

1 Introduction

JMT Consulting has been commissioned by Atlassian (the Applicant) to prepare this document in response to the issues raised in by government agencies, community organisation groups and the public during the public exhibition of the proposed Atlassian Central State Significant Development (**SSD**) application (SSD-10405) in relation to the site at 8-10 Lee Street, Haymarket.

The application was placed on public exhibition from 16th December 2020 to 3rd February 2021.

This document has been prepared to respond to the transport related issues raised by Transport for NSW and City of Sydney Council as reproduced on the following pages.

2 Response to Submissions

2.1 Response to City of Sydney Submission

City of Sydney Council Submission	JMT Consulting Response
The application proposes a 3.6 metre clearance for the service vehicle ramp access. Please note that MRVs require 4.5 metre clear height and will have a maximum length of 8.8 metres. It is recommended that the ramp be amended accordingly.	The vehicle access ramp into the Atlassian building has been designed by JMT consulting to have the steepest possible ramp slope of 1:6.5, as per the Australian Standards requirements. As a result the lowest achievable RL for Level B2 is RL 5.0 which allows for the maximum possible height at the southern boundary connection. This ramp cannot be extended any further due to the turntable is at the bottom of the ramp. With the Sydney Water easement clearance zone a maximum clearance height of 3.6m for vehicles can be achieved which would be an extension of the dive ramp height. It is important to note that while a 3.6m clearance height is provided in the 'Day 1' scenario, suiting the specific needs of Atlassian, a 4.5m clearance height is provided in the 'Day 2' scenario which satisfies the requirements of all stakeholders in the Western Gateway precinct. A 4.5m clearance height for a Medium Rigid Vehicle (MRV) is noted in Table 2.1 of Australian Standards for off-street commercial vehicle facilities AS2890.2 2018. In relation to this clearance height the following should be noted: • The reference to a 4.5m clearance height is based on specifications a document from 1995 that has since been withdrawn • The standard notes that there is provision for a variation in the dimensions when a commercial facility is being designed specifically for a nominated vehicle type. The Atlassian Central development dive ramp structure via Lee Street has been designed to provide a 3.6m clearance height which will initially service the on-site loading dock, prior to the completion of the Dexu/Frasers Site. Given the constraints associated with the Sydney Water asset above the B2 access tunnel, a 3.6m height clearance to service the Atlassian Central development would be considered acceptable. As indicated in the table below, there are

City of Sydney Council Submission	JMT Consulting Response																																																
	numerous examples of large commercial buildings in the Sydney CBD with loading dock clearance heights of 3.6m or less. Table 1 CBD buildings with clearance heights of 3.6m or less <table><tr><th>CBD Building</th><th>GFA (m²)</th><th>Loading dock clearance height (m)</th></tr><tr><td>420 George Street</td><td>60,000</td><td>3.2</td></tr><tr><td>1 Shelley Street</td><td>35,000</td><td>3.2</td></tr><tr><td>Chifley Tower</td><td>85,000</td><td>3.4</td></tr><tr><td>MLC Centre</td><td>94,000</td><td>3.4</td></tr><tr><td>201 Kent Street</td><td>66,000</td><td>3.4</td></tr><tr><td>161 Castlereagh Street</td><td>64,000</td><td>3.4</td></tr><tr><td>1 O'Connell Street</td><td>42,000</td><td>3.4</td></tr><tr><td>383 George Street</td><td>23,000</td><td>3.4</td></tr><tr><td>50 Bridge Street</td><td>97,000</td><td>3.4</td></tr><tr><td>275 Kent Street</td><td>77,000</td><td>3.5</td></tr><tr><td>Darling Park</td><td>44,000</td><td>3.6</td></tr><tr><td>60 Martin Place</td><td>42,000</td><td>3.6</td></tr><tr><td>Darling Quarter</td><td>67,000</td><td>3.6</td></tr><tr><td>8 Chifley Square</td><td>22,000</td><td>3.6</td></tr><tr><td>33 Alfred Street</td><td>35,000</td><td>3.6</td></tr></table>	CBD Building	GFA (m²)	Loading dock clearance height (m)	420 George Street	60,000	3.2	1 Shelley Street	35,000	3.2	Chifley Tower	85,000	3.4	MLC Centre	94,000	3.4	201 Kent Street	66,000	3.4	161 Castlereagh Street	64,000	3.4	1 O'Connell Street	42,000	3.4	383 George Street	23,000	3.4	50 Bridge Street	97,000	3.4	275 Kent Street	77,000	3.5	Darling Park	44,000	3.6	60 Martin Place	42,000	3.6	Darling Quarter	67,000	3.6	8 Chifley Square	22,000	3.6	33 Alfred Street	35,000	3.6
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City of Sydney Council Submission

JMT Consulting Response

A 3.6m height clearance provides flexibility for a large range of Medium Rigid Vehicle's including waste contractor vehicles with a lifting capacity of over 600kgs and payload of 8500kgs. An example of a large rear-lift waste contractor vehicle with a clearance of less than 3.6m is shown in the figure below.

