

Memo

To	Senior Environment and Sustainability Manager
From	Environment and Sustainability Advisor, Western Distributor Smart Motorway
Priority	URGENT

Date	04/09/2024
Subject	Addendum assessment and decision No.10 for proposed modifications to M1 Western Distributor Smart Motorway Project

Proposed modification

Modification to the M1 Western Distributor Smart Motorway Review of Environment Factors (REF).

Background

In 2021, Transport for NSW proposed to introduce intelligent technology, known as a smart motorway system, to the M1 corridor between Milsons Point and Allen Street in Pyrmont. This proposal is located in the North Sydney, and City of Sydney local government areas (LGAs).

A review of environmental factors (REF) prepared for the Western Distributor Smart Motorway proposal (referred to as the approved project REF) was determined in May 2021.

A further nine (9) addendum REFs and two (2) consistency reports have been prepared and determined as listed in **Appendix A - Determined minor works REFs, determined addenda, and consistency reports**.

- Addendum assessment and decision No. 1 for proposed modification for the use of auxiliary compound sites at White Bay for the M1 Western Distributor Smart Motorway, December 2022.
- Addendum assessment and decision No. 2 for changes to project boundaries to include five new gantries, minor landscaping, removal of existing traffic signage and additional ITS works for the M1 Western Distributor Smart Motorway, January 2022.
- Addendum assessment and decision No. 3 for the use of an additional construction compound site at Colebee for the M1 Western Distributor Smart Motorway, February 2023.
- Addendum assessment and decision No. 4 for use of an auxiliary compound site at the Glebe Island Bridge eastern approach for the M1 Western Distributor Smart Motorway, April 2023.

- Addendum assessment and decision No. 5 for additional vegetation clearing, modification of the project boundary, works associated with RSC#30 on the western abutment of Anzac Bridge for the M1 Western Distributor Smart Motorway, October 2023.
- Addendum assessment and decision No. 6 for revised position of RSC#16 and RSC#17 for the M1 Western Distributor Smart Motorway, December 2023
- Addendum assessment and decision No. 7 for unrestricted access and hours of use of Glebe Island Bridge eastern approach for the M1 Western Distributor Smart Motorway, April 2024
- Addendum assessment and decision No.8 for the use of an additional construction compound site at Bank Street, Pyrmont for the M1 Western Distributor Smart Motorway, April 2024.
- Addendum assessment and decision No.9 for the installation of smart motorway technology to the Sydney Harbour Bridge transit corridor for the M1 Western Distributor Smart Motorway, August 2024.
- M1 Western Distributor Smart Motorway – Review of Environmental Factors consistency review No.01, September 2023 – modifications to project boundaries, variation to works including new gantry structures and ITS connections.
- M1 Western Distributor Smart Motorway – Review of Environmental Factors consistency review No.02, February 2024 - revised position of RSC#25 and modification of the project boundary to accommodate the point of electricity supply for RSC#25.

Purpose

The purpose of this memo is to:

- Describe the proposed modification.
- Document and assess the likely impacts of the proposed modification on the environment.
- Detail protective measures to be implemented.
- Document the recommendation of the Transport Senior Manager Environment and Sustainability and the decision by Transport's delegated representative as to whether to, or not to determine the modification to the project.

This memo is an addendum to, and is to be read in conjunction with, the previous project REF, addendum REFs and consistency reviews determined for the project.

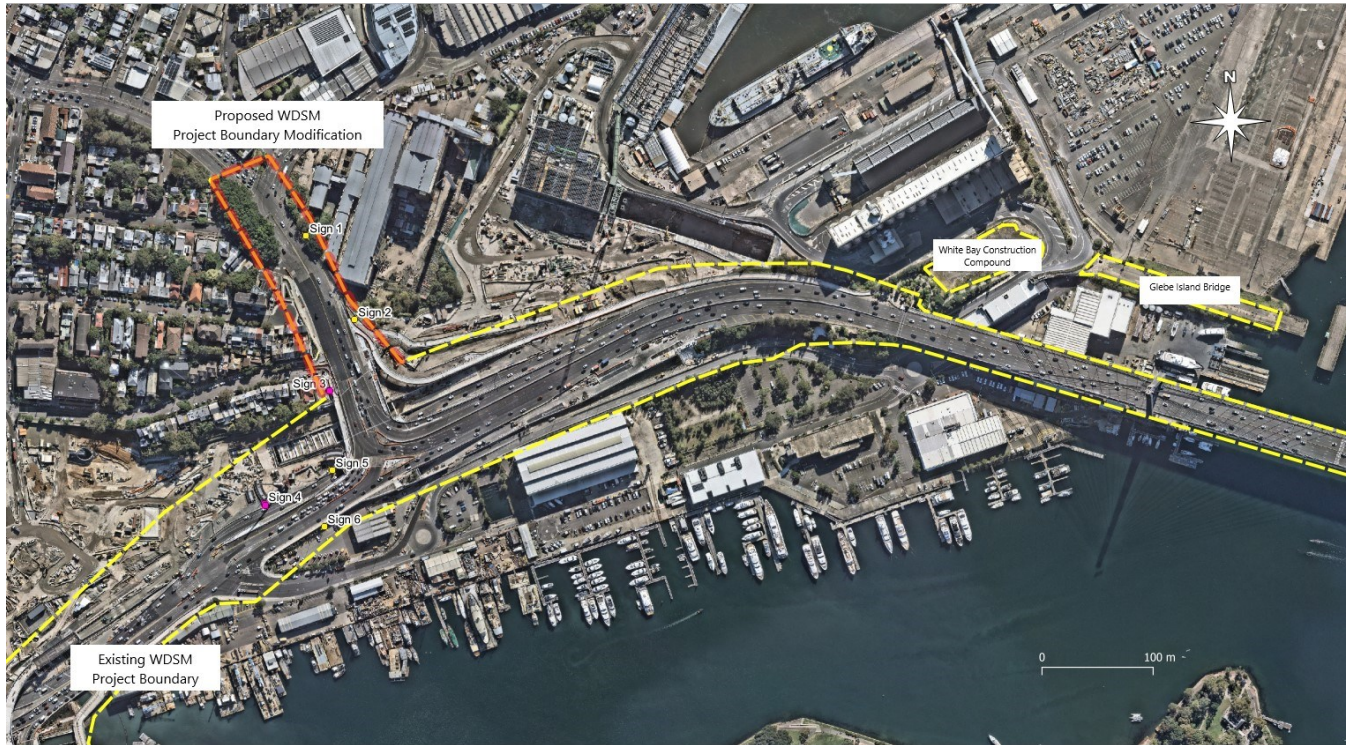
Description of proposed modification

Transport for NSW proposes to modify the M1 Western Distributor Smart Motorway (WDSM) project to include six (6) new static signs to the interface of the M1 Western Distributor and the M4-M8 Link Rozelle Interchange (WestConnex). The purpose of this modification is to better integrate the intelligent technology, known as a smart motorway system, to the junction of the two (2) motorways. All proposed signage will inform road users of the variable-speed limit zones that are governed by the smart motorway technology. See Figure 1 for aerial markup.

