Upgrades to Chatswood Public School and Chatswood High School

Appendix 23 - Preliminary Construction Traffic Management Plan

SSD 9483
Prepared by The Transport Planning Partnership (TTPP)
For School Infrastructure NSW, Department of Education

Artists impression of upgrades to Chatswood Public School

Upgrades to Chatswood Public School and Chatswood High School

Preliminary Construction Traffic and Pedestrian Management Plan

Prepared for:

School Infrastructure NSW

16 March 2020

The Transport Planning Partnership

Upgrades to Chatswood Public School and Chatswood High School

Preliminary Construction Traffic and Pedestrian Management Plan

Client: School Infrastructure NSW

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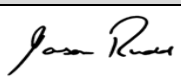
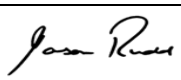
Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	30/01/2020	Lalaine Malaluan	Jessica Ng	Jason Rudd	
V02	19/02/2020	Lalaine Malaluan Jessica Ng	Jason Rudd	Jason Rudd	
V03	24/02/2020	Lalaine Malaluan Jessica Ng	Jason Rudd	Jason Rudd	
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1 Introduction

1.1 Background

The Transport Planning Partnership (TTPP) has been engaged by School Infrastructure NSW to prepare a Preliminary Construction Traffic and Pedestrian Management Plan (PCTPMP) to support a State Significant Development (SSD) application for the proposed delivery of educational facilities as part of the 'Upgrades to Chatswood Public School and Chatswood High School' project.

This PCTPMP has been prepared to support the proposed upgrades and sets out measures to manage travel behaviour of students and staff in a sustainable manner.

The development proposal will deliver new and refurbished innovative learning and teaching spaces, as well increased quality active play space and new sports and recreational and administration facilities.

1.2 Secretary's Environmental Assessment Requirements

On 6 August 2018, the Department of Planning and Environment (DoPE) issued the Secretary's Environmental Assessment Requirements (SEARS) for SSD 9483. Specifically, a traffic and accessibility impact assessment is required as part of the Environmental Impact Statement (EIS), in accordance with the SEARs for the proposed development.

The issues raised in the SEARs have been considered during the preparation of this PCTPMP and are summarised in Table 1.1.

Table 1.1: Review of Compliance with SEARs

SEARS Transport, Traffic, Parking and Access	Report Reference
Transport and Accessibility • The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:	This Plan
○ assessment of cumulative impacts associated with other construction activities (if any)	Refer to Section 4.84.7
○ an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity	Refer to Section 4.1 and Section 4.2
○ details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process	Refer to Section 3.2
○ details of anticipated peak hour and daily construction vehicle movements to and from the site	Refer to Section 4.1

SEARS Transport, Traffic, Parking and Access	Report Reference
o details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicles	Refer to Section 4 and Section 5
o details of temporary cycling and pedestrian access during construction.	Refer to Section 4.2

It is noted that at this stage a Contractor has not yet been appointed. Any changes proposed by the newly appointed Contractor will require the PCTPMP to be updated accordingly for further review/approval from the relevant consent authorities.

1.3 Purpose of the PCTPMP

The purpose of this PCTPMP is to assess the traffic and pedestrian implications and outline how vehicular, cyclist and pedestrian traffic and access will be managed during the construction period. This PCTPMP provides a structured approach to manage traffic and access during construction to provide a safe road environment, minimise impact on the surrounding road network and maintain access for all road users and the local community.

Specifically, the purpose of this PCTPMP is to:

- maintain vehicle and pedestrian access to/from adjacent properties at all times
- restrict construction vehicle movements to designated routes to/from the site
- manage and control construction vehicle activity in the vicinity of the site
- provide an appropriate and convenient environment for pedestrians and cyclists around the construction site
- minimise the impact of construction activity on traffic flows, emergency vehicle access, pedestrian movements and during peak school operations
- maintain appropriate public transport access
- carry out construction activity in accordance with the approved work hours.

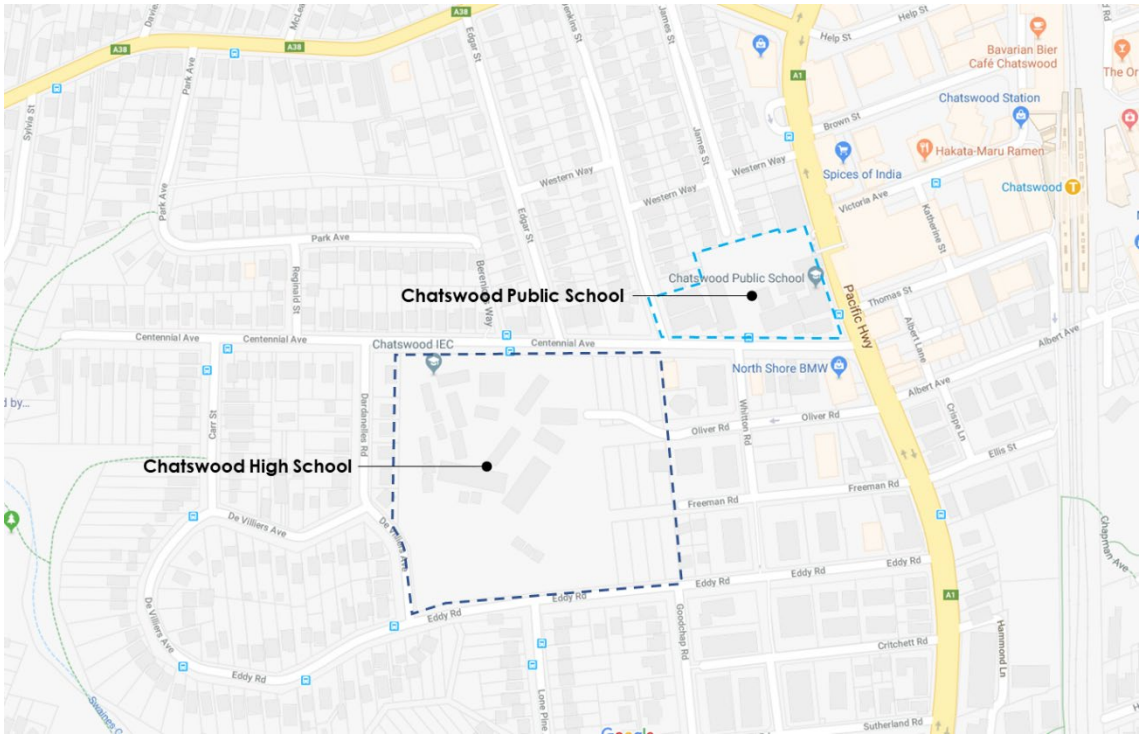
The report has been prepared and checked by engineers who hold the Roads and Maritime Services (Roads and Maritime) Prepare a Work Zone Traffic Management Plan card.

2 Existing Conditions

2.1 Site Description

Chatswood Public School (Pacific Highway site) and Chatswood High School (Centennial Avenue site) are located at 5 Centennial Avenue and 24 Centennial Avenue, Chatswood respectively. These sites are generally bound by Pacific Highway, Centennial Avenue and Eddy Road, as shown in Figure 2.1.

Figure 2.1: Locality Map



Source: Google Maps Australia

2.2 Road Network

The sites are surrounded by a network of state and local roads including Pacific Highway, Centennial Avenue, Jenkins Street, Oliver Road, Freeman Road, Eddy Road and De Villiers Avenue. A brief description of these roads is provided in Table 2.1.

Table 2.1: Road Network

Road Name	Road Classification	Speed Limit	Description
Pacific Highway	State	60km/h (with 40km/h school zone restrictions)	Pacific Highway travels along the eastern boundary of Chatswood Public School and serves as a major north-south arterial link, providing connectivity between the Warringah Freeway and M1 Pacific Motorway. The road is generally configured with six traffic lanes, with three traffic lanes in each direction, across an 18m

Road Name	Road Classification	Speed Limit	Description
			wide road carriageway. No kerbside car parking is permitted on either side of the road.
Centennial Avenue	Local	50km/h (with 40km/h school zone restrictions)	Centennial Avenue is a two-way, two-lane road with on-street car parking provided on both sides of the road. It has an east-west alignment and predominately serves access to/from key drop off areas associated with both Chatswood Public School and Chatswood High School.
Jenkins Street	Local	50km/h (with 40km/h school zone restrictions)	Jenkins Street functions as a two-way road, generally aligned in a north-south direction. The road predominately serves residential access to properties along Jenkins Street, particularly between Western Way and Fullers Road, as well as school drop off/pick up activities.
Oliver Road	Local	50km/h (with 40km/h school zone restrictions)	Oliver Road is a one-way, one-lane westbound road, generally aligned in an east-west direction. A dedicated marked bicycle lane is provided on the north side of the road. Unrestricted kerbside car parking provided on the south side of the road. The road provides good connectivity between Pacific Highway and Whitton Road, including to/from the Chatswood Public School Bush Campus staff park at the west end of the road.
Freeman Road	Local	50km/h	Freeman Road is a two-way cul-de-sac road with an east-west alignment. Access to the road is generally provided via Pacific Highway on the western end of the road. Kerbside car parking provided on the north side of the road. No Parking restrictions during school hours are provided on the south side of the road.
Eddy Road	Local	50km/h (with 40km/h school zone restrictions)	Eddy Road is generally aligned in an east-west direction along the southern boundary of the Centennial Avenue site. Access to this road is generally provided off Pacific Highway on the western end of the road. Kerbside car parking is generally made available on one or both sides of the road.
De Villiers Avenue	Local	50km/h (with 40km/h school zone restrictions)	De Villiers Avenue is generally aligned in a north-south direction along the western boundary of the Centennial Avenue site. This road provides vehicle access to the staff car park within the Centennial Avenue site. No kerbside car parking is generally made available on either side of the road between De Villiers Avenue and Eddy Road.

2.3 Public Transport Facilities

The Chatswood Interchange provides a number of high frequency public transport services for both rail and bus services. It is located east of the site, approximately 250m (5-minute walk) from Chatswood Public School and 650m (10-minute walk) from Chatswood High School. The site's proximity to existing public transport services is shown in Figure 2.2.

