

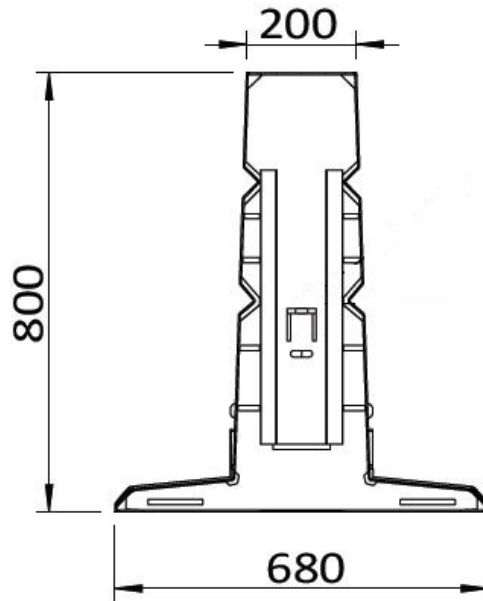
DEFENDER 70

REVISION REGISTER

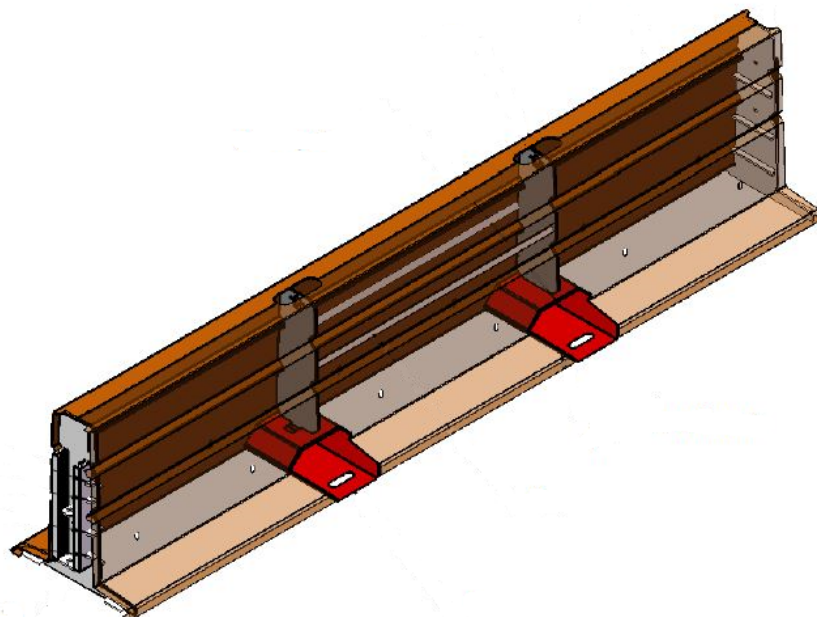
Revision	Description	Date
1	Issued for use.	12/07/2018.

Defender 70 is a portable freestanding steel barrier that is to be used for temporary applications only. Each Defender 70 barrier unit is 3.9m long and contains 3# concrete filled ballast box, giving each unit a mass of 1,040kg.

Images:

