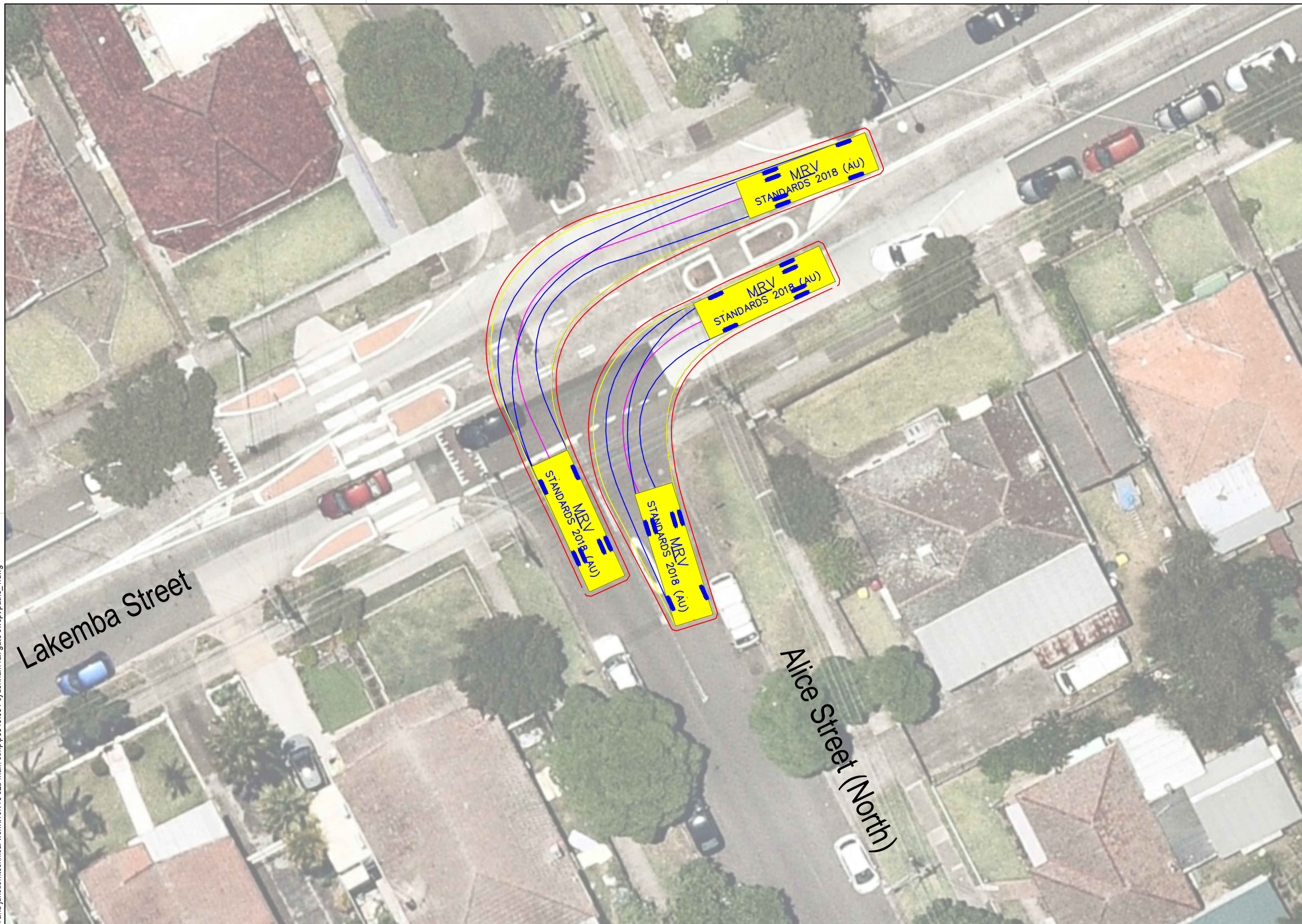
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 14.867U - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	5	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

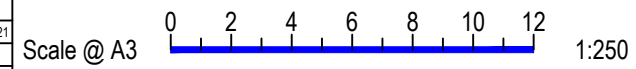
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

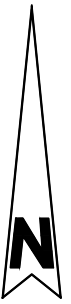
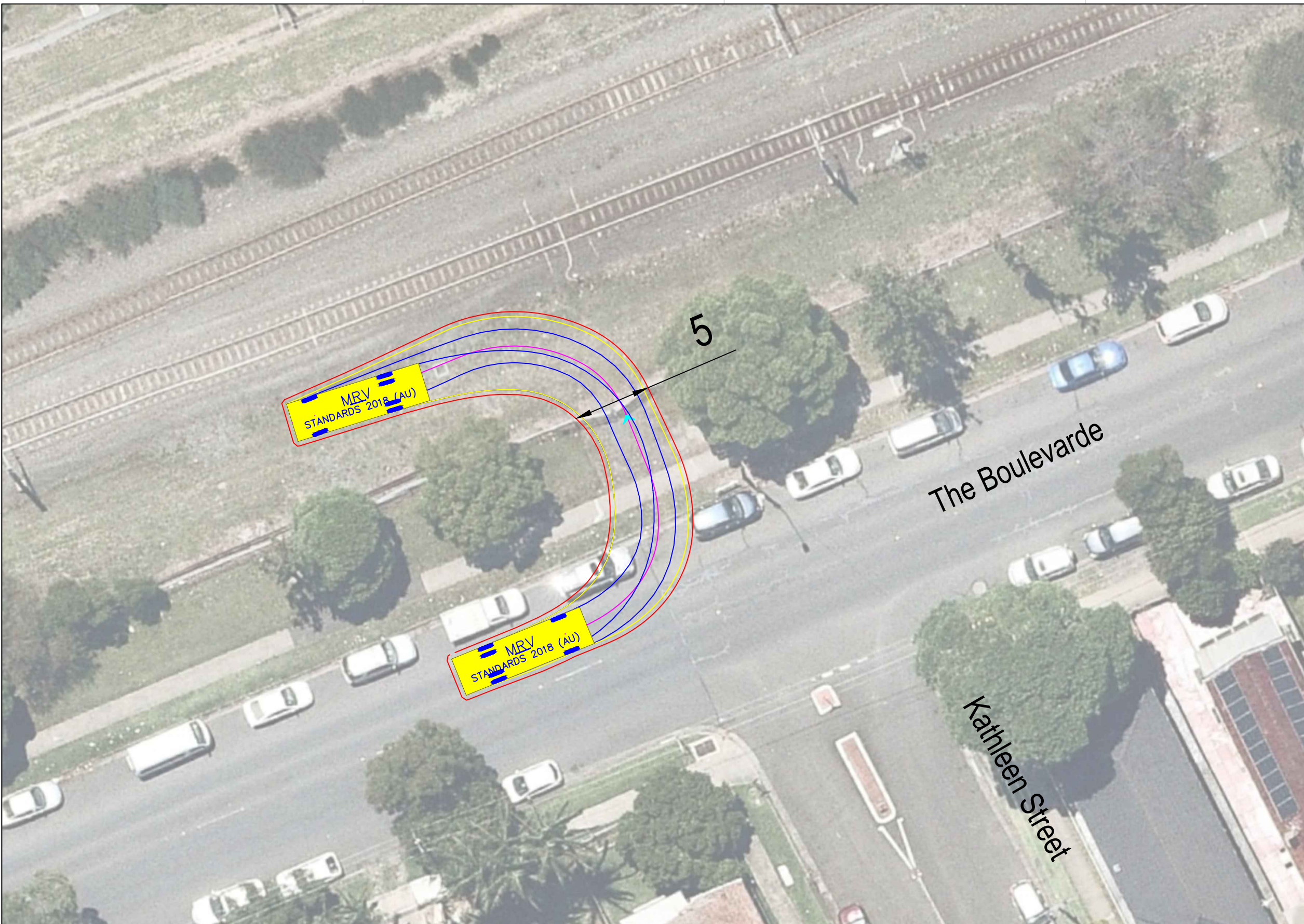
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



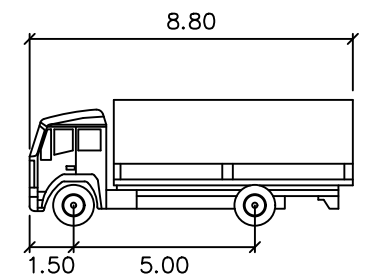
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.756U/14.867U - HAULAGE ROUTE
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
6	001	



Note: Requires occupation of one (1) parking space west of gate



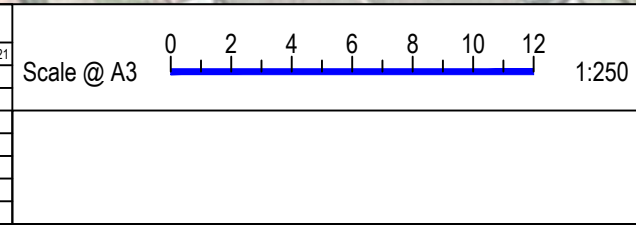
MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

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

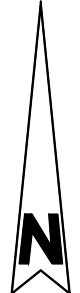
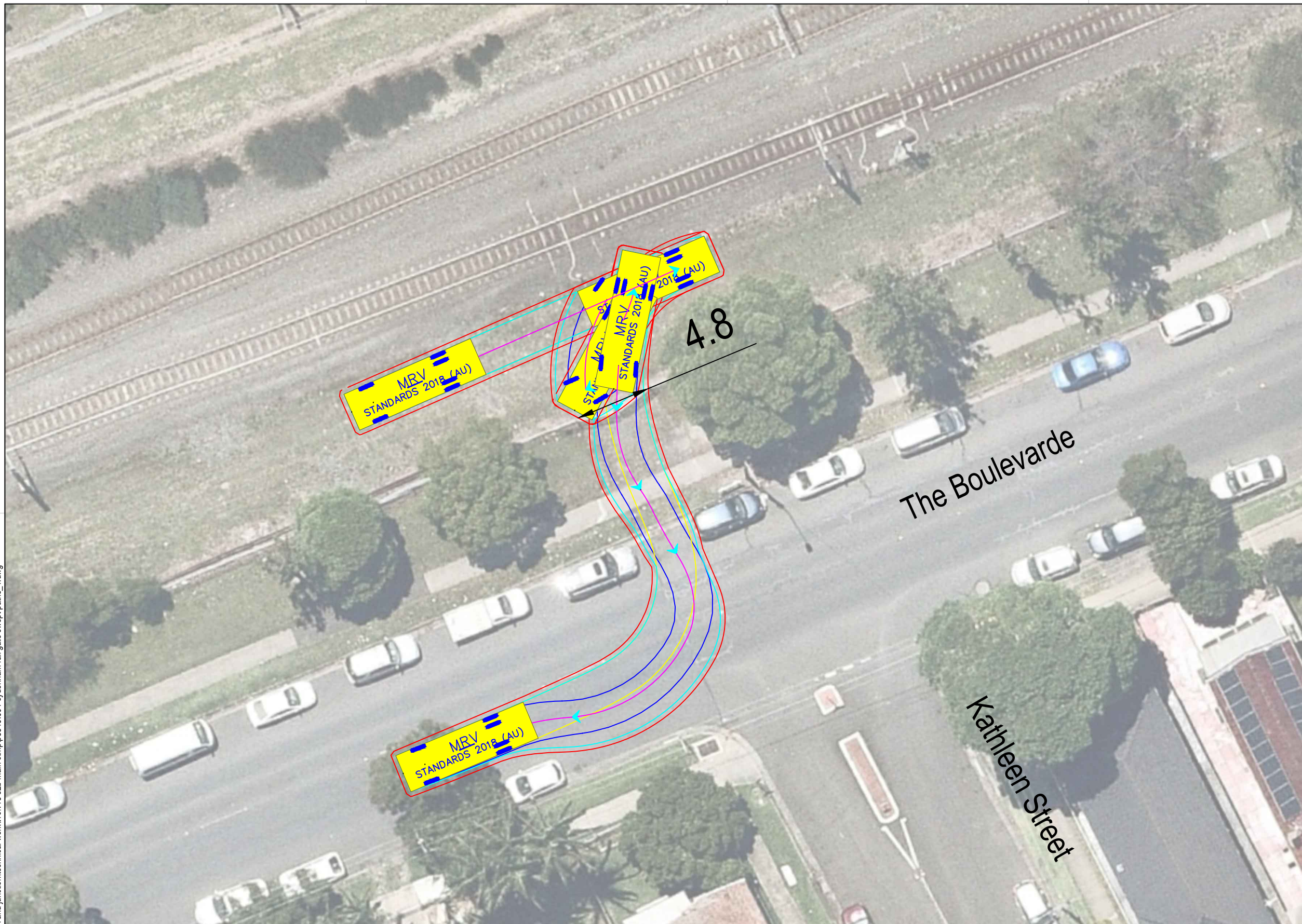
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



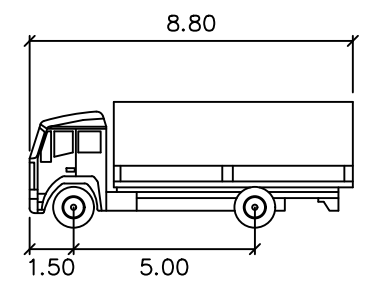
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 14.943D - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
	7	001

p:\p3519\jhlrvj sydenham station and junction\technical work\14.943D - FORWARD ENTRY\14.943D - FORWARD ENTRY MRV SWEEP PATHS.dwg



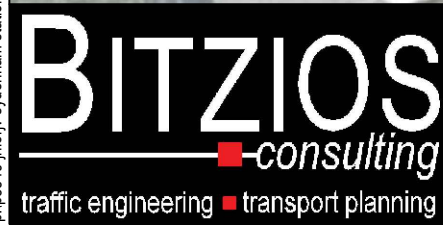
Note: Requires occupation of one (1) parking space west of gate



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

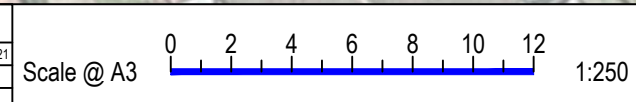
DESIGN VEHICLE

p:\p3519\jlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

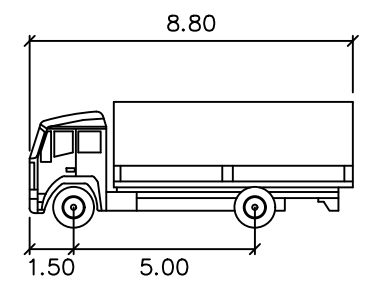
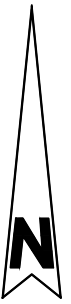
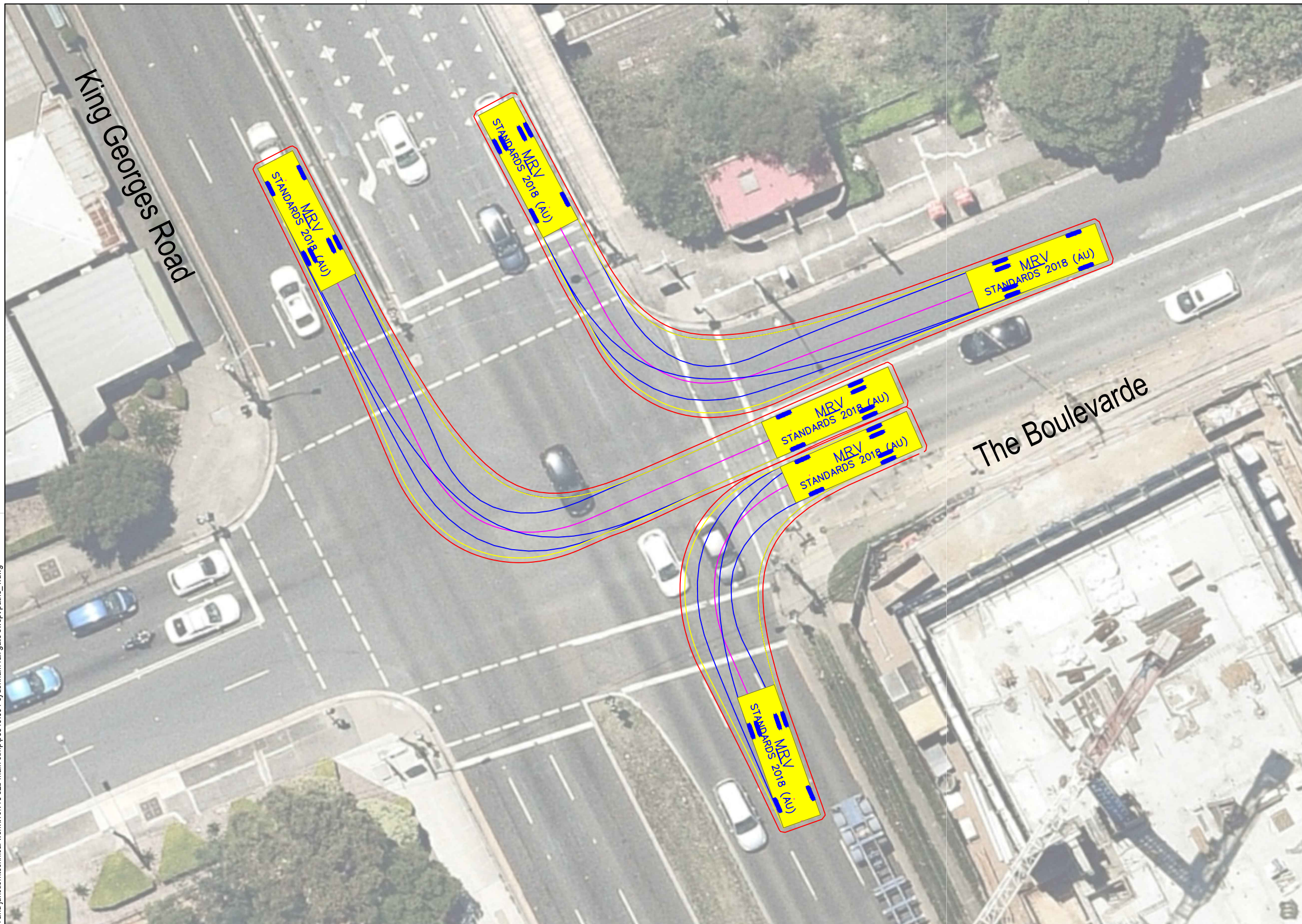
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.943D - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	8	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

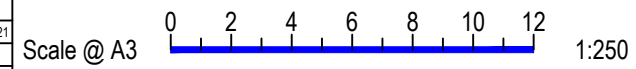
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

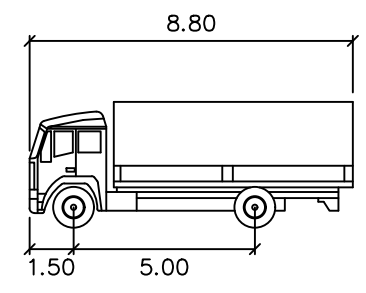
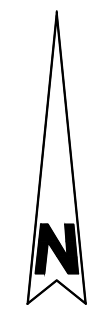
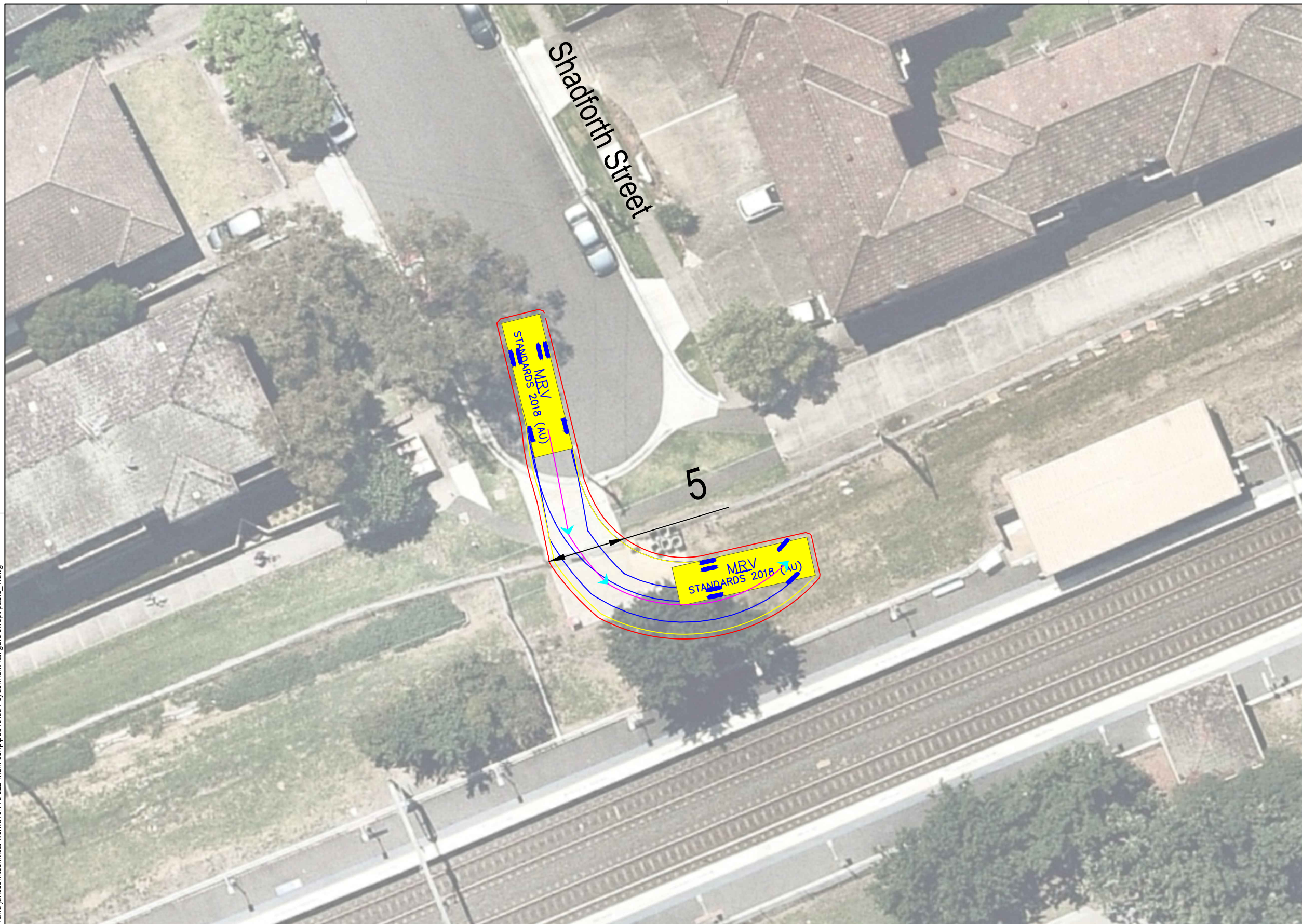
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 14.943D - HAULAGE ROUTE
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
	9	001

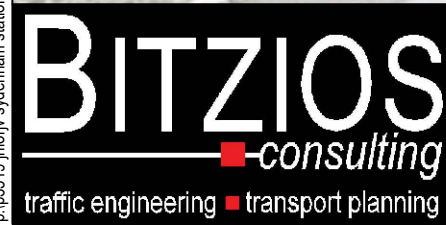


MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

p:\p3519_jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

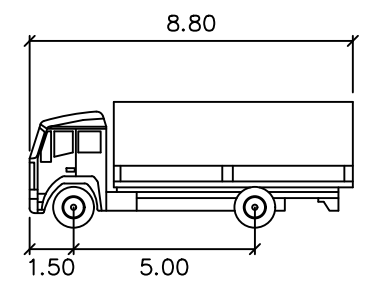
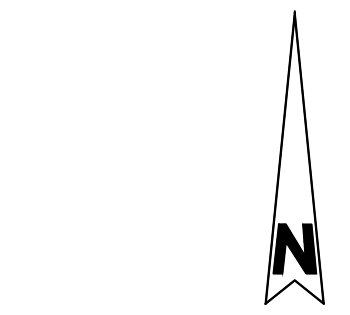
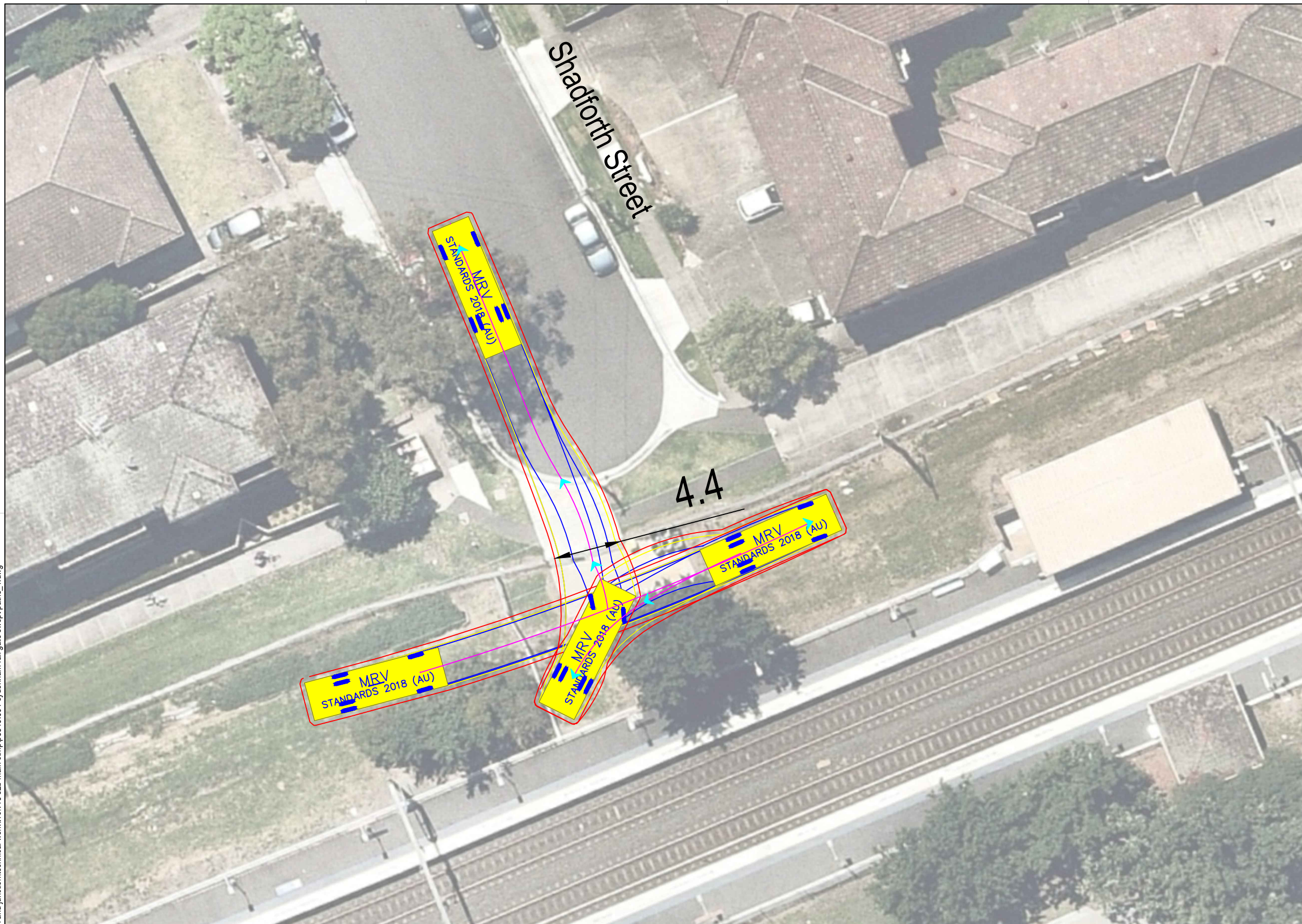
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.377U - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
10	10	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