Figure 2.2: Proximity to Public Transport Services

Basemap Source: Google Maps Australia

Chatswood Train Station provides frequent train services for T1 North Shore, Northern, and Western Line. During peak hours, T1 trains traveling from Chatswood to Sydney CBD, northern and western suburbs arrive at the station approximately every two minutes. In addition to this, the new Sydney Metro between Chatswood Station and Tallawong Station arrives every four minutes during peak periods and every 10 minutes outside of peak periods.

A map of the existing rail network is provided in Figure 2.3.

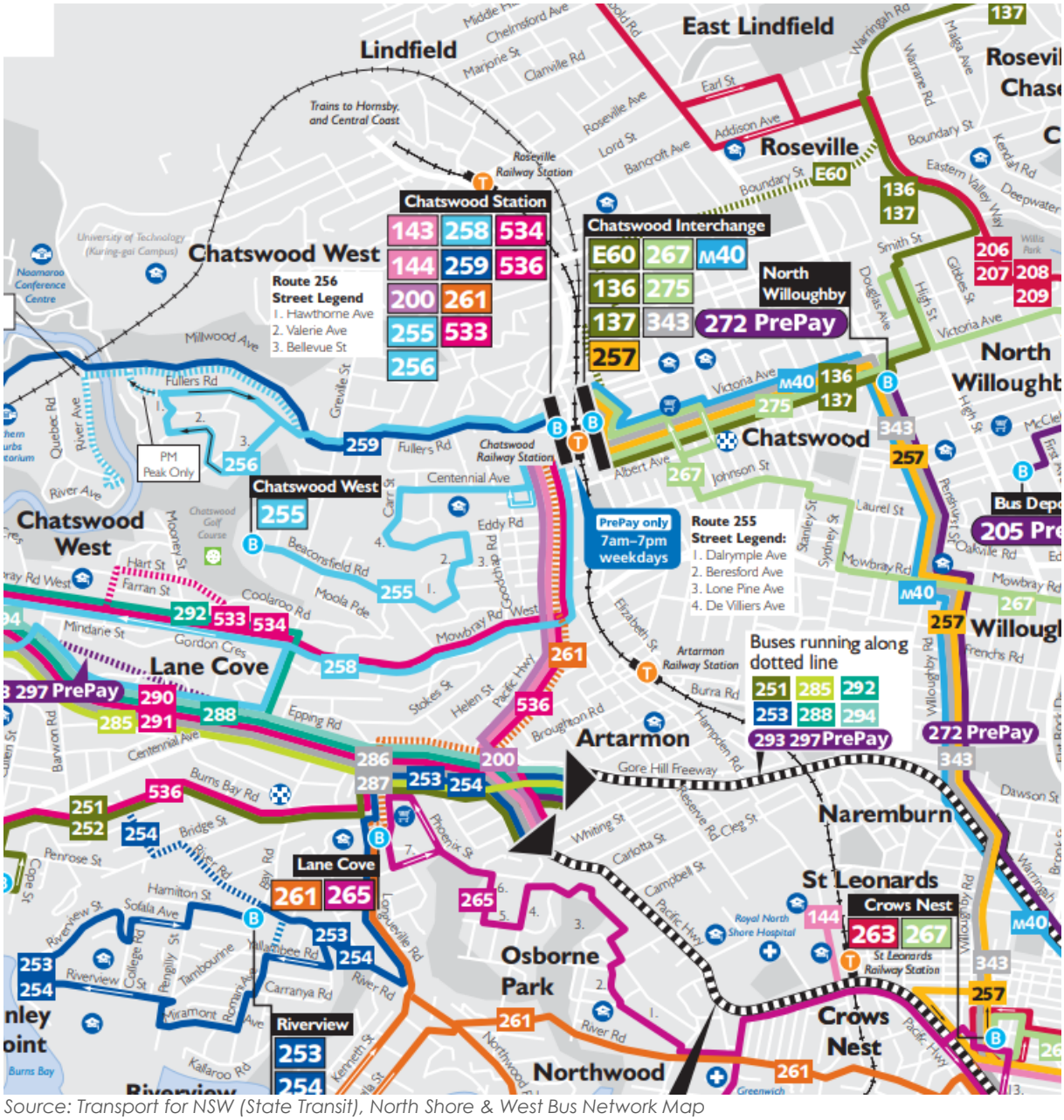
Figure 2.3: Existing Railway Network

Source: Transport for NSW (retrieved 02 May 2019)

In addition to this, the Chatswood Bus Interchange provides good connection to a wide range of bus services operating to/from areas of Sydney CBD, Northern Beaches, North Shore, Willoughby, Parramatta, Macquarie University, and Bondi. Chatswood Interchange bus stands are located along Victoria Avenue, Railway Street and Orchard Road.

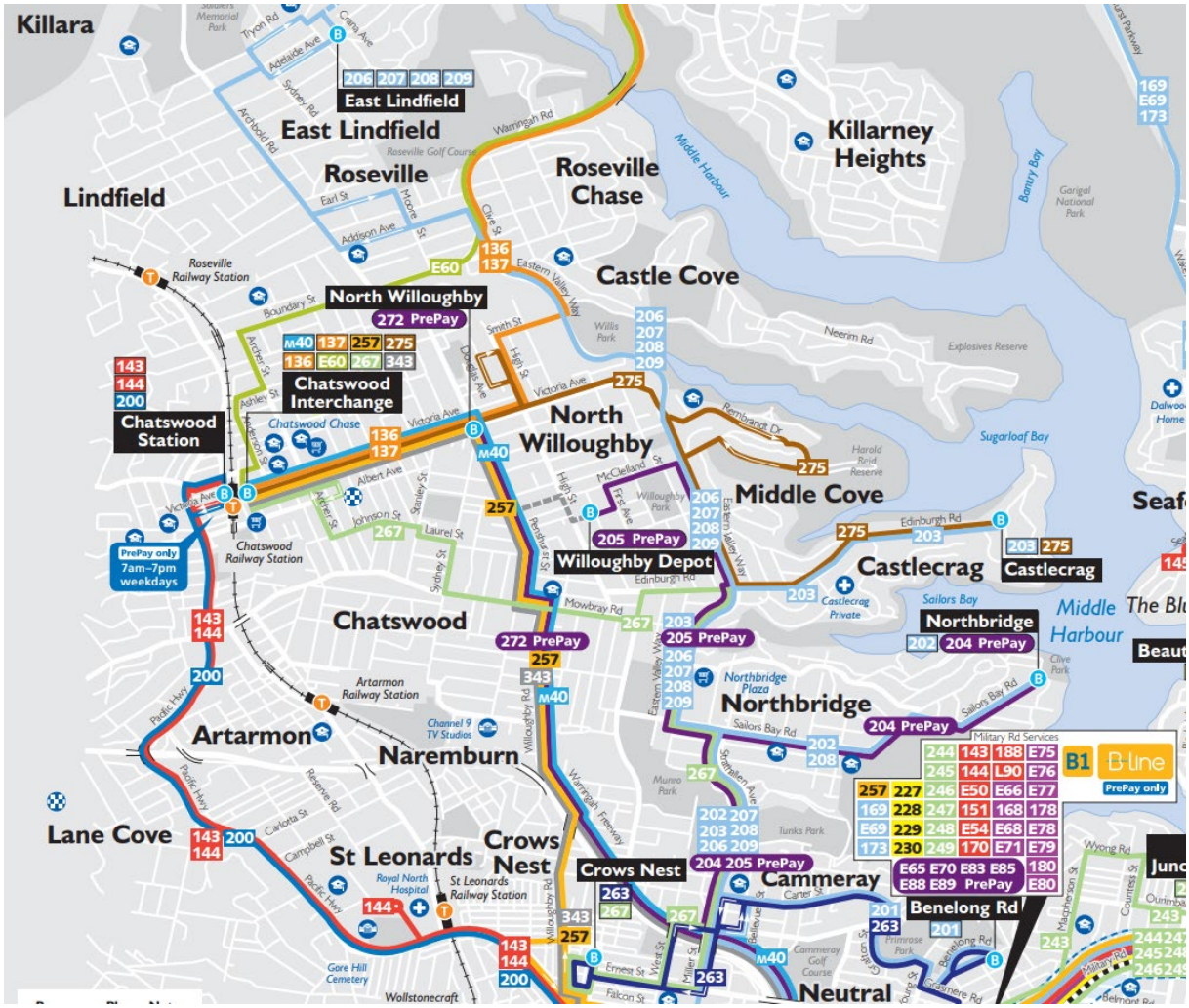
The existing bus network maps are presented in Figure 2.4 and Figure 2.5.

Figure 2.4: Existing Bus Network Map – North Shore and West Network Map



Source: Transport for NSW (State Transit), North Shore & West Bus Network Map

Figure 2.5: Existing Bus Network Map – Northern Beaches and Lower North Shore Network Map



Source: Transport for NSW (State Transit), Northern Beaches and Lower North Shore Bus Network Map

2.4 Vehicle and Pedestrian Access

Vehicle access to both schools is currently provided on Pacific Highway, Centennial Avenue, Oliver Road, Jenkins Street and De Villiers Avenue. The existing driveways provide direct vehicle access to/from the on-site car parking areas, which are generally dedicated for staff only. In addition to this, a gated vehicle access is currently provided on Eddy Road, which provides restricted access to Centennial Avenue site's sportsground.

