Technical Memorandum – Victoria Cross ISD, SSDA Traffic & Green Travel Plan

Date:	27 March 2020
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Reference Document Numbers:	SMCSWSVO-LLC-SVC-TI-REP-000001, SMCSWSVO-LLC-SVC-TI-REP-000002

This technical memorandum responds to comments and recommendations within submissions made on the Victoria Cross OSD Detailed State Significant Development Application (SSD-10294), including the Transport for NSW (TfNSW) submission dated 20 December 2019 as well as relevant public submissions.

1. **Comment/ recommendation: Loading and parking provision**

Further information and justification should be provided for the reducing the number of loading bays and demonstrate that the reduced provision will not have an adverse impact on the use of the surrounding kerb space and operation of the road network. Consideration could also be given to E-transportation charging facilities at the parking area.

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Response: Loading and parking provision

In developing the response to this comment, consultation was undertaken with TfNSW Sydney Coordination Office on 31 January 2020.

The approved concept State Significant Development Application (SSDA) indicated that the provision of loading dock spaces would be refined in the detailed design phase and noted that there is potential scope to reduce the assumed dwelling times within the loading bays to accommodate more service vehicles (assumed to be 30 minutes in the approved concept SSDA). The detailed SSDA includes about 2,400 square metres gross floor area (GFA) of retail, which is reduced from the approved concept SSDA, which allowed for up to 5,000 square metres GFA for retail. In addition, since the detailed SSDA was submitted, the design has progressed, and further assessment of the loading bays have been completed based on a managed loading dock leading to the current provision of eight loading bays within the basement.

The approved concept SSDA provides a total of 12 loading bay spaces with the following breakdown:

- Two medium rigid vehicle (MRV) bays
- Two small rigid vehicle (SRV) bays
- Six courier bays

- Two Sydney Metro bays

Given the reduction in retail GFA compared with the approved concept SSDA, which will reduce the demand for loading bays. The proposed SSDA provides a total of eight loading bays with the following breakdown:

- Two MRV bays
- Two SRV bays
- Four Courier bays.

Service and courier vehicle movements will be managed through a Vehicle Booking System (VBS), to control the arrival of authorised vehicles to and from the site and manage dwell times. The VBS will require vehicles arriving to the site to pre-book a loading bay appointment time, prior to accessing the site. The use of a VBS provides greater certainty to drivers and Road Operators with regards to arrival and time within the site, reducing any dwell time outside of the loading bay area. Within the site, this will reduce queuing and congestion at the access, and spread out incoming service and courier vehicle movements during the operational hours of the site. The system will regulate and vehicle arrivals to the loading dock and prevent vehicle queuing and stopping in Denison Street and kerbsides within the surrounding road network.

A detailed Loading Dock Management Plan will be developed by the operator and will include details of the VBS prior to occupation, this Loading Dock Management plan will be updated regularly during the operation of the OSD.

The loading dock management plan will include reduced dwell times in the development of the VBS, compared with the approved concept SSDA (which assumed a dwell time of 30 minutes per bay). The reduced dwell times will ensure that the kerbside surrounding the proposed development is not impacted by service vehicles accessing the site. The dwell times used to determine the timeslots for the VBS are 20 minutes for SRVs and MRVs, and 10 minutes for couriers. These reduced dwell times are based on improvement of the basement and loading bay layout, the inclusion of a centralised mail room near the loading bays and the revised arrangement of the OSD core and tower that provides a reduced delivery route to the OSD. The proposed timeslot allocation for the VBS will accommodate up to 24 service vehicles per hour for the eight service and courier spaces provided in the detailed SSDA. In the event that couriers are required to deliver to more than one tenancy, they will have the opportunity to book up to two timeslots, which would be managed through the VBS.

Based on the peak service vehicle and courier vehicle traffic generation of 23 vehicles in and 23 vehicles out in the AM peak, eight loading bays is considered sufficient for the estimated demand with the ability to accommodate up to 24 vehicles per hour. The loading dock will also be operated by a Loading Dock Manager who will be responsible for enforcing the VBS and dwell times for vehicle parked within the allocated bays.