REARLIFT

Vehicle	Rearlift			
Weights	TARE	GVM	Payload	
	13800kgs	27000kgs	8500kgs	
	Height	Load Height	Length	Width
Measurements	3.3m	3.3m	9.7m	2.5m
Turning Circle	17m			
Lift Capacity	600kgs			



2.2 Response to Transport for NSW Sydney Submission

Transport for NSW Submission	JMT Consulting Response
<u>Comment</u> Section 6.7 of the Traffic Report states that there are no impacts to road user safety. It is advised that this needs to be demonstrated by the following: Undertake a Stage 2 (Concept Plan) Road Safety Audit for the proposed Lee Street access arrangement, Lee Street pick and drop off arrangement and the access arrangement between the loading dock and Lee Street; and Undertake a Swept Path analysis for the maximum size of the vehicle that would expect to use the loading dock to demonstrate that: Simultaneous service vehicle movements to/from Lee Street through dive ramp structure would be possible as the proposed access arrangement would have the potential to lead vehicles to reverse into Lee Street and give way to the vehicles leaving the site and causing pedestrian and traffic related incidents; and The service vehicles turning left from the loading dock access to Lee Street would not conflict with the vehicles travelling in the opposite direction along Lee Street and with the vehicles dropping off and picking up in the proposed “No Parking” zone on Lee Street. <u>Recommendation</u> It is requested that the applicant undertakes the following as part of the applicant’s Response to Submissions: A Stage 2 (Concept Plan) Road Safety Audit for the proposed Lee Street access arrangement, Lee Street pick and drop off arrangement and the access arrangement between the loading dock and Lee Street in accordance with	A swept path for the longest vehicle expected to enter the site (8.8m Medium Rigid Vehicle) has been prepared and is presented in Appendix A of this document. The swept path has considered the very conservative scenario whereby a large 8.8m long Medium Rigid Vehicle enters the site at the same time as a 6.4m long Small Rigid Vehicle (SRV). The analysis demonstrates that simultaneous entry and exit of these vehicles is possible even under this conservative scenario. 600mm clearance is provided between an MRV passing an SRV, with 1200mm clearance provided an MRV and a van (B99). The instances of an MRV and an SRV passing on the driveway will be very low however the driveway still has the ability to accommodate this scenario. All trucks leaving the site would be instructed to stop at the top of the ramp and give way to any vehicle that may be entering the site. This would provide priority for entering vehicles over exiting vehicles so they do not impede traffic flow on Lee Street. This will also allow for the extremely rare occurrence when an MRV is entering the site at the same time an MRV is exiting the site. Vehicles will give way to pedestrians when crossing the driveway, consistent with any other CBD style developments. In the busiest hour of the day there would be less than 15 vehicles entering the site or one every four minutes. A maximum queue of between one and two vehicles would form which would not come close to extending back to the Pitt Street intersection The request for the preparation of a Road Safety Audit (RSA) by TfNSW is acknowledged however considered to be too early in the design process. The project is still in schematic design phase and is yet to consider in any

Transport for NSW Submission	JMT Consulting Response
Austroads Guide to Road Safety Part 6: Managing Road Safety Audits and Austroads Guide to Road Safety Part 6A: Implementing Road Safety Audits by an independent TfNSW accredited road safety auditor; and A Swept Path analysis for the simultaneous service vehicle movements to/from Lee Street through dive ramp structure for the maximum size of the vehicle that would expect to use the loading dock. Swept paths need to cover the vehicle travel paths between Lee Street and the loading dock. Based on the results of the road safety audit and the swept path analysis, the design drawings need to be reviewed to identify safety measures that may need to be implemented in consultation with TfNSW.	great detail the Lee Street driveway design and layout. Importantly it has been demonstrated through the additional swept path analysis that vehicles are safely able to enter and exit the site. The Lee Street driveway design will be further developed during the detailed design phase of the project well before construction commences. Therefore this point in the project will present a more suitable time to undertake the RSA in accordance with the TfNSW recommendation, with the findings and recommendations of the RSA to be incorporated in the final drawing set for the project. This requirement to undertake a RSA prior to the commencement of construction may be reinforced through a suitably worded condition of consent. At this stage it has been demonstrated however that the current driveway design provides for suitable width to accommodate simultaneous vehicle entry and exits to the site without impacting the flow of traffic on Lee Street. The dive ramp has been designed to provide for a 1:20 gradient at the top of the ramp so vehicles have excellent sight lines to oncoming pedestrians as they exit the site. The level of vehicle movements into the site is low at less than 1 vehicle every 4 minutes and this volume of traffic, coupled with the driveway design, will not impact pedestrian safety. The existing pedestrian refuge adjacent to Ambulance Avenue would be removed in conjunction with the closure of Ambulance Avenue to vehicle traffic. A continuous footpath treatment will be provided on the northern side of Lee Street to emphasise pedestrian priority at this location.
<u>Comment</u>	Currently two vehicle access points are provided on Lee Street, those being at Ambulance Avenue and Upper Carriage Lane. These two access