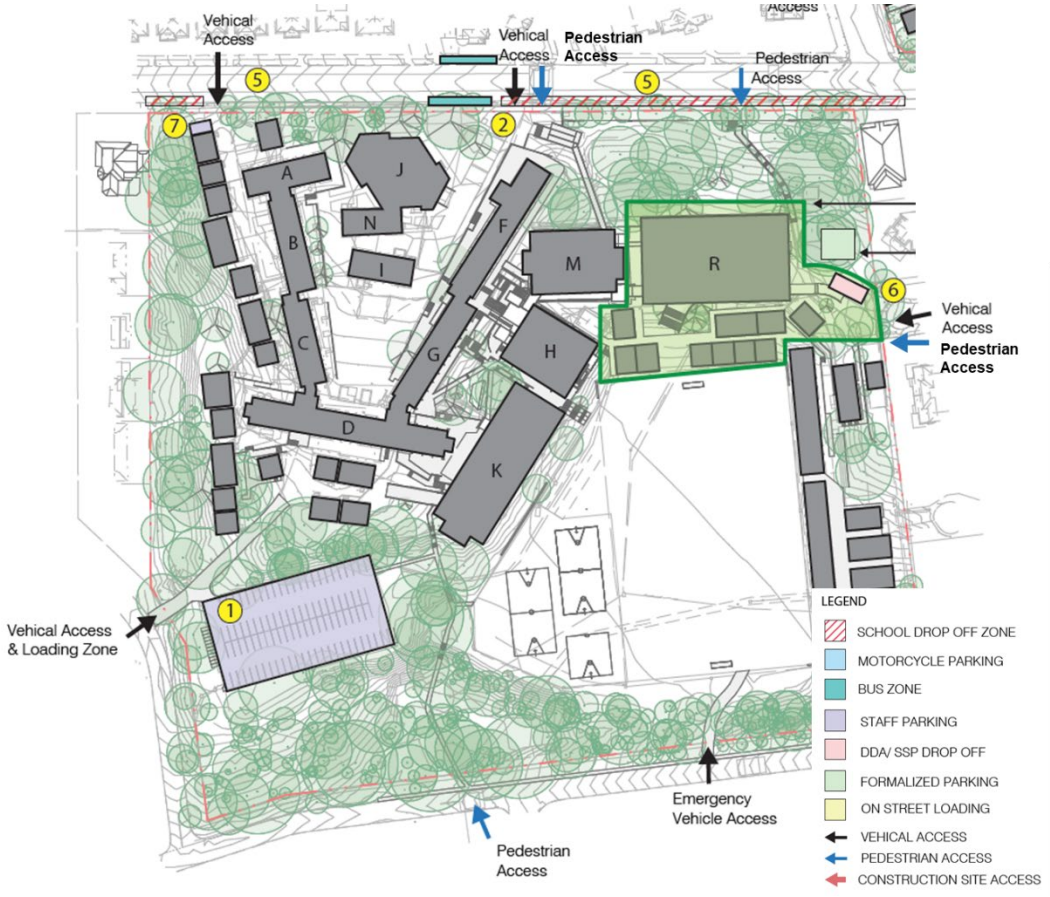
Concurrent with the above vehicle access locations, pedestrian access gates are also provided along Pacific Highway, Centennial Avenue, Oliver Road, Jenkins Street, De Villiers Avenue and Eddy Road.

The location of the existing vehicle access and pedestrian access points is shown in Figure 2.6 and Figure 2.7.

Figure 2.6: Pacific Highway Site Vehicle and Pedestrian Access - Existing

Source: Architectus

Figure 2.7: Centennial Avenue Site Vehicle and Pedestrian Access - Existing



Source: Architectus

2.5 Loading Facilities and Service Vehicle Access

At present, all loading and unloading activities associated with both schools are conducted on-site. Deliveries and waste collection activities are conducted within the staff car parking areas, with access provided off Pacific Highway for the Pacific Highway site and off De Villiers Avenue for the Centennial Avenue site.

All loading and unloading activities are generally conducted during school hours, between 8am and 4pm, Monday to Friday. The exception to this would be during waste collection activities, which would generally occur in the early morning.

2.6 Emergency Vehicle Access

Emergency vehicle access to the schools are provided via existing vehicular accesses off Pacific Highway, Jenkins Street, Centennial Avenue, De Villiers Avenue, Oliver Road and Eddy Road, as shown in Figure 2.6 and Figure 2.7.

2.7 Car Parking

The sites currently provide some 100-140 parking spaces across the two sites. It is however noted that demountables have recently been installed on both sites, which have resulted in the loss of some car parking spaces.

Of note, TTPP has observed the following car parking provision across the two sites:

- Chatswood Public School (Pacific Highway site)
  - Pacific Highway car park – approx. 16 staff car parking spaces (N.B. some spaces restricted by demountables)
  - Jenkins Street car park (dedicated to Chatswood OSHCare) – 2 staff car parking spaces
- Chatswood High School (Centennial Avenue site)
  - De Villiers Avenue car park – 104 staff car parking spaces
  - Oliver Road car park (shared by Chatswood Public School Bush Campus and High School) – 18 staff car parking spaces, including 2 spaces for drop-off/pick-up or disabled parking use (N.B. parking spaces are not currently in use due to demountables)

Further to this, based on site observations, the existing car parks are generally well utilised throughout the day, with limited spare parking capacity available. In addition to this, a mix of long-term and short-term on-street car parking are provided within the immediate vicinity of the site.

2.8 Pedestrian and Cyclist Infrastructure

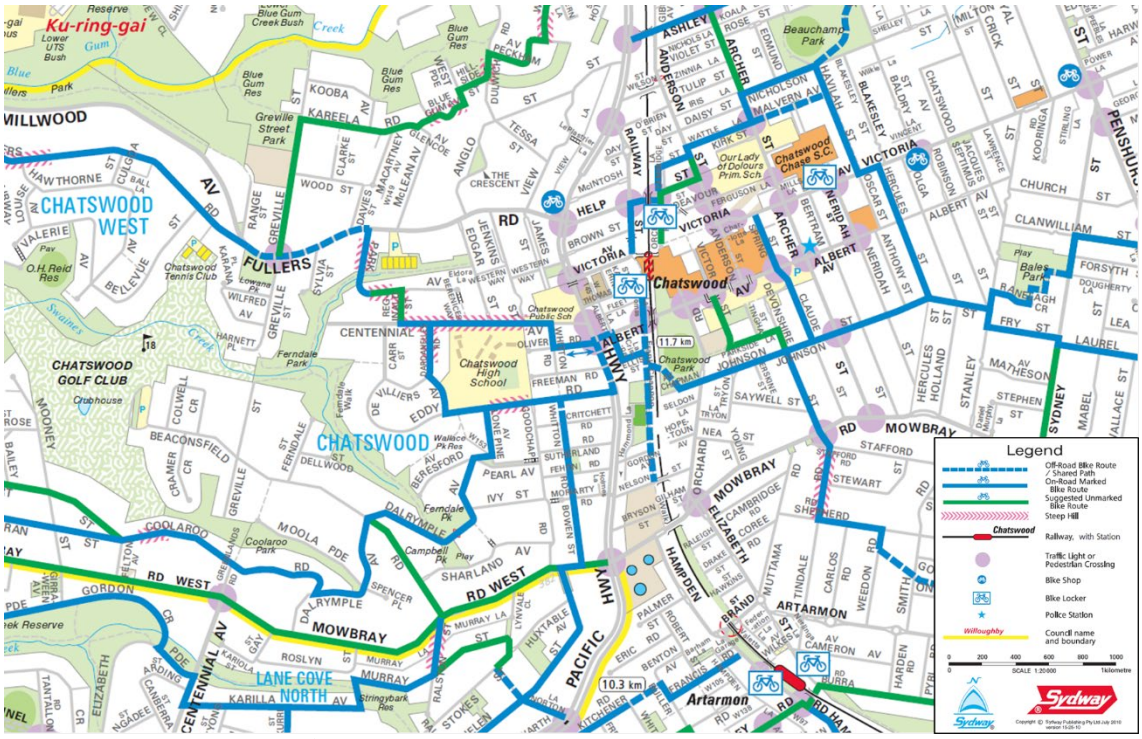
Well-established pedestrian facilities are available in the immediate vicinity of the site with a network of paved footpaths on both sides of the roads. Victoria Avenue, Pacific Highway and Centennial Avenue are the most utilised roads in terms of pedestrian activity as these roads provide direct connection to the Chatswood Transport Interchange.

Further to this, a good cycle network is currently provided within the immediate vicinity of the site, generally in the form of on-road cycle paths, as shown in Figure 2.8.

Figure 2.8: Existing Cycling Facilities

The existing bicycle network within the vicinity is shown in Figure 2.9.

Figure 2.9: Cycling Network



Source: Northern Sydney Cycling Map

3 Proposed Construction Activities

This section of the report outlines the proposed construction methodology.

3.1 Description of Construction Activities

The proposal seeks consent for the demolition of existing buildings, removal of demountable buildings and construction of new school buildings.

A summary of the key construction activities of the project is provided in Table 3.1, with the overall development plans provided in Appendix A.

Table 3.1: Summary of Proposed Construction Activities

Construction Activity	Description of Works
Demolition and Bulk Excavation	• Relocate/demolish existing demountables • Remove existing trees
Structure	• Construction of new school buildings
Fit out and Finishes	• Finalise external and internal works and landscape

3.2 Duration and Staging of Works

The construction works are expected to commence in January 2021 and finish in late 2023 over a total period of approximately 36-months. The construction works will be scheduled to occur outside of school terms as far as practicable to minimise its impact on existing school operations.

t is noted that works at the two sites are expected to occur concurrently during the project, with appropriate measures in place to minimise disruption on existing school operations (e.g. decanting of students to temporary demountables during the works).

3.3 Work Hours

Construction activities will be carried out in accordance with the approved work hours specified in the conditions of consent for the development. At this stage, it is envisaged that the standard construction work hours will be as follows:

- Monday to Friday 7am to 6pm
- Saturday 8am to 1pm
- Sunday and Public Holiday No work.

Any works outside of the above listed hours will only occur with approval from the relevant authorities (i.e. Willoughby City Council / Roads and Maritime), prior to the commencement of any works. Such works may include delivery of large plant or equipment required for the site. Additionally, it is expected that no construction vehicle movements to/from the site will be permitted during school peak drop off and pick up times (i.e. between 8:00am and 9:30am and between 2:00pm and 4:30pm), unless otherwise approved. The Contractor will be responsible to liaise with Council to obtain all relevant permit approvals.

3.4 Site Access Arrangements

Vehicle access to the site will be provided off existing vehicle access points along Pacific Highway, Centennial Avenue and De Villiers Avenue. Appropriate fencing and hoarding will be in place around the site areas accordingly to minimise disruption to existing school operations.