The provision of E-transportation facilities within the parking area is currently under investigation as part of the development of the detailed design with a minimum of one electric vehicle charging space committed on opening of the site, with the opportunity to install additional charging spaces at a later time in accordance with North Sydney Council’s Development Control Plan.

2. **Comment/ recommendation: Construction Pedestrian Traffic Management Plan**

The applicant should be conditioned to prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with the Sydney Coordination Office within Transport for NSW (TfNSW).

Response: Construction Pedestrian Traffic Management Plan

Lendlease Building has developed a preliminary CPTMP, which will be updated as required in consultation with the Sydney Coordination Office within TfNSW.

3. **Comment/ recommendation: Green Travel Plan**

A comprehensive Travel Plan, taking into consideration of the above suggestions [refer to list of suggestions and considerations in TfNSW letter, dated 20 December 2019]*, should be prepared prior to occupation of the site.*

Response: Green Travel Plan

A preliminary Green Travel Plan was prepared to inform the detailed SSDA. This Green Travel Plan will be updated to consider the prior to occupation of the site and associated Work Travel Plans will be developed specifically for the tenants. In the update of the Green Travel Plan and preparation of specific Work Travel Plans, the following will be considered:

- Specifying contribution and responsibilities for the implementation of each of the actions within the Green Travel Plan, including monitoring and review
- Development of a Travel Plan Committee to ensure implementation, monitoring and review of the Travel Plan
- Preparation of a high-quality Travel Access Guide (TAG), providing information to occupants about how to travel to the site by sustainable transport modes, with all supporting information provided specifically for this site
- Developing a comprehensive communications strategy to support the implementation and ongoing updates, monitoring and review of the Green Travel Plan and TAG
- More current 2016 ABS data will be used if publicly available at the time of the update of the Green Travel Plan
- Consideration of allocating proportion of the proposed car parking in the OSD to be designated for car share.

4. **Comment/ recommendation: MLC breakthrough**

Further information should be provided on the future MLC breakthrough

Response: MLC breakthrough

As detailed in the architectural and structural design (refer to Figures 1 and 2) of the basement loading dock area, the proposed design allows for a future breakthrough into the adjacent MLC basement, for the connection of vehicle access via a shared loading dock as required in the Sydney Metro Victoria Cross Scope of Works and Technical Criteria (SWTC). This design is completed as part of the station works under the Critical State Significant Infrastructure project (CSSI) approval which includes the construction of all works below ground or above ground improvements with the metro station structure for appropriate integration with the OSD.

Swept paths have been completed for the proposed connection locations to the MLC at loading dock level to inform the Victoria Cross basement design as shown in appendix A of the OSD Detailed

SSD DA – Traffic and Transport Impact Assessment Doc No. SMCSWSVO-LLC-SVC-TI-REP-000001.

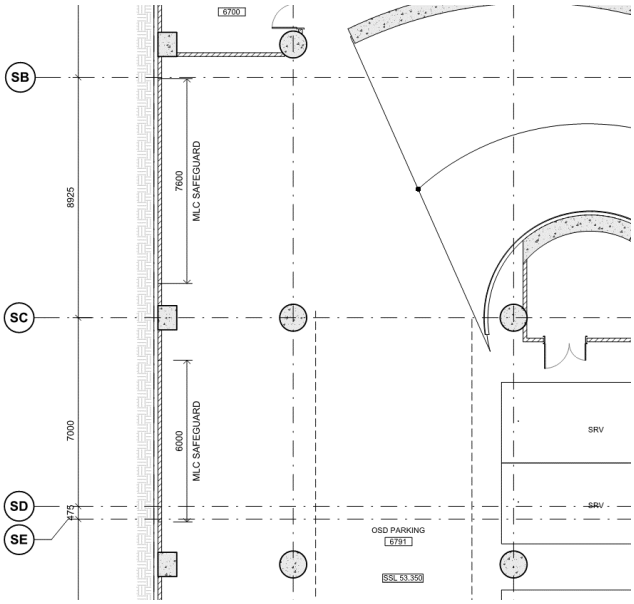

Figure 1 - Extract of Victoria Cross Station architectural layout showing future MLC breakthrough location