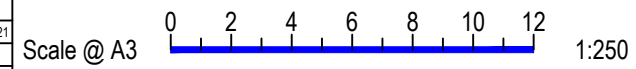
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

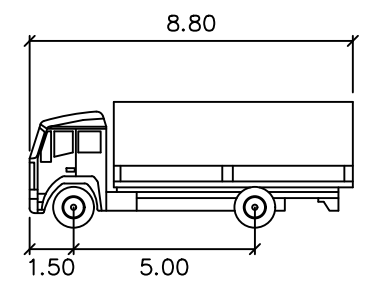
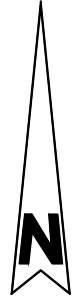
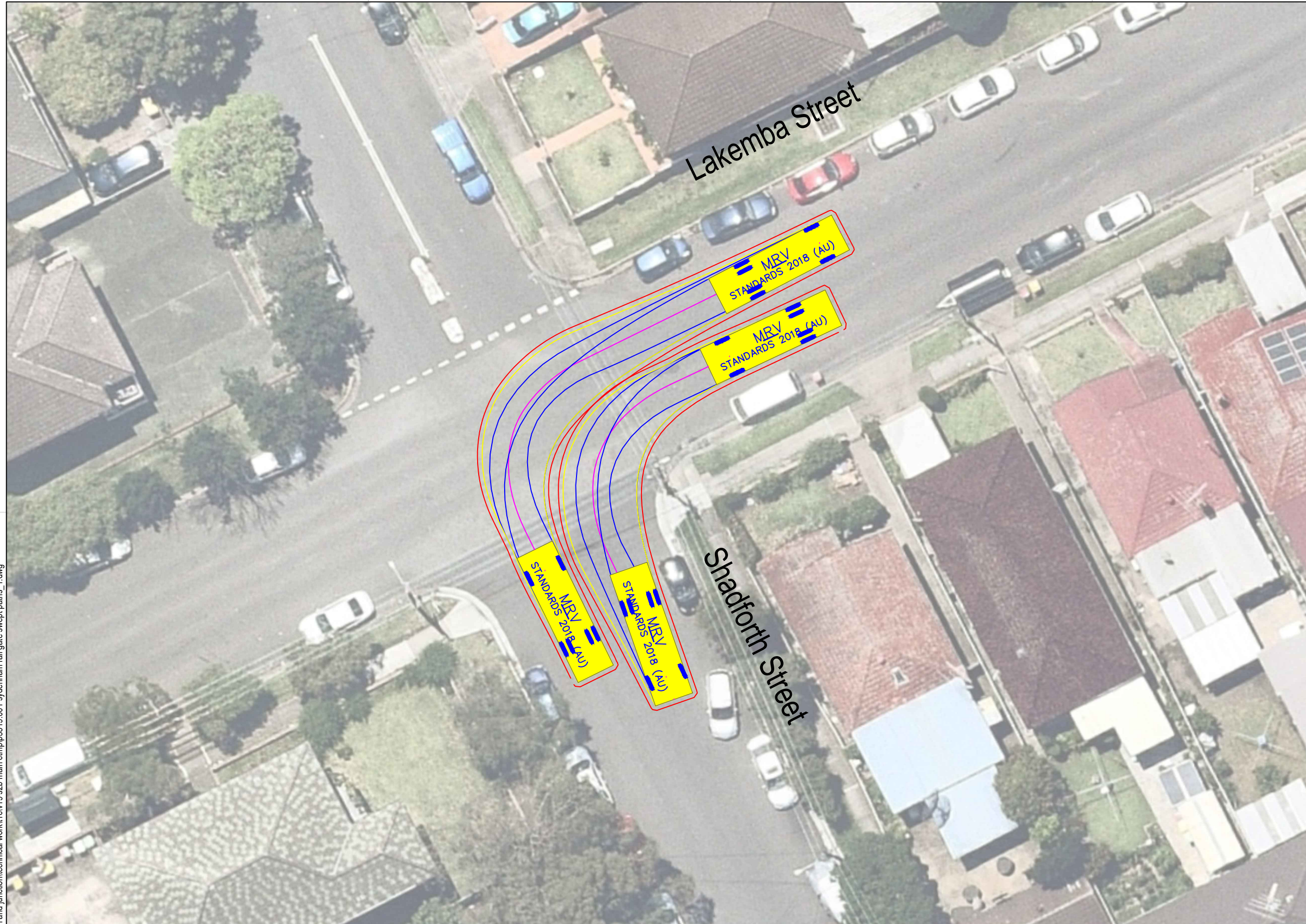


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.377U - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	11	001

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



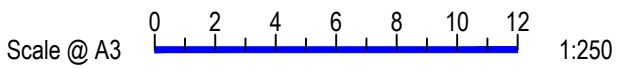
MRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

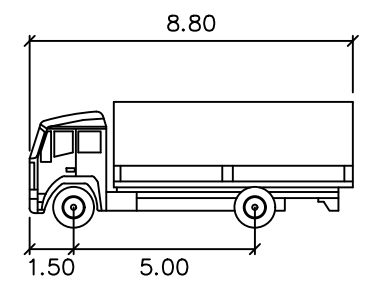
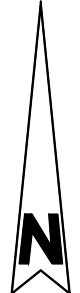
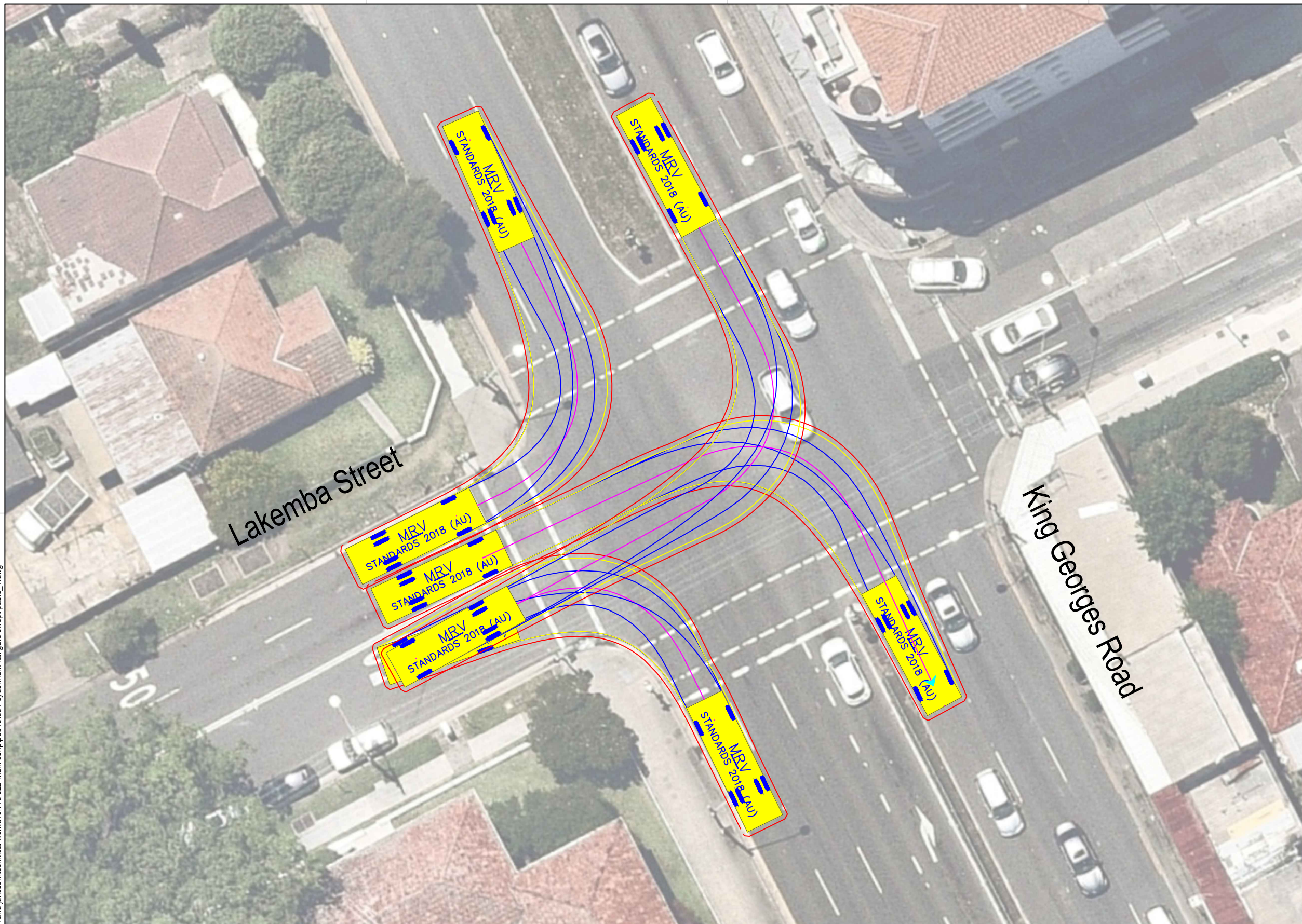
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 15.377U - HAULAGE ROUTE
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
12	12	001



MRV meters

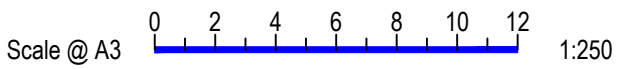
Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

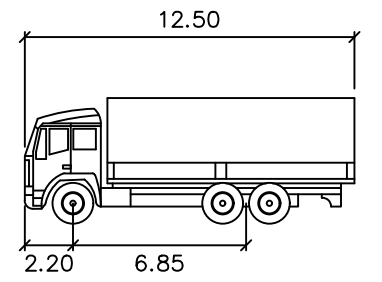
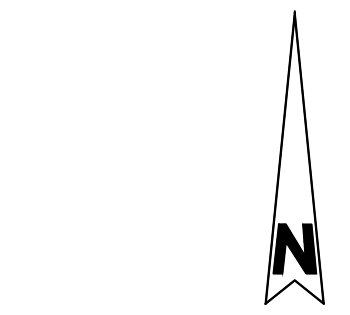
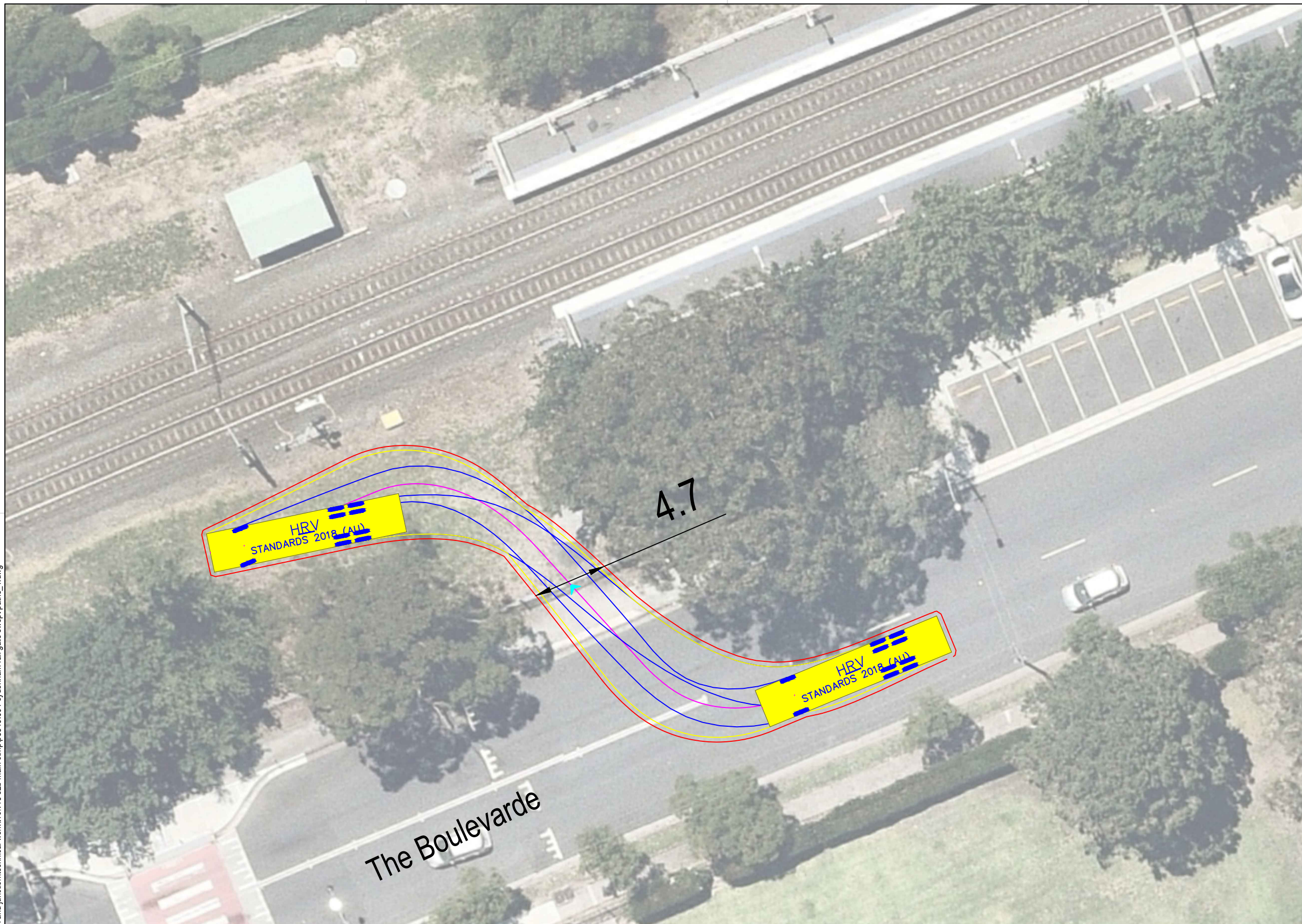


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.377U - HAULAGE ROUTE
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
13	13	001

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

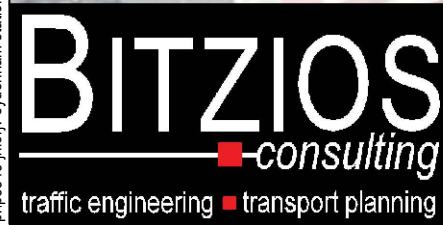


HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

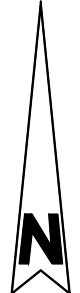
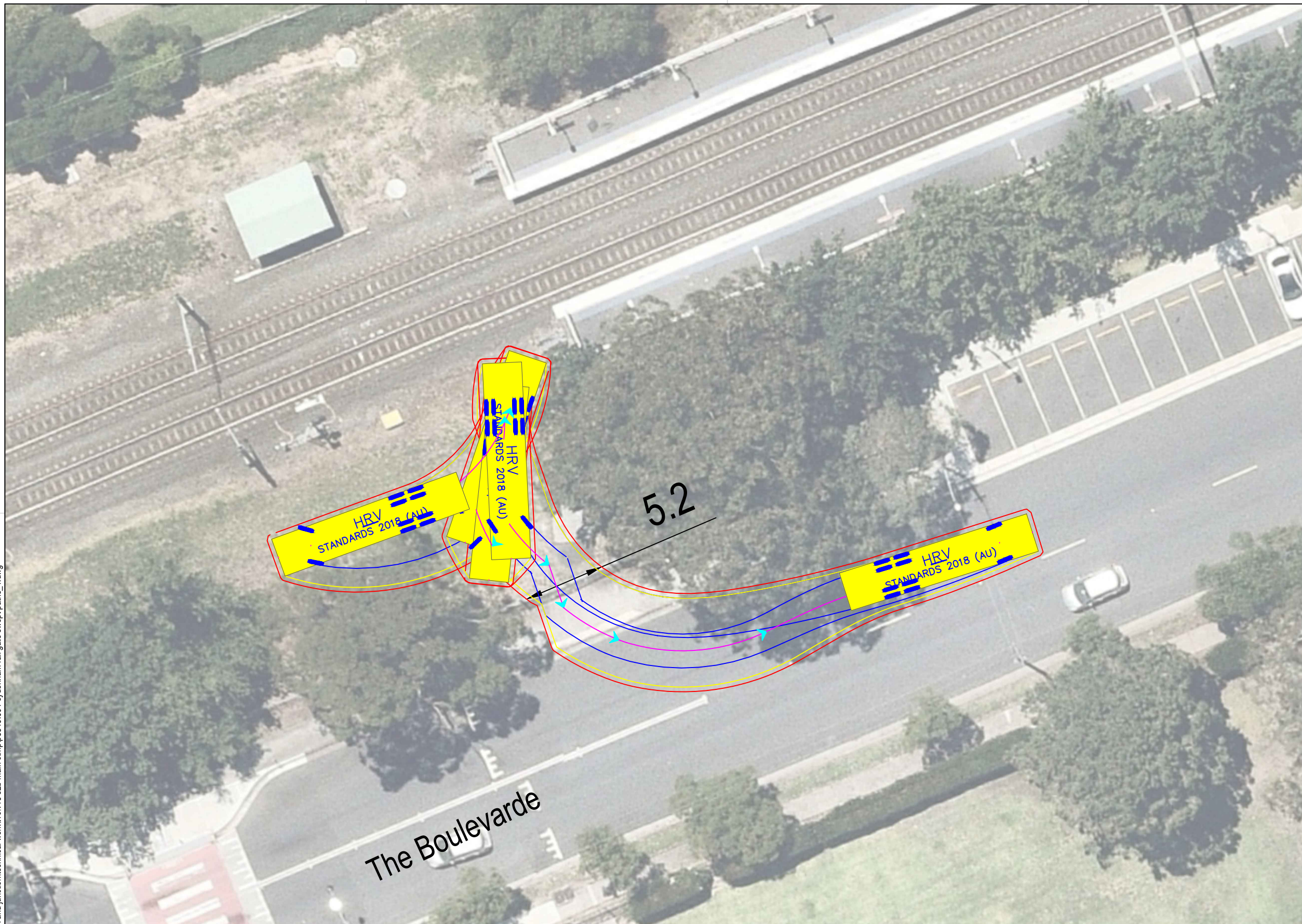
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

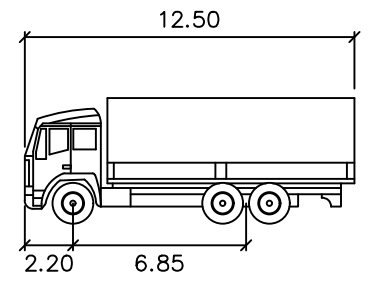
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.440D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	14	001



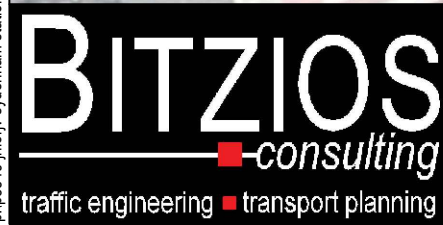
Note: Requires occupation of two (2) parking spaces east of gate



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

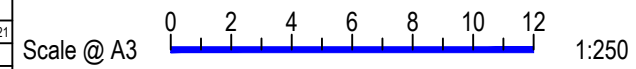
DESIGN VEHICLE

p:\p3519\jlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



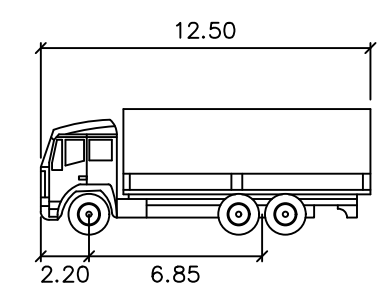
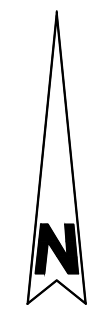
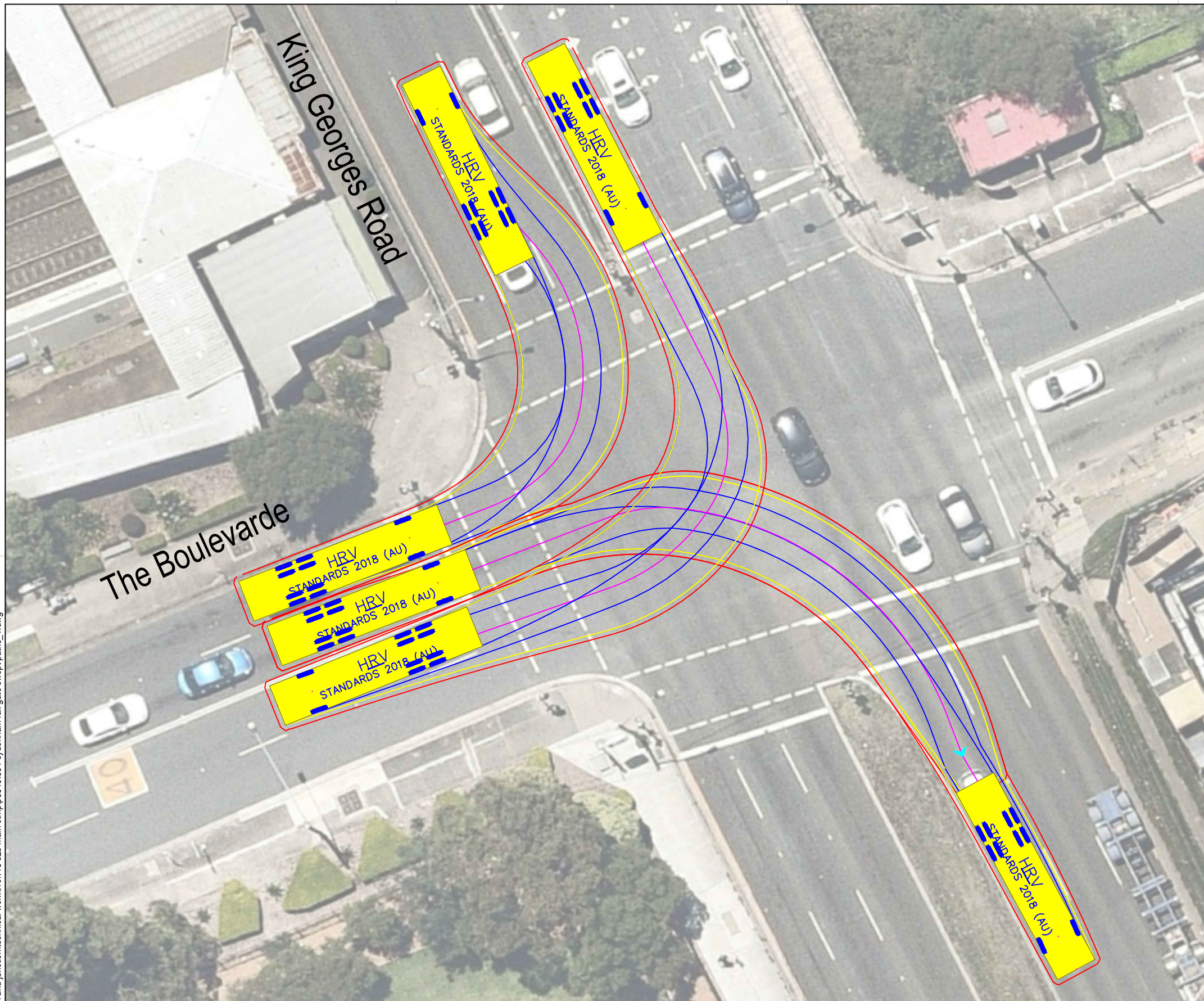
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 15.440D - FORWARD EGRESS
 HRV

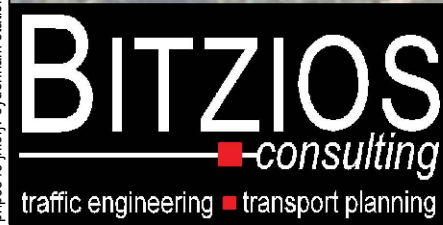
Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
15	15	001



HRV

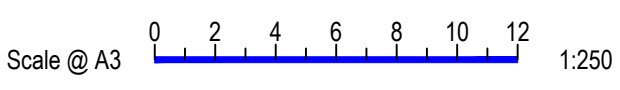
Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

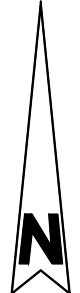
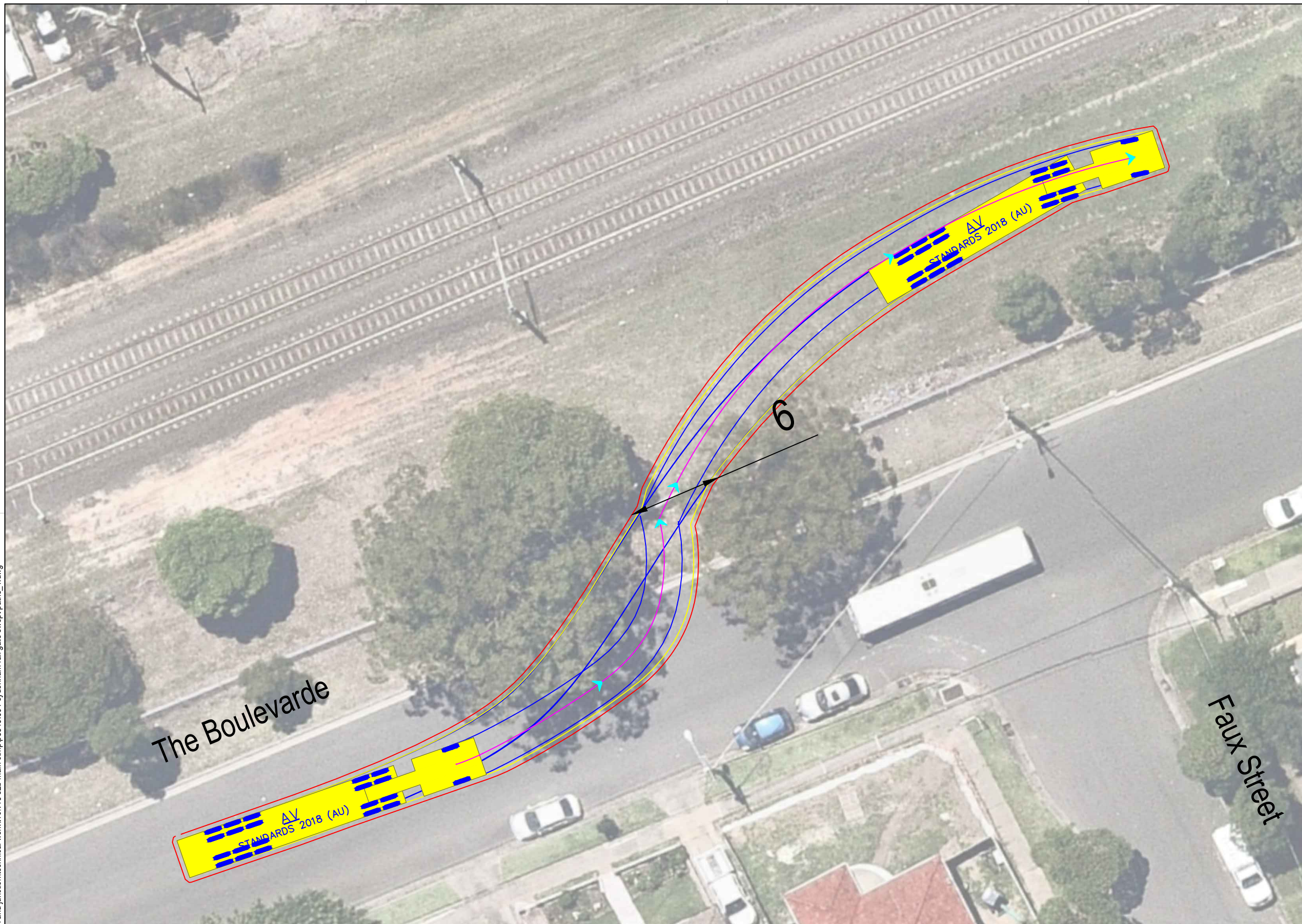