3.5 Construction Vehicle Routes

Construction vehicles will have origins and destinations throughout Sydney. Dedicated construction vehicle routes have been developed to provide the shortest distances to/from the arterial road network, whilst minimising the impact of construction traffic on streets within the immediate vicinity of the site.

All truck drivers will be advised of the designated truck routes to/from the site and be required to adhere to the nominated routes. Generally, it is proposed to use Pacific Highway and Centennial Avenue to access the site.

The designated construction vehicle routes are presented in Figure 3.1.

Figure 3.1: Construction Truck Routes

Source: Street Directory Australia, Sydways

No queuing or marshalling/parking will be permitted on public streets, unless otherwise approved. Construction vehicles are to radio or call on approach to ensure adequate access to the site is made available.

All construction vehicles are required to enter and exit the site in a forward direction, unless otherwise approved.

3.6 Construction Vehicle Type

All construction activities will generally be carried out by small to heavy rigid vehicles, no larger than a 12.5 long heavy rigid vehicle.

Swept path analysis has been undertaken using a 12.5m long heavy rigid vehicle (HRV), 8.8m long medium rigid vehicle (MRV) and 6.4m long small rigid vehicle (SRV). The swept path analysis indicates that appropriate vehicle access can be accommodated to/from the site. All expected construction vehicles will enter and exit the site in a forward direction. This swept path analysis is provided in Appendix B.

In addition to this, it may be necessary that a truck and dog / articulated vehicle may be required during bulk excavation works or major building works. The appointed Contractor will be responsible for obtaining all relevant permits and/or approvals from the relevant authorities for such "one-off" occasions.

3.7 Construction Worker Parking

No onsite vehicle parking will be provided. All workers will be encouraged and expected to use public transport and/or carpool to travel to/from the site. This will be incorporated in the workers induction program to ensure minimal parking impact on surrounding streets.

If necessary, workers who will need to drive to site would be instructed to park on the streets further from the site and would be discouraged to park on streets within the immediate vicinity of the school. This is to minimise impact to the school drop-off and pick-up activities which generally occur on streets near the school entrance gates.

3.8 Materials and Handling Area

All materials handling and plant equipment, including waste storage, are expected to be wholly stored on-site within the works site. It is not expected that any public road will be required for such purposes. However, if temporary use of any public road is required for temporary storage purposes or the like, prior consultation with Council will be undertaken. All relevant permit approvals will also be obtained prior to the commencement of such activities.

3.9 Road Occupancy License Requirements

Any construction activities that will impact on the operational efficiency of the State road network will require a road occupancy license (ROL) prior to the commencement of such construction activities. The Contractor will be responsible to obtain all relevant ROL's as required.

3.10 Works Zone Requirements

No on-street work zones will be required as part of the works. At this stage, it is expected that all loading and unloading associated with the construction activities will be undertaken wholly within the site.

4 Construction Traffic Assessment and Implications

4.1 Construction Vehicle Traffic Generation

The estimated traffic movements associated with the construction activities are not yet known during this stage. However, as an indication, a summary of the expected traffic movements during each key construction activity is shown in Table 4.1. These numbers may be refined once the construction methodology progresses further by the appointed Contractor.

Table 4.1: Construction Vehicle Types and Frequencies

Activity	Vehicle Type	Daily Movements	Hourly Movements
Bulk Excavation	Truck and Dog	20 trips per day	Up to 5
Structural Work	Articulated Vehicle	1 trip per day	Up to 1
	MRV, HRV	4 trips per day	Up to 2 (Up to 4 during concrete pours)
Fit-out and Finishes	HRV	4 trips per day	Up to 1

The proposed construction traffic generation is considered to generate a modest level of vehicular traffic, with up to five truck movements (two-way) per hour expected, or up to 20 truck movements per day, during peak construction activities. As such, the proposed construction activities could not be expected to result in adverse impact on the surrounding road network.

In addition, it is expected that no heavy construction vehicle movements to/from the site will be permitted during school peak drop off and pick up times (i.e. between 8:00am and 9:30am and between 2:00pm and 4:30pm) to minimise conflict between the truck movements and high pedestrian activity.

4.2 Pedestrian and Cycle Access

Pedestrian and cycle access will be maintained as per existing conditions during the project. It may be necessary to temporarily close some pedestrian access points to the school, with appropriate alternate pedestrian access provided during certain stages of the project. All relevant site hoarding and fencing shall be installed to ensure pedestrian safety from the work site. All relevant permit approvals will be obtained from Council prior to the commencement of any work.

4.3 Public Transport Facilities

The proposed construction activities are not expected to result in any changes to existing public transport services. Consultation with all key stakeholders shall be undertaken prior to the commencement of any construction works to ensure minimal disruption to the surrounding road network, particularly existing special school bus services.

4.4 Emergency Vehicles and Heavy Vehicles

No special provisions for emergency service vehicles or heavy vehicles are required as part of the proposed construction works. Emergency and heavy vehicle access shall be maintained at all times.

4.5 Adjoining Properties and Local Access

The proposed construction works will not impact existing local access to/from properties. Local access to properties will be maintained at all times during the works.

4.6 Construction Worker Parking

The anticipated number of construction staff is not yet known at this stage. However, no on-site vehicle parking will be provided. All workers will be encouraged and expected to use public transport to travel to/from the site. This will be incorporated in the workers induction program to ensure minimal parking impact on surrounding streets.

4.7 Car Parking

Demountables will need to be installed within the existing staff car park on the Centennial Avenue site in order to provide temporary teaching space for high school students to facilitate construction. This will result in the temporary loss of 104 staff car parking spaces for the duration of the project for a period of approximately 36-months.

Additionally, the existing 16 car parking spaces within the Pacific Highway site will be permanently removed as part of the proposed development. All staff will be notified and advised to use public transport and/or other transport modes such as walking and/or cycling as no car parking will be made available during the works.

Car parking surveys were conducted within a 400-metre radius catchment from the school sites on Thursday 14 March 2019 between 7am and 5:30pm and on Saturday 16 March 2019 between 10am and 4.30pm, as shown in Figure 4.1.

Figure 4.1: Parking Survey Map

Source: nearmap Australia

A summary of the hourly car parking profiles during the survey period on Thursday and Saturday are illustrated in Figure 4.2 and Figure 4.3 respectively.

Figure 4.2: Weekday On-Street Parking Occupancy

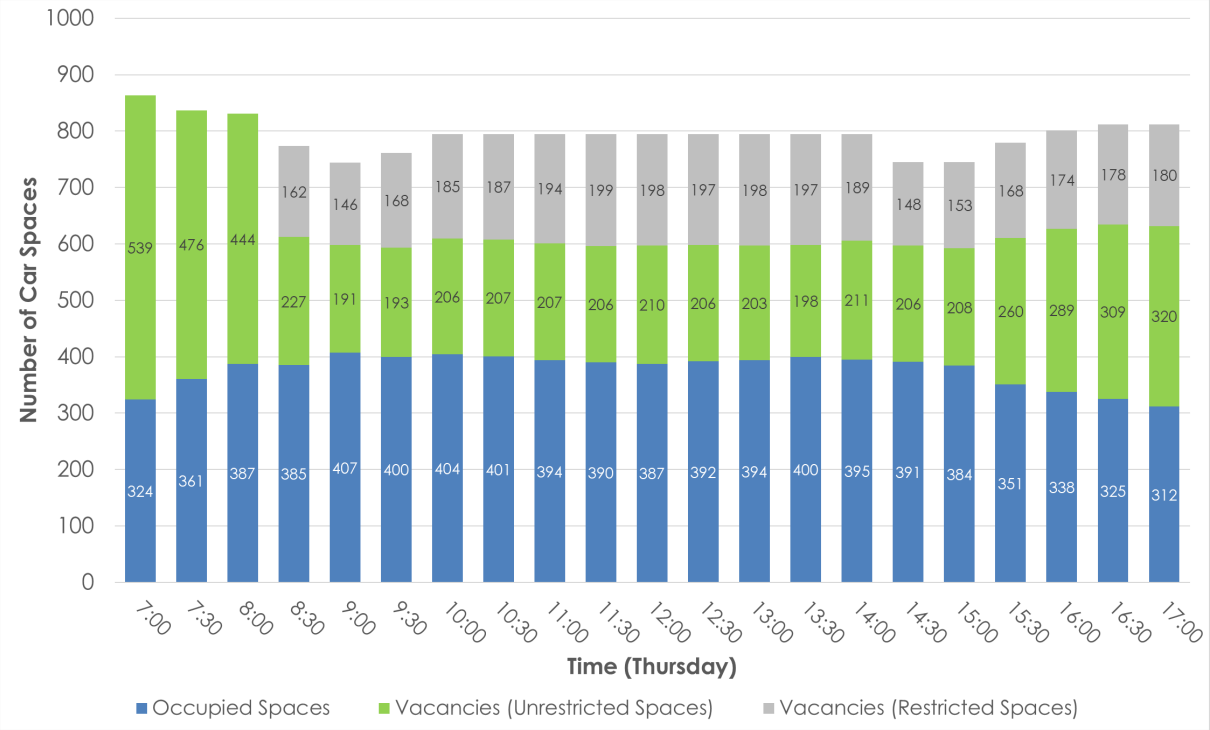
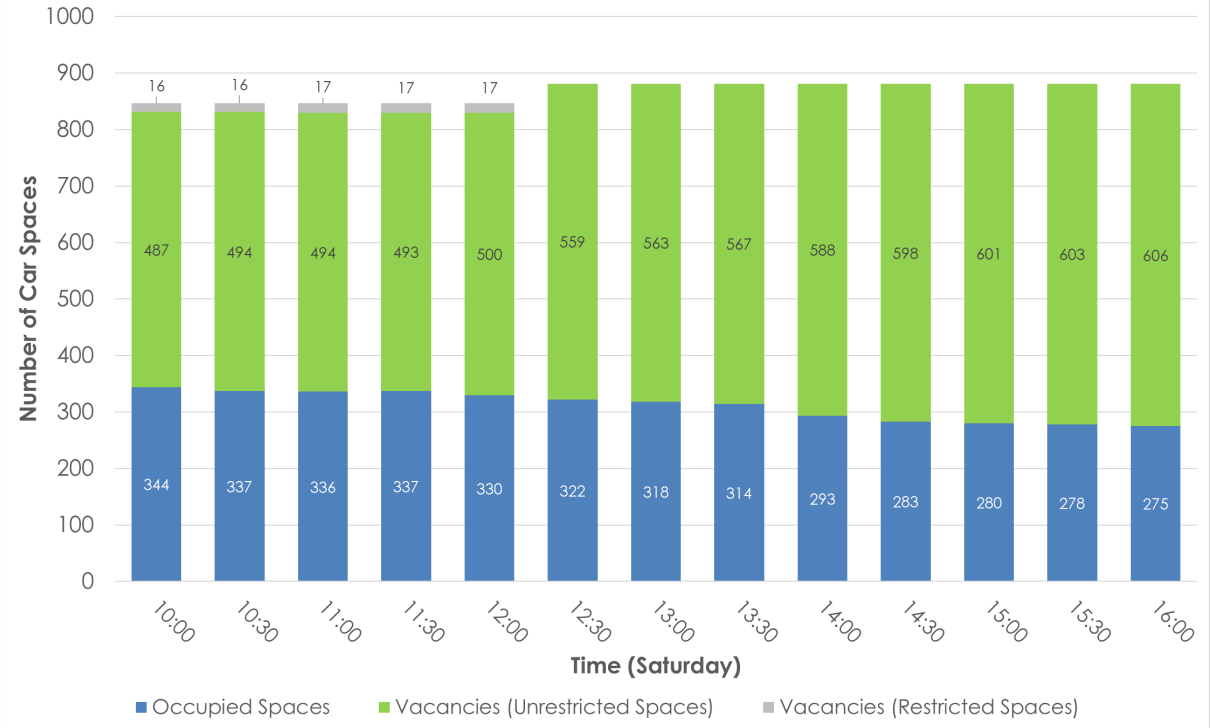