Two (2) of the six (6) additional signs are proposed to be constructed outside of the determined WDSM Project boundary. As such, the boundary is proposed to be extended to include these additional works. See Appendix C for the proposed modification to WDSM Project boundary.

Construction methodology and all relevant drawings (detailed design) are included in Appendix D and Appendix E.

Figure 1 – Aerial Markup of Proposed Modifications to WDSM Project Boundary



Need for the proposed modification

The approved WDSM project includes the installation of smart motorway technology to the M1 Western Distributor road corridor. The objective of this proposal is to increase network capacity and resilience and enhance road user experience. Following a road safety audit, it was determined that there was a requirement to improve integration to WestConnex with additional, consistent signage. The additional static signage will indicate variable-speed zones informing the motorist of smart motorway traffic management systems.

Options considered

During development of the project, strategic alternatives and accompaniments were considered. Following this process, two options were identified for further investigation:

- Option 1 'Do not modify project' - The project would proceed without the modifications proposed in this memo.
- Option 2 'Modify project' – Construct the project with the modifications proposed in this memo.

These options were assessed against the proposal objectives and development criteria outlined in Chapter 2 of the determined REF. 'Option 1' was discounted it would not meet the REF proposal objective no.04 to enhance the road user experience – provide smoother journeys and enhanced journey decision-making for the road users.

The proposed modification's construction activities, which comprise 'Option 2' would have short term traffic, noise, and lighting impacts on the local community from night-time construction operations but have no enduring impacts. Modifications of the approved project are necessary to further optimise transport asset utility as well as presenting consistency of operations for Transport for NSW's customers that use both WestConnex, and the Western Distributor.

As such, 'Option 2' is the preferred option.

Consultation

The modification does not require formal widespread community or stakeholder consultation due to its limited scope. Upon determination the project team would notify and engage with potentially affected residents and businesses adjacent to or having an interest in the specific work areas at which this modification impacts.

The Smart Link Alliance have an established protocol for community and stakeholder communications.

Impact assessment

Soil

Negligible soil or water quality impacts are anticipated. No *additional* safeguards are required.

Waterways and water quality

Negligible impacts to waterways and water quality are anticipated. No *additional* safeguards are required.

Noise and vibration

The proposed modification's construction activities would have short term noise, and lighting impacts on the local community from night-time construction operations but have no enduring impacts. Noise impacts have been assessed using Transport for NSW *Construction and Maintenance Noise Estimator Tool*. A distance-based noise impact estimate of a road furniture installation scenario was used for the calculations.

Minor noise and vibration impacts are anticipated. Standard mitigations measures and safeguard will be implemented. Noise impact assessment results are shown in the following tables.

Table 1 – Representative Noise Area Category: High-Density Residential (R4)

Noise area category (based on AS 1055.3-1997)	R4 – High-Density Residential		
Time period	Day	Evening	Night
RBL/LA90 Background noise level (dBA)	55	50	45

Table 2 – Source List for Road Furniture Installation Scenario used in Noise Impact Assessment

Activity	Description of Activity	Plant/ Equipment	L _{Aeq} SWL	L _{Aeq} at 7m
Road furniture installation	Signposting and line marking	Road truck	108	83
		Scissor lift	98	73
		Franna crane 20t	98	73
		Line marking truck	108	83

Table 3 – Rated Background and Noise Management Levels for Noise Impact Assessment

Noise area category		R4
RBL or LA90 Background level (dB(A))	Day	55
	Evening	50
	Night	45
LAeq(15minute) Noise Management Level (dB(A))	Day	65
	Day (OOHW)	60
	Evening	55
	Night	50

Table 4 Construction and Maintenance Noise Assessment – Distance Based Road Furniture Installation Scenario

Construction and Maintenance Noise Impact Assessment - Distanced Based (Scenario)	
Noise area category	R4
Night time RBL (dB(A))	45
Night time NML (dB(A))	50
Propagation Type	Developed Settlements
Scenario	Road furniture installation
Is there line of sight to receiver?	Yes
Distance to the worst affected receiver (m)	20
LAeq(15minute) noise level at the worst affected receiver (dB(A))	72
Level above RBL at the worst affected receiver	27
Standard mitigation measures to be implemented where feasible and reasonable	Notification (N), Phone Calls (PC), Specific Notifications (SN), Respite Period 2 (R2), Duration Respite (DR) and Noise Verification Monitoring (V)

Air quality

No additional air quality impacts are anticipated. No *additional* safeguards are required.

Aboriginal heritage

No Aboriginal sites or places were recorded in or near the location of the WDSM project boundary as adjusted. AHIMS search undertaken 11 July 2024.

No *additional* safeguards are required.

Non-Aboriginal heritage

No additional non-Aboriginal heritage impacts are anticipated. No *additional* safeguards are required.

Biodiversity

No additional biodiversity impacts are anticipated. No *additional* safeguards are required.

Traffic and transport

The proposed modification's construction activities would have short term traffic impacts on the local community from night-time construction operations but have no enduring impacts.

No additional traffic and transport impacts are anticipated. No *additional* safeguards are required.

Socio-economic issues

No additional socio-economic impacts are anticipated. No *additional* safeguards are required.

Landscape character and visual impacts

No additional landscape character and visual impacts are anticipated. No *additional* safeguards are required.

Waste

The proposed modification would not generate any additional waste as part of the determined project. No *additional* safeguards are required.

Cumulative impacts

The proposed modification would result in minor and short-term cumulative impacts in terms of traffic, noise, and lighting.

No *additional* safeguards are required.

Appendix B addresses the environmental factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021.

Summary of additional or revised safeguards

A summary of additional or revised safeguards to be included as part of this modification are listed in the table below. A complete list of project safeguards as amended is provided in **Table 1**.