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

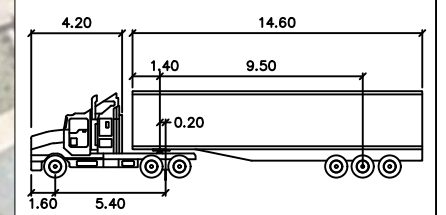
Title SWEEP PATH ANALYSIS
 GATE M24 15.440D - HAULAGE ROUTE
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
16	16	001

p:\p3519\jhlrvjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate sweep paths_1.dwg

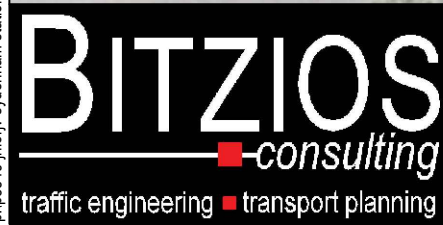


Note: Requires occupation of two (2) parking spaces west of gate



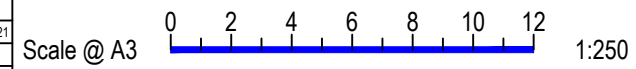
AV		units
		meters
Tractor Width	: 2.50	
Trailer Width	: 2.50	
Tractor Track	: 2.50	
Trailer Track	: 2.50	
Lock to Lock Time	: 6.0	
Steering Angle	: 28.3	
Articulating Angle	: 72.0	

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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

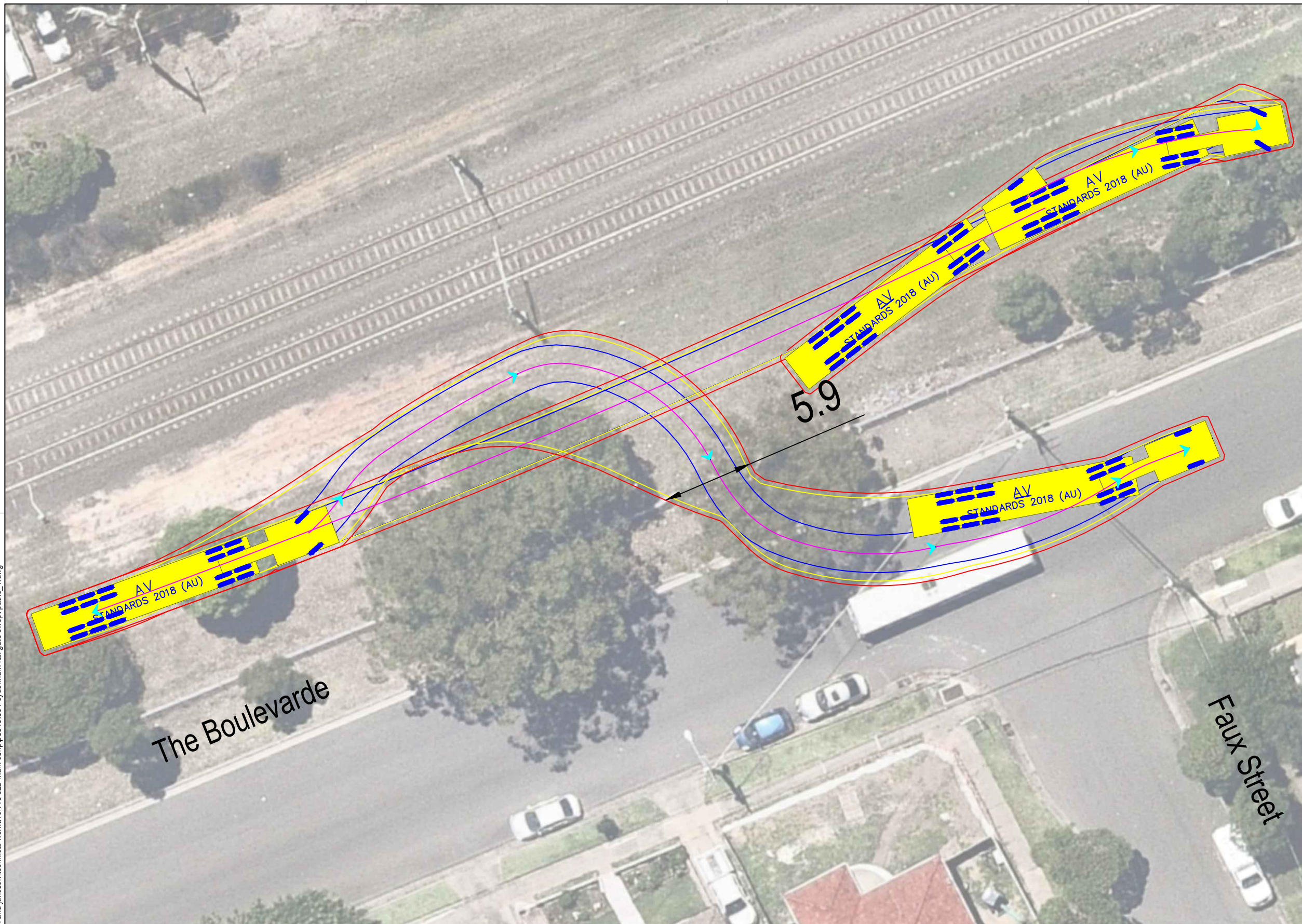
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



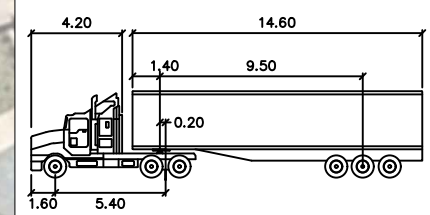
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 15.763D - FORWARD ENTRY
 AV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
17	17	001

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



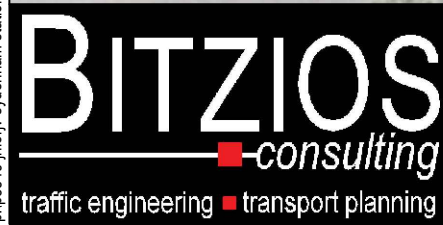
Note: Will conflict with tree on right side of gate
 Requires occupation of two (2) parking spaces east of gate



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

DESIGN VEHICLE

p:\p3519\jlorjv-sydenham station and junction\technical\work\1\cv19_s2b_main.ctmp\p3519_001_sydenham rail gate swept paths_1.dwg



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

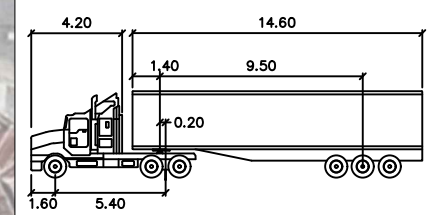
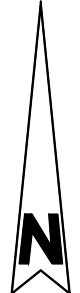
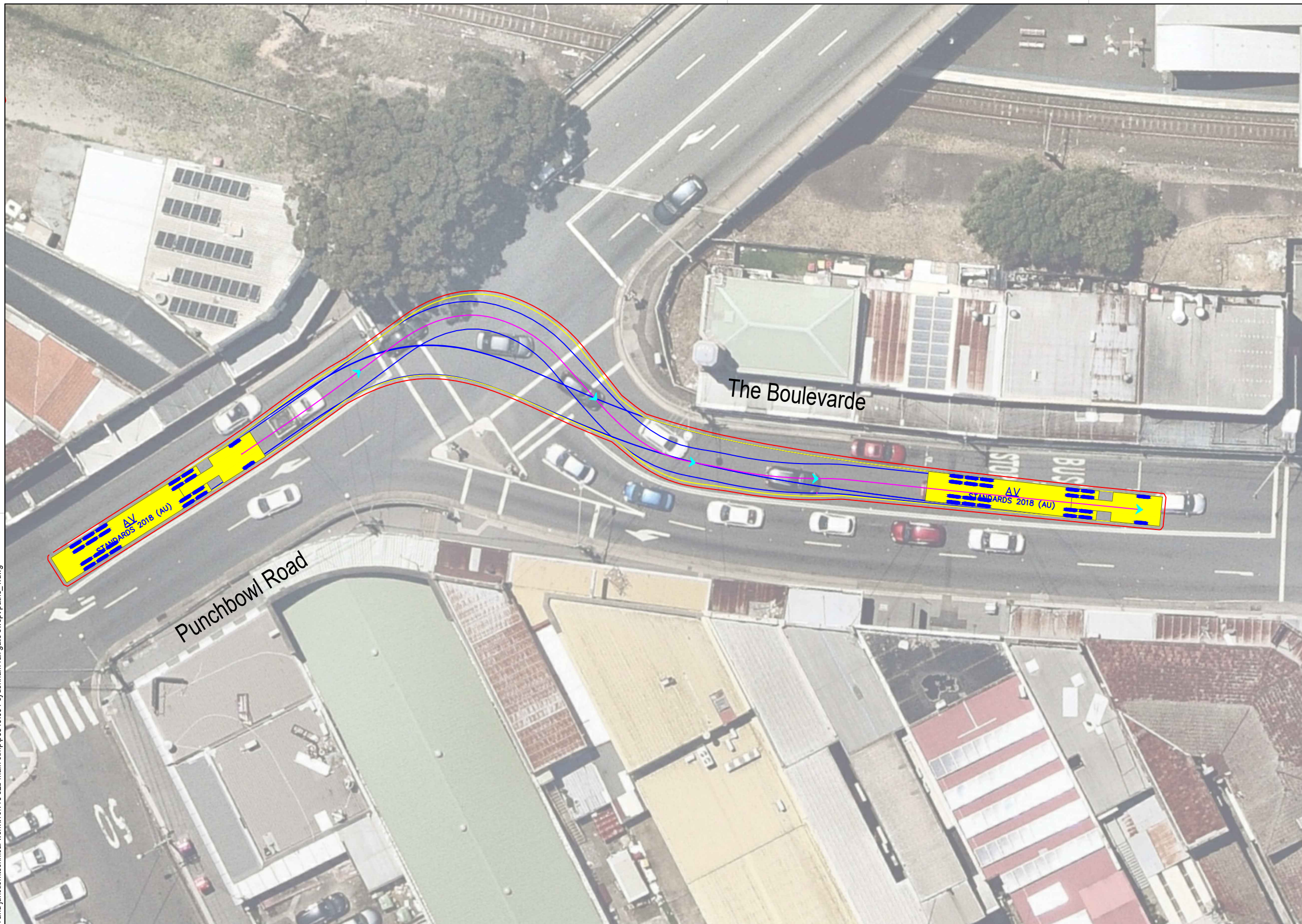
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.763D - FORWARD EGRESS
 AV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	18	001



AV

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

DESIGN VEHICLE

p:\p3519\jlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

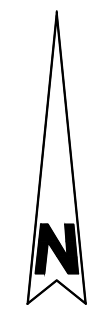
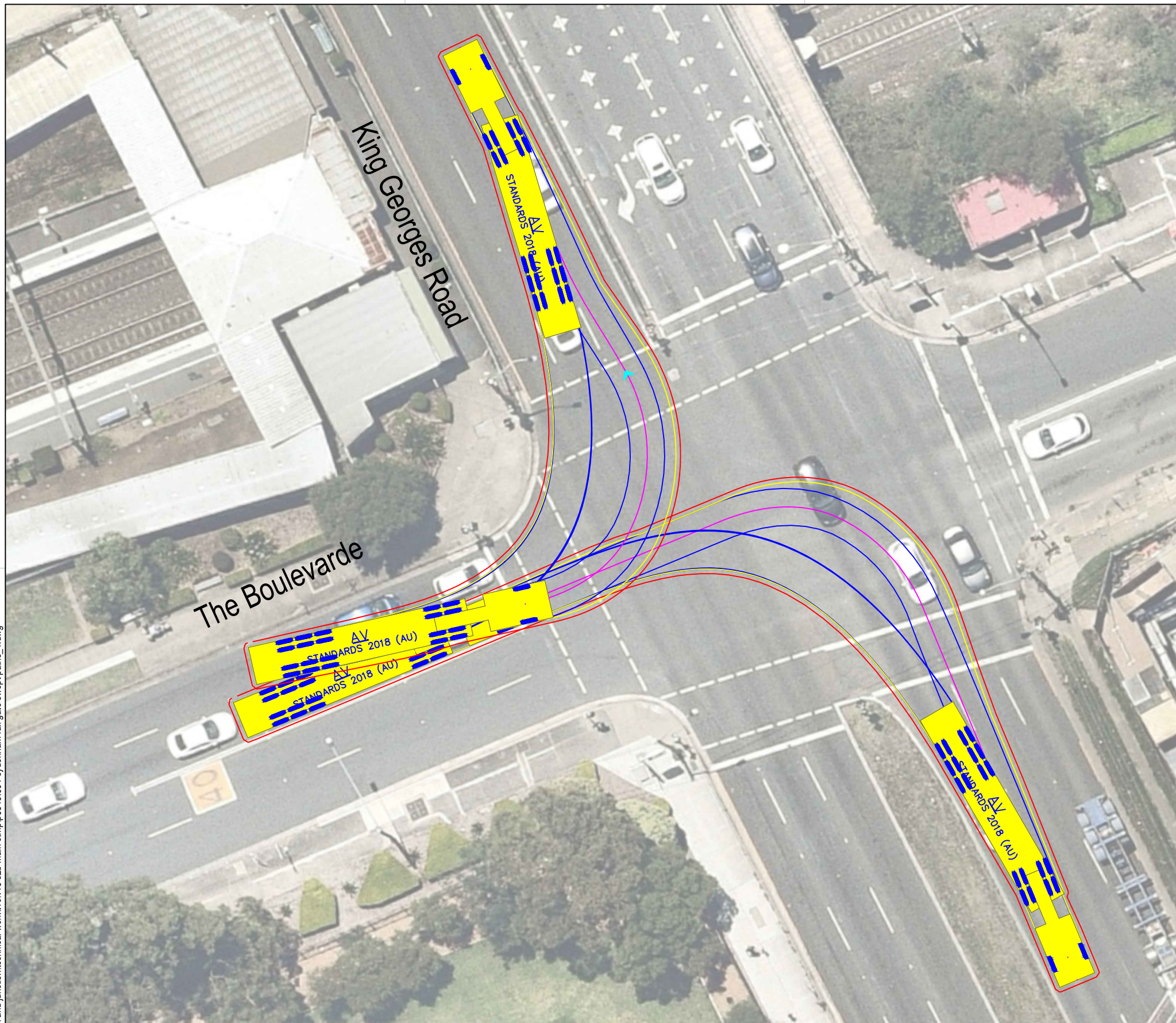
BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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

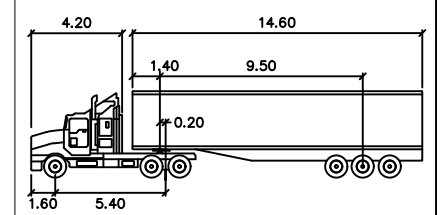
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Project	JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP
Title	SWEPT PATH ANALYSIS GATE M24 15.763D - HAULAGE ROUTE AV

Design	M.H	Drawn	M.H	Checked	A.G
NOT FOR CONSTRUCTION					
Project Number	P3519	Sheet Number	19	Date	22.02.2021
				Issue	001

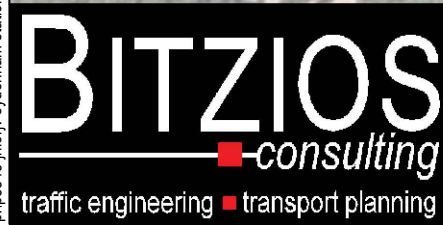


Note: Left turn must begin from right approach lane



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

DESIGN VEHICLE



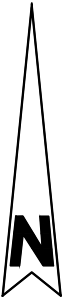
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

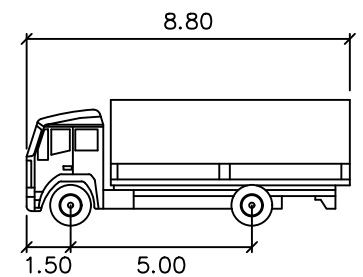
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 15.763D - HAULAGE ROUTE
 AV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	001
20	Issue	

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



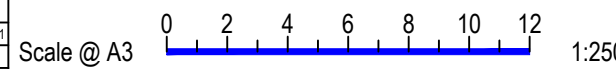
Note: Requires occupation of one (1) parking space east of gate



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

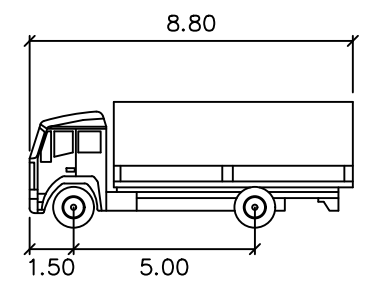
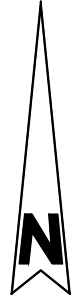
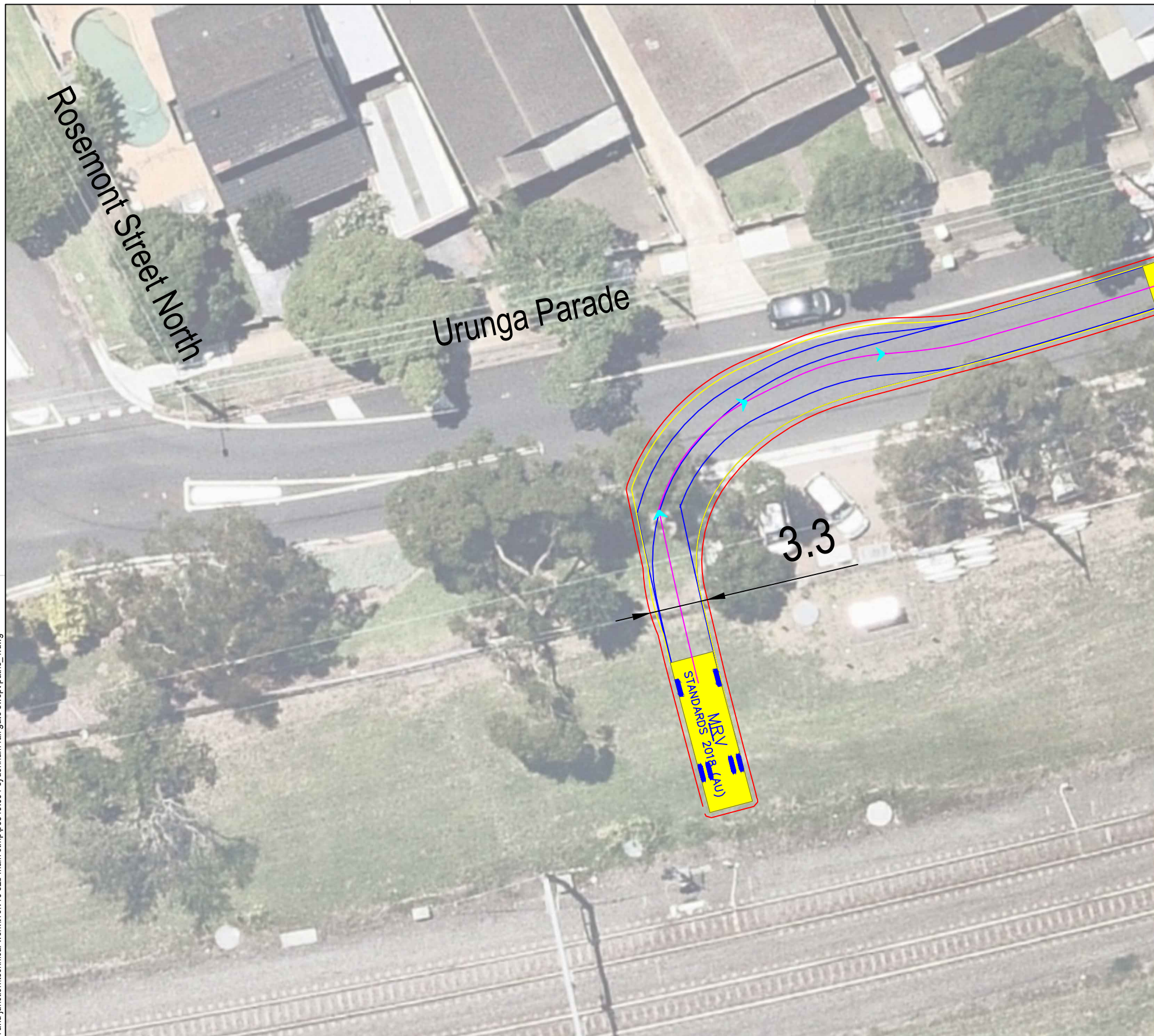
DESIGN VEHICLE

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project	JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP
Title	SWEPT PATH ANALYSIS GATE M24 15.962U - FORWARD ENTRY MRV

Design	M.H	Drawn	J.H	Checked	A.G
NOT FOR CONSTRUCTION		Date	22.02.2021		
Project Number	P3519	Sheet Number	21	Issue	001

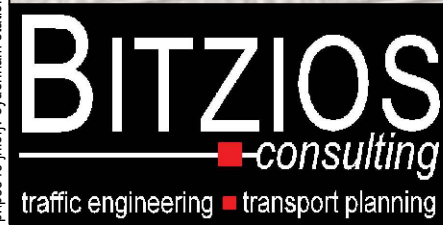


MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

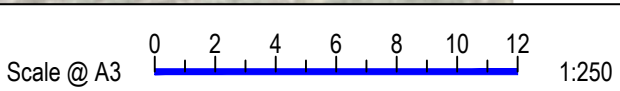
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



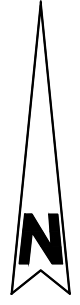
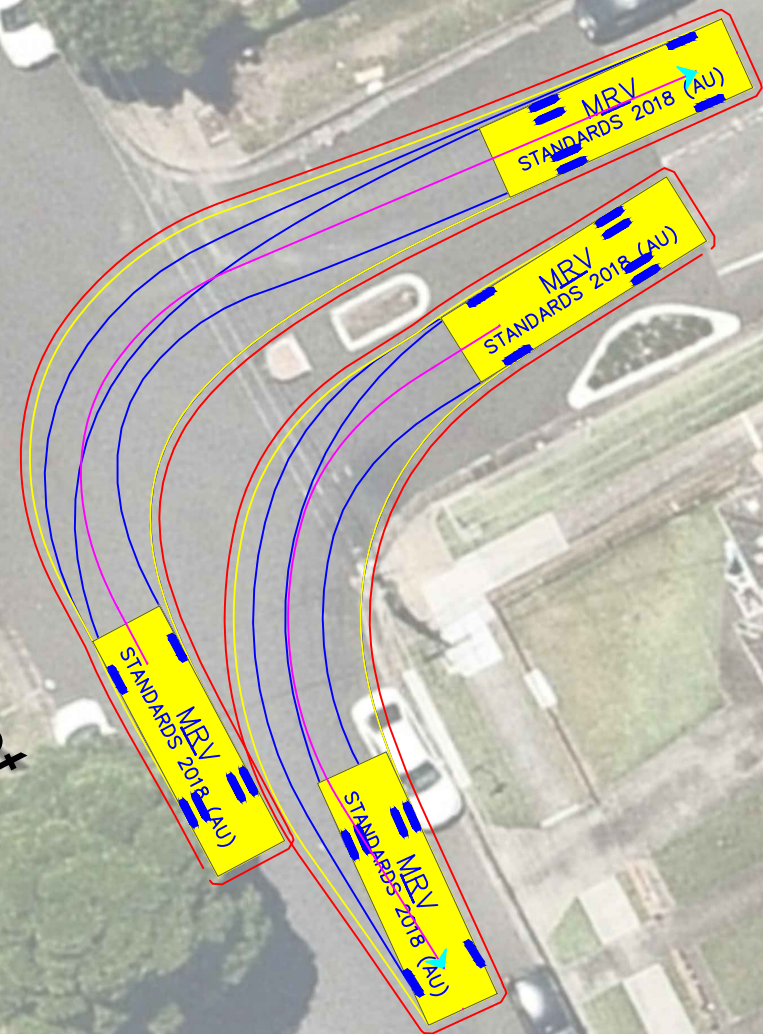
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 15.962U - FORWARD EGRESS
 MRV

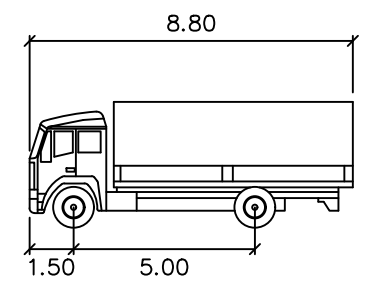
Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	22	001

Lakemba Street

Cornelia Street



Note: Requires occupation of one (1) parking space on Cornelia Street south of Lakemba Street



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical\work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



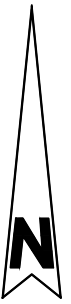
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

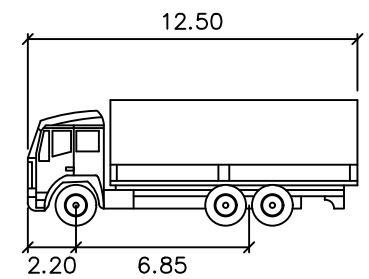
Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 15.962U - HAULAGE ROUTE
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	23	001



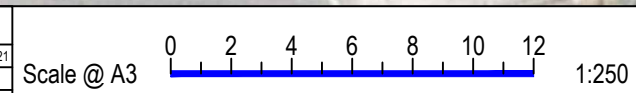
Note: Requires occupation of two (2) parking spaces west of gate