Figure 4.3: Saturday On-Street Parking Occupancy



Note: The total parking supply varies throughout the day due to timed parking restrictions.

Based on the parking surveys, the peak parking accumulation occurred during the weekday at 9am with 407 parked vehicles, which is 55 per cent of its capacity (337 remaining

vacancies – 191 unrestricted and 146 restricted spaces). It is noted that the majority of the parking vacancies were observed to be located further away from the site such as along De Villiers Avenue, Pearl Avenue, Lone Pine Avenue, Beresford Avenue, Ivy Street.

On this basis, the parking surveys indicate that there is spare capacity to cater any additional car parking demand arising from the temporary loss of car parking during the works. During the peak parking period, there are 191 unrestricted parking spaces available which is adequate to accommodate the temporary loss of 120 car parking spaces (104 spaces in Centennial Avenue and 16 spaces in Pacific Highway site).

It is however noted that these parking areas are generally located further afield from the school sites, which may not be "convenient" for staff. Notwithstanding this, all staff will be encouraged not to travel to the site by car during the works.

As discussed in Section 3.7, no onsite vehicle parking will be provided and workers will be encouraged and expected to use public transport to travel to/from the site. However, should workers need to drive to site for some reasons, they would be instructed to park on the streets further from the site and would be discouraged to park on streets within the immediate vicinity of the school.

The remaining on-street parking vacancy as the result of temporary loss of staff parking would be about 73 unrestricted spaces during the peak parking period. The anticipated number of construction workers are not yet known at this stage however it is unlikely that the parking demand of construction workers would be significantly high enough to occupy all the remaining on-street parking spaces.

On the above basis, it is anticipated that the surrounding on-street parking supply would be sufficient to accommodate both the temporary loss of staff parking as well as minimal use from construction workers. Nonetheless, both the staff and construction workers will be encouraged to use public transport to the site to minimise parking demand.

4.8 Other Construction Activities / Projects

A summary of the known construction projects currently being undertaken within the immediate vicinity of the site is shown in Figure 4.4.

Figure 4.4: Concurrent Construction Projects

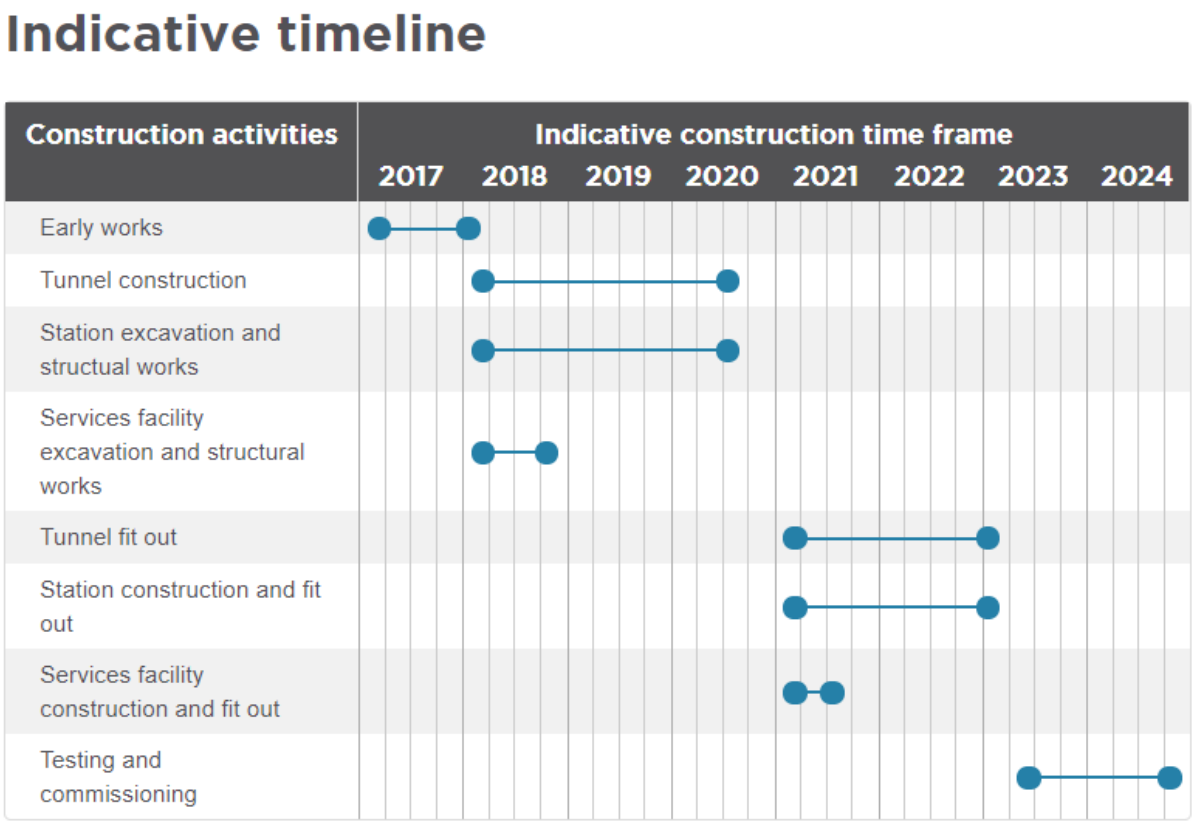
Source: NearMap

These projects include 'Meridan Chatswood' (mixed use development) at 654-666 Pacific Highway, 2 Oliver Road and 1 Freeman Road and '18 at Chatswood' (seven-storey residential development) at 18-20 Freeman Road and 25-27 Eddy Road. It is however expected that these construction works may be complete by the time the project commences in July 2020.

In addition to this, Sydney Metro construction works are expected to be ongoing during the construction works of the proposed development. These works involve the construction of the Sydney Metro line between Chatswood and Sydenham, which is expected to be completed in Year 2024. These works are not expected to impact construction of the proposed development.

The indicative construction timeline of the Sydney Metro works timeline is shown in Figure 4.5.

Figure 4.5: Indicative Sydney Metro Construction Timeline



Source: SydneyMetro < https://www.sydneymetro.info/citysouthwest/project-overview>

5 Construction Traffic Management Measures

5.1 Traffic Management Measures

A site-specific Traffic Control Plan (TCP) will be prepared once a Contractor has been appointed. This TCP will be designed in accordance with Roads and Maritime Traffic Control at Works Sites manual, with all relevant approvals and permits obtained prior to the commencement of any construction works.

The proposed construction truck movements to/from the works site will be accompanied by advisory traffic control signage to minimise the traffic impact on the surrounding road network. An example of such a TCP is shown in Appendix C.

At no time will traffic controllers be permitted to stop traffic on the public streets to facilitate trucks entering or exiting the site, unless otherwise approved. Traffic controllers will only be able to assist, manage and guide construction trucks out of the site under suitable gaps in traffic.

All advisory road signage will be installed in accordance with AS1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads and the Roads and Maritime Services Traffic Control at Worksites Manual. Signs will be installed and maintained throughout the construction period.

5.2 Vehicle Access

Construction vehicles will radio/call the site office on approach to ensure a loading area is available within the works site. All loading and unloading activities will be undertaken within the works site during the approved work hours. If there are any materials spilt onto the road, site personnel and equipment will rectify the issue accordingly, subject to appropriate OH&S provision.

5.3 Heavy Vehicle Loads

All drivers will be required to adhere with the posted vehicle load limits on all roads and not overload vehicles beyond its maximum loading limits and/or relevant approvals.

5.4 Truck Routes

Protocols must be in place to ensure:

- site induction to include procedures for accessing the site
- drivers adhere to the nominated truck routes, as shown in Figure 3.1
- drivers are aware that pedestrians and cyclists are in the vicinity of the site

- drivers are aware of the sign posted speed limits.

5.5 Construction Worker Parking

As indicated previously, onsite car parking will not be available during the works. However, a tool drop-off and storage facility is expected to be provided on-site. This will allow construction workers to drop off and store their tools, which will encourage them to use public transport to travel to and from the site.

Taking the above into consideration, it is proposed to implement the following measures to encourage workers to use public transport:

- provide an on-site tool drop-off and storage facility to allow tradespeople to drop off and store their specific machinery for the project
- inform staff during the induction and regular management meetings that no car parking will be available for staff
- instruct staff to use public transport to access the site during the induction and regular management meetings, and
- display public transport timetable information at key locations within the work site and ensure that it is easily accessible by staff.

