


Safety Barrier Technical Conditions for Use

ZONEGUARD MDS Steel Safety Barrier - Temporary

	Issue Date: 4 March 2021	Supplier: Hill & Smith Pty Ltd
	<p>These conditions take precedence over any instructions in the Product Manual.</p> <p>This document is a summary of the Austroads Safety Barrier Assessment Panel's assessment of the technical performance of the product against AS/NZS 3845 Parts 1 or 2 only. It does not consider procurement practices by individual Road Agencies.</p> <p>The Austroads Safety Assessment Panel may at any time, withdraw or modify this Technical Conditions for Use without notice.</p> <p>These acceptance conditions should be read in conjunction with the Product Manual and Austroads Guide to Road Design Part 6: Roadside Design, Safety and Barriers.</p> <p>Acceptance of this product does not place any obligation on the Northern Territory Government or its contractors, to purchase or use the product.</p>	

Status	Recommended for Acceptance
Product accepted	<p>ZONEGUARD MDS Steel Safety Barrier – Temporary</p> <p><u>Variant/s</u></p> <p>Variants that are NOT listed above are NOT recommended for acceptance.</p>
Accepted Speed	100 km/h
Product Manual reviewed	
Product Manual	Zoneguard (hsroads.com.au)

Design Requirements

Containment Level	Point of Redirection (m)		Tested Article Length (m)	Anchor/Post Spacing (m)	Dynamic Deflection (m)	Working Width (m)	Notes
	Leading	Trailing					
NCHRP 350 TL3 update (Concrete Installation)	Interface between barrier and end treatment		95	10.2	0.13	0.83	
MASH TL3 (Asphalt Installation)	Interface between barrier and end treatment		95	6.0	0.10	0.80	

Approved Connections

Crash Cushions or Terminals must be fitted to both ends of a barrier	
Public Domain Products	
W-Beam Guardrail	Not Permitted
Thrie-Beam Guardrail	Not Permitted
Concrete	Not Permitted

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Proprietary Products	
LEGACY: UNIVERSAL TAU-II Crash Cushion	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • Refer to Universal Tau-II Crash Cushion Technical Conditions for Use. • The Zoneguard to Universal Tau-II Crash Cushion transition must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
LEGACY: QUADGUARD CZ Crash Cushion	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • Refer to QUADGUARD CZ Crash Cushion Technical Conditions for Use. • The Zoneguard to Quadguard CZ Crash Cushion transition must be used to connect the crash cushion to the barrier. • Reverse impacts into the transition section can produce a greater occupant severity value than preferred. Where reverse impacts are possible (e.g. bi-directional traffic), a risk assessment must be completed and steps to mitigate the likelihood of reverse impact should be implemented.
LEGACY: ABSORB 350 Plastic Terminal	<ul style="list-style-type: none"> • LEGACY status recommended from 1 January 2021. • The installation is restricted to an impact speed of 70 km/h or less. • Refer to ABSORB 350 Terminal Technical Conditions for Use. • The Zoneguard to AB350 Terminal transition must be used to connect the terminal to the barrier. • This is a gating device.
ABSORB-M Crash Cushion	<ul style="list-style-type: none"> • The installation is restricted to an impact speed of 80 km/h or less. • Refer to Absorb-M Crash Cushion Technical Conditions for Use. • The Zoneguard MDS to Absorb-M Crash Cushion transition must be used to connect the crash cushion to the barrier. • This is a gating device.

Design Guidance

Minimum installation length (m)	95 metres between crash cushions/terminals (tested article)
System width (m)	0.7
Minimum distance to excavation (m)	0.45 - concrete installation - measured from the outer edge of the foot on the works side 0.75 - asphalt installation - measured from the outer edge of the foot on the works side
Slope limit	7%
Systems conditions	1. Installation on top of a kerb is not recommended, however if installed on top of a kerb all system components must be free to operate. 2. All offsets are to be measured from the relevant outer edge of the foot. The foot is not trafficable.
Gore area use	Permitted
Pedestrian area use	Permitted
Cycleway use	Permitted
Frequent impact likely	Permitted
Remote location	Permitted
Median use	Permitted

Submitted Foundation Pavement Conditions

Pavement	Use	Accepted Speed (max)	Post/Pin Spacing (m)	Post/Pin Type	Pavement Construction
Concrete	Permitted	100km/h	10.2	M30 x 300mm treaded rod with epoxy	Min 150mm concrete pavement

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Deep lift asphaltic concrete	Permitted	80km/h	6.0	M30 x 500mm asphalt pin	Wearing Course - 45mm AC14 Base Course - 150mm AC20 Sub-Base - 260mm heavily bound
Asphaltic concrete over granular pavement	Not permitted				
Flush seal over granular pavement					
Unsealed compacted formation					

Note: Installation in pavement conditions not listed above have not been justified to the Panel's satisfaction.