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

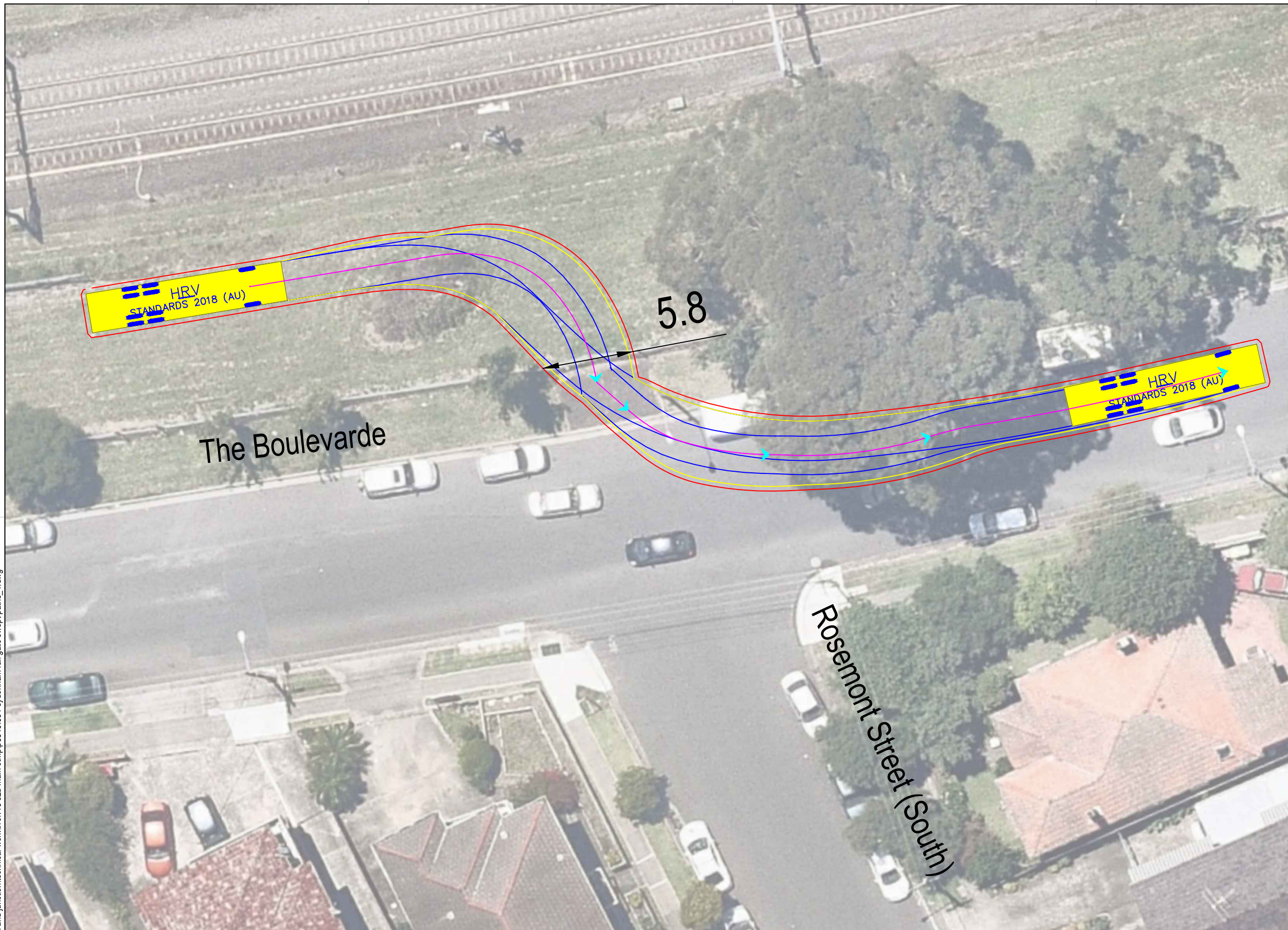
DESIGN VEHICLE

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

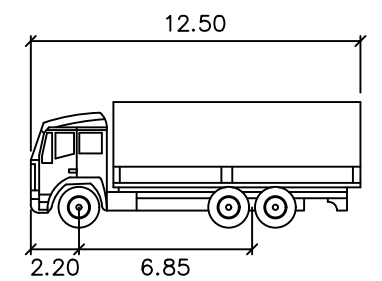


Project	JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP
Title	SWEPT PATH ANALYSIS GATE M24 15.986D - FORWARD ENTRY HRV

Design	M.H	Drawn	J.H	Checked	A.G	
NOT FOR CONSTRUCTION						
					Date	22.02.2021
Project Number	P3519	Sheet Number	24	Issue	001	



Note: Requires occupation of two (2) parking spaces east of gate

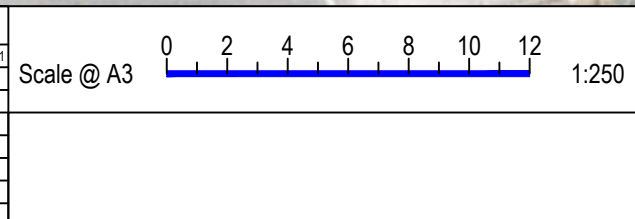


HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

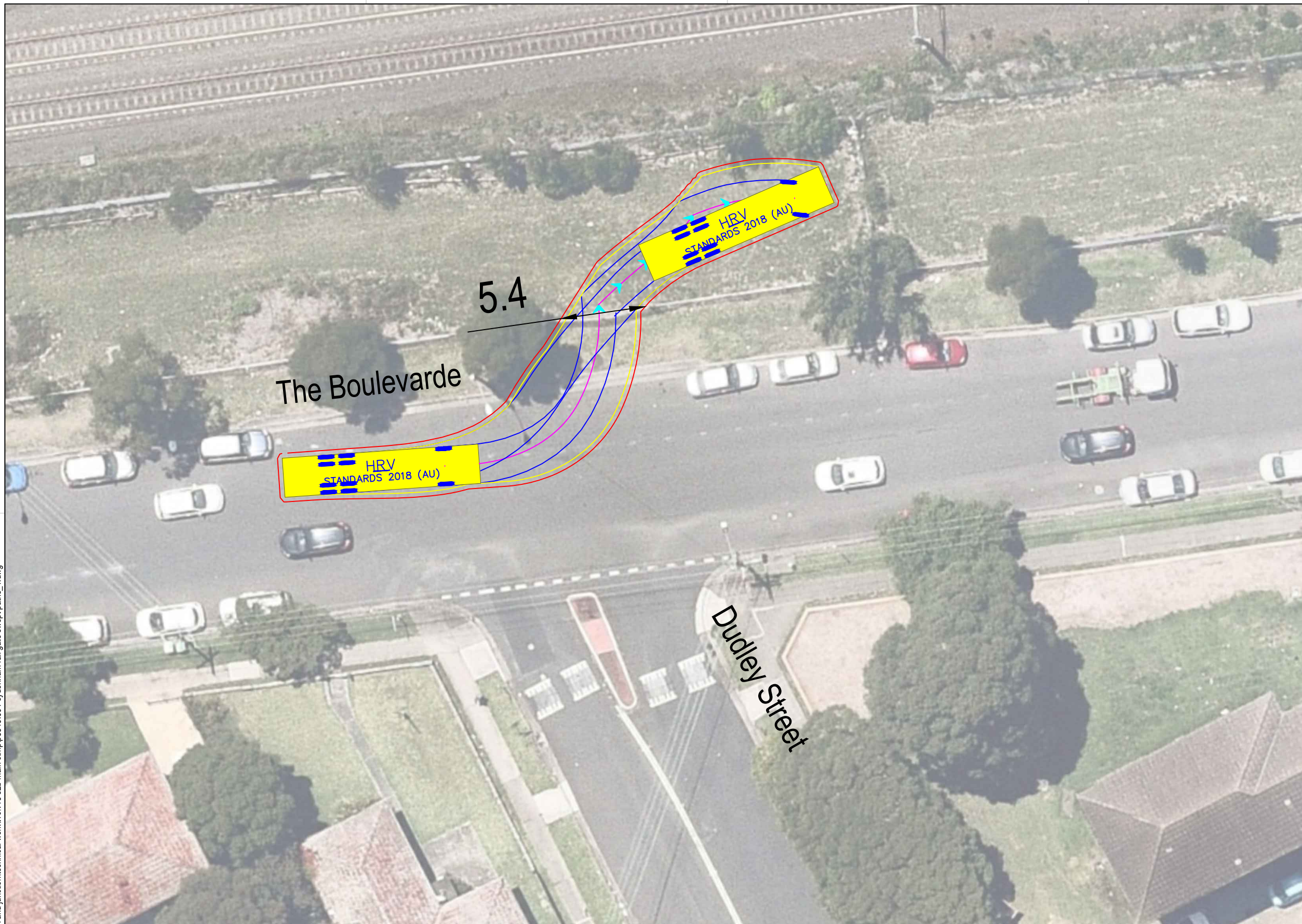
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



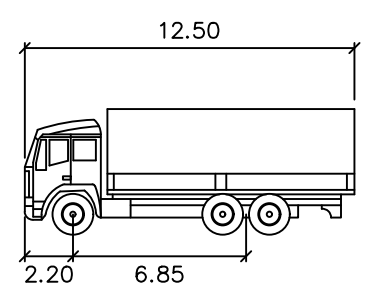
Project	JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP
Title	SWEPT PATH ANALYSIS GATE M24 15.986D - FORWARD EGRESS HRV

Design	M.H	Drawn	M.H	Checked	A.G
NOT FOR CONSTRUCTION				Date	22.02.2021
Project Number	P3519	Sheet Number	25	Issue	001

p:\p3519\jhlorjv sydenham station and junction\technical\work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Note: Requires occupation of two (2) parking spaces west of gate

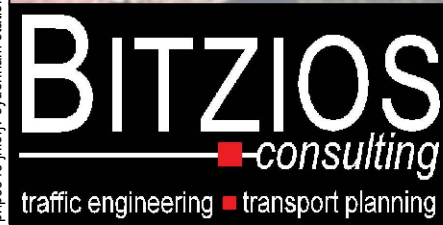


HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

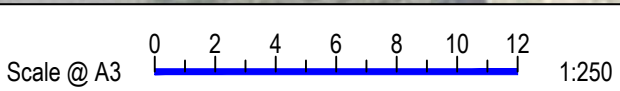
DESIGN VEHICLE

p:\p3519 jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate sweep paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

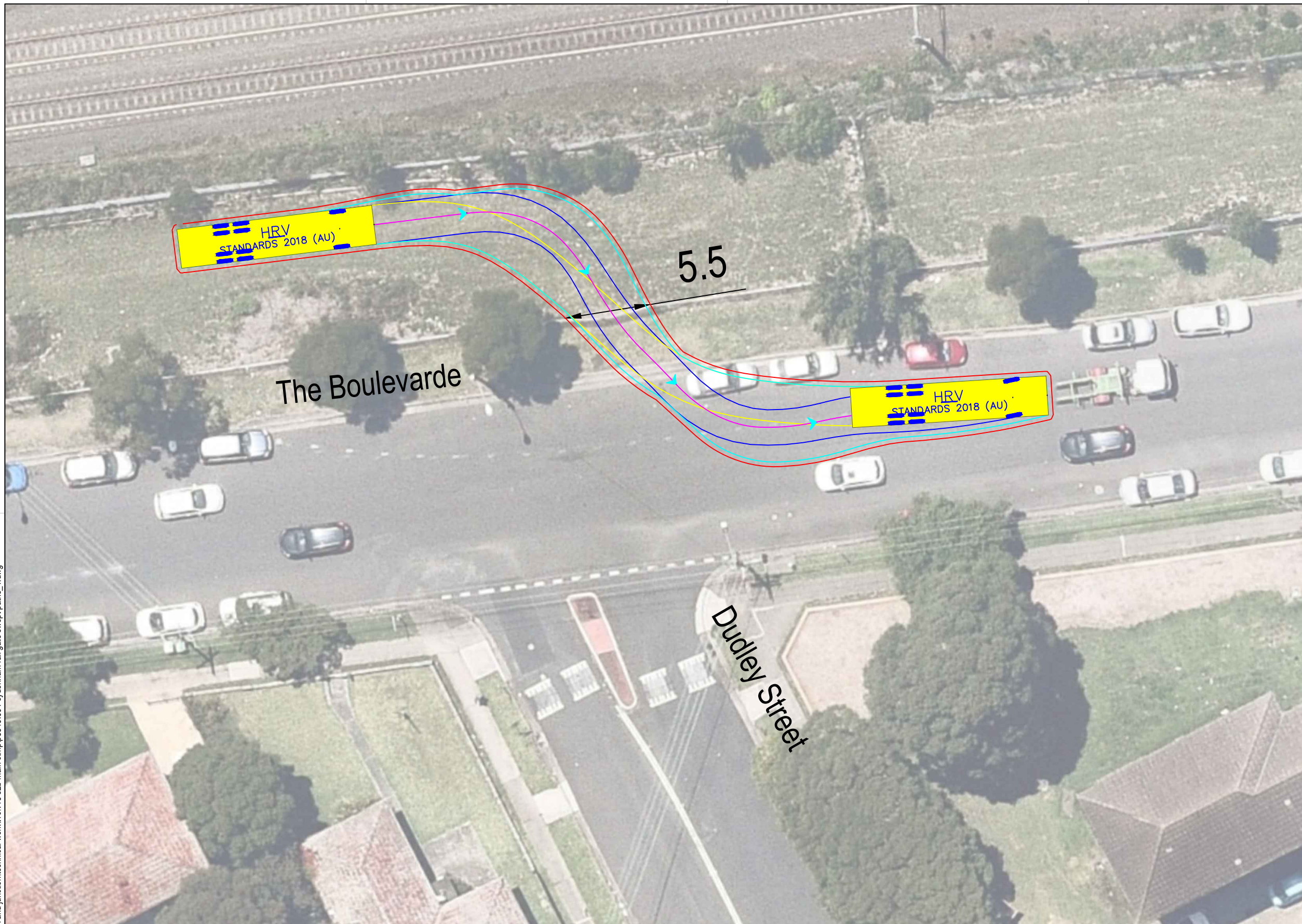
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



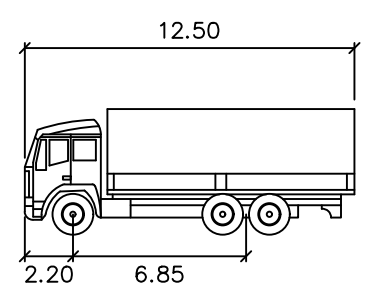
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title
 SWEEP PATH ANALYSIS
 GATE M24 16.050D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	26	001



Note: Requires occupation of two (2) parking spaces east of gate



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519 jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

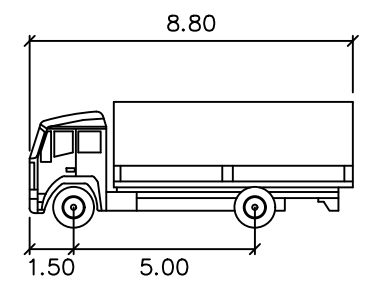
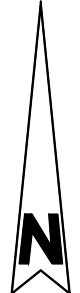
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.050D - FORWARD EGRESS
 HRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
	27	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

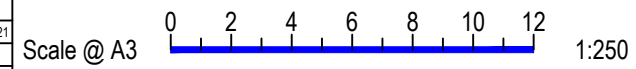
DESIGN VEHICLE

p:\p3519_jhlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

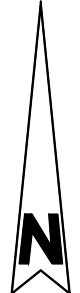
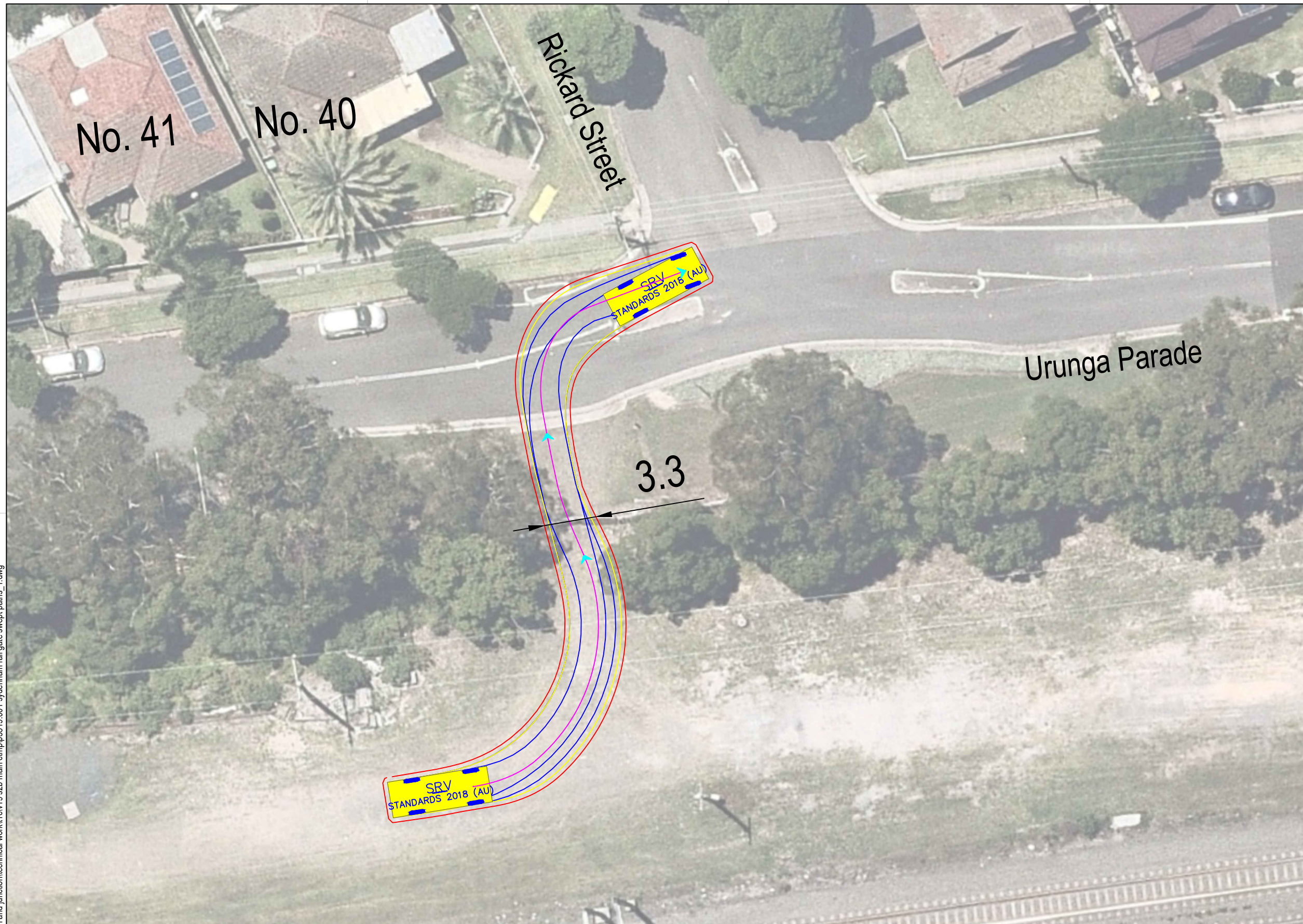
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



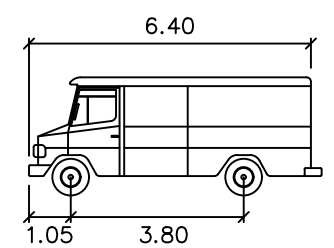
Project JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP

Title SWEEP PATH ANALYSIS GATE M24 16.259U - FORWARD ENTRY MRV

Design M.H	Drawn M.H	Checked A.G
NOT FOR CONSTRUCTION		Date 22.02.2021
Project Number P3519	Sheet Number 28	Issue 001



Note: This gate is unsuitable for exit movements for all heavy vehicle sizes due to median



SRV
 Width : 6.40 meters
 Track : 3.80 meters
 Lock to Lock Time : 6.0
 Steering Angle : 38.1

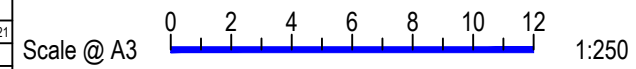
DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



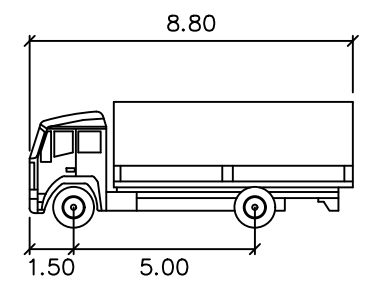
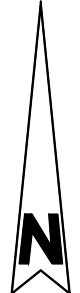
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 16.259U - FORWARD EGRESS
 SRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
29	29	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

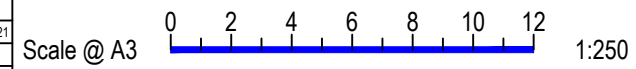
DESIGN VEHICLE

p:\p3519 jhlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

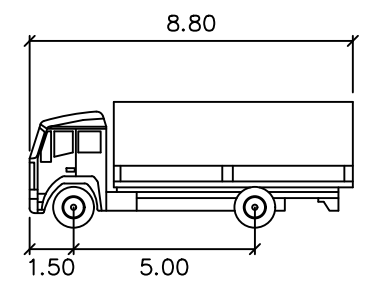
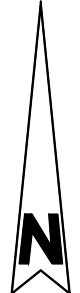
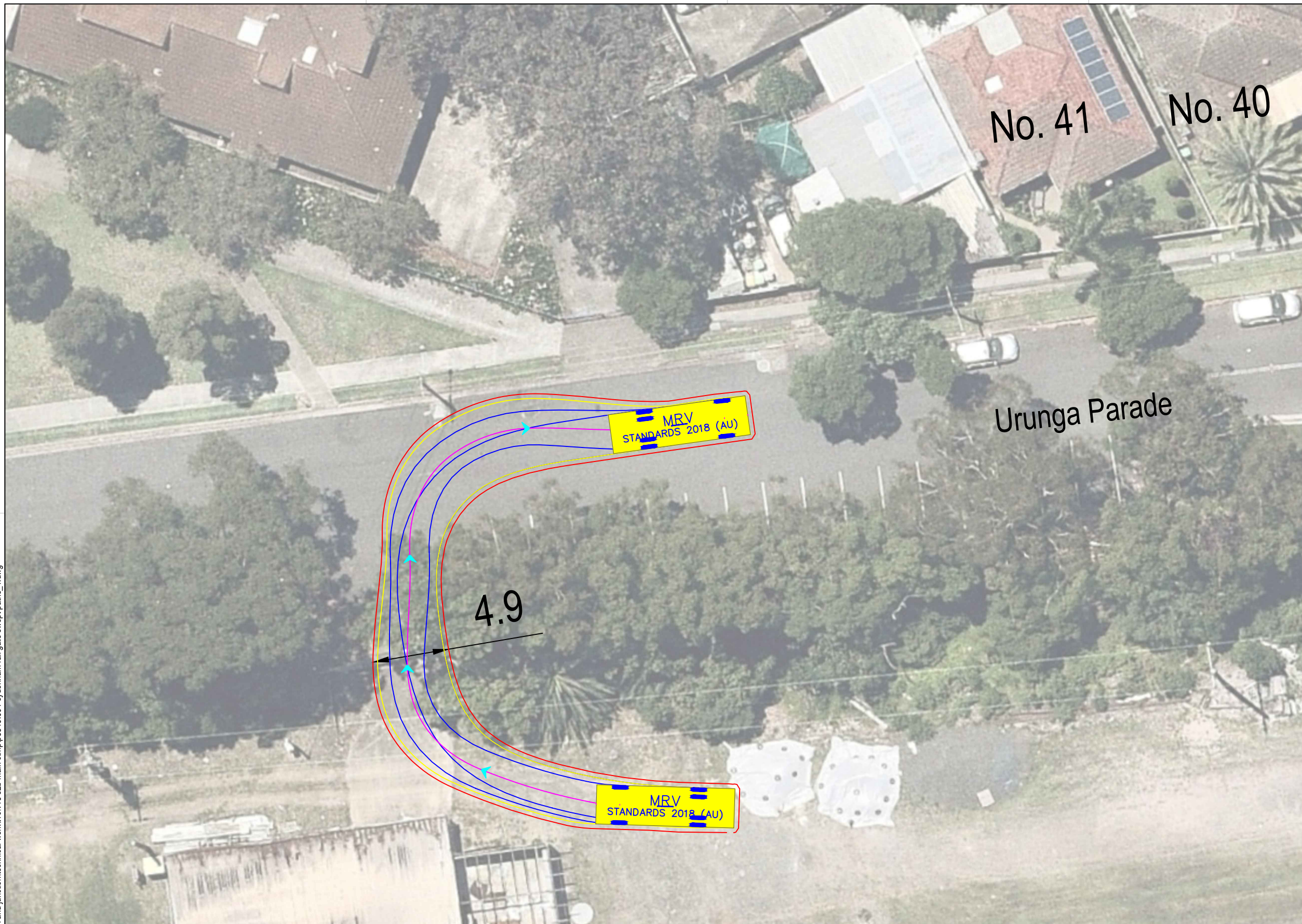
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.328U - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
30	30	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

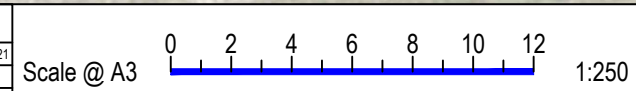
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

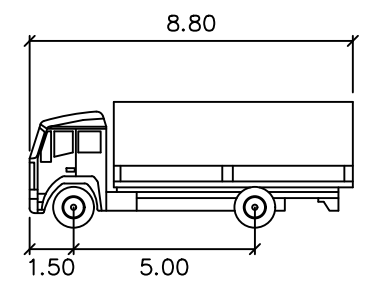
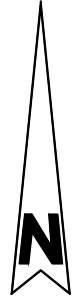
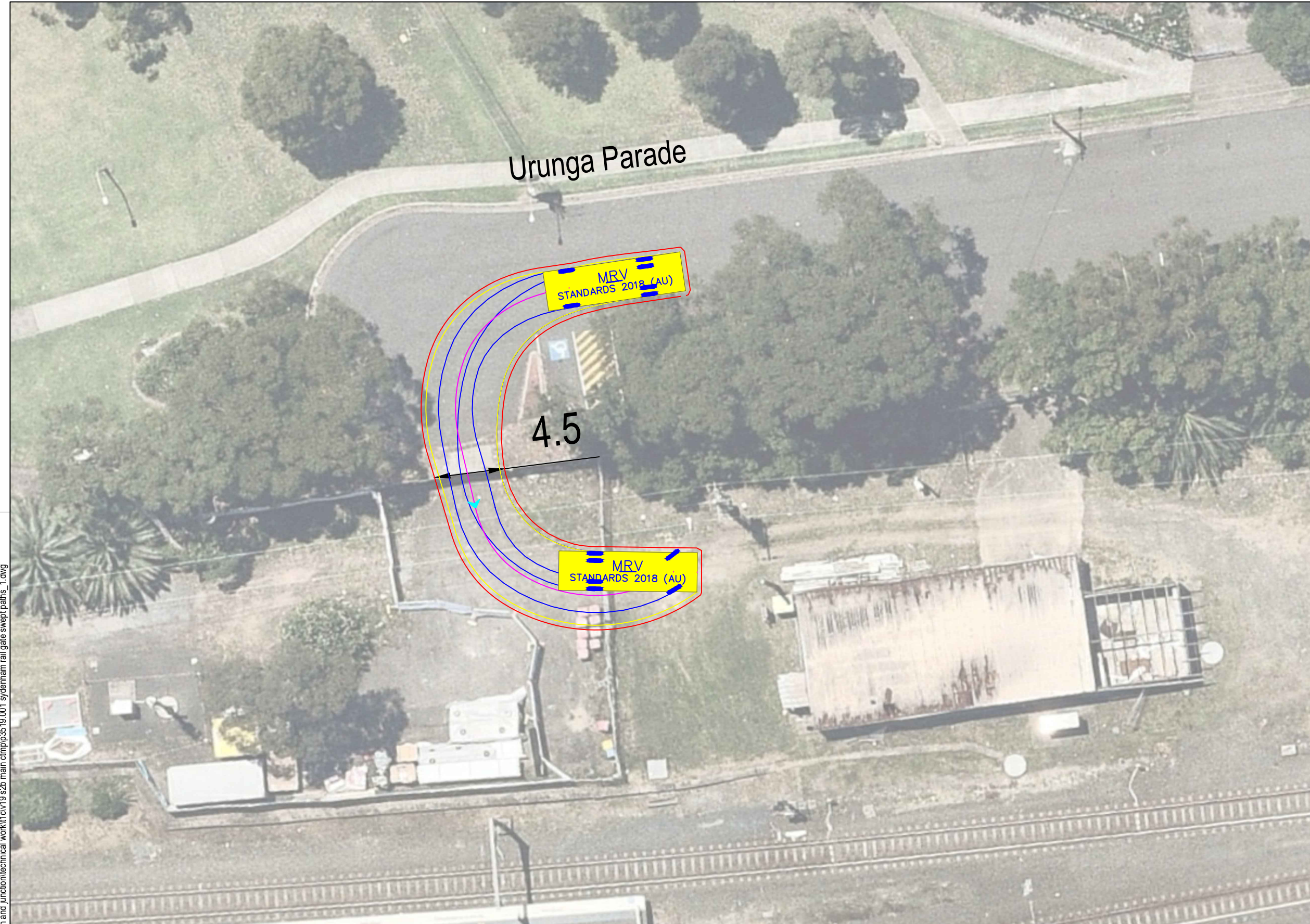