5.6 Site Inspection and Record Keeping

The construction operation would be monitored to ensure that it proceeds as set out in the Construction Management Plan provided by the Contractor. A daily inspection before the start of construction activity is to take place to ensure that conditions accord with those stipulated in the plan and that there are no potential hazards. Any possible adverse impacts are to be recorded and dealt with as they arise.

5.7 Site Induction

All staff employed on the site by the appointed Contractor will be required to undergo a site induction. The induction will include permitted access routes to and from the works site for site staff and delivery vehicles as well as standard environmental, OH&S, driver protocols and emergency procedures. The workers are to be informed to use public transport to access the site during the induction.

6 Conclusion

This PCTPMP has been prepared to document the proposed construction activities and associated construction traffic management measures necessary to facilitate construction of the Upgrades to Chatswood Public School and Chatswood High School project.

The key findings contained in this PCTPMP are as follows:

- The construction of the proposed development is expected to generate up to five truck movements per hour (two-way) during peak construction activities.
- It is expected that no construction vehicle movements to/from the site will be permitted during school peak drop off and pick up times (i.e. between 7:30am and 8:30am and between 3:00pm and 3:30pm), unless otherwise approved.
- Given the expected low volume of construction vehicles, construction vehicle movements to and from the site can be satisfactorily accommodated in the surrounding road network.
- No pedestrian or cyclist facilities will be impacted as a result of the construction activities.
- It is proposed that loading/unloading of trucks is to occur within the site, with construction vehicle access provided off existing vehicle access points at the school sites.
- A number of driver protocols will be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- Truck drivers are to be instructed to use the designated truck routes to/from the site.

In summary, it is concluded that the proposed traffic control measures will adequately address potential implications associated with proposed construction activities. This PCTPMP fulfils the requirements of the SEARs relating to SSD-9483.

Appendix A

Development Plans

HIGH SCHOOL EMERGENCY VEHICULAR ENTRY

PEDESTRIAN CROSSING

HIGH SCHOOL AND COMMUNITY SECONDARY ENTRY

CENTENNIAL AVENUE

HIGH SCHOOL MAIN ENTRY

EXISTING BUILDING J

BUILDING T

NEW HIGH SCHOOL GREEN

BUILDING Q

EXISTING BUILDING M

EXISTING BUILDING R

HIGH SCHOOL SPECIAL SUPPORT DROP OFF ENTRY

EXISTING BUILDING H

NEW LANDSCAPE COURTYARD

BUILDING S

EXISTING BUILDING K

EXISTING SPORTS FIELD

FREEMAN ROAD

EXISTING SPORTS COURTS

EXISTING CARPARK

HIGH SCHOOL EXISTING MAIN VEHICULAR ENTRY

DE VILLIERS AVENUE

EDDY ROAD

HIGH SCHOOL EXISTING SECONDARY ENTRY

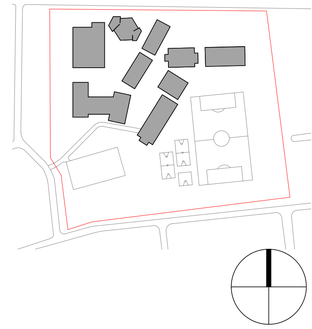
EXISTING EMERGENCY VEHICULAR ENTRY

Nominated Architect
Ray Brown, NSWARB 6359

Do not scale drawings. Verify all dimensions on site

issue	amendment	date
A	SSDA ISSUE	18/12/2019
B	ISSUE FOR SSDA COORDINATION	14/02/2020
C	FINAL SSDA ISSUE	27/02/2020
D	FINAL SSDA ISSUE	11/03/2020

KEY PLAN



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Sydney
Melbourne
Adelaide
Auckland
Christchurch
Brisbane

project

Upgrades to Chatswood Public School & Chatswood High School, Centennial Avenue

drawing

SSDA - Proposed Site Plan

scale	1 : 500@A1	drawing no.	DA-AX-A0032
drawn	MR		
checked	AC	issue	D
project no	180326.00		

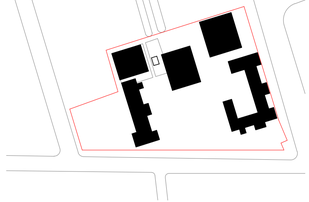
11/03/2020 4:01:44 PM

Nominated Architect
Ray Brown, NSWARB 6359

Do not scale drawings. Verify all dimensions on site

issue	amendment	date
A	100% SD ISSUE	17/04/2019
B	Issue for Civil Coordination	14/12/2019
C	SSDA ISSUE	18/12/2019
D	FINAL SSDA ISSUE	27/02/2020
E	FINAL SSDA ISSUE	11/03/2020

KEY PLAN



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ABN 90 131 245 684

Sydney
Melbourne
Adelaide
Auckland
Christchurch
Brisbane

project

Upgrades to Chatswood Public School and Chatswood High School Pacific Highway Site

drawing

Site Plan Proposed (Final)

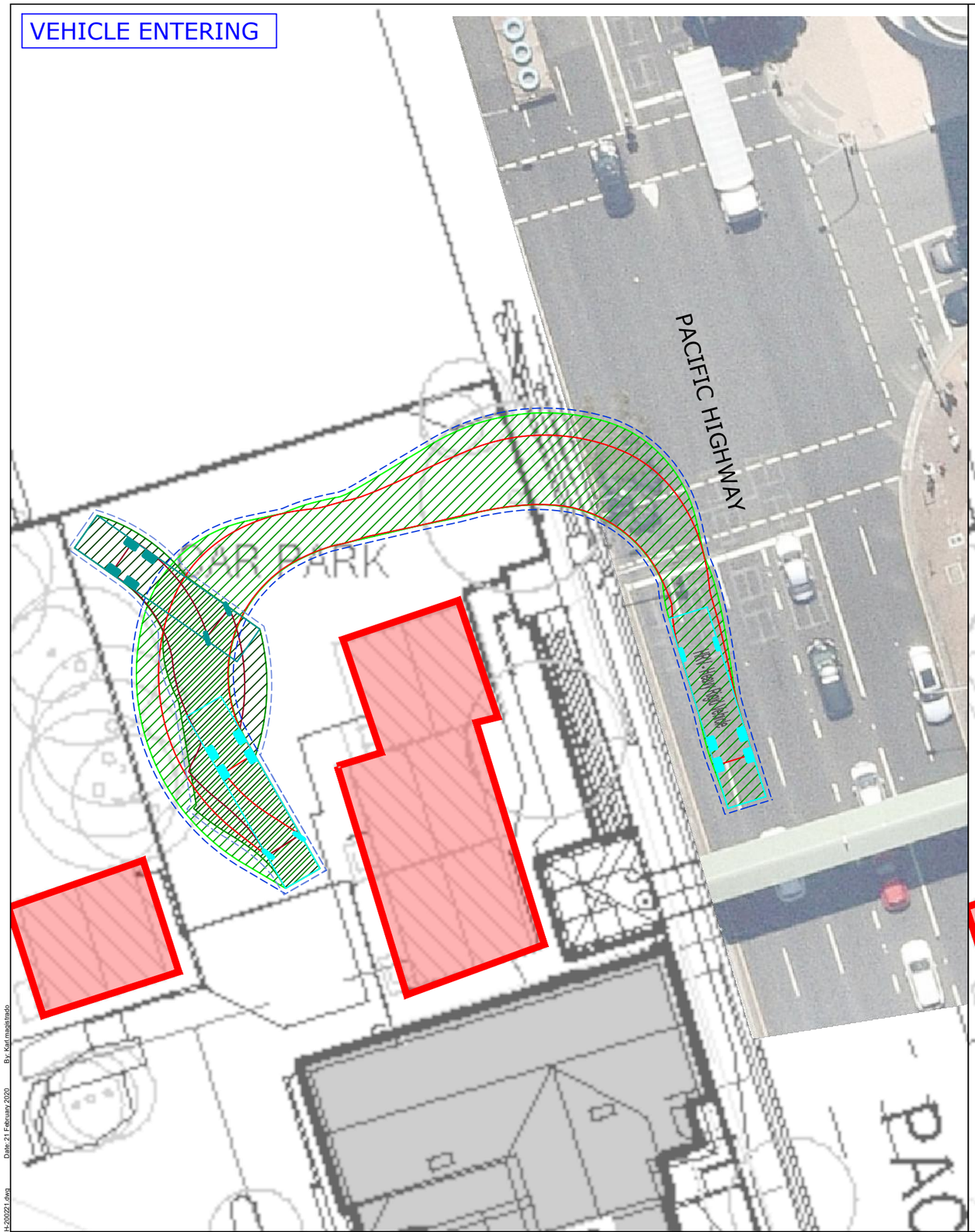
scale	1 : 500@A1	drawing no.	**DA-BX-A0030**
drawn	MR		
checked	AC	issue	**E**
project no	180326.00		