Table 1 - Summary of additional or revised safeguards

Safeguards	
Soil	No <i>additional</i> safeguards are required.
Waterways and water quality	No <i>additional</i> safeguards are required.
Noise and vibration	No <i>additional</i> safeguards are required.
Air quality	No <i>additional</i> safeguards are required.
Non-Aboriginal heritage	No <i>additional</i> safeguards are required.
Aboriginal heritage	No <i>additional</i> safeguards are required.
Biodiversity	No <i>additional</i> safeguards are required.
Trees	No <i>additional</i> safeguards are required.
Traffic and transport	No <i>additional</i> safeguards are required.
Socio-economic	No <i>additional</i> safeguards are required.
Landscape character and visual amenity	No <i>additional</i> safeguards are required.
Waste	No <i>additional</i> safeguards are required.
Cumulative impacts	No <i>additional</i> safeguards are required.

Licences, permits or approvals

All relevant licenses, permits, notifications and approvals needed for the Western Distributor Smart Motorway (WDSM) and when they need to be obtained are listed in the determined Western Distributor Review of Environmental Factors (REF) May 2021 and the nine (9) addenda (as determined). These have been included in the approved project Construction Environmental Management Plan (CEMP).

There are no changes to the licencing, permits or existing approvals required as part of this proposed modification.

Conclusion

All relevant safeguards identified in the Western Distributor Smart Motorway (WDSM) Review of Environmental Factors (REF) and the nine (9) addenda, all as determined would be applied to this modification and included work. There are no additional proposed work activities or impacts requiring major revisions to existing approved project safeguards.

Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) applies to the proposed modification. The proposed modification has been reviewed in the context of the Western Distributor Smart Motorways Review of Environmental Factors and nine (9) addenda as determined which have been considered against the requirements of sections 5.5 and 5.7 of the EP&A Act.

In considering the proposed modification this assessment has examined and taken into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of that activity as addressed in this memo, and associated information. This assessment is considered to be in accordance with the factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021.

The M1 Western Distributor Smart Motorway Project including the proposed modification described in this memo has manageable environmental impacts which would be satisfactorily mitigated against. Having regard to the safeguards and management measures proposed, it is considered that the expected environmental impacts are unlikely to be significant and a further or revised environmental impact statement is not required under Division 5.2 of the EP&A Act.

The assessment has considered the potential impacts of the activity on the biodiversity values listed under the *Biodiversity Conservation Act 2016* and the *Fisheries Management Act 1994*. The M1 Western Distributor Smart Motorway Project including the proposed modification described in this memo would not significantly affect biodiversity values listed under the *Biodiversity Conservation Act 2016*. Therefore, the concurrence of the Coordinator General of the Environment and Heritage Group of Department of Planning and Environment and a species impact statement or a Biodiversity Development Assessment Report (BDAR) is not required.

In addition to the above, the assessment considered the effect of the activity on:

- Conservation agreements under the *National Parks and Wildlife Act 1974*.
- Plans of management under the *National Parks and Wildlife Act 1974*.
- Biodiversity stewardship sites under the *Biodiversity Conservation Act 2016*.
- Wilderness areas under the *Wilderness Act 1987*.

The assessment has also addressed the potential impacts of the activity on matters of national environmental significance and any impacts on the environment of Commonwealth land and concluded that there would be no significant impacts. Therefore, there is no need for a referral to be made to the Australian Government Department of Agriculture, Water and the Environment for a decision by the Australian Minister for the Environment on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or for application of the EPBC Act strategic assessment for Transport activities assessed under Part 5 of the EPBC Act.

This memo is of adequate quality and meets all relevant requirements.

The proposed modification has been characterised in the context of the M1 Western Distributor Smart Motorway Project and is consistent with that project's objectives and key features. While the proposed modification would increase the overall environmental impacts of the determined project, it is substantially the same as the activity described and assessed in the determined REF and does not constitute an entirely new activity.

Certification

This memo provides a true and fair description of the scope and potential impacts of the proposal to modify the Western Distributor Smart Motorway for the purposes of enabling safe construction and delivery.

Prepared by:

, Environment and Sustainability Advisor – WDSM

Reviewed by:

Senior Environment and Sustainability Officer, Transport for NSW

Date: **4 Sept 2024**

Noted by:

Date: **11/09/2024**

Recommendation

It is recommended that the proposal to modify the Western Distributor Smart Motorway (WDSM) as described in this memo proceed subject to the implementation of all safeguards and management measures identified in in this memo and in the Western Distributor Smart Motorway Review of Environmental Factors and addenda, along with compliance with all other relevant statutory approvals, licences, permits and authorisations. Consideration of this proposed modification has examined and taken into account, to the fullest extent possible, all matters likely to affect the environment by reason of the activity and established that the activity is not likely to significantly affect the environment. The memo has concluded that there would be no significant impacts on matters of national environmental significance or the environment of Commonwealth land.

Recommended by:

Senior Environment and Sustainability Manager (Sydney Assets and Operations)

Date: 12-9-2-24

Endorsed by:

Director Smart Motorways

Date: 12/09/2024

Determination

Determined by:

Director Place – Inner West

Date: 13 Sep 2024

Appendices

Appendix A – Section 171 EP&A Regulation checklist

Appendix B - Complete list of safeguards

Appendix C – Modification to WDSM Project Boundary

Appendix D – Indicative Construction Elements

Appendix E: 100% Detail Design Phase WestConnex Interface Static Signs, as Prepared by Aurecon

Please return this paperwork to:

Appendix A: Determined minor works refs, determined addenda, and consistency reports

A review of environmental factors (REF) was prepared for the Western Distributor Smart Motorway proposal (referred to as the approved project REF) which was determined in May 2021.

A further nine (9) addendum REFs and two (2) consistency reports have been prepared and determined as described below:

- Addendum assessment and decision No. 1 for proposed modification for the use of auxiliary compound sites at White Bay for the M1 Western Distributor Smart Motorway, December 2022.
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Appendix B: Environmental Planning and Assessment Regulation 2021 checklist

The following factors, listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021, have been considered to assess the likely impacts of the proposal on the natural and built environment. This consideration is required to comply with sections 5.5 and 5.7 of the EP&A Act.