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.328U - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
31	31	001

p:\p3519\jlorjv-sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



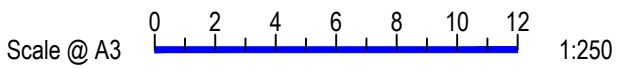
MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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

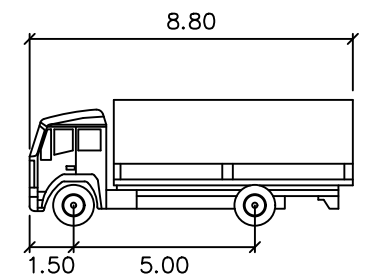
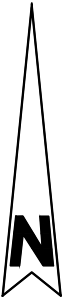
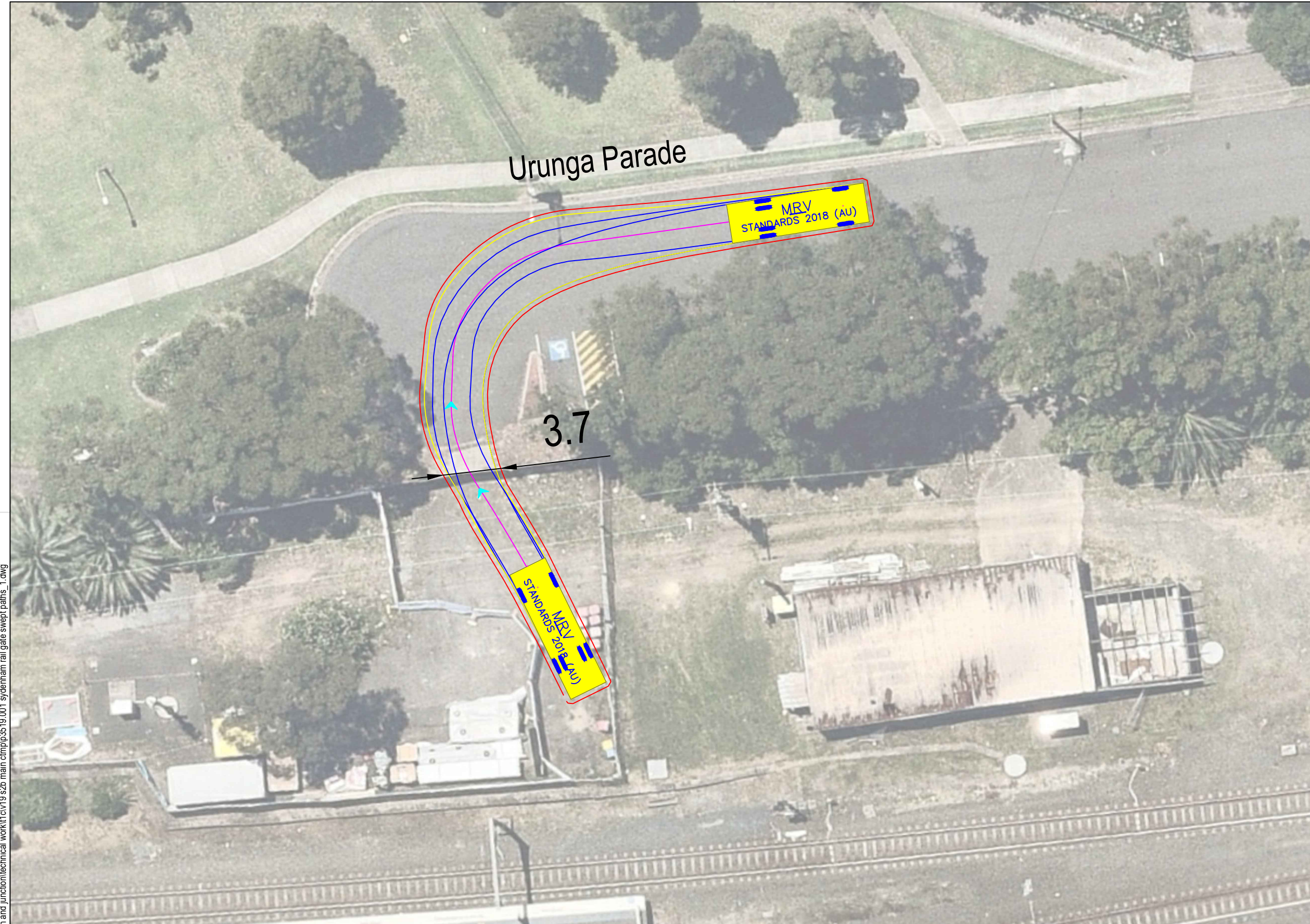
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 16.358U - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
32	32	001

p:\p3519 jhlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

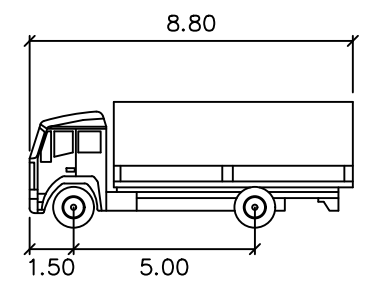
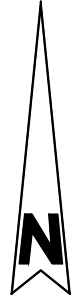
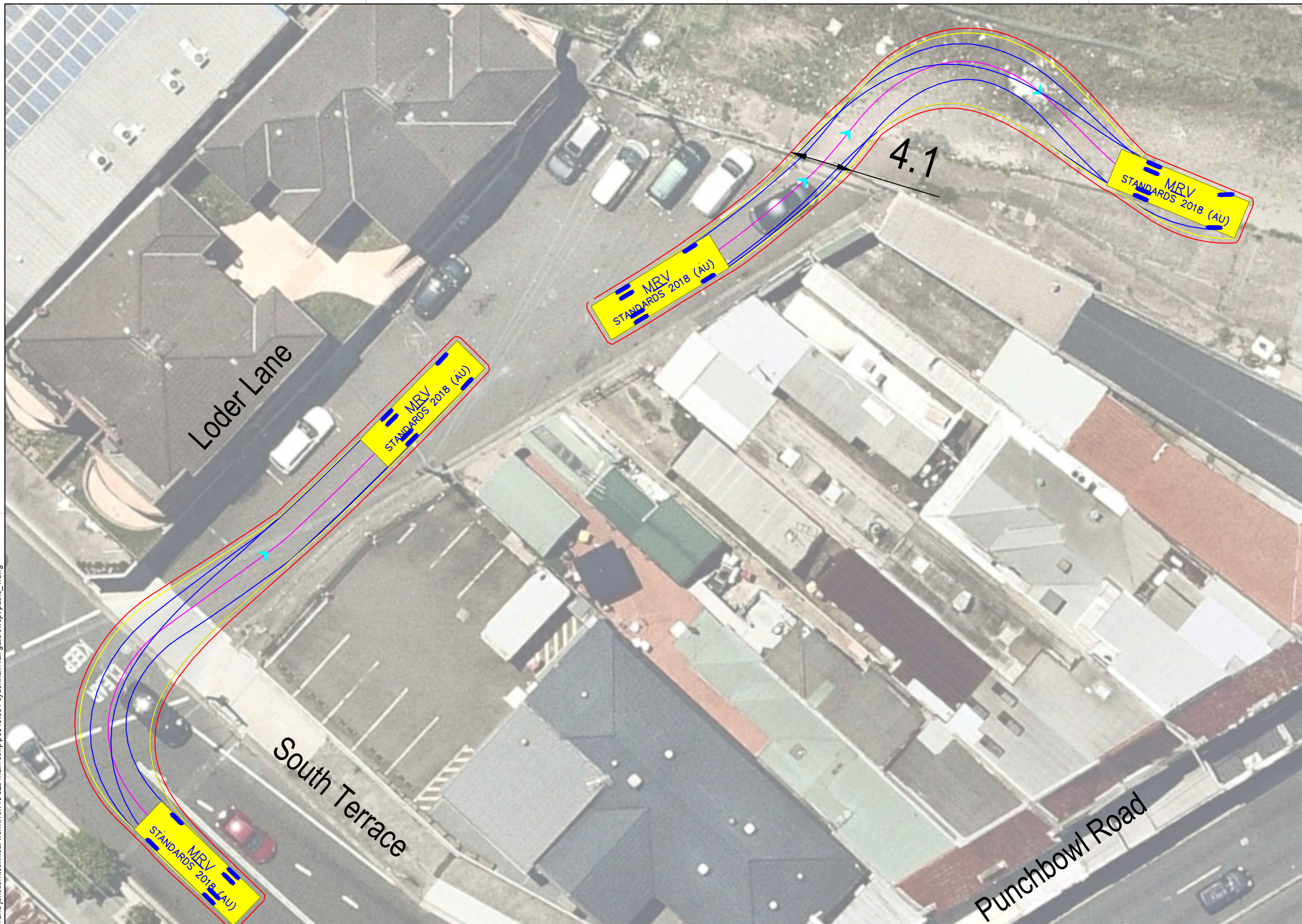
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.358U - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		Issue
P3519	33	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

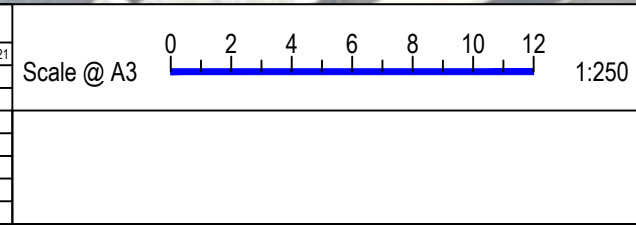
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

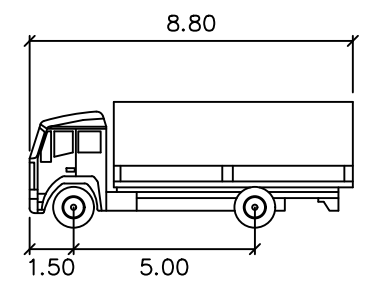
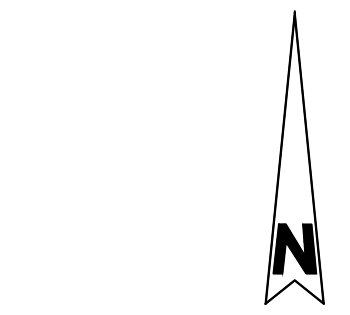
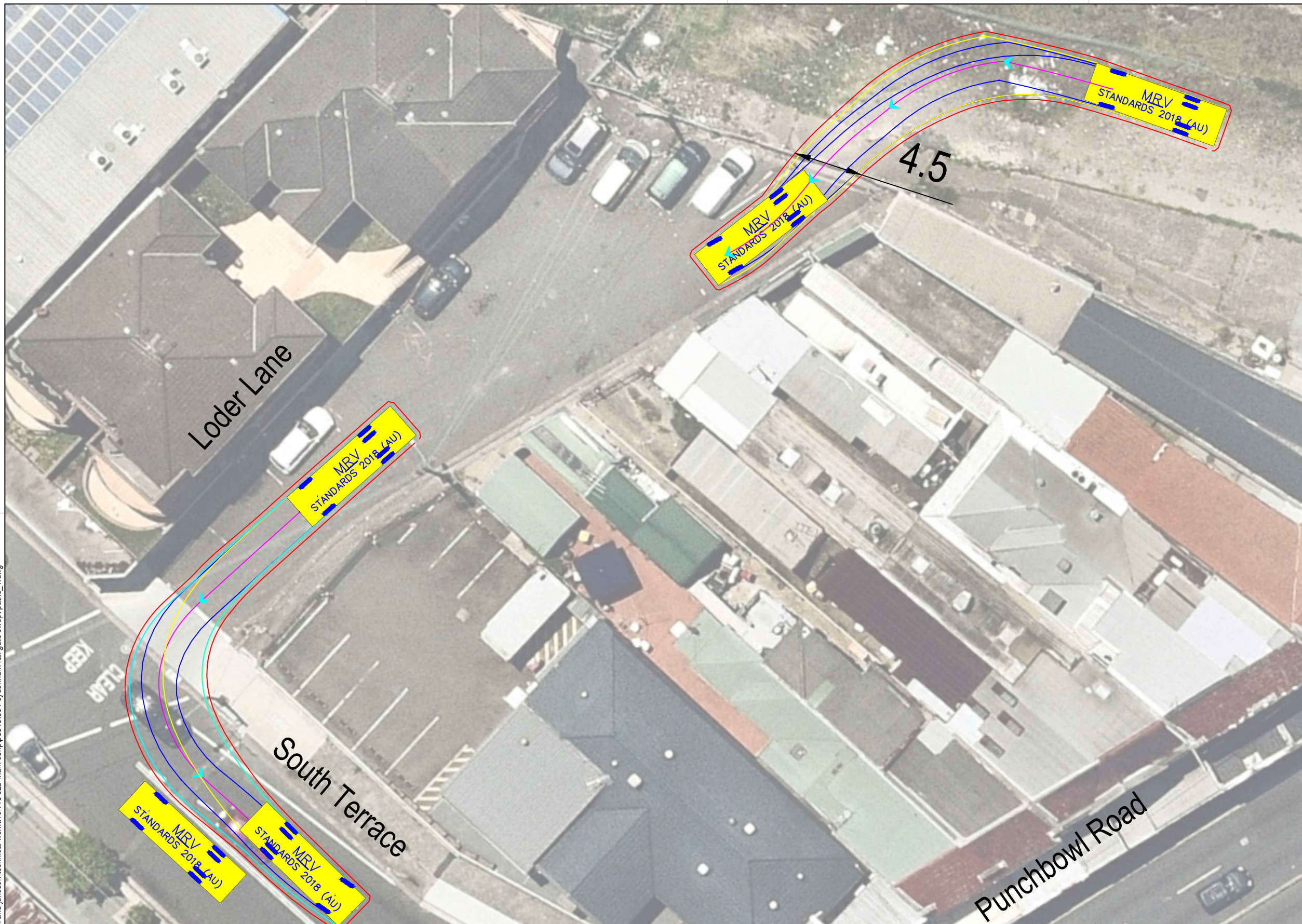
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.608D - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
34	34	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

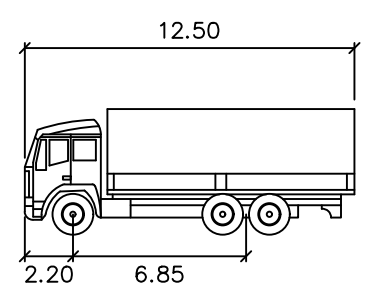
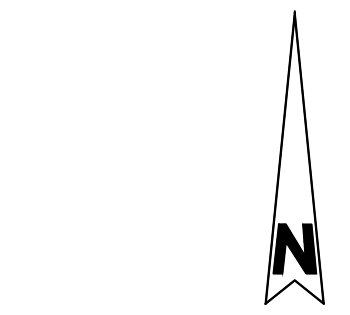
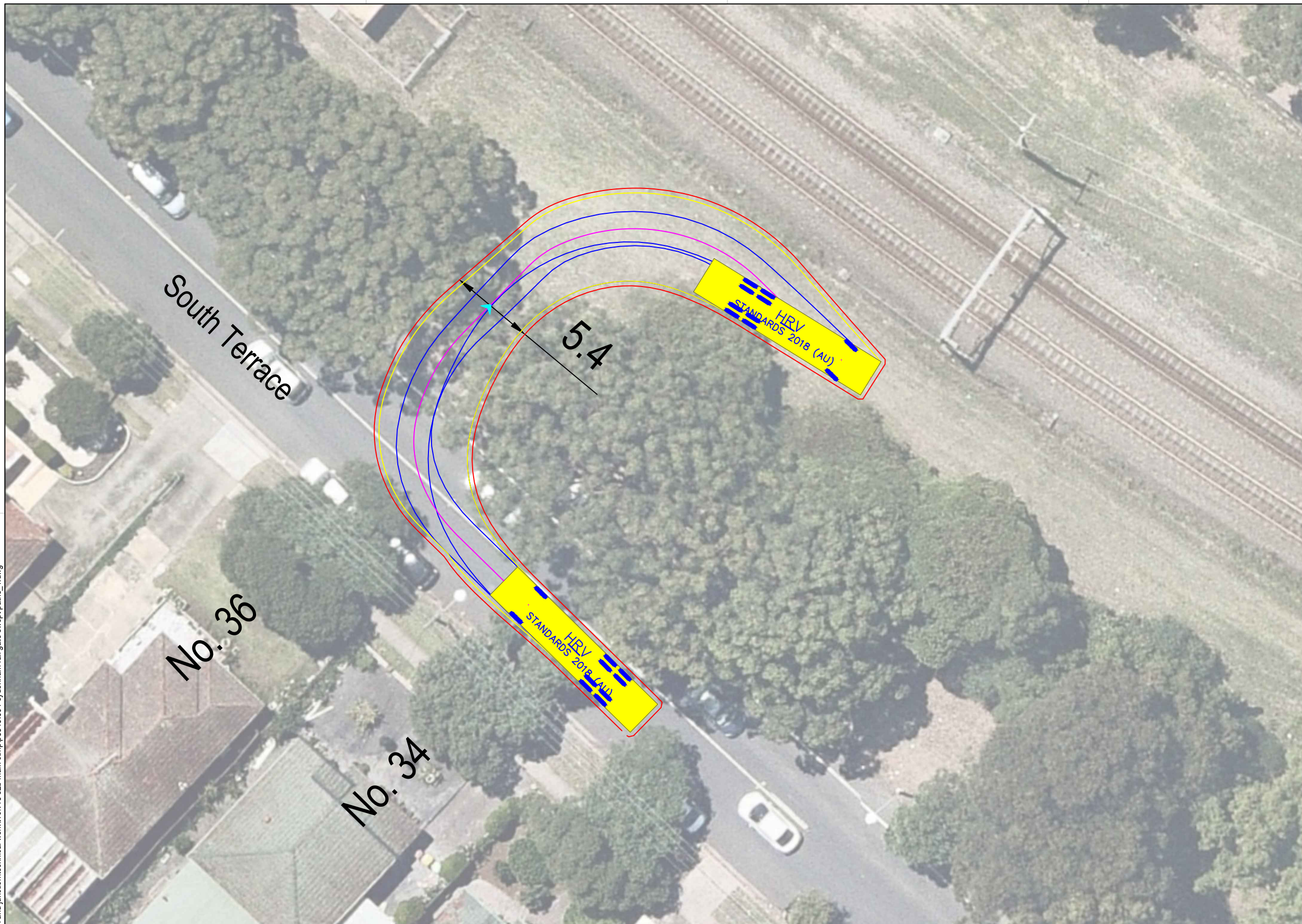
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 16.608D - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	35	001



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

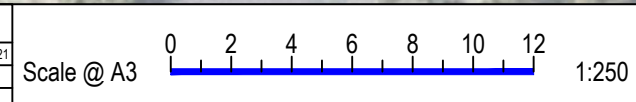
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

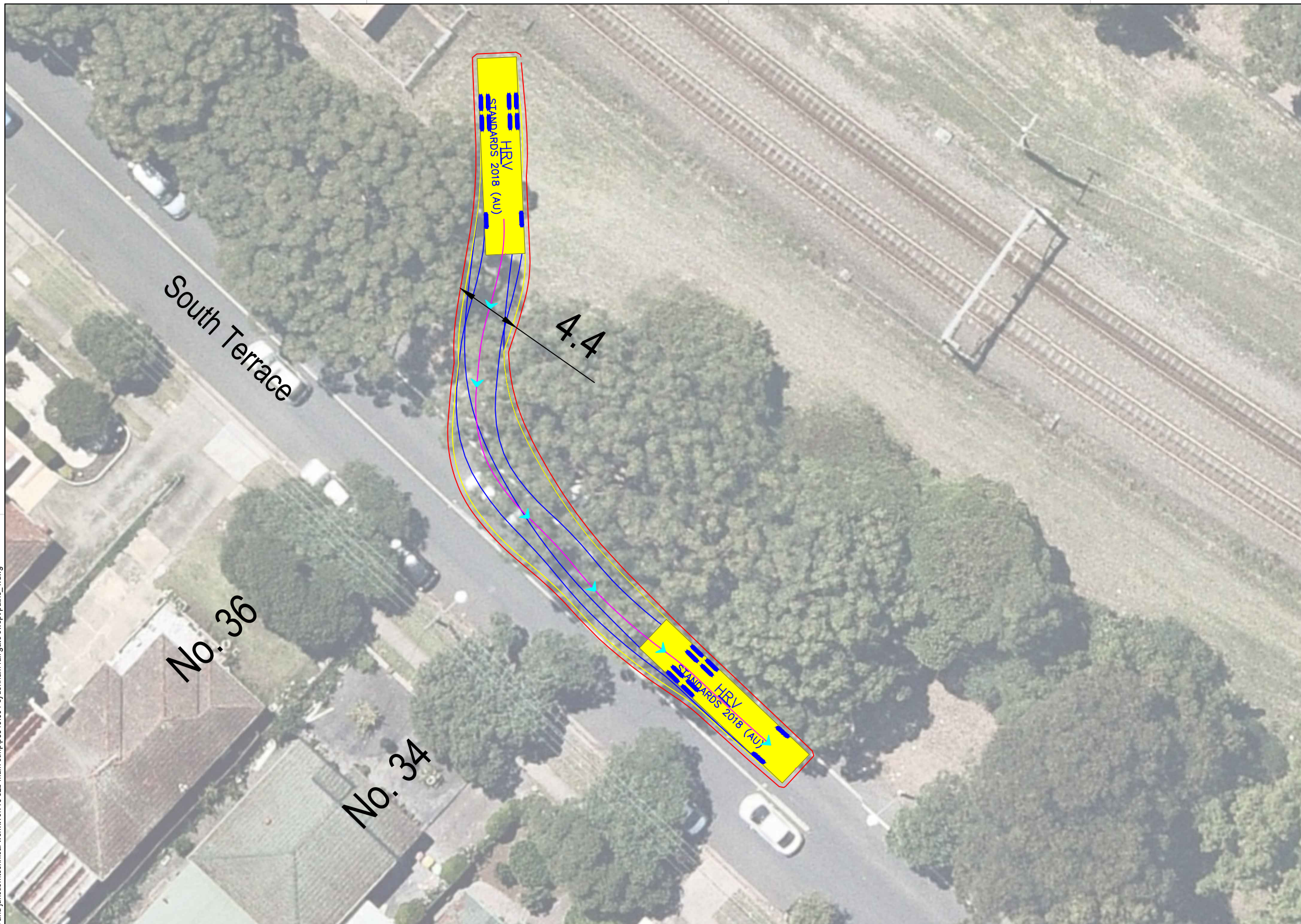


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

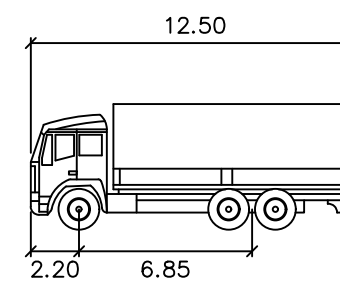
Title SWEEP PATH ANALYSIS
 GATE M24 16.795D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	36	001

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Note: Requires occupation of two (2) parking spaces east of gate



HRV

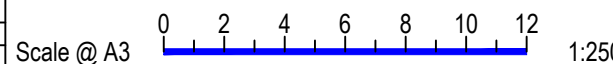
	units
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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