11/03/2020 2:57:40 PM

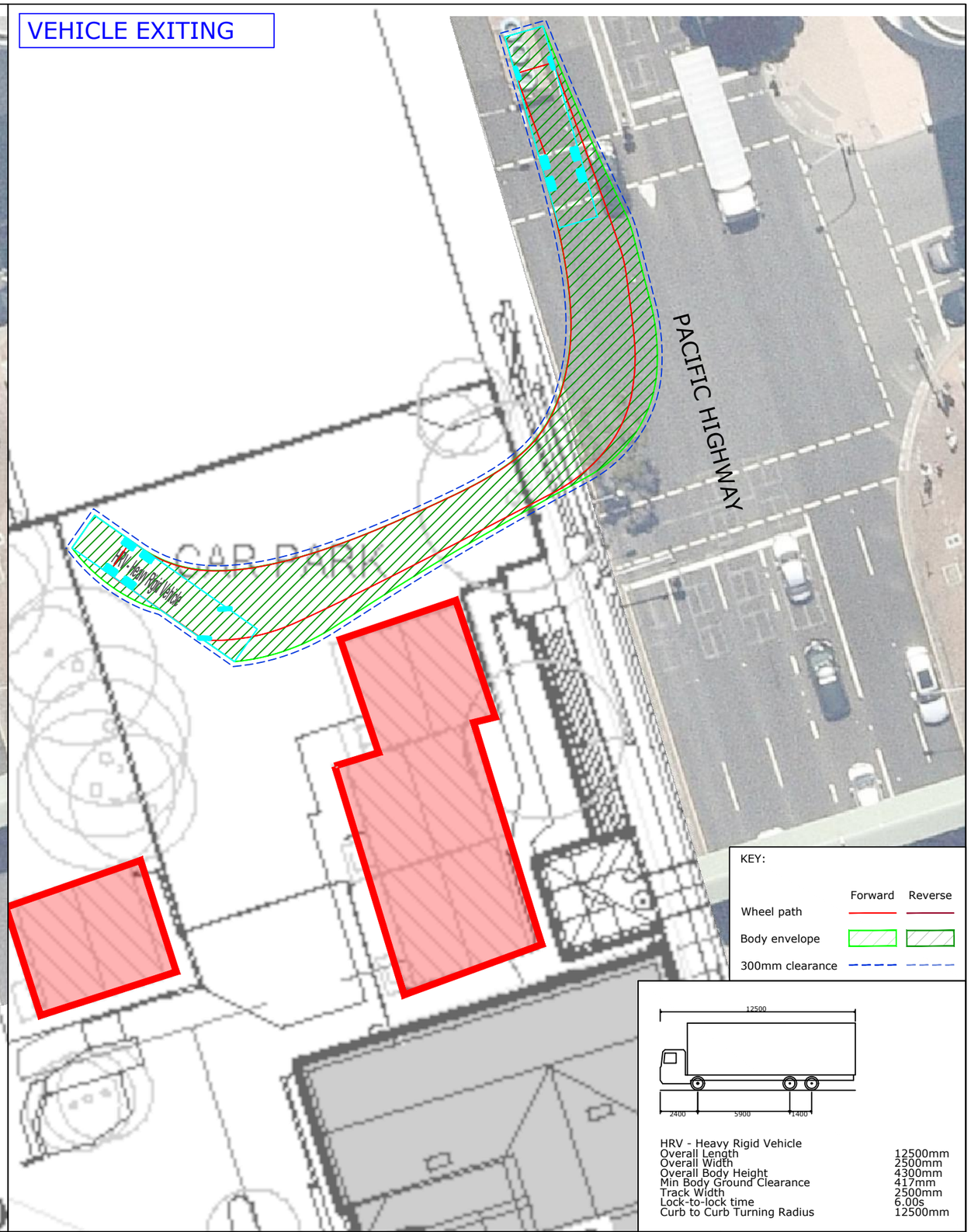
Appendix B

Swept Path Diagrams

VEHICLE ENTERING



VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

HRV - Heavy Rigid Vehicle

Overall Length	12500mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	417mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 12.5m HEAVY RIGID VEHICLE (PACIFIC HIGHWAY ENTRY)

DWG No. 17356CAD011
FIGURE 1

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:300 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg Date: 21 February 2020 By: Karl.magistrado

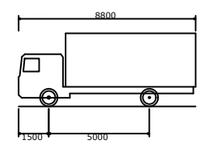
VEHICLE ENTERING

VEHICLE EXITING

PACIFIC HIGHWAY

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



MRV - Medium Rigid Vehicle

Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 8.8m MEDIUM RIGID VEHICLE (PACIFIC HIGHWAY ENTRY)

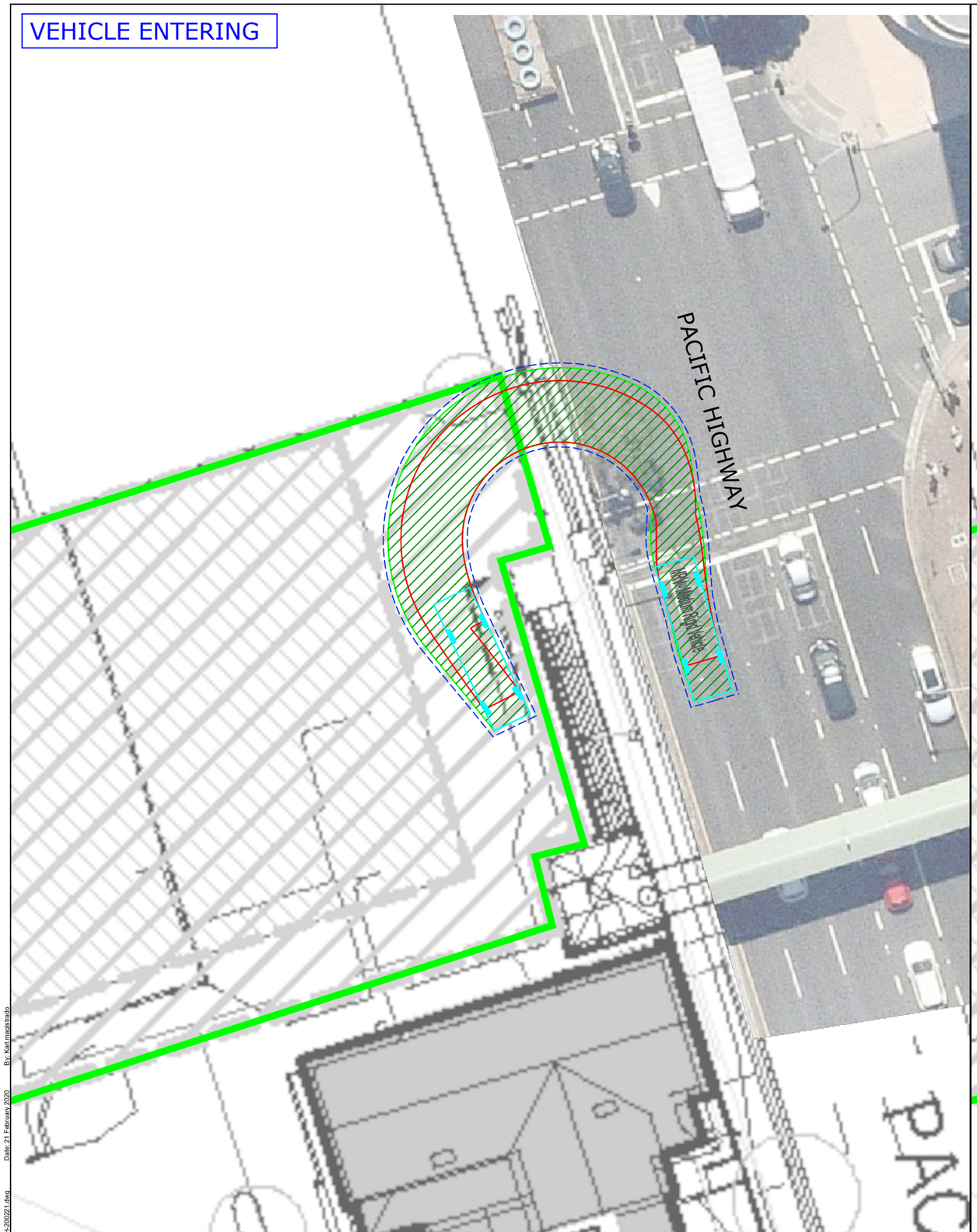
DWG No. 17356CAD011 FIGURE 2

DATE STAMP 21 FEBRUARY 2020

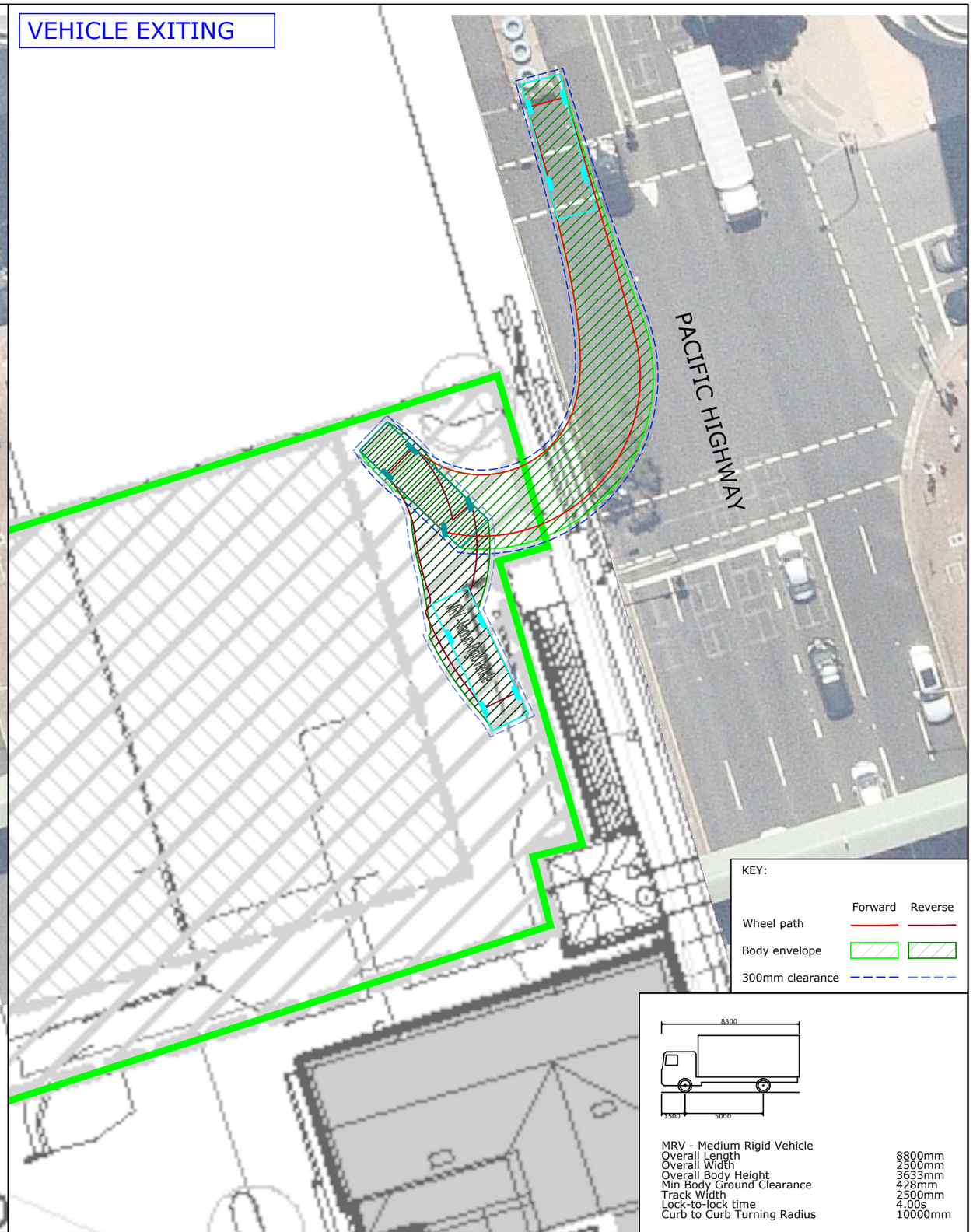
PROJECT No.	SCALE	REV.
17356	1:300 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg Date: 21 February 2020 By: Karl.magalinao