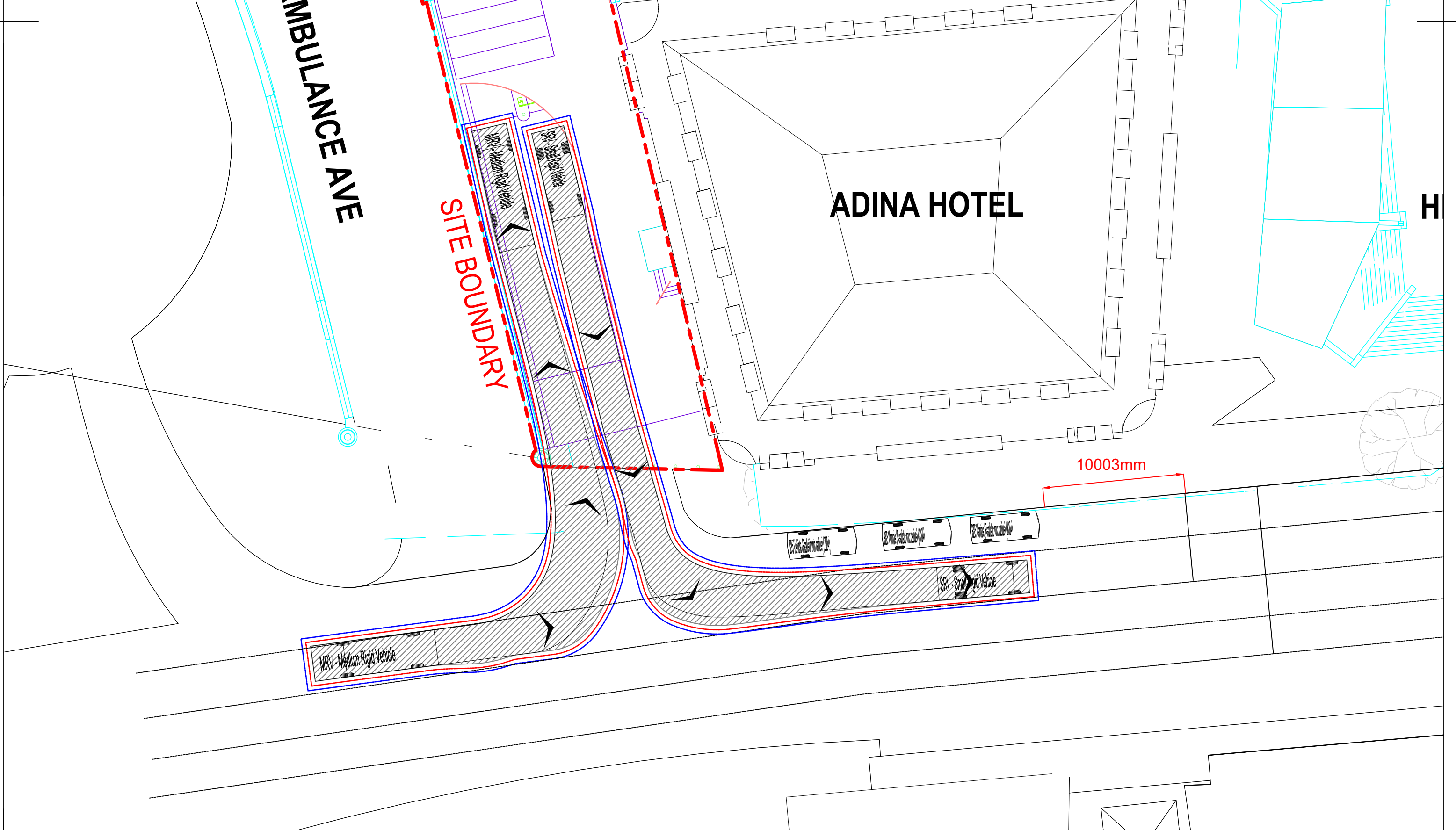
Transport for NSW Submission	JMT Consulting Response
The following comments are provided in relation to traffic and safety issues associated with Lee Street: The proposed development proposes changes to traffic arrangements along Lee Street. It is noted that no traffic and pedestrian safety analysis for Lee Street has been undertaken for the existing situation to confirm that the proposed measures would not exacerbate existing safety issues; The management of conflicts on the B2 ramp has been detailed in Section 4.5 of the Traffic Report, however, no arrangements are proposed to manage conflicts beyond this point at the Lee Street access. That is, a service vehicle about to depart onto Lee Street would prevent a vehicle entering given the driveway width of 5.5 m does not allow simultaneous movement. Importantly, this has the potential to impact the nearby Lee Street / Pitt Street / George Street intersection; The proposed pick up and drop off arrangement on Lee Street would have potential impact on general traffic and bus movements due to the following: The traffic and pedestrian conflict is a concern due to the number of near misses observed along Lee Street and the fact that a significant number of pedestrians cross at midblock locations along Lee Street. The proposed arrangement is likely to increase conflict involving vehicles leaving the kerb and vehicles changing lanes just after the intersection and pedestrians crossing Lee Street at midblock locations. Any incidents on Lee Street would have potential to impact on general traffic and bus operation with the CBD and beyond; and Introduction of a 'No Parking' zone on Lee Street immediately adjacent to the Adina Hotel would have the potential to impact on the operation of the road network including the operation of the nearby Lee Street / Pitt Street / George Street intersection. Based on the Traffic Report, the maximum queue length at	points combined accommodate over 50 parking spaces as well as a public drop off area for the Adina Hotel. Under the Atlassian proposal one of these vehicle access points will be removed (Ambulance Avenue) while the other (Upper Carriage Lane) will be converted from a public drop off area to a dive ramp servicing the Atlassian loading dock and Adina Hotel. Therefore the proposal results in an improved safety outcome by reducing the number of pedestrian/vehicle conflict points on Lee Street from two down to one. Further, the removal of existing parking spaces on Ambulance Avenue and Upper Carriage Lane will result in reduced traffic movements across the Lee Street footpath, even with the introduction of the dive ramp to the Atlassian loading dock. A review of crash data on Lee Street near Ambulance Avenue has been undertaken indicates there has only been three crashes in the last five years, none of which resulted in a serious injury or a fatality (see summary in Appendix B of this document). A number of pedestrian related crashes were recorded at the existing mid-block pedestrian crossing which will be unchanged as part of the proposal. The 'No Parking' zone on Lee Street would terminate 10m before the commencement of the crossing, consistent with TfNSW safety standards. Provision of this No Parking zone is considered to improve pedestrian safety when compared to current conditions, given southbound vehicles will no longer be travelling at high speeds in the kerbside lane. To emphasise pedestrian priority along Lee Street, the driveway entrance is to be fully integrated with the adjoining footpath, at one continuous level. The treatment will therefore be an area which is designed for pedestrians, across which vehicles can pass slowly. Drivers of vehicles will be guided and encouraged to give way to pedestrians on the footpath as required by