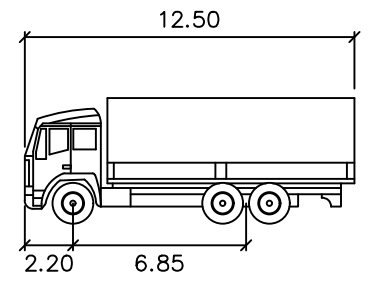
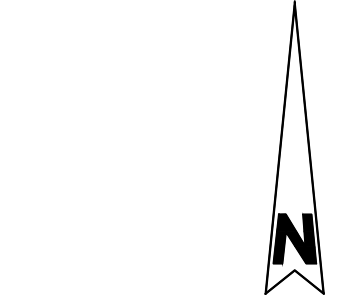
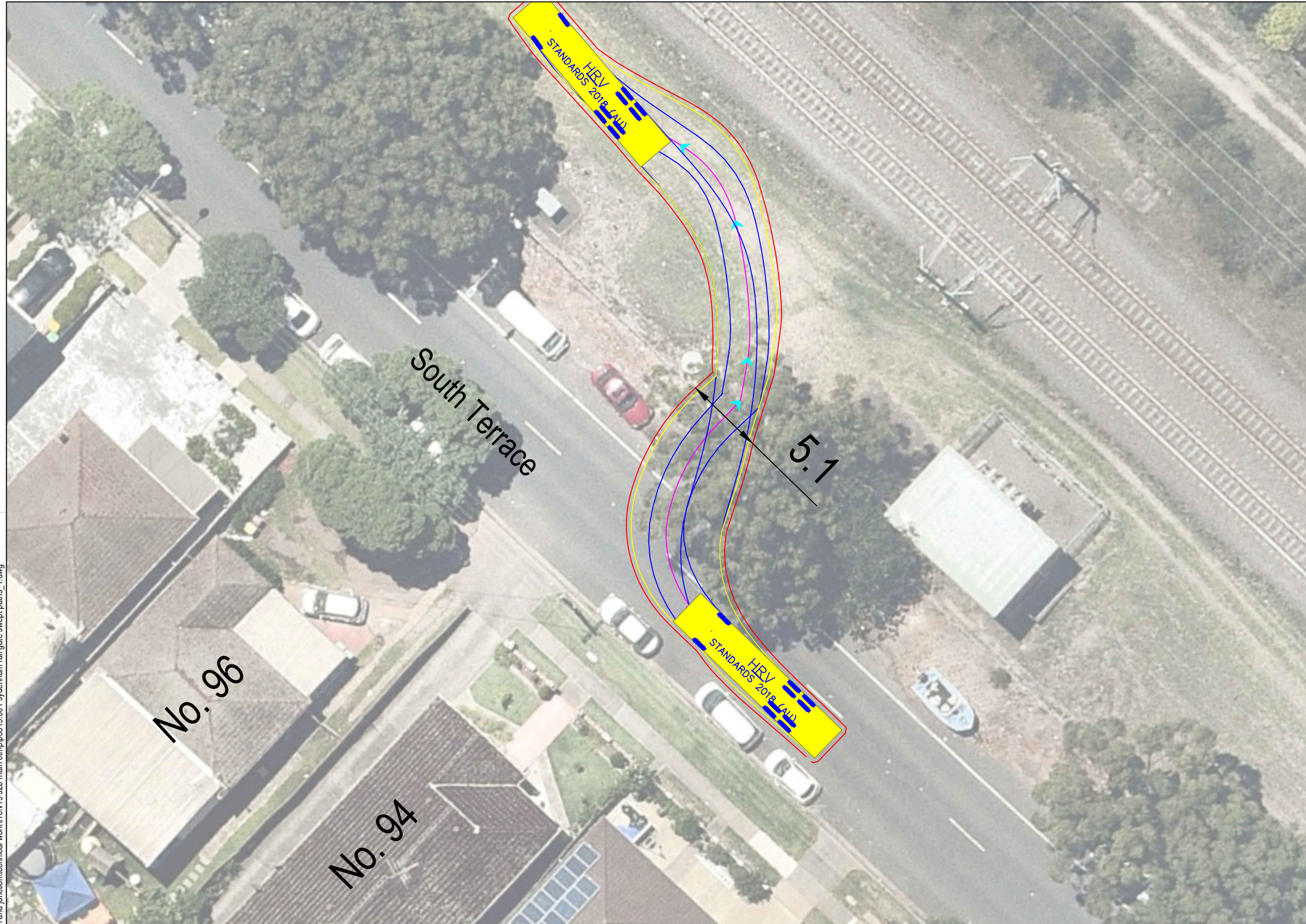
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 16.795D - FORWARD EGRESS
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	37	001

p:\p3519 jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



HRV

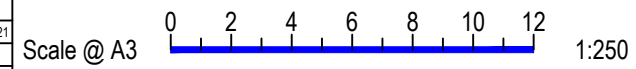
	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

DESIGN VEHICLE

BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

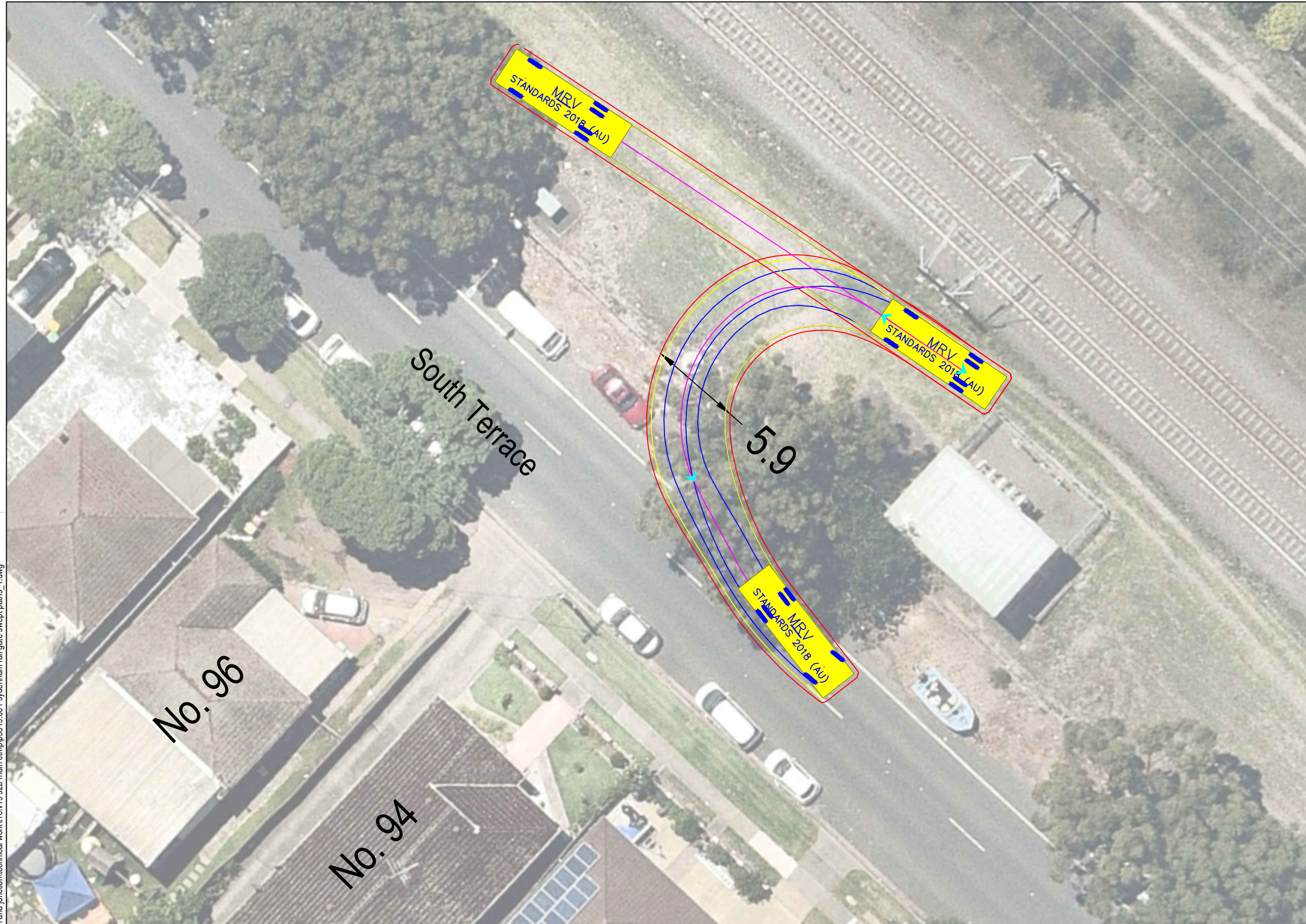


Project JHLORJV SYDNEY METRO CITY AND
SOUTHWEST CORRIDOR WORKS
CTMP

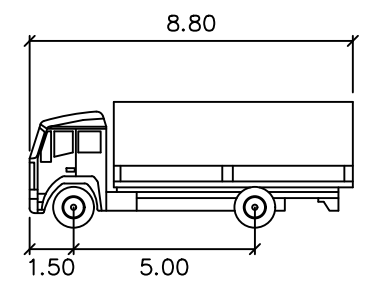
Title SWEEP PATH ANALYSIS
GATE M24 17.254D - FORWARD ENTRY
HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
	38	001

p:\p3519 jhlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Note: Requires occupation of two (2) parking spaces east of gate



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

DESIGN VEHICLE

BITZIOS
 consulting
 traffic engineering ■ transport planning

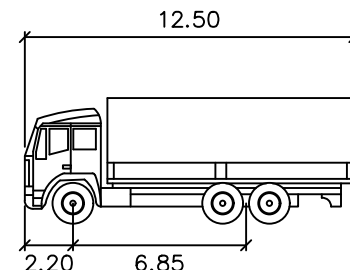
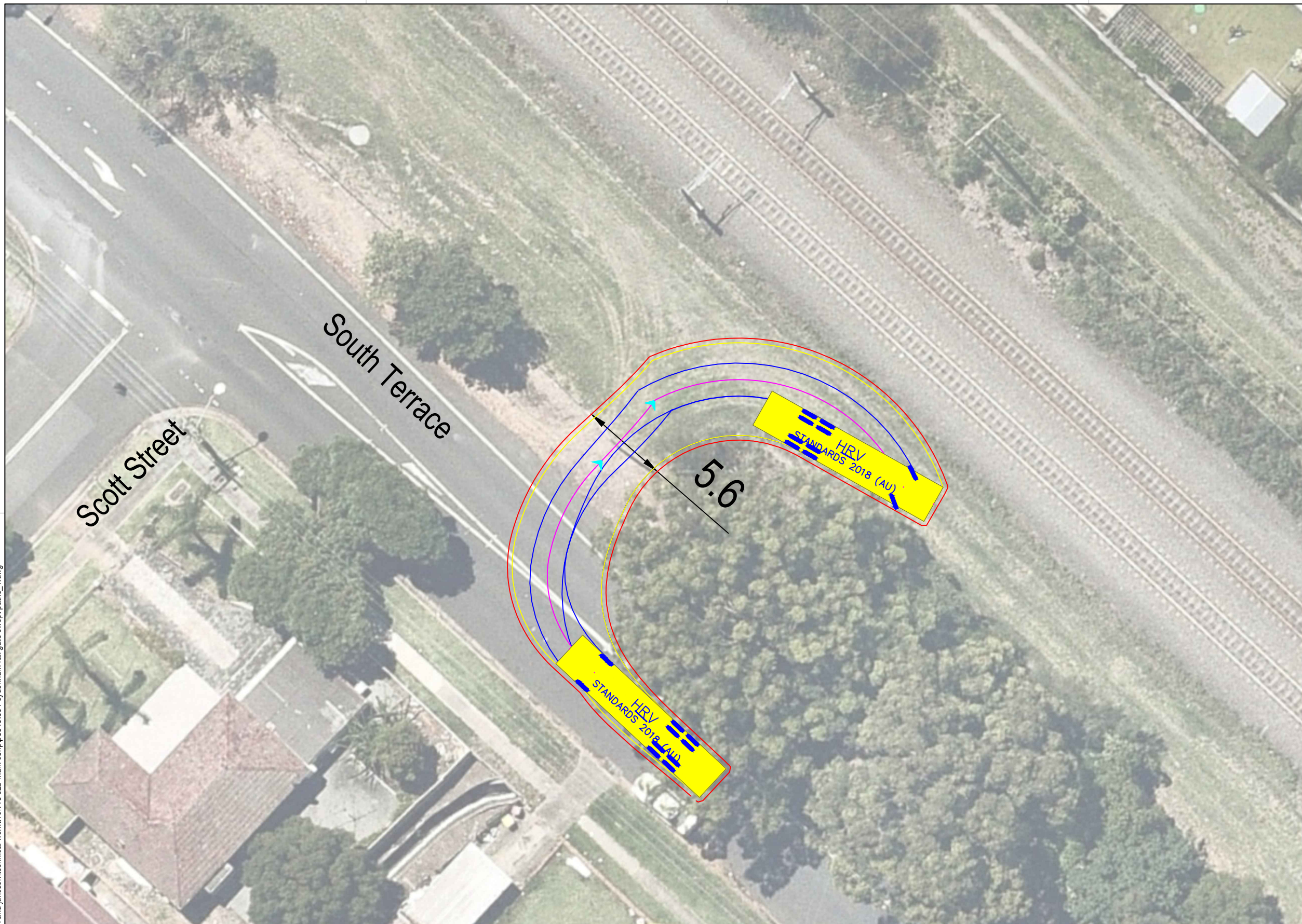
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 17.254D - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
39	001	



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

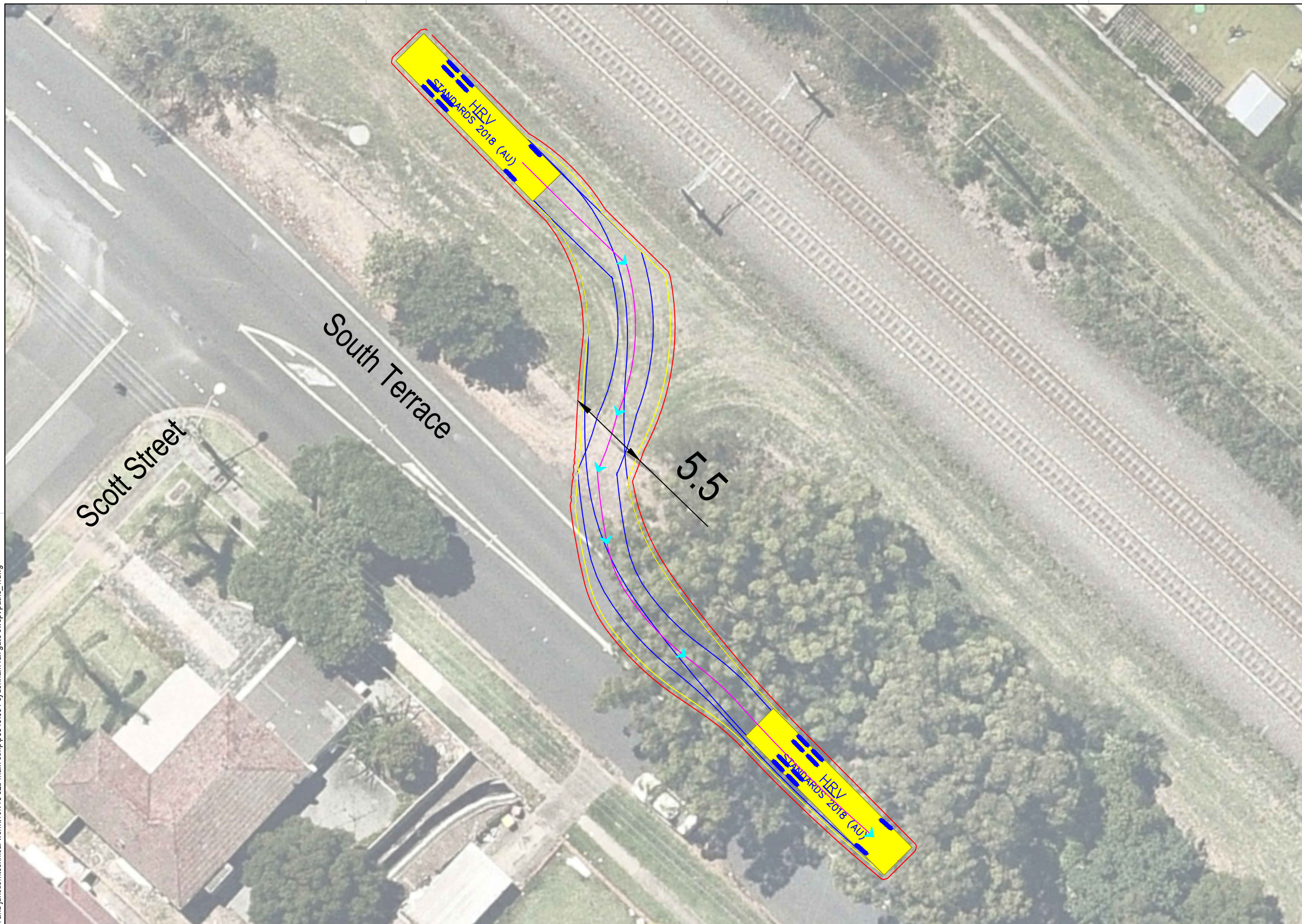
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

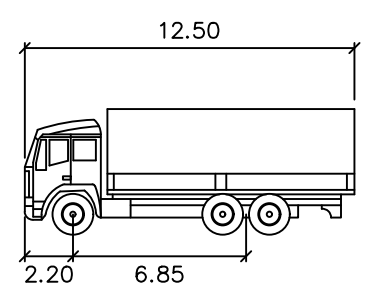
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 17.363D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
40	40	001



Note: Requires occupation of two (2) parking spaces east of gate



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519\jlorjv sydenham station and junction\technical work\11civ19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

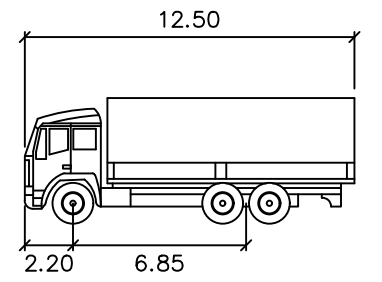
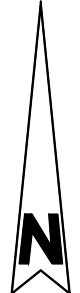
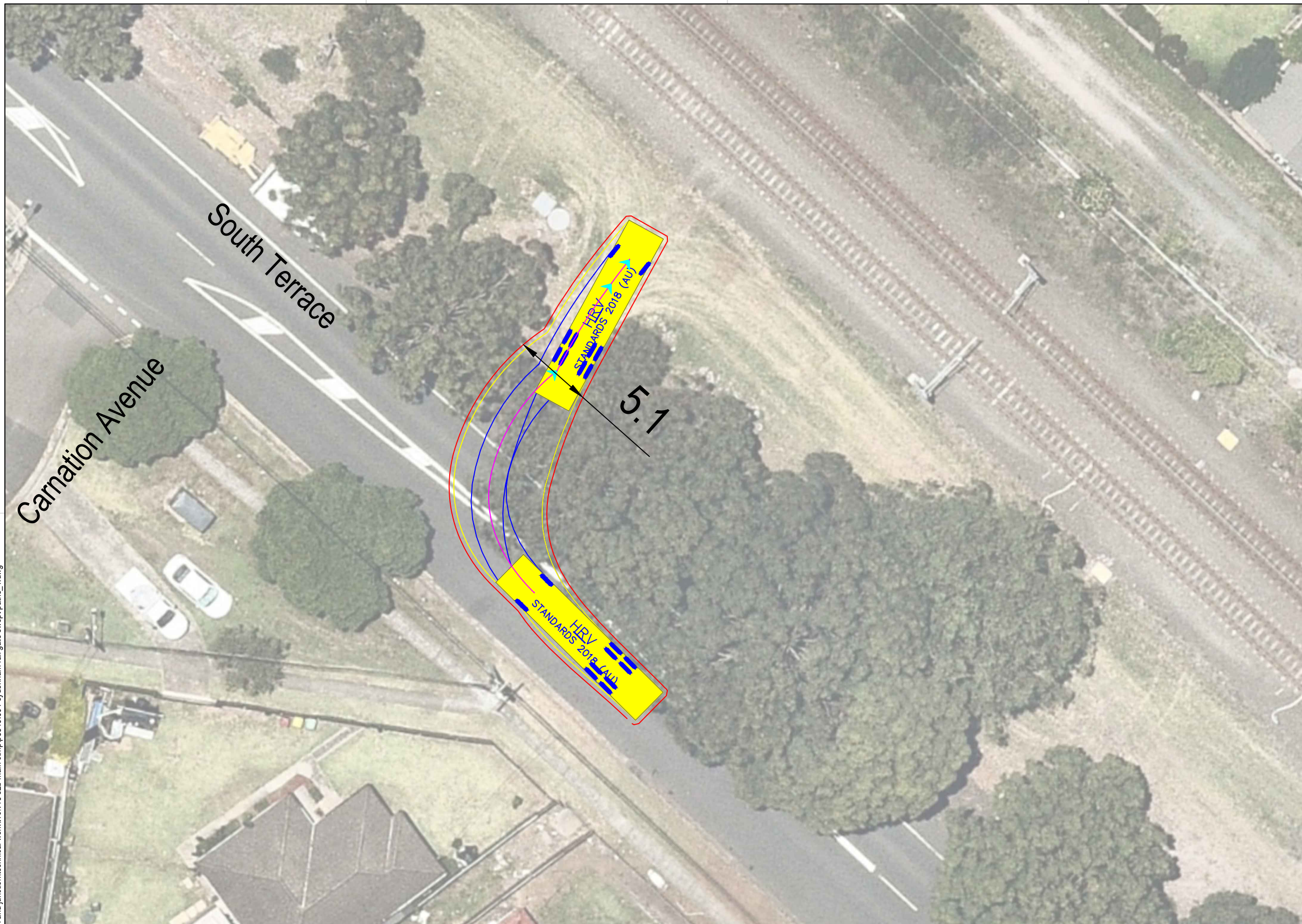
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 17.363D - FORWARD EGRESS
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
22.02.2021		Issue
Project Number	Sheet Number	Issue
P3519	41	001



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

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

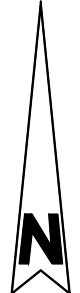
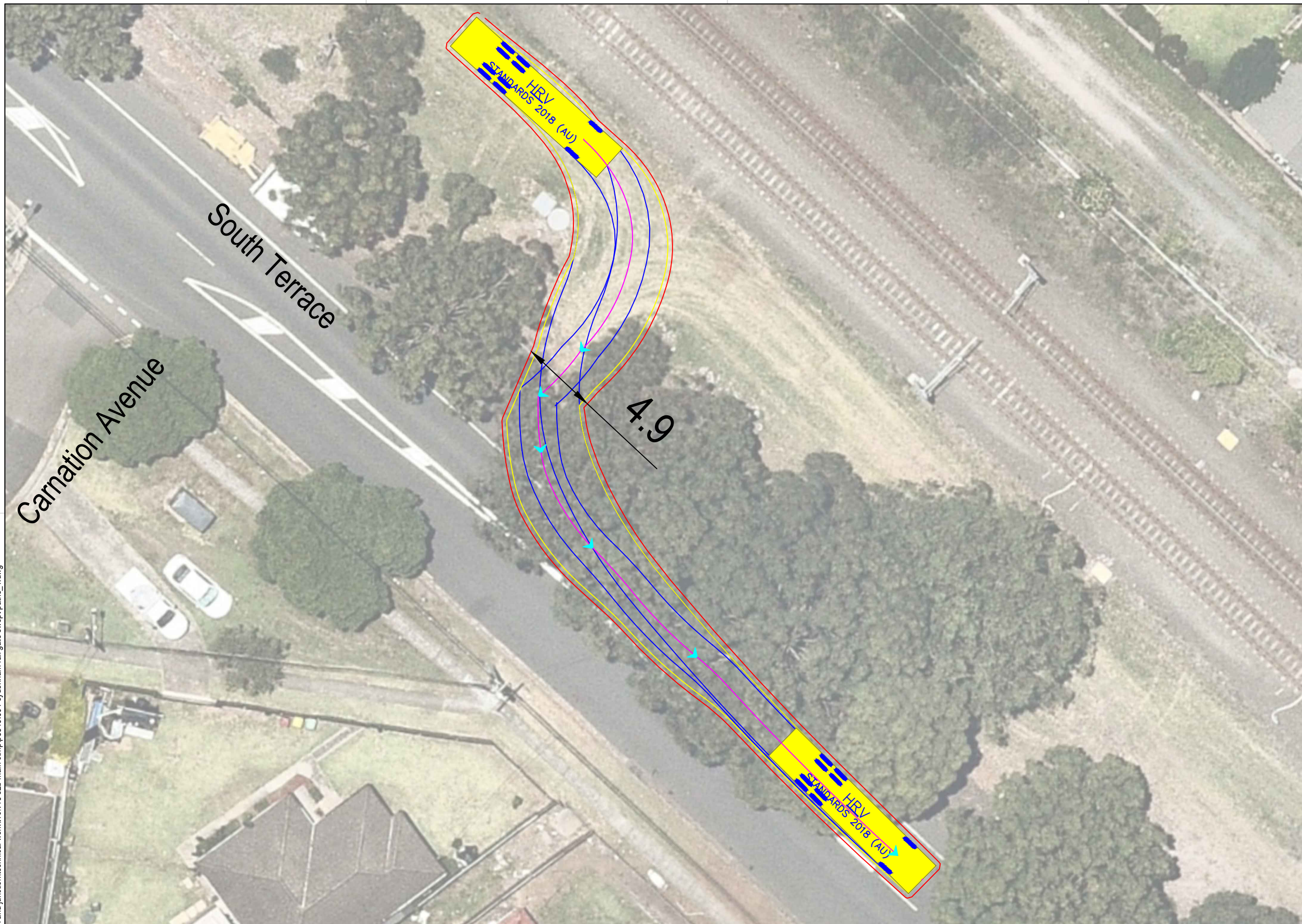
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

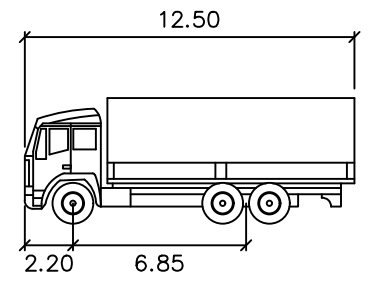
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 17.642D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
42	001	



Note: Requires occupation of two (2) parking spaces east of gate



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

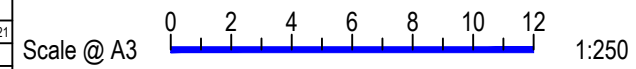
DESIGN VEHICLE

p:\p3519\jhorjv sydenham station and junction\technical work\11civ19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

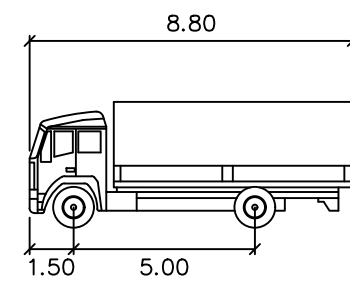
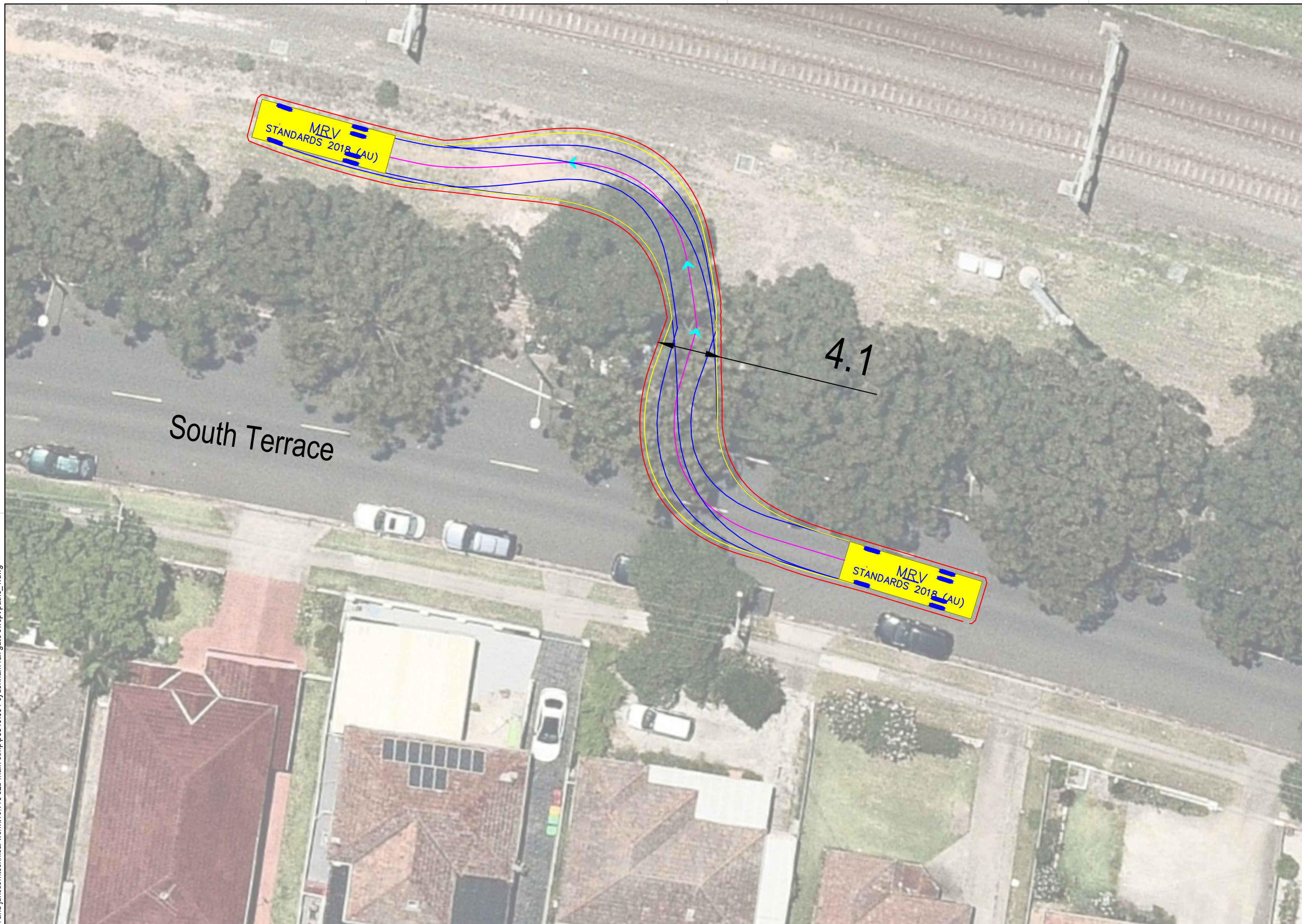
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 17.642D - FORWARD EGRESS
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
43	43	001