VEHICLE ENTERING



VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

MRV - Medium Rigid Vehicle

Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 8.8m MEDIUM RIGID VEHICLE (PACIFIC HIGHWAY ENTRY)

DWG No. 17356CAD011
FIGURE 3

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:300 @A3	A

By: Karl.magistrado
Date: 21 February 2020
Filename: 17356CAD011- SWEPT PATH-200221.dwg

VEHICLE ENTERING

VEHICLE EXITING

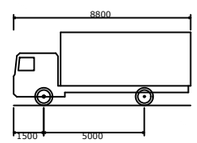
SH EXISTING
GS C, D, E, F & I
SH EXISTING
NTABLES (REF)
SH EXISTING TREES

BUILDI

DE VILLIERS AVENUE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



MRV - Medium Rigid Vehicle

Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT
UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE
SWEPT PATH ANALYSIS
AS2890.2 8.8m MEDIUM RIGID VEHICLE (DE VILLIERS AVENUE)

DWG No. 17356CAD011
FIGURE 4

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:500 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg
Date: 21 February 2020
By: Karl.magistrado

VEHICLE ENTERING

VEHICLE EXITING

G S & BUILDING Q
CONSTRUCTION

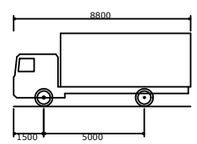
VEHICLE WOULD REQUIRE UP TO 4 MANOEUVRES TO REVERSE.

1
2
3
4

DE VILLIERS AVENUE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



MRV - Medium Rigid Vehicle

Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT
UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE
SWEPT PATH ANALYSIS
AS2890.2 8.8m MEDIUM RIGID VEHICLE

DWG No. 17356CAD011 FIGURE 5

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:500 @A3	A

By: Karl.magistrado
Date: 21 February 2020
Filename: 17356CAD011- SWEPT PATH-200221.dwg

VEHICLE ENTERING

VEHICLE EXITING

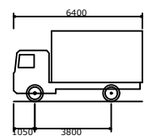
SH EXISTING
GS C, D, E, F & I
SH EXISTING
NTABLES (REF)
SH EXISTING TREES

BUILDI

DE VILLIERS AVENUE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



SRV - Small Rigid Vehicle

Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	398mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 6.4m SMALL RIGID VEHICLE (DE VILLIERS AVENUE)

DWG No. 17356CAD011
FIGURE 6

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:500 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg
Date: 21 February 2020
By: Karl.magistrado

VEHICLE ENTERING

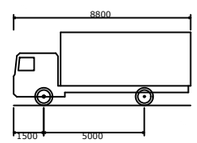
VEHICLE EXITING

G S & BUILDING Q
CONSTRUCTION

DE VILLIERS AVENUE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



MRV - Medium Rigid Vehicle

Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 6.4m SMALL RIGID VEHICLE

DWG No. 17356CAD011
FIGURE 7

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:500 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg
Date: 21 February 2020
By: Karl.magis/tado

VEHICLE ENTERING

CONSTRUCTION ACC

CENTENNIAL AVENUE

VEHICLE WOULD REQUIRE UP TO 4 MANOEUVRES TO REVERSE.

MRV - Medium Rigid Vehicle

1

2

3

4

VEHICLE EXITING

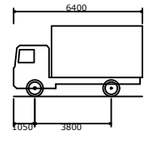
CONSTRUCTION ACC

CENTENNIAL AVENUE

MRV - Medium Rigid Vehicle

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



SRV - Small Rigid Vehicle

Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	398mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 6.4m SMALL RIGID VEHICLE (CENTENNIAL AVENUE)

DWG No. 17356CAD011
FIGURE 8

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:300 @A3	A

Filename: 17356CAD011- SWEPT PATH-200221.dwg Date: 21 February 2020 By: Kiet magistrado

VEHICLE ENTERING

CONSTRUCTION ACC

CENTENNIAL AVENUE

SRV - Small Rigid Vehicle

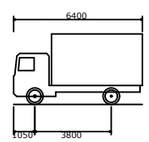
VEHICLE EXITING

CONSTRUCTION ACC

CENTENNIAL AVENUE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



SRV - Small Rigid Vehicle

Overall Length	6400mm
Overall Width	2330mm
Overall Body Height	3500mm
Min Body Ground Clearance	398mm
Track Width	2330mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7100mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	LM	JR	21/02/20

ttpp transport planning

PROJECT

UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 6.4m SMALL RIGID VEHICLE (CENTENNIAL AVENUE ENTRY)

DWG No. 17356CAD011
FIGURE 9

DATE STAMP 21 FEBRUARY 2020

PROJECT No.	SCALE	REV.
17356	1:300 @A3	A

By: Karl magistrado

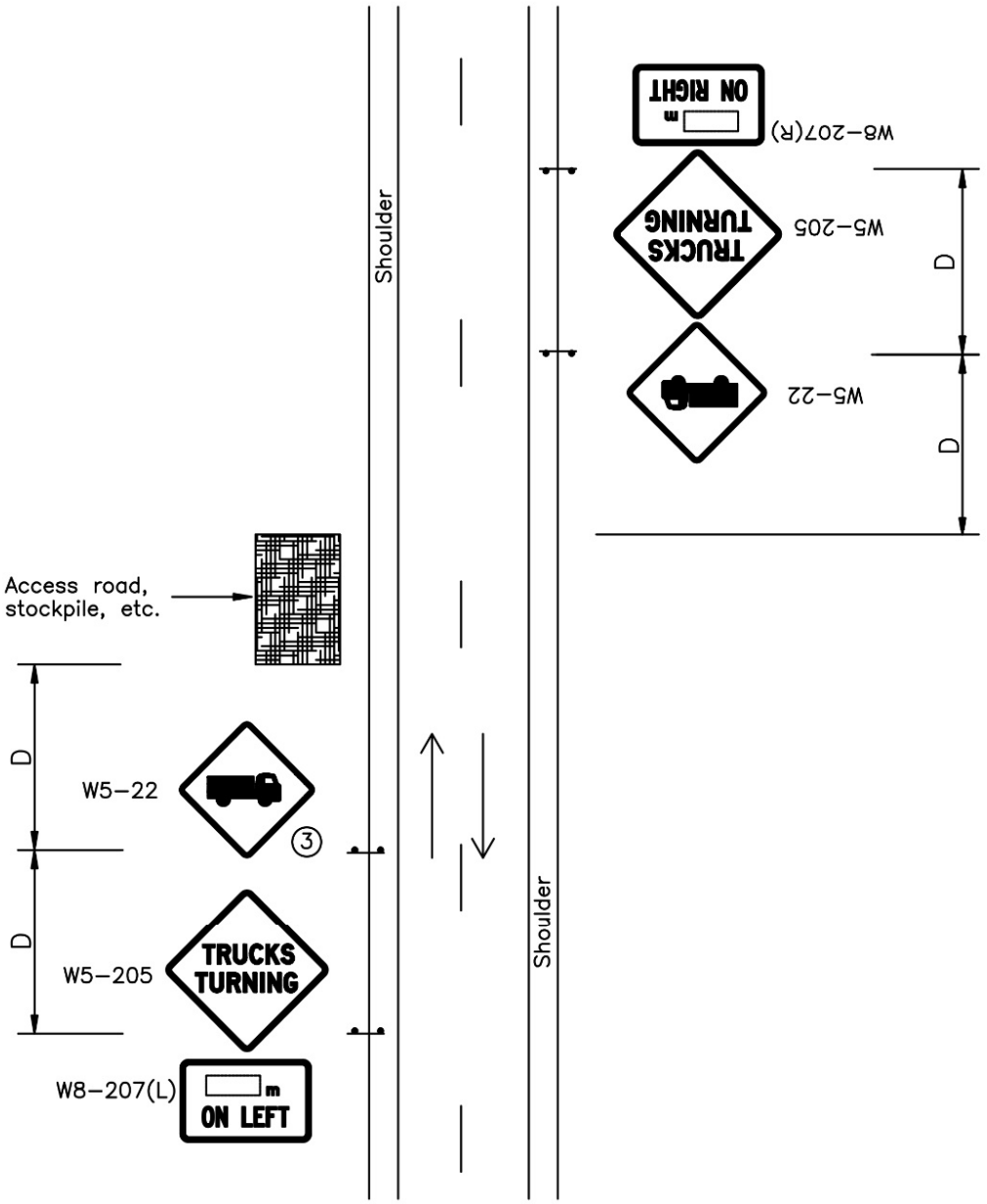
Date: 21 February 2020

Filename: 17356CAD011- SWEPT PATH-200221.dwg

Appendix C

Standard Traffic Control Plan

TCP 195



NOTE:

① For use where roadside is generally undeveloped, ADT is more than 1,500 vehicles per day, sight distance is restricted and there are more than 20 truck movements per shift.

② See ***Traffic control at work sites,*** Section 7.7, ***Signs for depots, stockpiles, quarries, gravel pits etc.***

③ For short term works use T2–25.

ACCESS TO DEPOT, STOCKPILE, QUARRY, GRAVEL PIT ETC.
ALL ROADS
LONG TERM USE

T000195

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