Transport for NSW Submission	JMT Consulting Response
the existing midblock pedestrian crossing in Lee Street is expected to increase by approximately 25m. SIDRA modelling, however, does not account for all driver behaviour. Taxis leaving the drop off / pick up zone may result in the maximum queue length extending further and impacting the Lee Street / Pitt Street / George Street intersection. <u>Recommendation</u> It is requested that the applicant undertakes the following as part of the applicant's Response to Submissions: Traffic and pedestrian safety assessment including historic crash analysis to confirm that the proposed measures along Lee Street would not exacerbate existing safety issues; and An assessment of conflicts at the Lee Street access to provide mitigation measures to minimise the impacts on Lee Street / Pitt Street / George Street intersection and Lee Street.	law. The crossings would also be designed with consistent pavement material. Therefore in the above the proposal is not considered to impact pedestrian safety. To emphasise pedestrian priority along Lee Street during the interim access arrangements, the driveway entrance is to be fully integrated with the adjoining footpath, at one continuous level. The treatment will therefore be an area which is designed for pedestrians, across which vehicles can pass slowly. Drivers of vehicles will be guided and encouraged to give way to pedestrians on the footpath as required by law. The crossings would also be designed with consistent pavement material. Vehicles will give way to pedestrians when crossing the driveway, consistent with any other CBD style developments. In the busiest hour of the day there would be less than 15 vehicles entering the site or one every four minutes. A maximum queue of between one and two vehicles would form which would not come close to extending back to the Pitt Street intersection
<u>Comment</u>	Similar to other managed loading docks (e.g. Barangaroo) vehicles that have been refused entry into the loading dock will firstly enter the loading

Transport for NSW Submission	JMT Consulting Response
The Traffic Report document makes several references to the Sydney DCP where it is compliant. This document should acknowledge its non-compliance to the Sydney DCP (requirement for ~18 dock spaces); and Approximately 20 loading dock movements are anticipated during the peak hour. The design proposes to provide a total of nine service vehicle bays within the loading dock at a turnover rate of approximately 20 minutes. The stated turnover rate appears to be low. There is going to be no kerbside space to support loading activities associated with the subject development. The continued provision of on-street parking zones in any location cannot be guaranteed as there are many competing demands for kerbside space with kerbside restrictions set to suit the wider community needs and transport network requirements and are constantly subject to change. <u>Recommendation</u> It is requested that the applicant undertakes the following as part of the applicant's Response to Submissions: More information needs to be provided on how vehicles that have been refused entry will be managed back onto the road network, specifically to ensure that there are no reversing movements onto Lee Street; Further explanation is required to outline how management techniques can overcome the deficiency of what the DCP states should be provided. While there is a strong environmental focus to this building, there is a risk that under provision of dock capacity could lead to externalised environmental impacts; and Sufficient loading dock space should be provided in accordance with Council's Development Control Plan (DCP) or TfNSW's Guide to Traffic Generating Developments, whichever provides the greater amount of space, to ensure	area, turn around and then travel back out to Lee Street. No reversing movements will take place on Lee Street, with the turntable (day 1) to facilitate vehicle turnaround within the site to ensure they enter and exit in a forwards direction. With regards to the loading dock provision, it is important to recognise that the Sydney DCP loading rates are based on outdated survey data from approximately 20 years ago and also reflect loading docks with no management systems in place. More recent surveys undertaken by Transport for NSW of commercial buildings, including those with loading dock management plans in place, confirm that the loading provision provided within the Atlassian basement is suitable to accommodate future demands. It should be noted that Atlassian met with TfNSW Freight and Servicing Team on 2 April 2020 to present the proposed loading dock provision which is consistent with that shown in the SSDA documentation. The TfNSW Freight and Servicing team were supportive of the proposed design, with Ken Lee from TfNSW confirming that "TfNSW noted that, positively, the number of freight parking spaces within the Atlassian basement design had increased since the proposal was last reviewed." As noted in the preliminary loading dock management plan prepared for the proposal, a loading dock booking system will be employed to control access to dock and spread the demand profile over the day. Deliveries will be required to be pre-booked to an allocated time slot of 30 minutes maximum dwell time. Vehicles will only be allowed to approach loading bays once the occupying vehicle has departed from the bay.

Transport for NSW Submission	JMT Consulting Response
sufficient space is provided within the site to support the forecast freight and servicing demand of the proposed development.	Measures describing the operation and management of the loading dock have been provided as part of the preliminary loading dock management plan submitted with the EIS. These measures will be expanded upon further as part of a detailed loading dock management plan to be prepared following the occupation of the site. Trucks intending to use the docks will not be permitted to come to site without making a booking beforehand. The major benefit of the implementation of such a system is the ability to moderate demand throughout the day. The allocation of deliveries to timeslots (with strict length of stay limits) reduces the risk the loading dock reaching capacity and manages traffic flow into the Site during peaks. The booking system also largely mitigates the risk of vehicle queues forming to enter the Site and improving the flow of traffic on adjacent streets. As with any development there is the potential for an unauthorised vehicle to enter the site, however this will be minimised via the online booking system and management procedures in place. Any vehicle entering the site without a booking will be instructed by the loading dock manager to immediately depart the site should there not be space available within the dock. Drivers will be told this once they have passed through the boom gates on Level 1 and will not be permitted to enter the loading dock itself. All vehicles will still enter and exit the site in a forwards direction.