Environmental factor		Impact
(a)	Any environmental impact on a community? Nil additional impact. All temporary disruptions to the community during construction would be communicated at least 5 business days in advance of the works. Any closures or diversions would be clearly signposted.	Short term only
(b)	Any transformation of a locality? The proposed work would not transform the locality, as works would generally be contained within the existing public roadway.	Nil
(c)	Any environmental impact on the ecosystems of a locality? No potential impact of the local ecosystems would arise from the works. All potential impacts would be managed using the existing project safeguards.	Nil
(d)	Any reduction of the aesthetic, recreational, scientific, or other environmental quality or value of a locality? The proposal would not reduce the aesthetic, recreational, scientific, or other environmental quality or value of the locality. Works are within the existing project boundary or within the minor extension contained within the existing road formation. Stakeholders impacted by the proposal would be adequately consulted with	Nil
(e)	Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations? The proposal would not impact on a locality, place or building having any listed value above or other special value for present or future generations. All potential impacts would be mitigated against using existing project safeguards.	Nil
(f)	Any impact on habitat of any protected animals (within the meaning of the Biodiversity Conservation Act 2016)? The proposal would not have any impact on the habitat of protected animals with appropriate safeguards being implemented to mitigate potential risks	Nil
(g)	Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? The proposal would not endanger any species of animal, plant, or other form of life, whether living on land, in water or in the air and appropriate safeguards would be implemented prior to mitigate risks	Nil
(h)	Any long-term effects on the environment? The proposal would have positive long-term effects on the environment due to improved customer journey experience including road safety. There are no anticipated negative long-term effects on the environment from any maintenance arising.	Nil

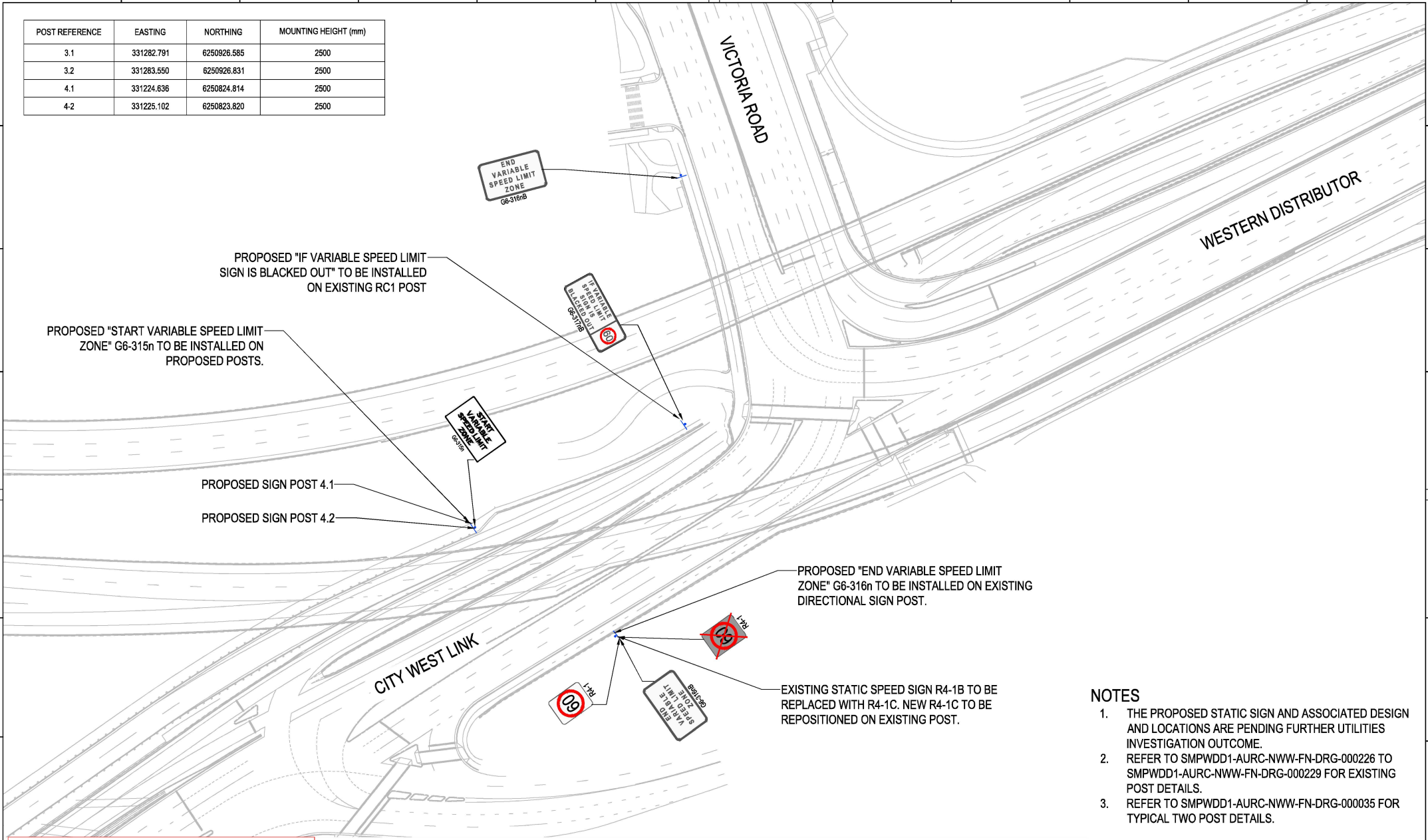
(i)	<p>Any degradation of the quality of the environment?</p> <p>The proposal would have minimal adverse impact on the quality of the environment. Potential impacts would be mitigated against through implementation of the safeguards.</p>	Nil
(j)	<p>Any risk to the safety of the environment?</p> <p>No unacceptable risks posed to the safety of the environment potentially arising from the works. The potential impacts would be mitigated against through the implementation of the safeguards.</p>	Nil
(k)	<p>Any reduction in the range of beneficial uses of the environment?</p> <p>During construction the use of the land and permitted work areas would be limited because of construction activities and safety considerations. The proposed modification would have no long-term impact on any beneficial uses of the environment.</p>	Nil
(l)	<p>Any pollution of the environment?</p> <p>The proposed works would not result in pollution of the environment. Potential risks would be mitigated via the implementation of the safeguards.</p>	Nil
(m)	<p>Any environmental problems associated with the disposal of waste?</p> <p>The proposed works would not generate extensive wastes different to those already managed on the project. Any waste generated during the works would be managed and disposed to approved and licenced recycling or landfill facilities. Potential risks would be managed via the implementation of the safeguards.</p>	Nil
(n)	<p>Any increased demands on resources, natural or otherwise which are, or are likely to become, in short supply?</p> <p>The modification is a minor extension of works similar in nature to the approved project works and no further impact would arise. Potential risks would be managed via the implementation of the safeguards.</p>	Nil
(o)	<p>Any cumulative environmental effect with other existing or likely future activities?</p> <p>The proposed modification is minor in nature and would not pose risk to cumulative project or environmental impacts. The potential impacts on the environment would be minimised by risk mitigation through implementation of the safeguards.</p>	Nil
(p)	<p>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</p> <p>Nil additional impacts on coastal processes and coastal hazards, including those under projected climate change conditions.</p>	Nil
(q)	<p>Any impact on applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1?</p> <p>The proposed works are similar in nature to those previously determined as part of the project approval. No new works are being introduced. There is no impact to applicable planning legislation or regional plans. For further information on the applicable plans refer to Regional and district plans (nsw.gov.au) website.</p>	Nil
(r)	<p>Any impact on other relevant environmental factors?</p> <p>Nil additional impact to other environmental factors has been identified through the preparation of this modification and during development of the proposed activities.</p>	Nil