The OSD Detailed SSDA – Structural statement Doc No; SMCSWSVO-LLC-SVC-ST-REP-000002, notes that the structural design of the basement loading dock area incorporates soft zones within the structural perimeter walls that do not require remediation works to permanent structural elements to allow for a future breakthrough into the adjacent MLC basement, for the connection of vehicle access via a shared loading dock as required in the SWTC.

As shown on the below extract of the current structural design documentation the soft zones have been detailed via the use of structural lintels in the boundary perimeter wall that allow for non-structural areas to be removed at a future date without remedial works required to the Victoria Cross Station structure.

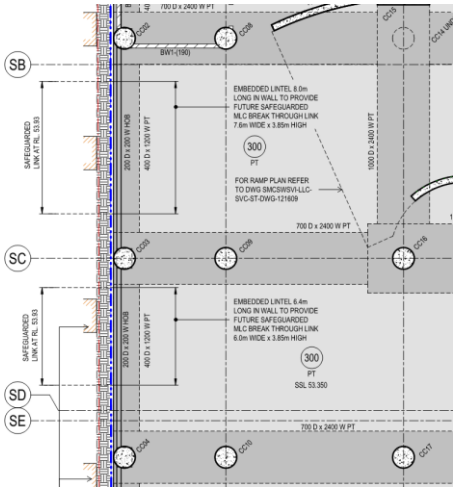

Figure 2 - Extract of Victoria Cross Station structural drawing

The location of the proposed future breakthrough aligns to the current MLC basement plant level and plant room boundary wall adjacent to the Victoria Cross site. MLC will need to assess their existing building (which may require significant works) or any proposed future development basement

configuration to enable utilisation of the allocated future breakthrough. In addition, MLC will need to coordinate traffic management of the breakthrough, and complete any further traffic assessments based on any proposed layout or connection for MLC loading areas

5. : Pedestrian assessment
5.1 Comment / recommendation: Pedestrian assessment

- *There is insufficient consideration of the impact on pedestrian traffic in the immediate area. The North Sydney Centre Traffic and Pedestrian Study (Arup, September 2014) identified insufficient footpath width in some locations and constrained crossing locations (including small splitter islands at signalised crossings) often result in congestion.*
- *Traffic analysis assumes pedestrians can choose either side of Miller Street to walk on, which is illogical as both railway station entries (Victoria Cross and the North Sydney station) are on the same side of Miller Street.*
- *Proposal does not assess the impact of pedestrians waiting at road crossings and bus stops (p.49)*

Response: Pedestrian assessment

Consideration of the station precinct impact on pedestrian traffic in the immediate area has been undertaken through detailed assessment including static pedestrian modelling and detailed dynamic pedestrian modelling. Static pedestrian modelling was carried out for the network surrounding the new Sydney Metro Victoria Cross Station, based on 2056 AM and PM peak hour demand as part of the station works (including station entries and exits) under the CSSI project approval. More detailed dynamic pedestrian modelling (including road crossings) has been undertaken for the station precinct using STEPS microsimulation software for the 2036 AM and PM peak hours under normal operations.

The results of the pedestrian assessment indicate that pedestrian traffic in the vast majority of locations surrounding the precinct operate at a suitable level. The pedestrian assessment considered the OSD's cumulative impact on appropriate locations within and surrounding the precinct, including footpaths, road crossings and bus stops. As provided in the SSDA, the precinct static pedestrian assessment results presented in the detailed SSDA indicate that most locations surrounding the precinct operate at level of service C or better. The southern end of Denison Street was identified to operate at a level of service worse than C (at level of service E) under the assumption that all pedestrians use the western footpath. A level of service B could be achieved if both sides of Denison Street are used as walkways. Further, the more detailed dynamic microsimulation modelling results indicate the bus stops on the southern end of Miller Street operates at level of service E. In the AM peak the bus stops on the eastern side of Miller Street were identified to narrowly surpass a level of service C, approaching level of service D. The difference is minimal, and a level of service of C would be achieved if the available width in this area was increased by 0.1 metres.