Appendix A: Vehicle Swept Paths



Client
Atlassian

Date
31.05.21

Job Title
Atlassian Central Station

Job No
1902

Drawing Title
Turning Paths
SRV & MRV entry via Lee Street

Drawing No
SKT24

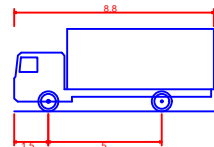
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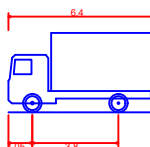
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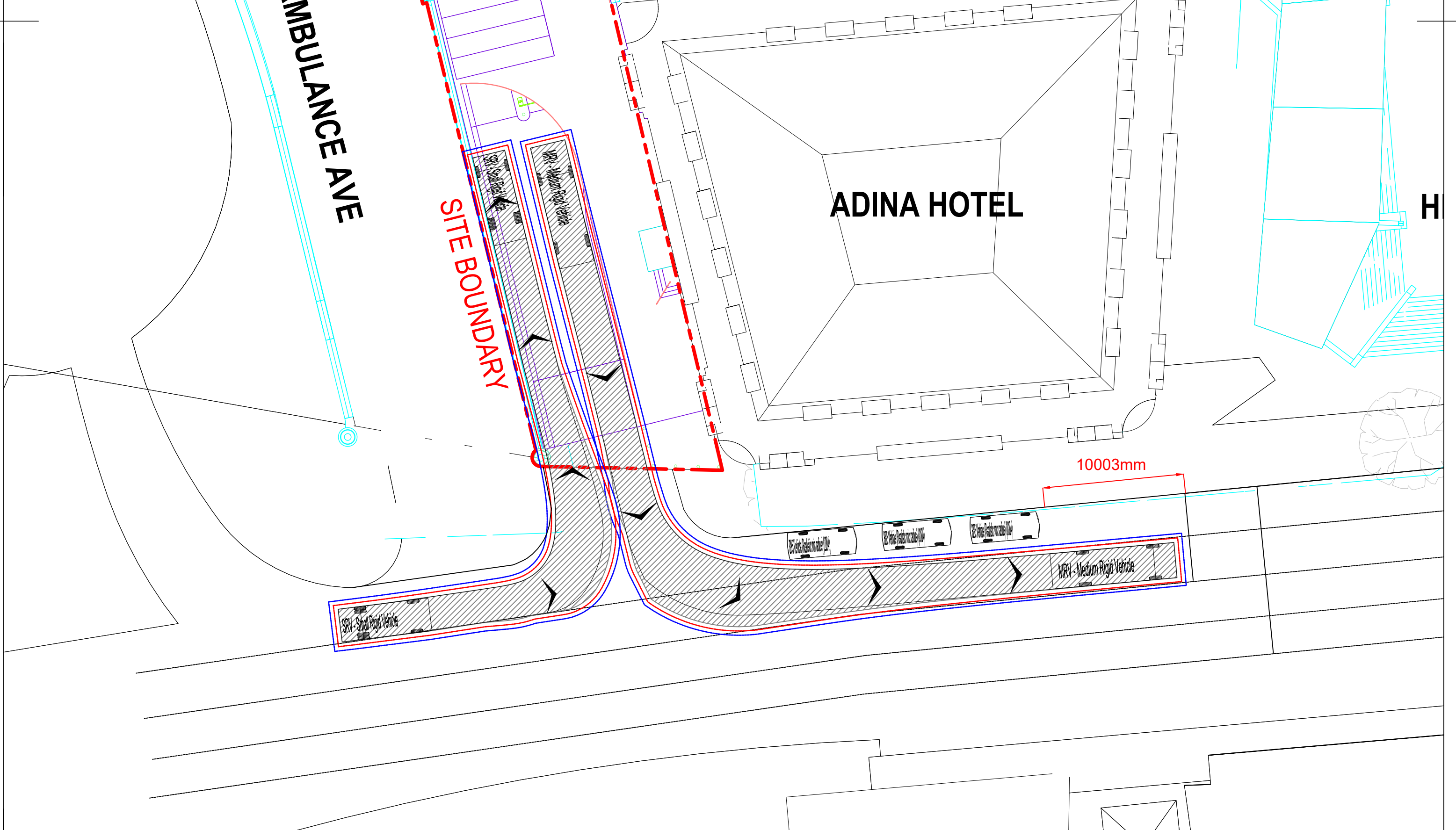
Vehicle type(s)



MRV - Medium Rigid Vehicle
Overall Length 8.800m
Overall Width 2.500m
Overall Body Height 3.633m
Min Body Ground Clearance 0.428m
Track Width 2.500m
Lock to lock time 4.00 sec
Curb to Curb Turning Radius 10.000m



SRV - Small Rigid Vehicle
Overall Length 6.400m
Overall Width 2.330m
Overall Body Height 3.500m
Min Body Ground Clearance 0.398m
Track Width 2.330m
Lock to lock time 4.00s
Curb to Curb Turning Radius 7.100m