Appendix C: Modification to the WDSM Project Boundary






Appendix D: Indicative Construction Detail and Methodology

POST REFERENCE	EASTING	NORTHING	MOUNTING HEIGHT (mm)
3.1	331282.791	6250926.585	2500
3.2	331283.550	6250926.831	2500
4.1	331224.636	6250824.814	2500
4.2	331225.102	6250823.820	2500

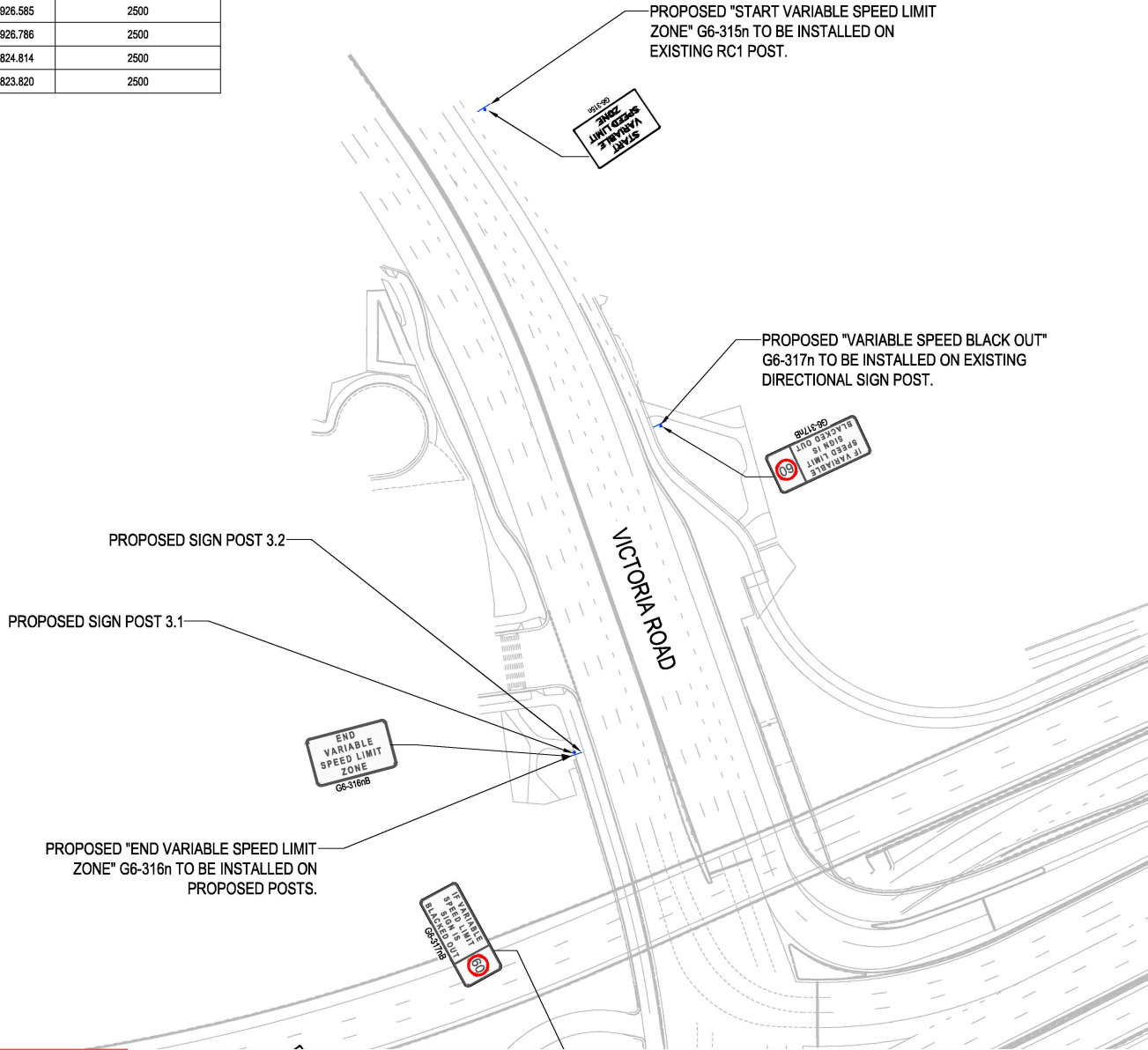


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- NOTES**
- THE PROPOSED STATIC SIGN AND ASSOCIATED DESIGN AND LOCATIONS ARE PENDING FURTHER UTILITIES INVESTIGATION OUTCOME.
 - REFER TO SMPWDD1-AURC-NWW-FN-DRG-000226 TO SMPWDD1-AURC-NWW-FN-DRG-000229 FOR EXISTING POST DETAILS.
 - REFER TO SMPWDD1-AURC-NWW-FN-DRG-000035 FOR TYPICAL TWO POST DETAILS.

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POST REFERENCE	EASTING	NORTHING	MOUNTING HEIGHT (mm)
3.1	331282.791	6250826.585	2500
3.2	331282.712	6250926.786	2500
4.1	331224.636	6250824.814	2500
4-2	331225.102	6250823.820	2500