MRV meters

Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

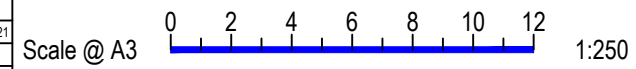
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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

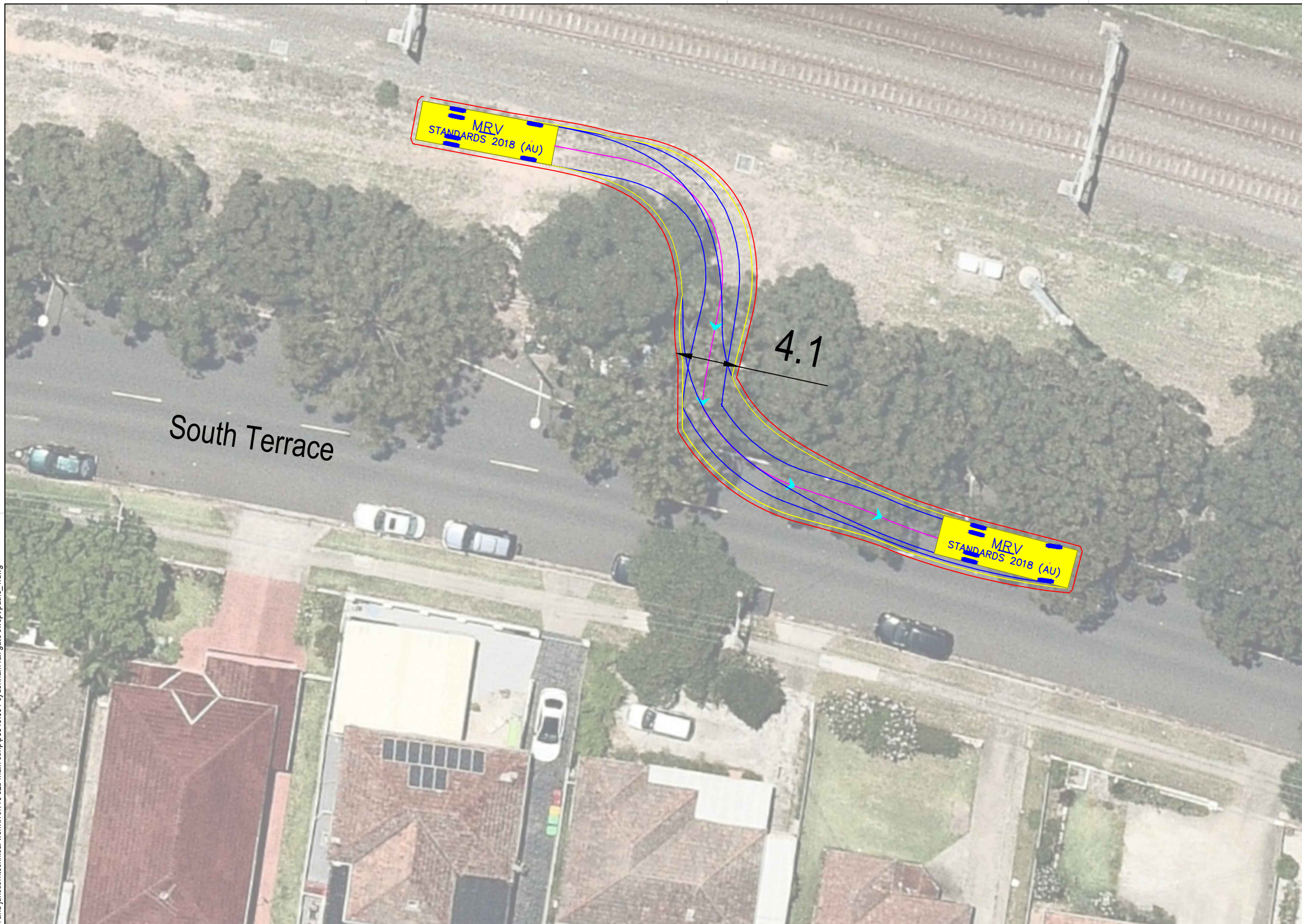
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



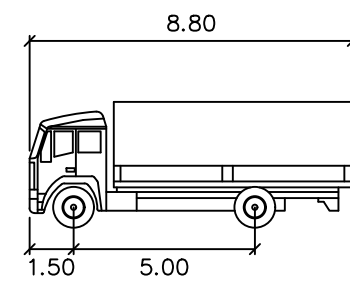
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 17.962D - FORWARD ENTRY
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
44	44	001



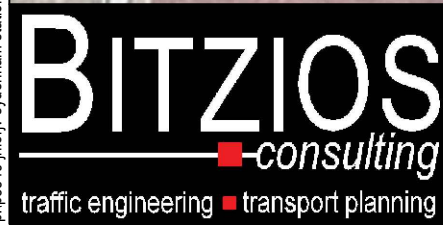
Note: Requires occupation of two (2) parking spaces east of gate



MRV meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 34.0

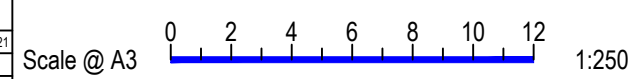
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



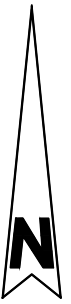
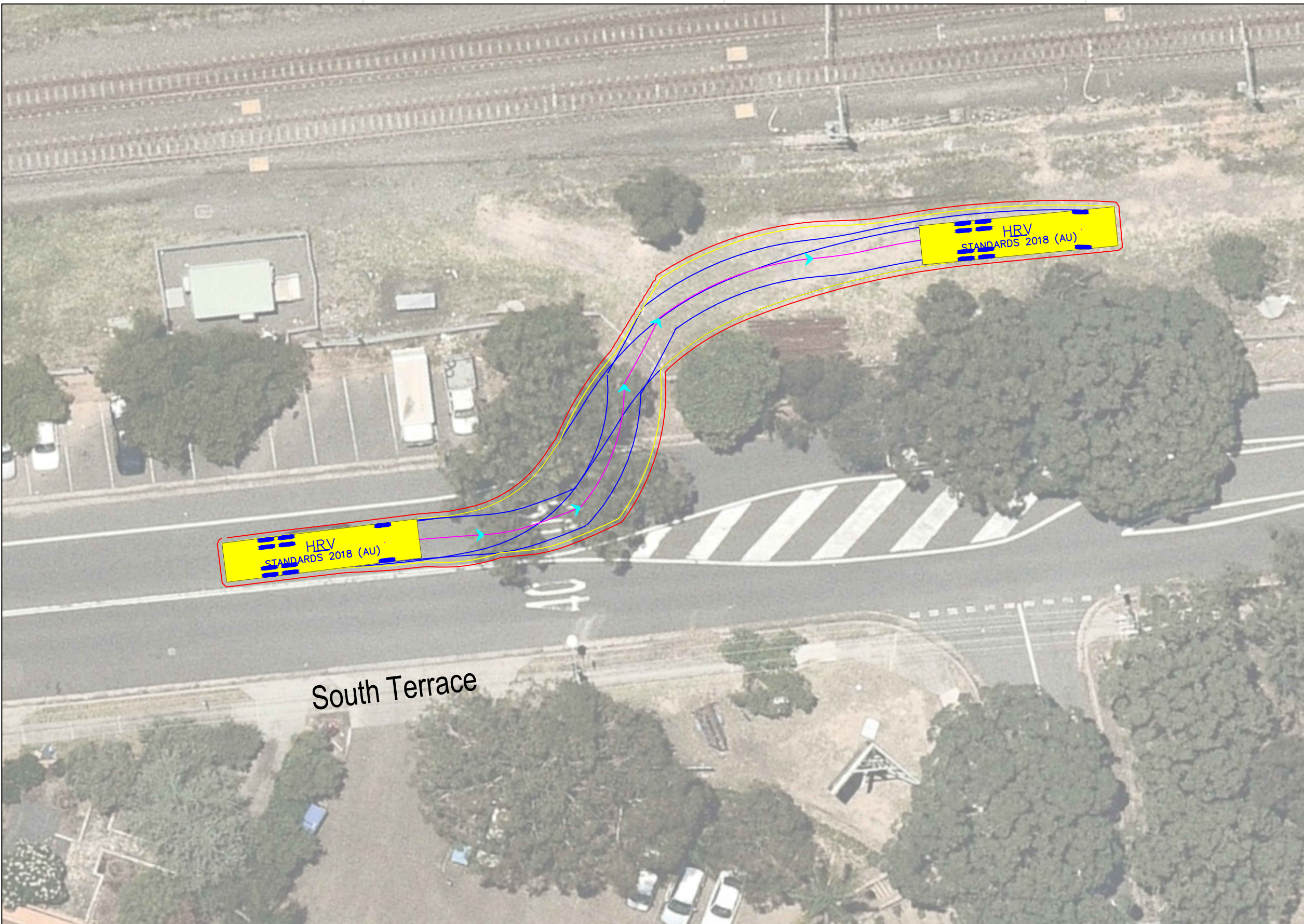
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

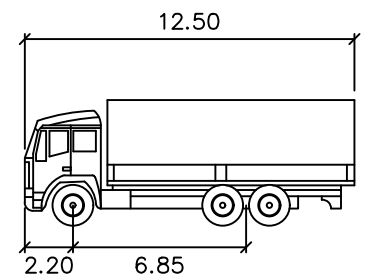


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 17.962D - FORWARD EGRESS
 MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	45	001



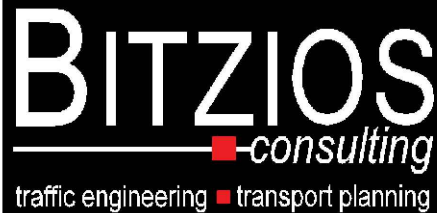
Note: Entry conflicts with tree in front of gate



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

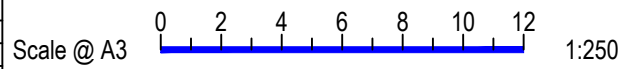
DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



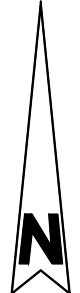
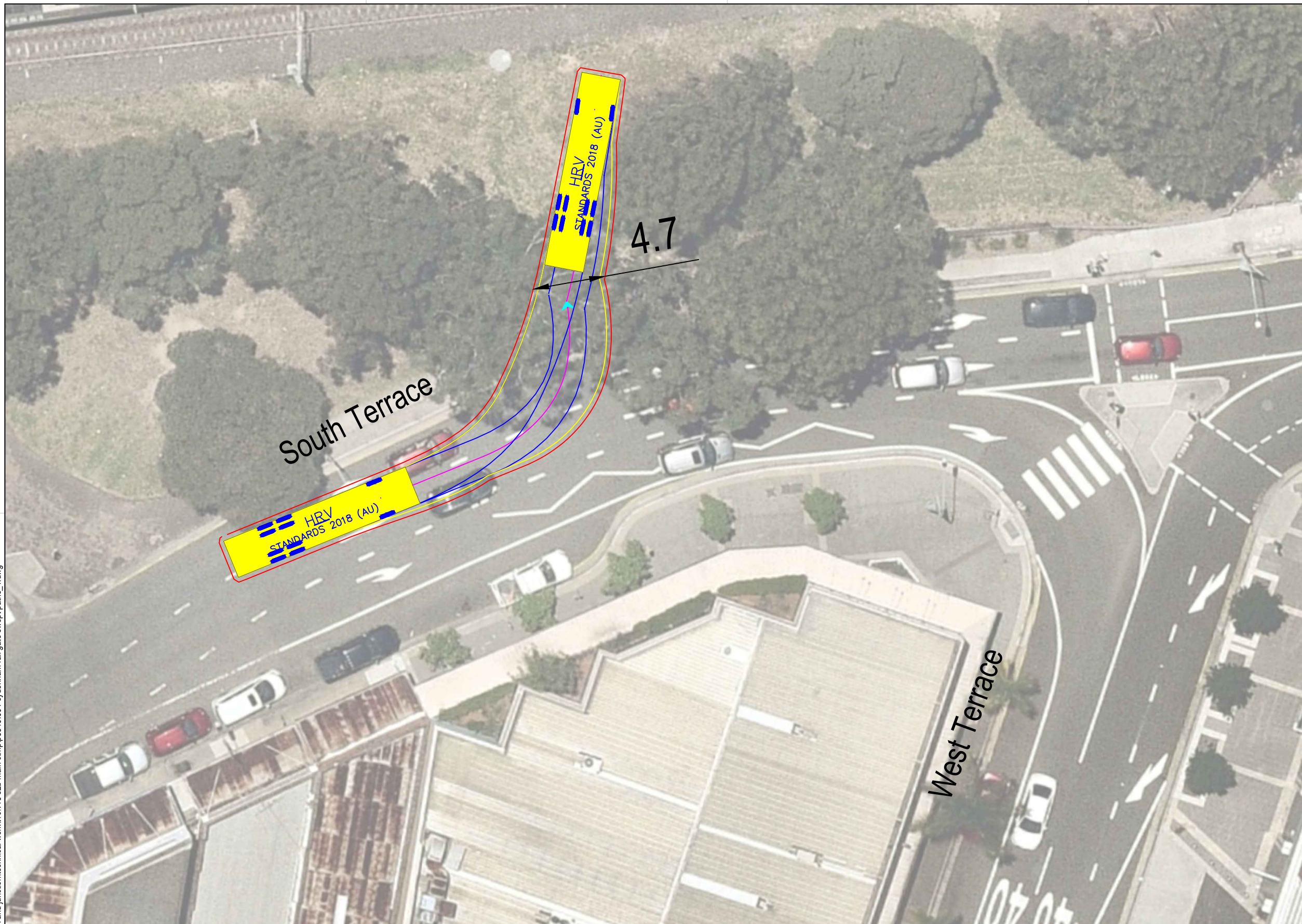
Gold Coast
 Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021

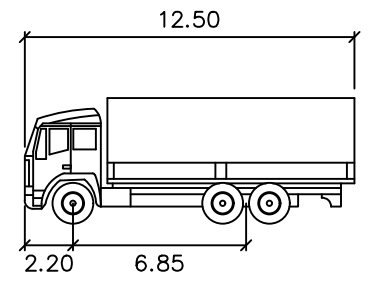


Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 18.223D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
46	46	001



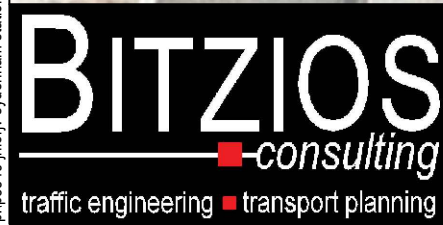
Note: Left Turn entry requires straddling both approach through lanes



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

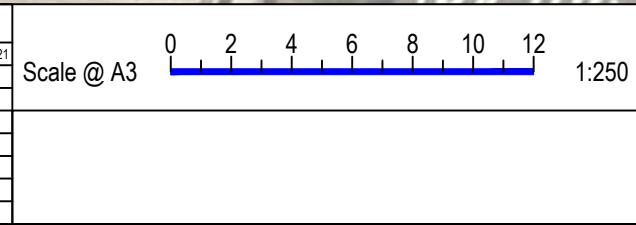
DESIGN VEHICLE

p:\p3519\jhlrvj sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



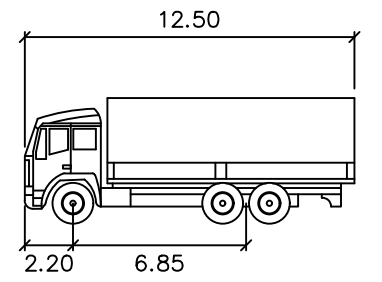
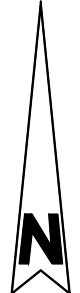
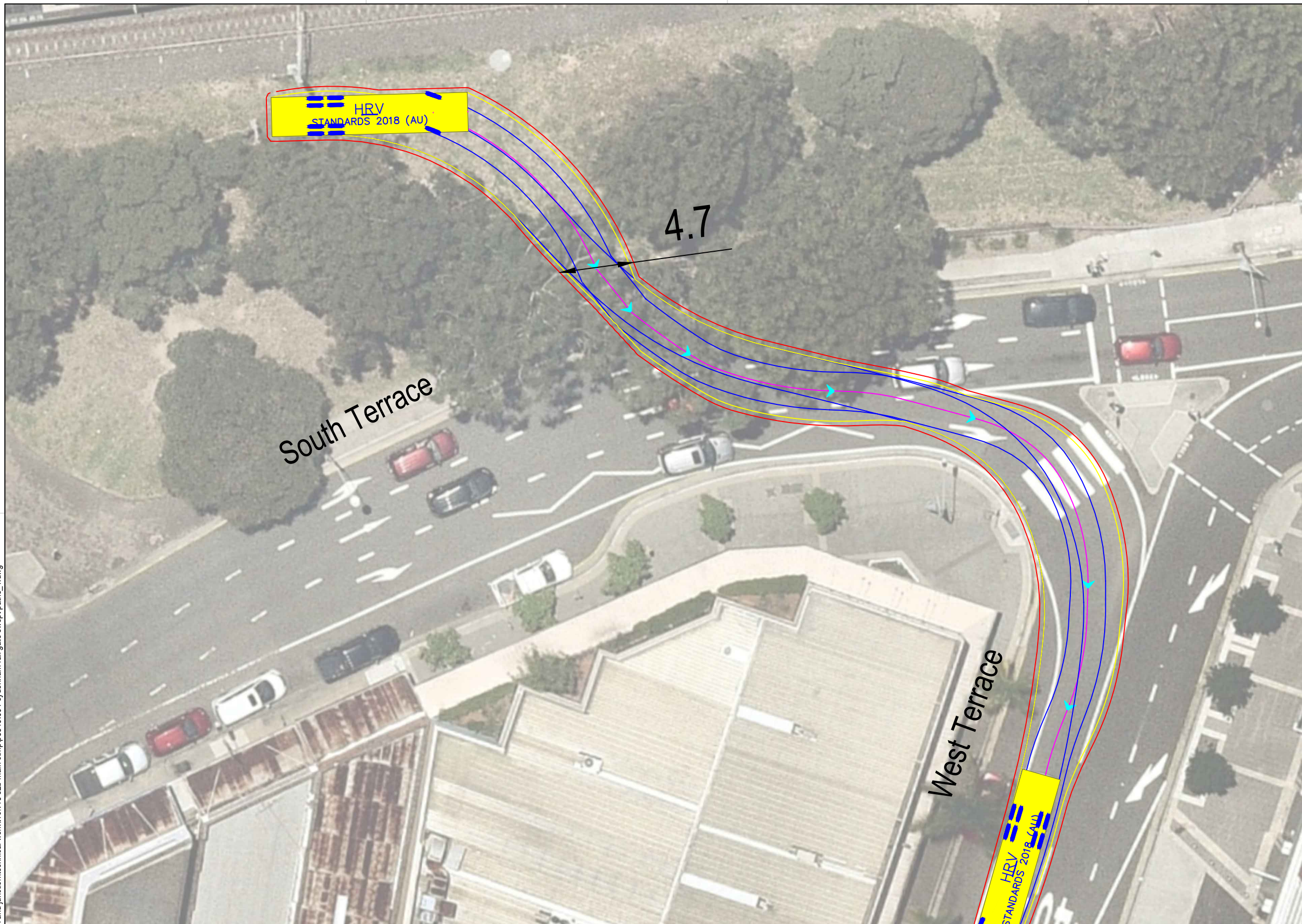
Gold Coast
 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226.
 P: (07) 5562-5377
 W: www.bitziosconsulting.com.au
Brisbane
 Level 2, 428 Upper Edward Street, Spring Hill 4000.
 P: (07) 3831-4442
 E: admin@bitziosconsulting.com.au
Sydney
 Studio 203, 3 Gladstone Street, Newtown NSW 2042.
 P: (02) 9557 6202

REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 18.512D - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
47	47	001



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519\jlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

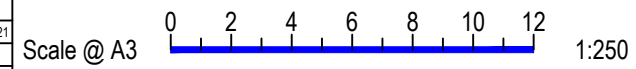
BITZIOS
 consulting
 traffic engineering ■ transport planning

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

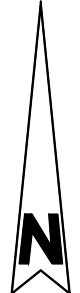
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



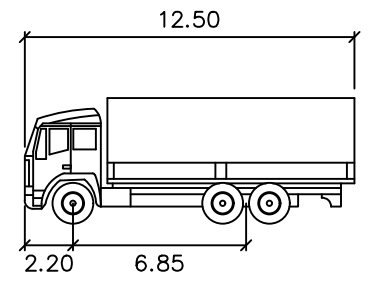
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 18.512D - FORWARD EGRESS
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
48	48	001



Note: Right Turn requires straddling both approach lanes



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

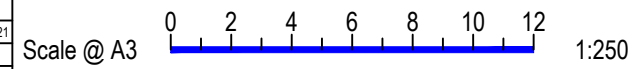
DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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

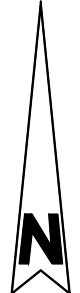
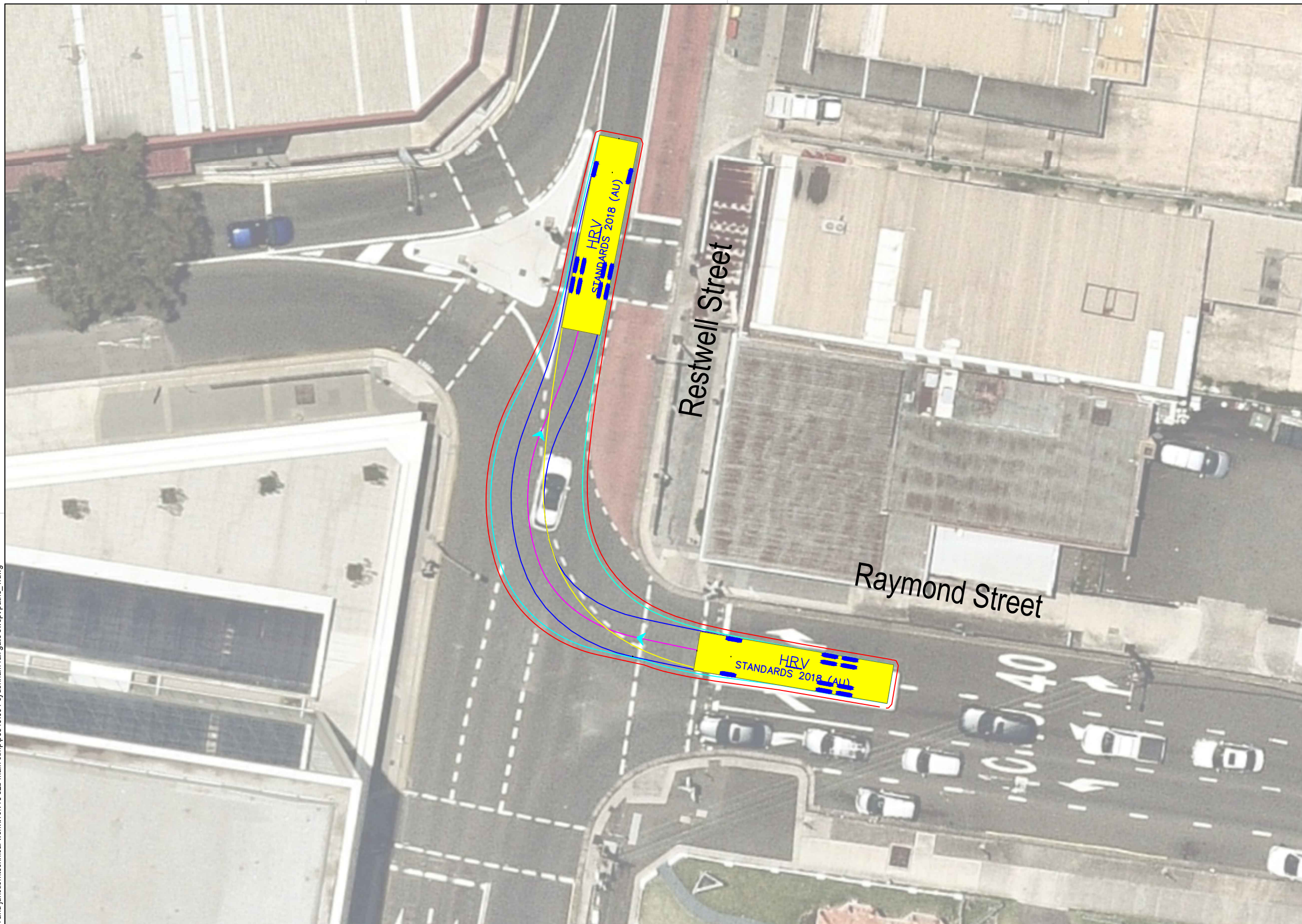
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



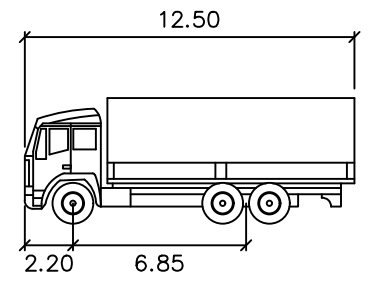
Project JHLORJV SYDNEY METRO CITY AND
SOUTHWEST CORRIDOR WORKS
CTMP

Title SWEEP PATH ANALYSIS
GATE M24 18.512D - HAULAGE ROUTE
HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
		22.02.2021
Project Number	Sheet Number	Issue
P3519	49	001



Note: Right Turn requires straddling both approach lanes



HRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

DESIGN VEHICLE

p:\p3519 jhlorjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
consulting
traffic engineering ■ transport planning

Gold Coast
Suite 26, 58 Rivenwalk 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