Client
Atlassian

Date
31.05.21

Job Title
Atlassian Central Station

Job No
1902

Drawing Title
Turning Paths
SRV & MRV entry via Lee Street

Drawing No
SKT25

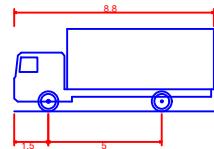
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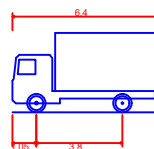
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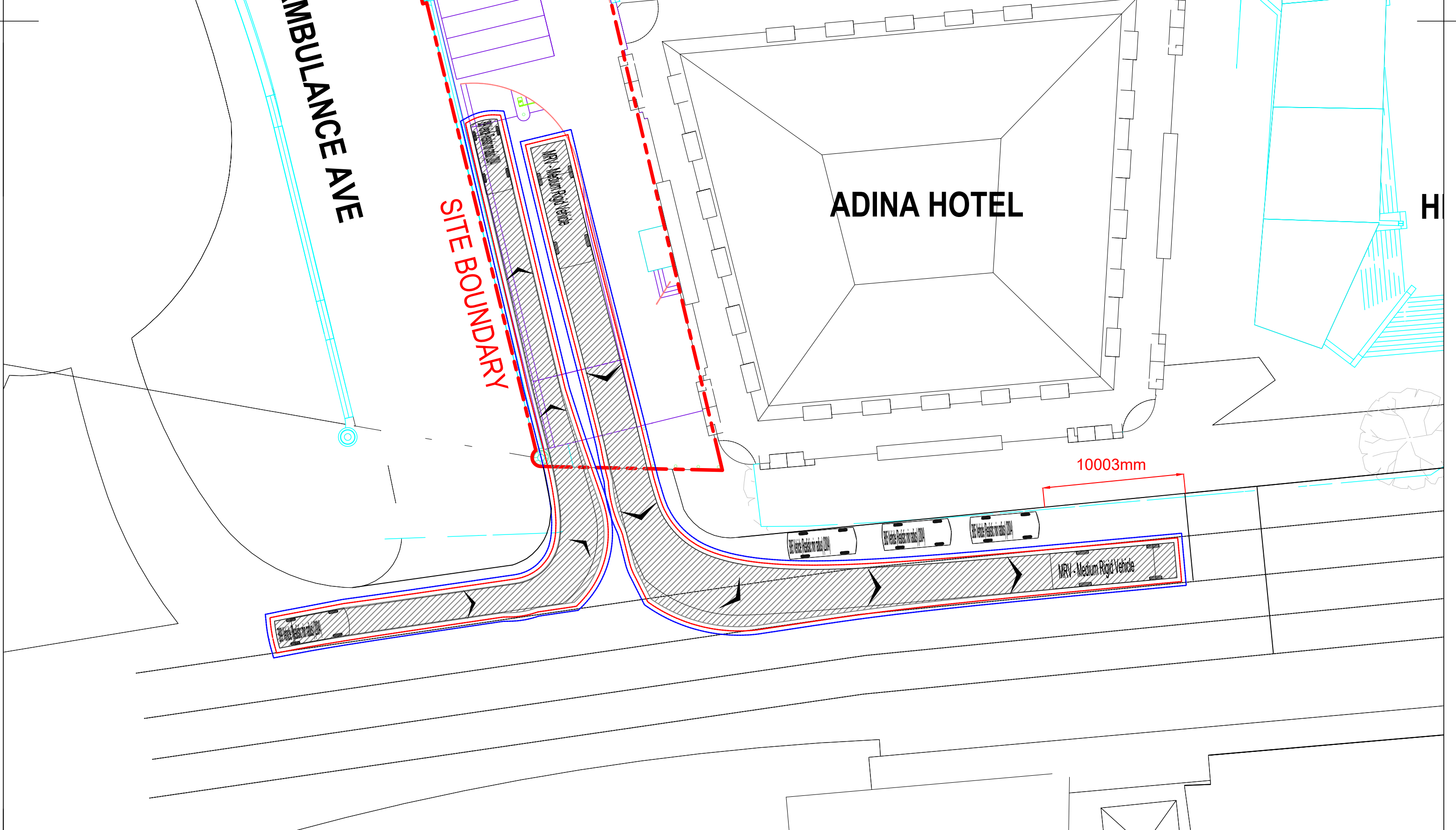
Vehicle type(s)



MRV - Medium Rigid Vehicle
Overall Length 8.800m
Overall Width 2.500m
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Min Body Ground Clearance 0.428m
Track Width 2.500m
Lock to lock time 4.00 sec
Curb to Curb Turning Radius 10.000m



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Overall Length 6.400m
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Min Body Ground Clearance 0.398m
Track Width 2.330m
Lock to lock time 4.00s
Curb to Curb Turning Radius 7.100m



Client
Atlassian

Date
31.05.21

Job Title
Atlassian Central Station

Job No
1902

Drawing Title
Turning Paths
MRV & B99 entry via Lee Street

Drawing No
SKT26

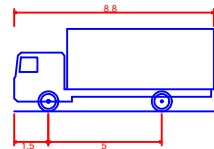
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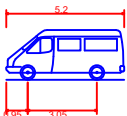
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Vehicle type(s)