- NOTES**
1. THE PROPOSED STATIC SIGN AND ASSOCIATED DESIGN AND LOCATIONS ARE PENDING FURTHER UTILITIES INVESTIGATION OUTCOME.
 2. REFER TO SMPWDD1-AURC-NWW-FN-DRG-000226 TO SMPWDD1-AURC-NWW-FN-DRG-000229 FOR EXISTING POST DETAILS.
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REFERENCES:		THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED.				SCALE: NOT TO SCALE		CLIENT:		<div><div><div><div></div><div>NSW</div><div>GOVERNMENT</div></div><div>Transport for NSW</div></div><div><div><div>aurecon</div><div>in association with</div><div>Stantec</div></div></div></div> <div><div>This drawing and the related information have been prepared by, or at the request of, Transport for NSW for a specific purpose and may not be used for any purpose other than the purpose intended by Transport for NSW. Transport for NSW does not provide any warranties and accepts no liability arising out of the use of this drawing or any of the related information for any purpose other than the intended purpose. This drawing is protected by copyright and no part of this drawing may be reproduced in any form without the express written permission of Transport for NSW.</div><div>DRAWN _____ R.L. _____ 16.07.2024 DESIGNED _____ B.L. _____ 16.07.2024 DRG CHECK _____ C. MABEZA _____ 16.07.2024 DESIGN CHECK _____ F.J.AU _____ 16.07.2024 PROJ/DES MNGR _____ H.SUAN _____ 16.07.2024 APPROVED _____ H.LEUNG _____ 16.07.2024</div></div>		INNER WEST, CITY OF SYDNEY, NORTH SYDNEY COUNCIL MR165, MR592, MR632, MR650, M4651, 6007 ROZELLE TO MILSONS POINT WESTERN DISTRIBUTOR SMART MOTORWAY ROAD FURNITURE WCX INTERFACING STATIC SIGNS GENERAL ARRANGEMENT - SHEET 1	
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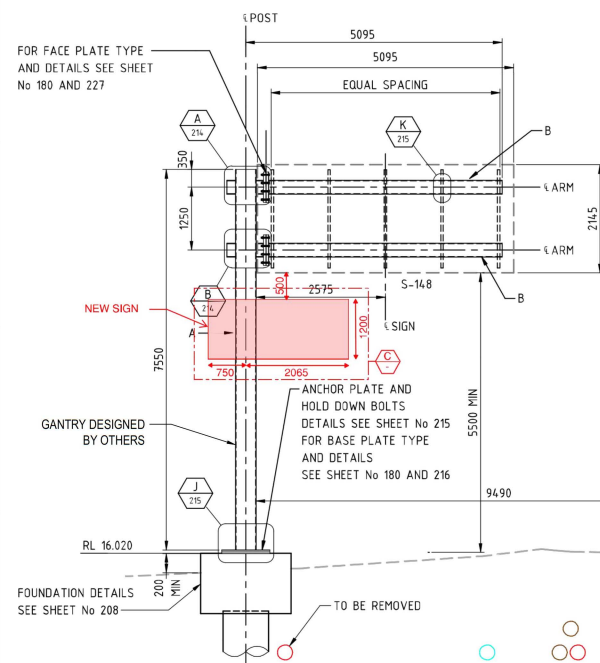


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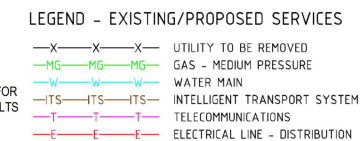
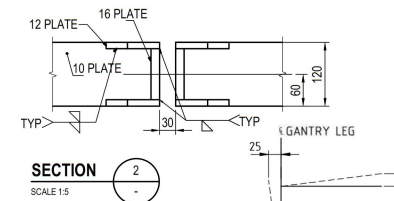
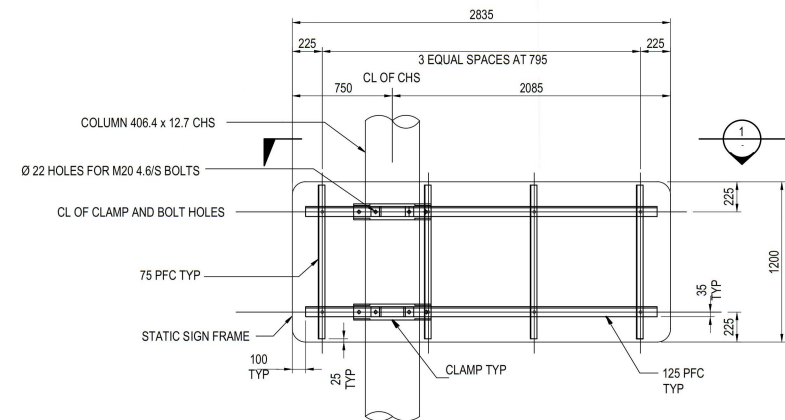
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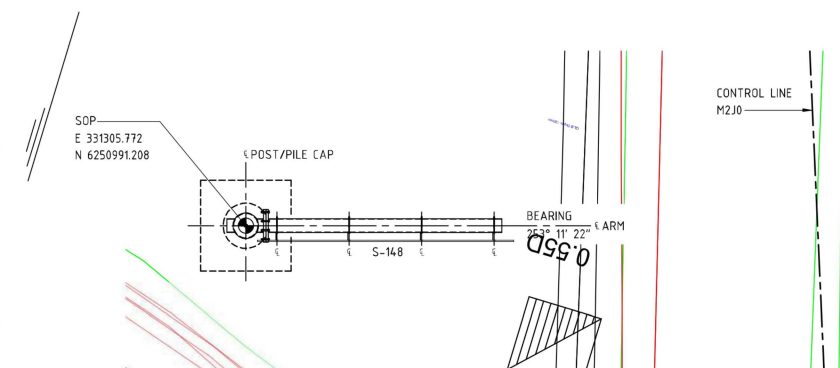
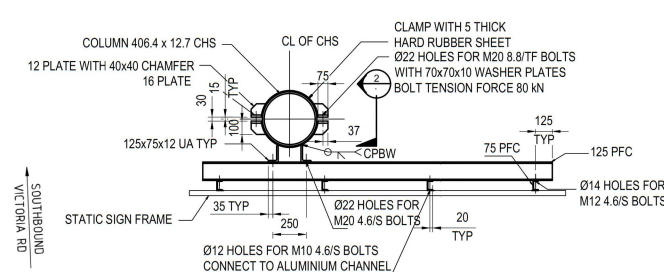


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MARK	MEMBER SIZE
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B	273.1x12.7 CHS



GENERAL NOTES

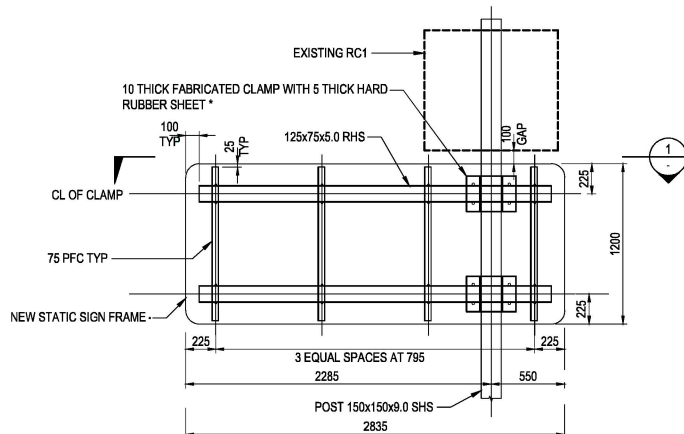
FOR OTHER GENERAL NOTES RELATING TO THIS SHEET,
SEE SHEET No 015, 016, 017
FOR FURTHER SIGN DETAILS, REFER TO DESIGN
PACKAGE No 20_02 CWL FOR LINE MARKING AND
SIGNAGE AND 20_39 CWL FOR ITS DESIGN