Comparatively, the more detailed dynamic microsimulation modelling results indicate the bus stops on eastern side of Miller Street operate at level of service C. The dynamic microsimulation modelling results for the intersections and footpaths surrounding the station precinct indicated acceptable levels of queuing to cross (including cumulative demand associated with the station and the OSD), with sufficient space for pedestrians to spread out without blocking the existing footpath width.

It is worthwhile noting that the actual level of queuing is likely to be improved from the modelling, as the dynamic microsimulation modelling directs pedestrians in the shortest route possible and does not allow for pedestrians to spread more evenly on approach to crossing locations, which is what would occur in reality. The development at 1 Denison Street and proposed future shared zone within Denison Street could contribute to improving pedestrian movements further. The development at 1 Denison Street will introduce an additional through site link, which is likely to distribute pedestrians more broadly, reducing the number of pedestrians accessing the southern section of Denison Street that is indicating poor levels of service. Denison Street is also proposed to be investigated for the implementation of a shared zone for this section, which would contribute to improving pedestrian safety through prioritising pedestrian movements and substantially reducing the speed environment for vehicles.

We note as detailed in the SSDA, the constrained crossing locations (including the small splitter islands at signalised intersections) that result in congestion during peak commuter periods identified in The North Sydney Centre Traffic and Pedestrian Study (Arup, September 2014) relate to the existing insufficient storage for pedestrians on splitter islands at crossings along the Pacific Highway within the North Sydney Centre, which are located beyond the station precinct and are outside of the scope of this SSDA.

The distribution of pedestrians on both sides of Miller Street accounts for pedestrians accessing the OSD and station precinct by buses and other land uses on the western side of Miller Street. The proportion of pedestrians assumed to be walking along the western side of Miller Street is less than 25 per cent of the total number of pedestrians estimated on Miller Street (AM peak period), which aligns with the location of the Victoria Cross Station entrances and the North Sydney Station access, providing the dominant pedestrian flows.

5.2 Comment / recommendation: Pedestrian assessment

- *The OSD proposal does not create a generous egress and exit for the 15,000 commuters travelling into and out of this station each day and the proposed workforce of 4,900.*

  …….The works/metro commuters will contribute negatively to the pedestrian congestion on the already very limited footpaths and public domain space in Miller Street and in the centre of the CBD.

Response: Pedestrian assessment

The pedestrian assessment and design of accesses and egresses from the station precinct considers cumulative impact of both metro commuters and the OSD workforce. The proposed OSD comprising commercial office building above the new Sydney Metro Victoria Cross Station is expected to contribute approximately eight per cent of the forecast pedestrian demand for the station precinct.

The pedestrian assessment identified the impact of the development on Miller Street's existing pedestrian traffic, and in general, indicates that under the pedestrian demand generated, results in acceptable levels of operation in most locations surrounding the precinct. The precinct static pedestrian assessment results presented in the detailed SSDA indicate that most locations surrounding the precinct operate at level of service C or better. The bus stops on the eastern side of Miller Street was identified to approach a level worse than C (at a level of service D) in the AM peak, which would be rectified by increasing the available width for pedestrians by only 0.1 metres. Comparatively, the more detailed dynamic microsimulation modelling results indicate the bus stops on eastern side of Miller Street operate at level of service C.

The dynamic microsimulation modelling results for the intersections and footpaths surrounding the station precinct indicated acceptable levels of queuing to cross (including cumulative demand associated with the station and the OSD), with sufficient space for pedestrians to spread out without blocking the existing footpath width. It is noted that the actual level of queuing is likely to be improved from the modelling, as the dynamic microsimulation modelling directs pedestrians in the shortest route possible and does not allow for pedestrians to spread more evenly on approach to crossing locations, which is what would occur in reality.