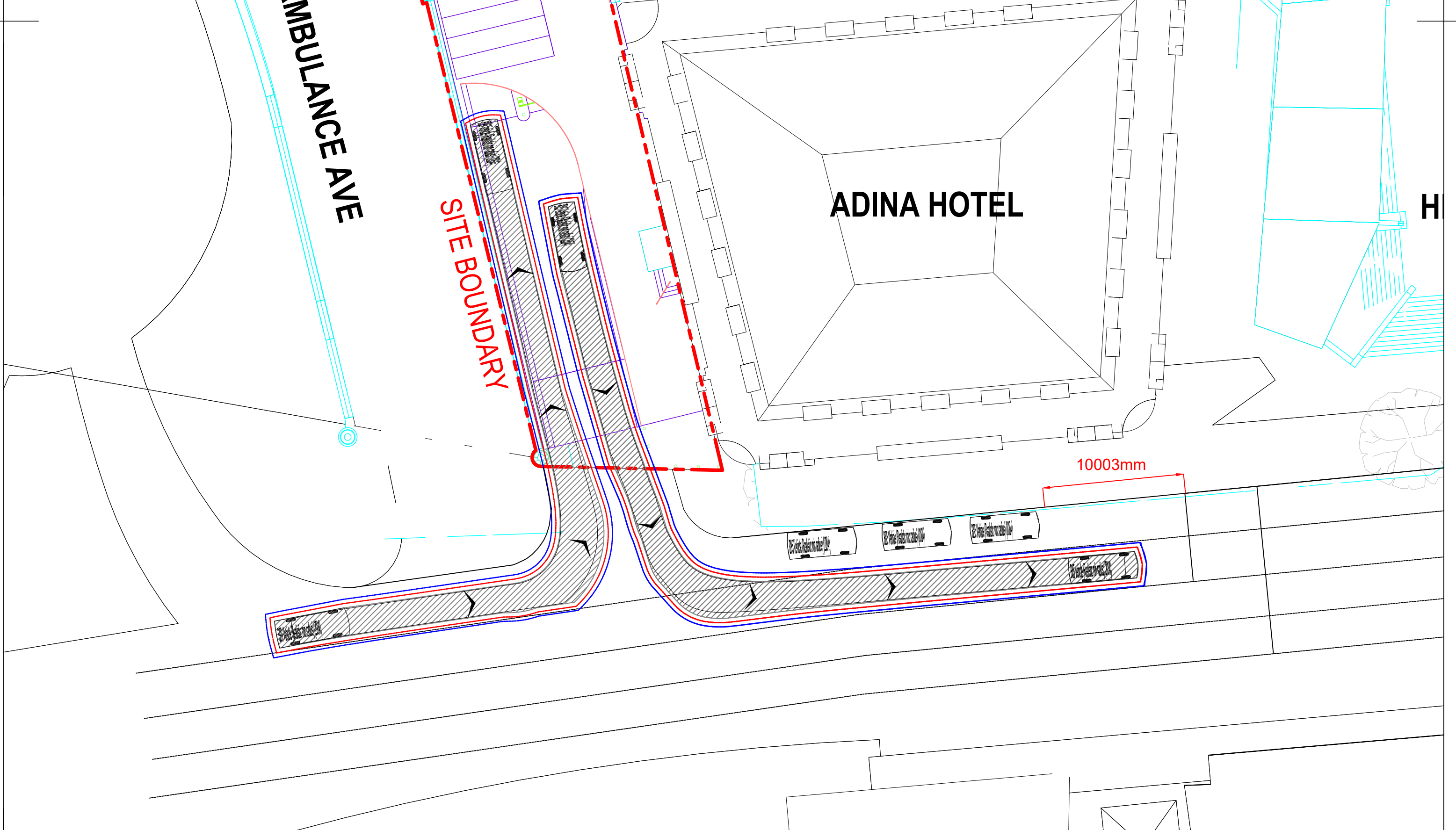
MRV - Medium Rigid Vehicle
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

8.800m
2.500m
3.633m
0.428m
2.500m
4.00 sec
10.000m



B99 Vehicle (Realistic min radius) (2004)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

5.200m
1.940m
2.200m
0.312m
1.840m
4.00 sec
6.250m



Client
Atlassian

Date
31.05.21

Job Title
Atlassian Central Station

Job No
1902

Drawing Title
Turning Paths
B99 entry via Lee Street

Drawing No
SKT27

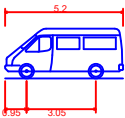
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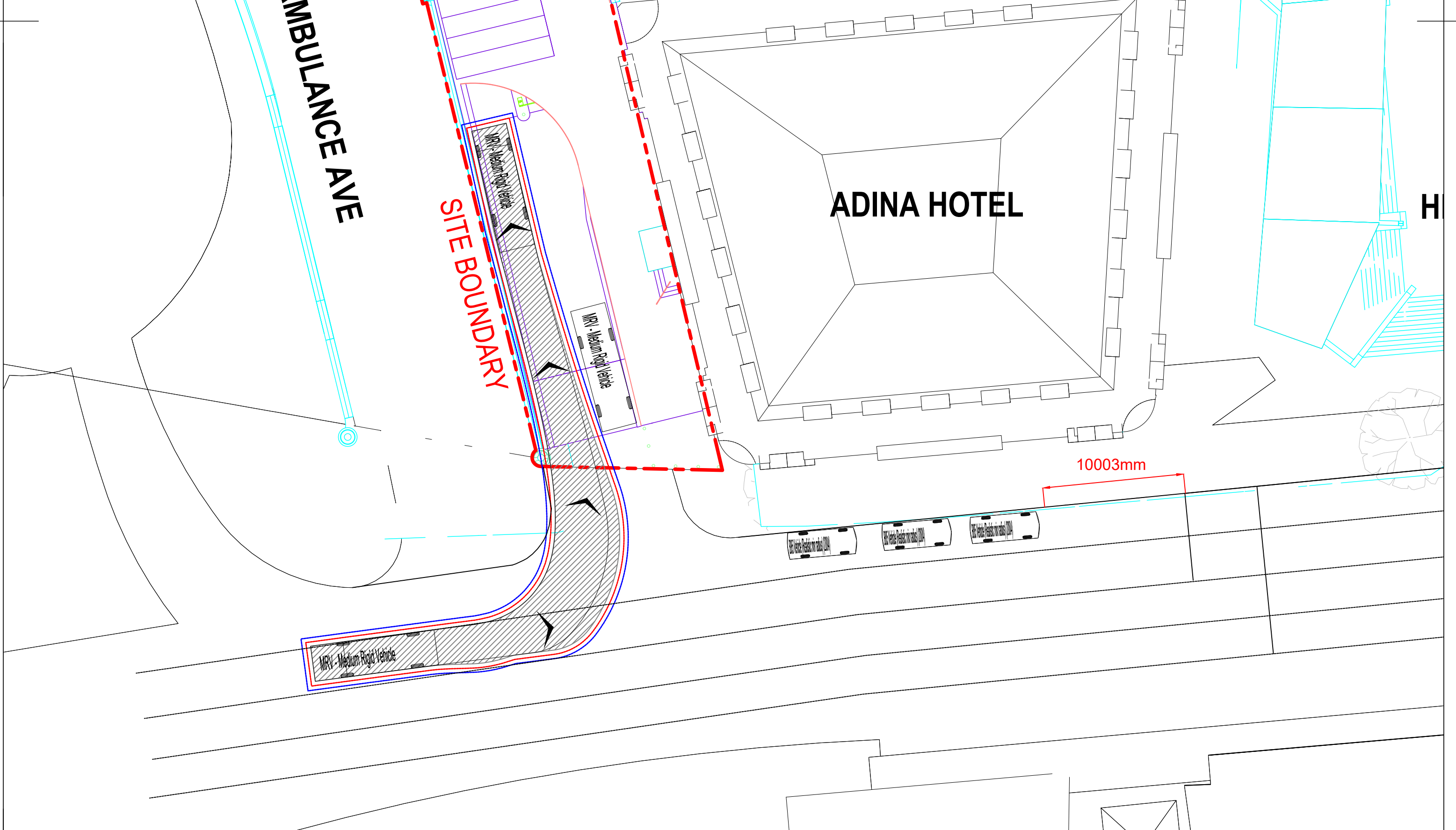
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Scale at A3
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Vehicle type(s)