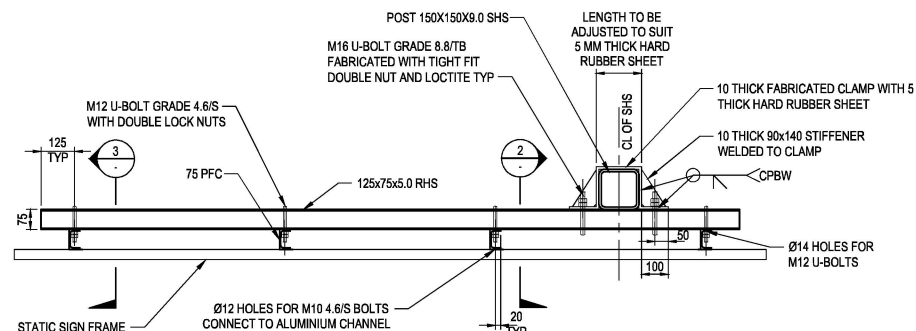
PLAN
SIGN STRUCTURE S-148
CHAINAGE 4 (CONTROL LINE M2J0)

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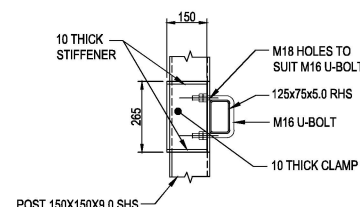
REFERENCES:	THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED.	SCALE: 1:5 @ A1 1:20 @ A1 	CIENT: Transport for NSW	The drawing and the related information have been prepared by, or at the request of, Transport for NSW for a specific purpose and may not be used for any purposes other than the purpose intended by Transport for NSW. Transport for NSW does not provide any warranties and accepts no liability arising out of the use of the drawing or any of the related information for any purposes other than the intended purpose. This drawing is protected by copyright and no part of this drawing may be reproduced in any form without the express written permission of Transport for NSW.	INNER WEST COUNCIL, CITY OF SYDNEY AND NORTH SYDNEY COUNCIL MR165, MR592, MR632, MR650, M4651, 6007 ROZELLE TO MILSONS POINT WESTERN DISTRIBUTOR SMART MOTORWAY ROAD FURNITURE WCX INTERFACING SIGN #2
A REV	DETAILED DESIGN - 100% DESCRIPTION	AG 15/07/2024 DESIGNER INITIALDATE	LB 15/07/2024 VERIFIED INITIALDATE	HYL 15/07/2024 APPROVED INITIALDATE	DRAWING SET No.: PART: SHEET: 1 OF 1 A1 BRIDGE No.: ©
COORDINATE SYSTEM: MGA ZONE 56/GDA20		HEIGHT DATUM:		DESIGN LOT CODE:	DRG No.: SMPWDY1-AURC-NWMA-FN-DRG-000227
EASING SYDNEY CONGESTION, DELIVERY STRATEGY & IMPROVEMENT					REV A VER EDMIS No. AMD No.



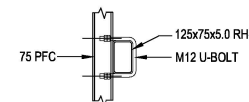
SIGN 5 ELEVATION FRONT VIEW
SCALE 1:20



SECTION 1
SCALE 1:10



SECTION 2
SCALE 1:10



SECTION 3
SCALE 1:10

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A DETAILED DESIGN - 100%		AG 15/07/2024		LB 15/07/2024		HYL 15/07/2024		1:10 @ A1						<div><div><div><div><div></div></div></div><div><div><div>0</div><div>0.1</div><div>0.5</div></div></div></div></div>			
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DRAWING SET No:		PART:		SHEET: 1		OF 1		A1	
STATUS: DETAILED DESIGN - 100%		BRIDGE No:							
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SMPWDD1-AURC-NWN-FN-DRG-000228		A							

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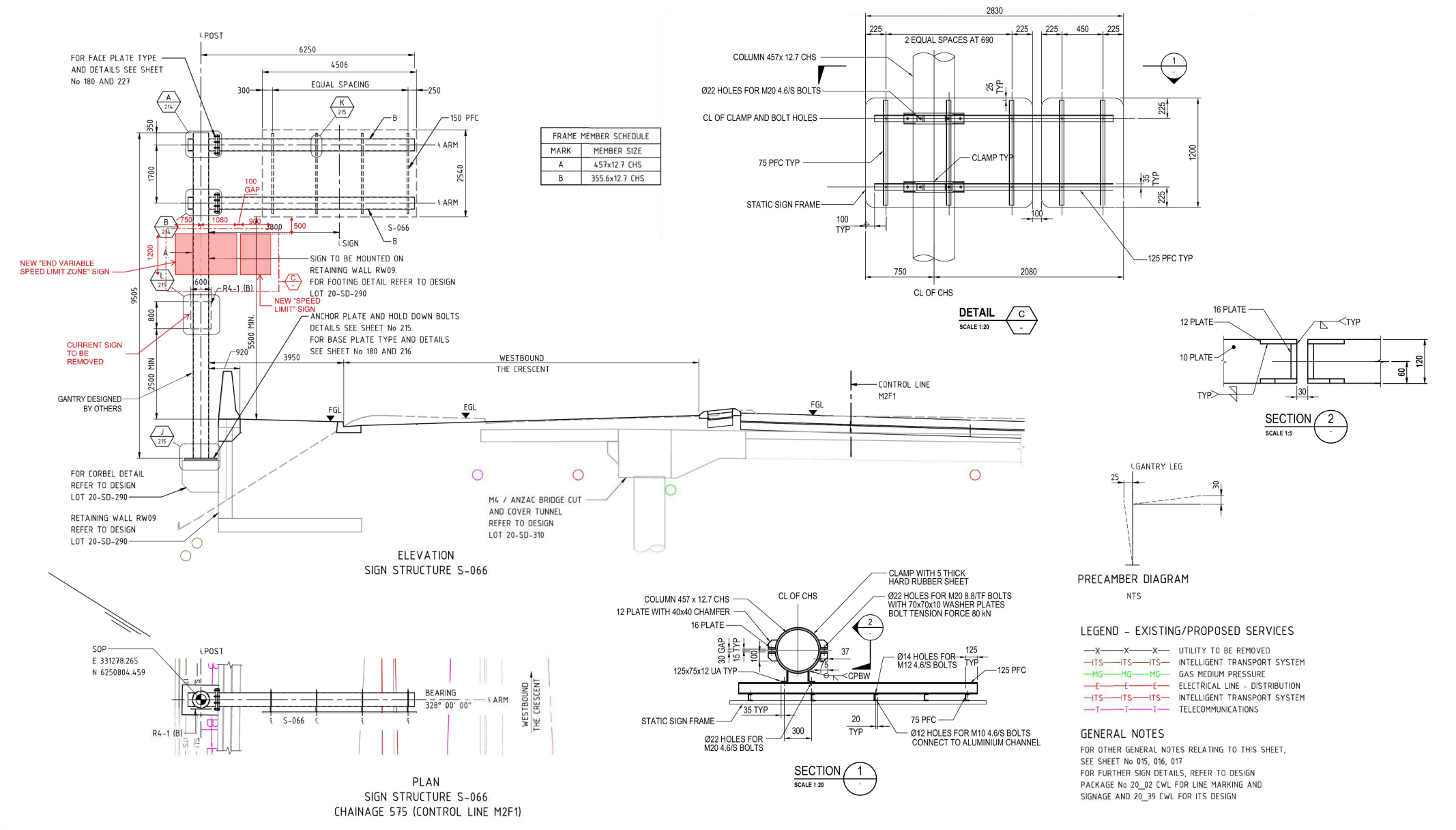
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