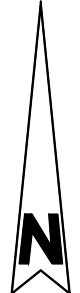
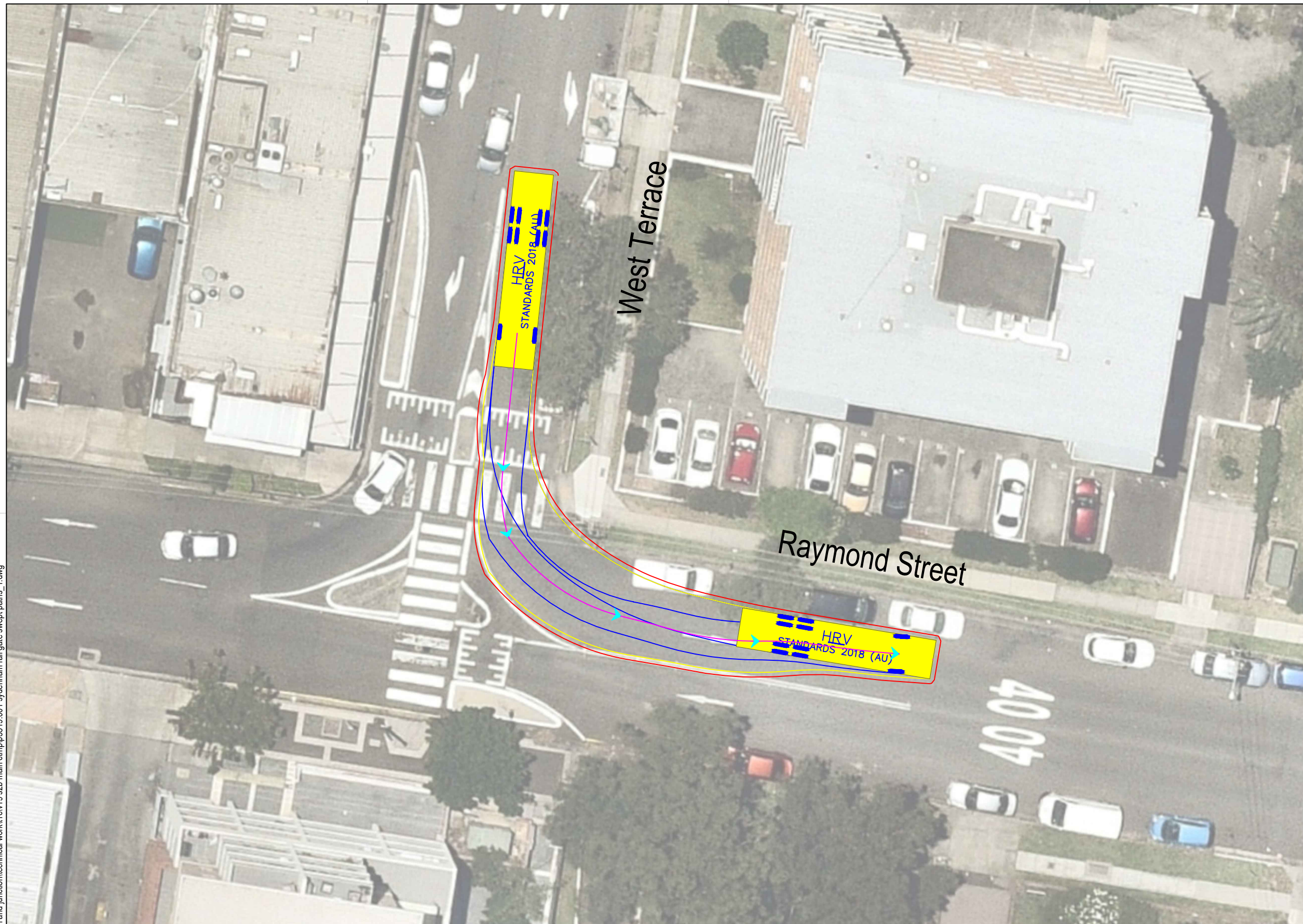
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

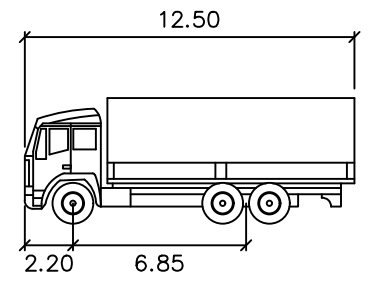
Project JHLORJV SYDNEY METRO CITY AND SOUTHWEST CORRIDOR WORKS CTMP

Title SWEEP PATH ANALYSIS GATE M24 18.512D - HAULAGE ROUTE HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
50	50	001

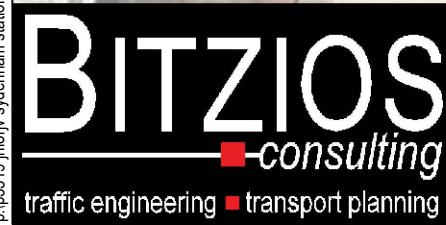


Note: Requires occupation of one (1) parking space on Raymond Street east of West Terrace



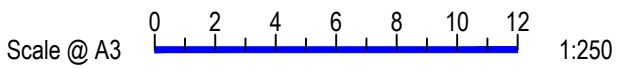
HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE



Gold Coast
 Suite 26, 58 Rivenwalk 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

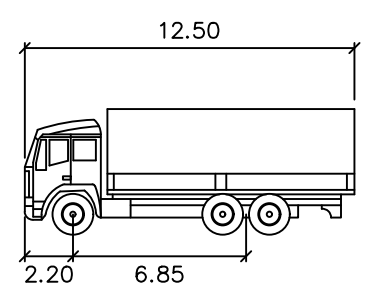
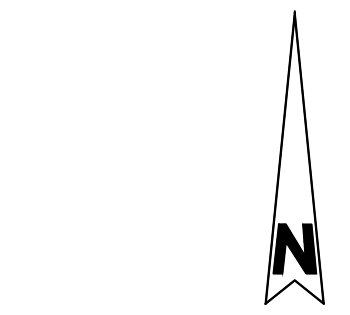
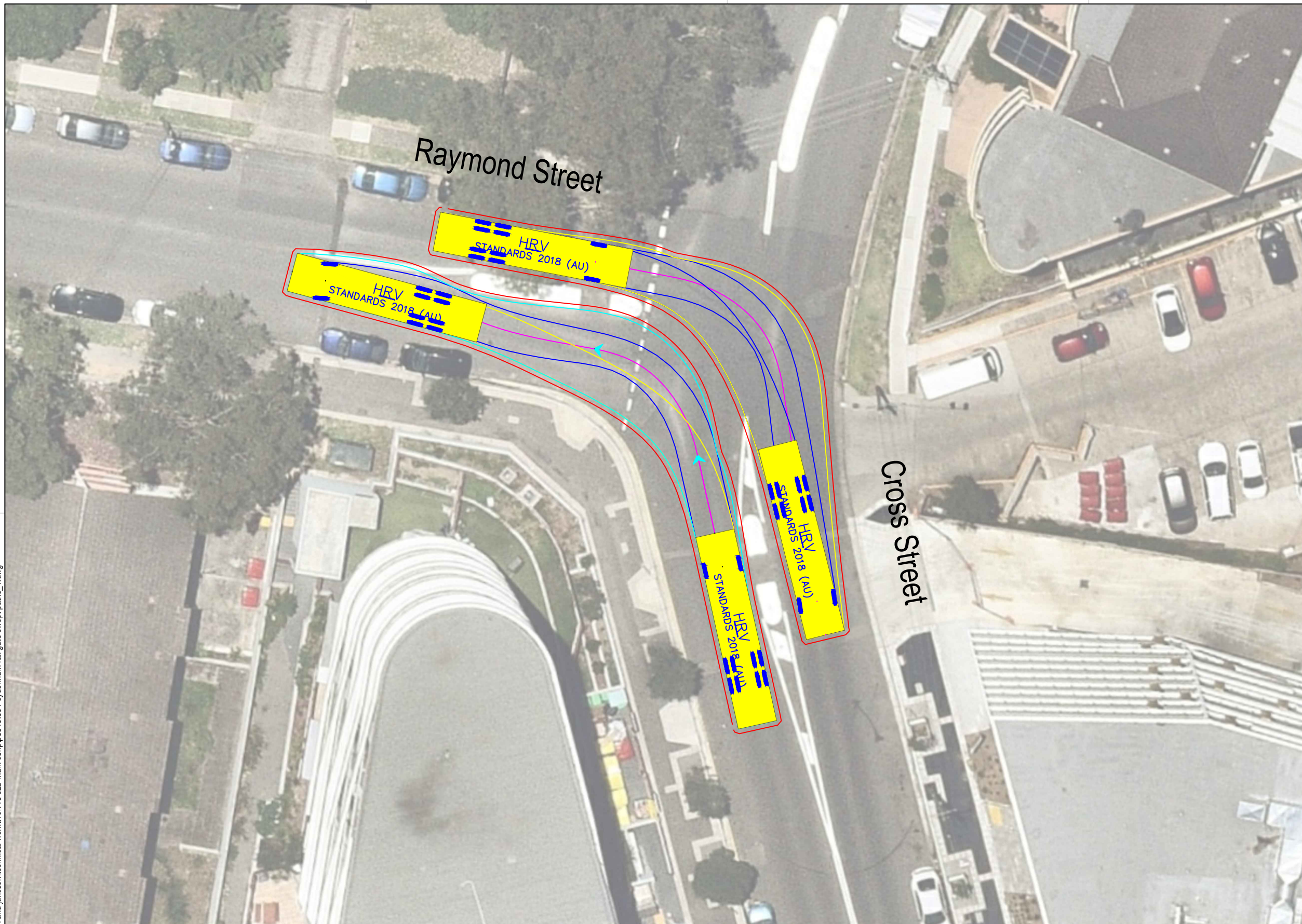
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 18.512D - HAULAGE ROUTE
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
51	91	001

p:\p3519 jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

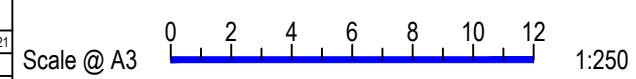
DESIGN VEHICLE

p:\p3519_jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

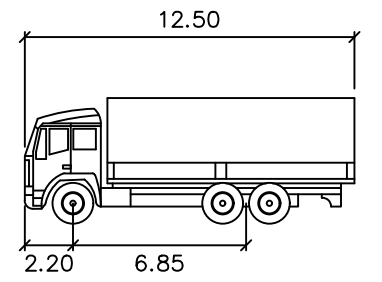
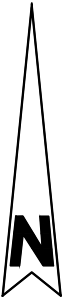
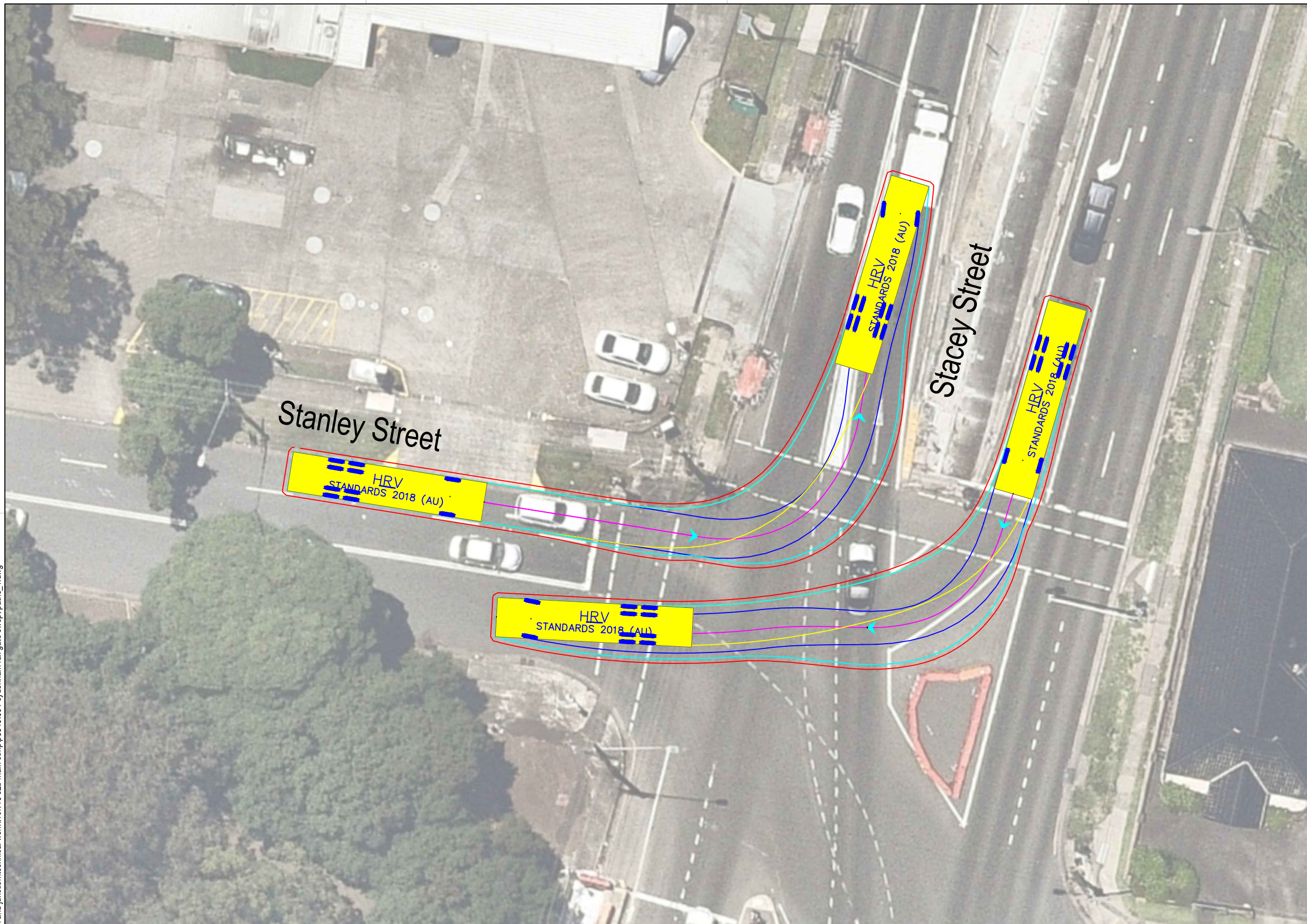
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 18.512D - HAULAGE ROUTE
 HRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
52	92	001



HRV

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

DESIGN VEHICLE

p:\p3519 jhlorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021

Scale @ A3 1:250

Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 18.512D - HAULAGE ROUTE
 HRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
P3519		22.02.2021
Project Number	Sheet Number	Issue
P3519	54	001

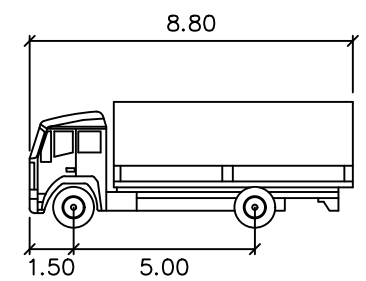
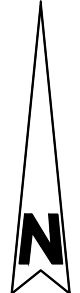
Featherstone Street

North Terrace

3.9

MRV
STANDARDS 2018 (AU)

MRV
STANDARDS 2018 (AU)



MRV meters

Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0
Steering Angle : 34.0

DESIGN VEHICLE

p:\p3519\jhorjv sydenham station and junction\technical work\11\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

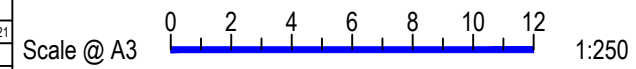


Gold Coast
Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au

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			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
SOUTHWEST CORRIDOR WORKS
CTMP

Title SWEEP PATH ANALYSIS
GATE M24 18.648U - FORWARD ENTRY
MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		Issue
P3519	55	001

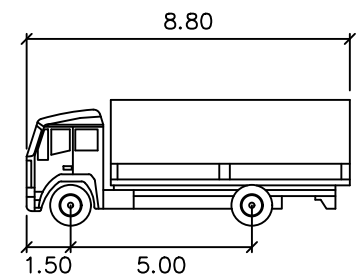
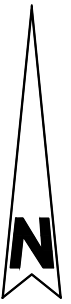
Featherstone Street

North Terrace

MRV
STANDARDS 2018 (AU)

3.3

MRV
STANDARDS 2018 (AU)



MRV meters

Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0
Steering Angle : 34.0

DESIGN VEHICLE

p:\p3519\jlorjv-sydenham station and junction\technical\work\11civ19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

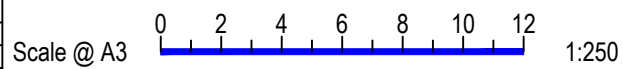


Gold Coast
Suite 26, 58 Rivenwalk Avenue, Robina QLD 4226.
P: (07) 5562-5377
W: www.bitziosconsulting.com.au

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

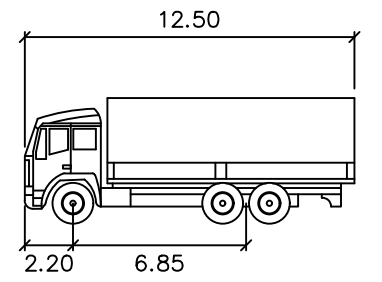
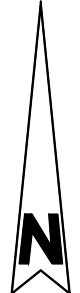
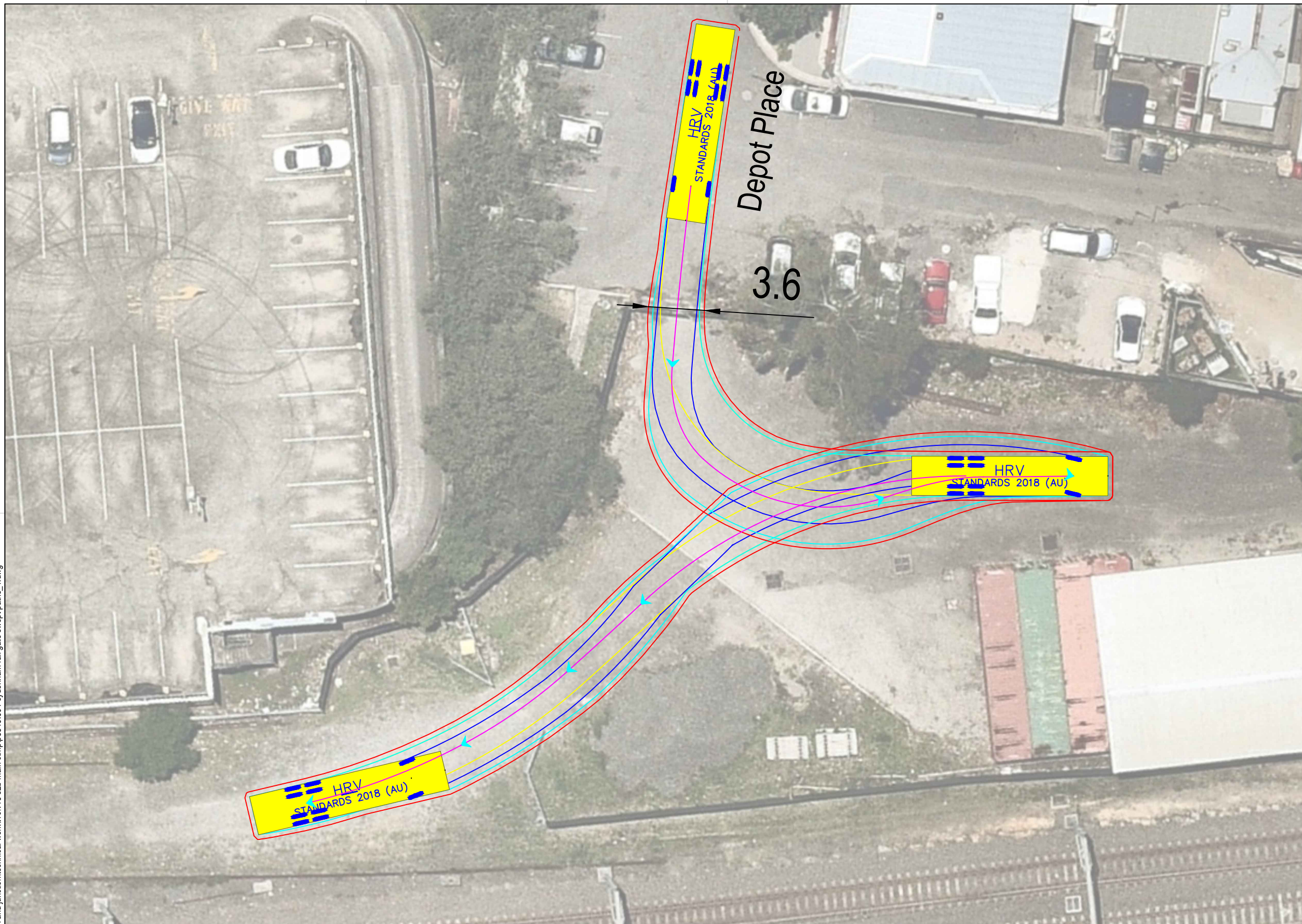
REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
SOUTHWEST CORRIDOR WORKS
CTMP

Title SWEEP PATH ANALYSIS
GATE M24 18.648U - FORWARD EGRESS
MRV

Design	Drawn	Checked
M.H	M.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		Issue
P3519	56	001

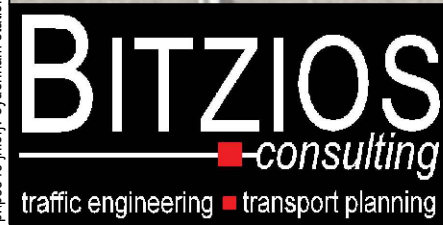


HRV

Width : 12.50 meters
 Track : 6.85 meters
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

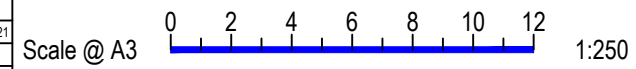
DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\11civ19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg



Gold Coast
 Suite 26, 58 Rivenwalk 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

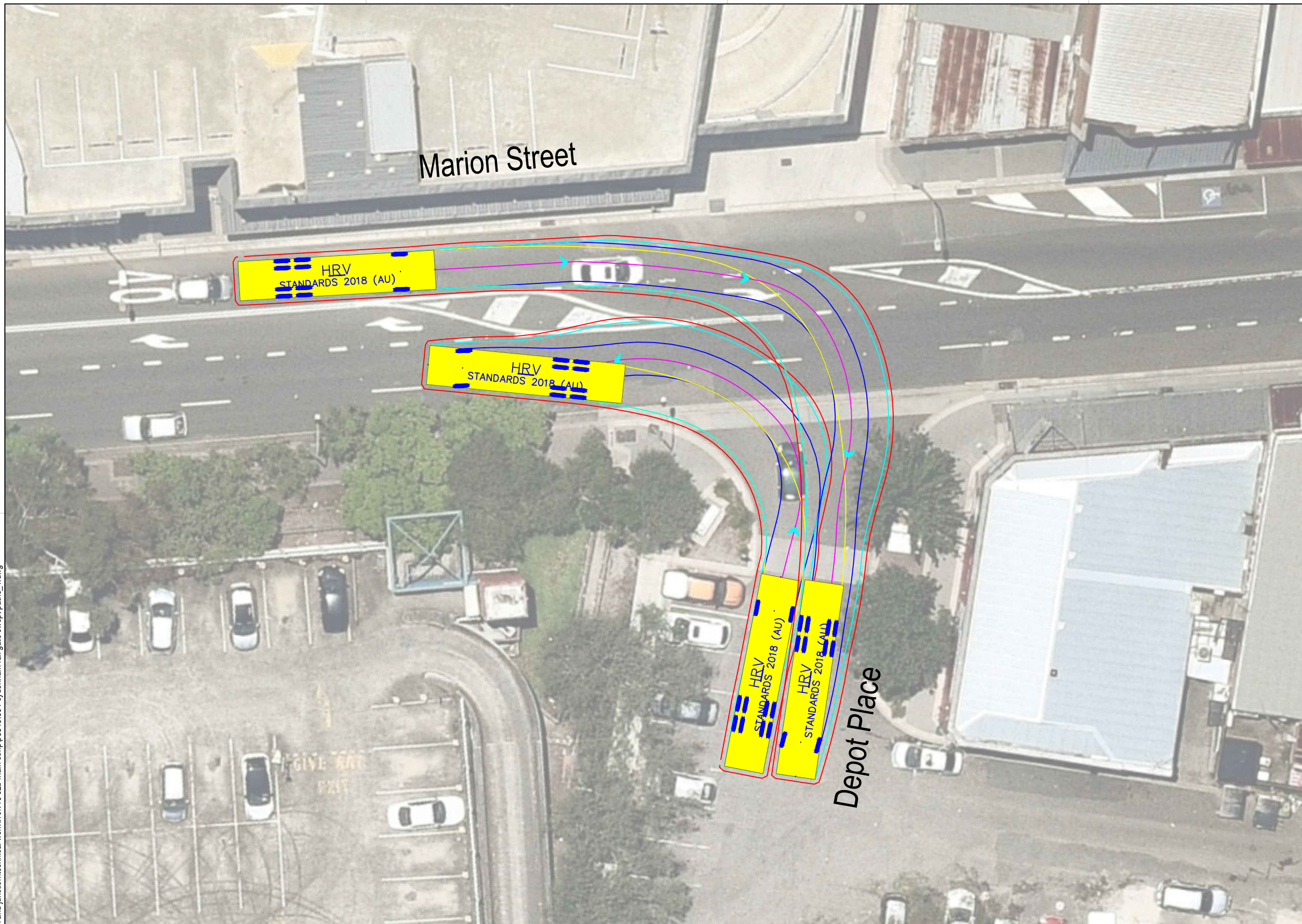
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



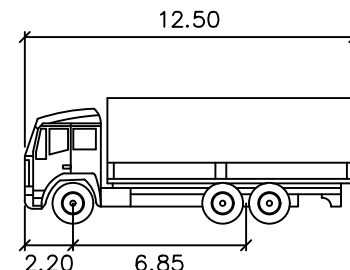
Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP

Title SWEEP PATH ANALYSIS
 GATE M24 18.958U - FORWARD ENTRY
 HRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		22.02.2021
P3519	Sheet Number	Issue
57	001	



Note: Right Turning trucks approaching site must give way to Left Turning trucks leaving site



HRV
 meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.7

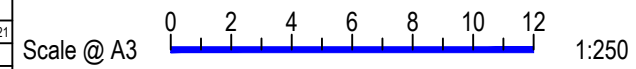
DESIGN VEHICLE

p:\p3519\jhlrvjv sydenham station and junction\technical work\1\cv19 s2b main ctmp\p3519_001 sydenham rail gate swept paths_1.dwg

BITZIOS
 consulting
 traffic engineering ■ transport planning

Gold Coast
 Suite 26, 58 Rivenwalk 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		Drawn	Date
Issue	Revisions/Descriptions		
001	INITIAL SWEEP PATHS	M.H	22.02.2021



Project JHLORJV SYDNEY METRO CITY AND
 SOUTHWEST CORRIDOR WORKS
 CTMP
 Title SWEEP PATH ANALYSIS
 GATE M24 18.958U - HAULAGE ROUTE
 HRV

Design	Drawn	Checked
M.H	J.H	A.G
NOT FOR CONSTRUCTION		Date
Project Number		Issue
P3519		001
Sheet Number		Date
59		22.02.2021