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 2.200m
Min Body Ground Clearance 0.312m
Track Width 1.840m
Lock to Lock Time 4.00 sec
Curb to Curb Turning Radius 6.250m



Client
Atlassian

Date
31.05.21

Job Title
Atlassian Central Station

Job No
1902

Drawing Title
Turning Paths
MRV entry via Lee Street

Drawing No
SKT28

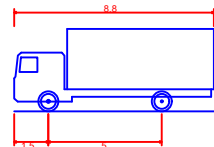
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Vehicle type(s)

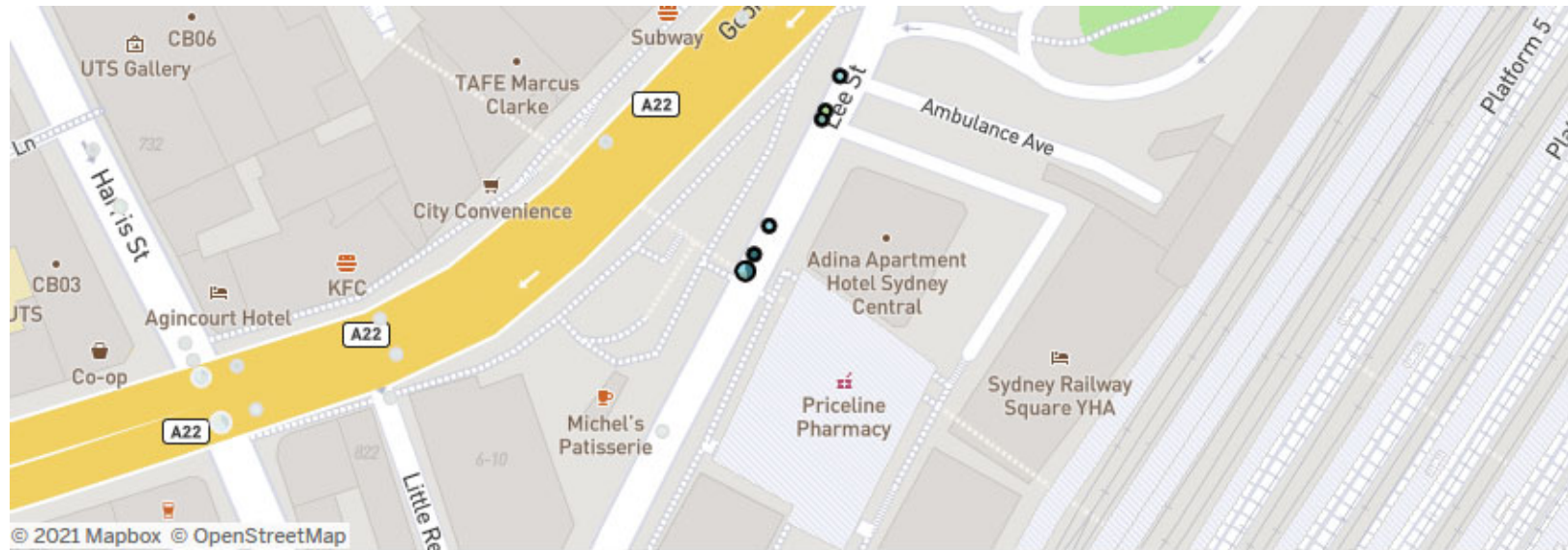


MRV - Medium Rigid Vehicle
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

8.800m
2.500m
3.633m
0.428m
2.500m
4.00 sec
10.000m

Appendix B: Crash Analysis

Record of all recorded crashes near the Lee Street / Ambulance Avenue intersection between 2015 and 2019



Degree of crash

■ Fatal
 ■ Serious Injury
 ■ Moderate Injury
 ■ Minor/Other Injury
 ■ Non-casualty (towaw...

Repo..	Crash ID	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	No Killed	No Injured
2015	1073494	Serious Injury	0	Ped nearside	2-way undivided	Daylight	151.203749	-33.883686	-	1
	1076270	Moderate Injury	2	Ped far side	2-way undivided	Darkness	151.203749	-33.883686	-	1
2016	1097863	Minor/Other Inj..	2	Ped far side	2-way undivided	Darkness	151.203749	-33.883686	-	1
2017	1158813	Serious Injury	2	Ped far side	2-way undivided	Daylight	151.203749	-33.883686	-	1
2018	1177156	Non-casualty (t..	30	Rear end	T-junction	Daylight	151.203979	-33.883304	-	-
	1189395	Moderate Injury	47	Emerging from drive	2-way undivided	Daylight	151.203969	-33.883324	-	1
2019	1191428	Minor/Other Inj..	2	Ped far side	2-way undivided	Daylight	151.203817	-33.883578	-	1
	1208535	Minor/Other Inj..	2	Ped far side	T-junction	Daylight	151.204021	-33.883221	-	1