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H



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A DETAILED DESIGN - 100%		AG 15/07/2024		LB 15/07/2024		HYL 15/07/2024		PREPARED FOR:		DRAWN _____ C. ARCE _____ 15.07.2024					
REV _____ DESCRIPTION _____		DESIGNER INITIAL/DATE		VERIFIED INITIAL/DATE		APPROVED INITIAL/DATE		EASING SYDNEY CONGESTION, DELIVERY STRATEGY & IMPROVEMENT		DESIGNED _____ A. GORGULU _____ 15.07.2024					
COORDINATE SYSTEM: MGA_ZONE_56/GDA20		HEIGHT DATUM:		DESIGN LOT CODE:						DRG CHECK _____ A. GORGULU _____ 15.07.2024					
										DESIGN CHECK _____ L. BAL _____ 15.07.2024					
										PROJ/DES MNGR _____ H. SUAN _____ 15.07.2024					
										APPROVED _____ H. LEUNG _____ 15.07.2024					
										DRAWING SET No: _____					
										STATUS: DETAILED DESIGN - 100%					
										PART: _____ SHEET: 1 OF 1 A1					
										BRIDGE No: _____					
										REV A VER _____ EDMS No. _____ AMD No. _____					
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Appendix E: 100% Detail Design Phase WestConnex interface Static Signs, Aurecon



Table 5-1 100% Detail Design Phase Westconnex Interface Static Signs

ID	Location	Description of road safety deficiency	Crash frequency	Crash severity	Level of risk	Action on risk to road safety (By persons/designer responsible)	Follow up and Close out (by Project Manager)
1	Sign 2 and 6	<p>Sign 2 and 6 appear to be set back from the road by over 4m, such a large offset reduce sign visibility for drivers and impact on compliance.</p> <ul style="list-style-type: none"> - Critical signs that demand immediate action from the drivers need to be noticeable and to ensure they command the attention of the driver. The signage placement may impact driver perception to the hazard ahead <div data-bbox="427 665 999 987" data-label="Image"> </div> <div data-bbox="418 1015 992 1386" data-label="Image"> </div>	Possible	Insignificant	Low	Noted. Due to complexity and limitations of the site, these locations have been suggested by TfNSW and NSS despite suboptimal visibility.	

ID	Location	Description of road safety deficiency	Crash frequency	Crash severity	Level of risk	Action on risk to road safety (By persons/designer responsible)	Follow up and Close out (by Project Manager)
2	Sign 1	<p>Sign located adjacent to a bus lane</p> <ul style="list-style-type: none"> - Sign might not be visible to traffic on other lanes and masked by heavy vehicle. Leading to non compliance with speed limit - The audit team also presumes the signage is frangible or placed outside the roll allowance of the vehicle <p>SIGN 1</p> 	Possible	Insignificant	Low	<p>The new signage is of relatively low importance and has excellent visibility given the geometry of the road.</p> <p>The existing RC1 and post are non-frangible.</p>	

ID	Location	Description of road safety deficiency	Crash frequency	Crash severity	Level of risk	Action on risk to road safety (By persons/designer responsible)	Follow up and Close out (by Project Manager)
3	Sign 3	<p>Sign 3 appear to be located next to a light pole reducing the effective width of the footpath.</p> <ul style="list-style-type: none"> The audit team presumes the minimum clear width is compliant to TfNSW specifications and Australian Standards to allow disability access. 	Likely	Minor	Medium	The post extends ~150mm from the edge of the shared path.	

ID	Location	Description of road safety deficiency	Crash frequency	Crash severity	Level of risk	Action on risk to road safety (By persons/designer responsible)	Follow up and Close out (by Project Manager)
4	Sign 2	<p>Mounting height appears higher than standard speed device mounting height which could result in non-compliance to TfNSW sign mounting specifications.</p> <ul style="list-style-type: none"> - Non-compliance to specifications could result in non-desirable driver perception / poor visibility 	Unlikely	Minor	Low	Sign was placed higher due to potential obstruction from the RC1 in front.	
5	Sign 5	<p>Following on from comment 4, there may be too much information at this location for drivers if the variable speed sign is operating (two speed limits showing, several signs)</p> <ul style="list-style-type: none"> - The team presumes an assessment/risk assessment has been undertaken by the designer to ensure compliance to specifications or have documented non-compliances. 	Unlikely	Minor	Low	Electronic signs is an RC1, used for lane control. Co-location of multiple signs has been recognised and approved by NSS.	

6	Sign 4 and 5	<p>Potential sign masking issue between sign 4 and 5.</p> <ul style="list-style-type: none"> - Its not clear if there is sufficient distance between the two signs allowing drivers to process information - Late weaving or side swipes could occur <div data-bbox="461 437 1111 815"> <p>SIGN 4</p>  </div> <div data-bbox="461 868 1111 1289"> <p>SIGN 5</p>  </div>	Unlikely	Minor	Low	<p>This is a recognised limitation of the site. It has been noted the relatively low importance of these signs. The information contained on these signs should not prompt drivers to late weave.</p>	
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