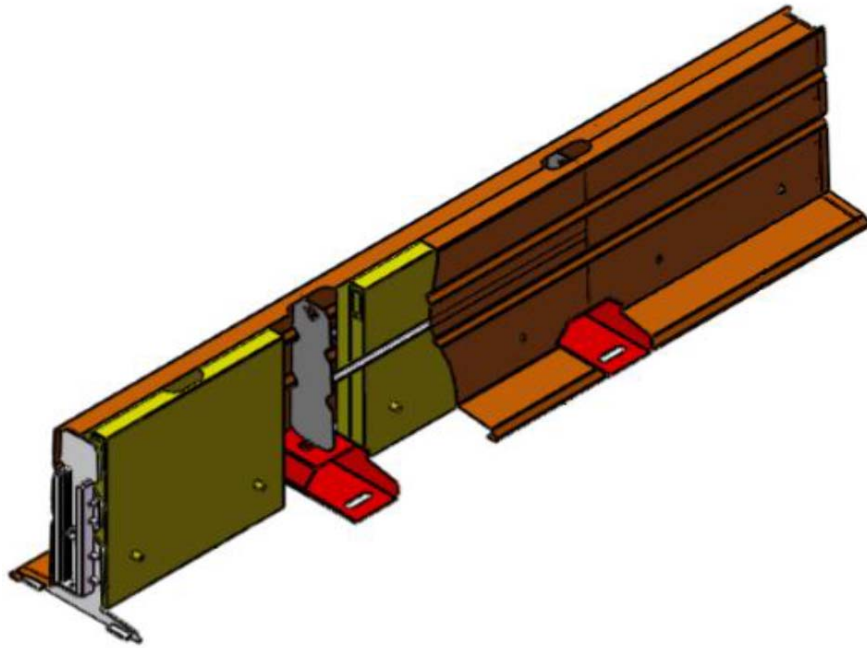


Typical cross section of Defender 70



Oblique view of Defender 70 unit

DEFENDER 70



Oblique view of Defender 70 unit (showing ballast boxes)



Photograph of Defender 70 unit

Ownership: Safe Barriers Pte Ltd

Supplier: Safe Barriers Pty Ltd
PO Box 7178
Hemmant, QLD 4174
Phone: 1800 169 799
Website - www.safebarriers.com

DEFENDER 70

Test Level: Approved to MASH TL2.

Test Level	Test Description	Deflection	Working Width (measured at base of units)
MASH – TL 2	2270kg vehicle @ 70km/h, 25° impact angle	1.20m	1.88m

Configuration:

- Standard 3.9m long units are to be used.
- As the barrier is designed to resist loadings by deflecting the units should be free to move.
- The system was crash tested on a flat asphalt surface.

Design:

- Design to be in accordance with the Defender Barrier™ Product Design and Installation Manual Version 1.0, dated 28 June 2017.
- Barrier should be placed a minimum of 250 mm from the edge of travelled way to avoid nuisance impacts.
- Barrier length must be sufficient to adequately protect the hazard.
- The ends of the barrier must be protected with a suitable end treatment.

Minimum Length:

105.3m (not including Absorb 350 terminals).

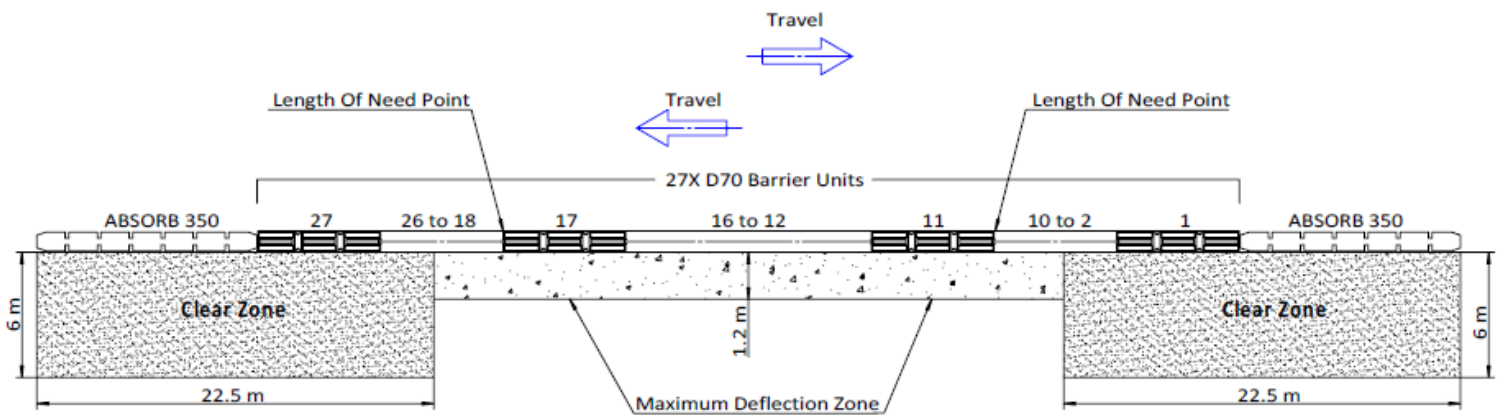
Terminals permitted:

- Absorb 350 (suitable for TL 2 conditions only – i.e. maximum design speed = 70 km/h, maximum posted speed = 60 km/h)

Length of Need:

The beginning of the length of need shall be at 10 units or 39.0m from the leading or trailing end, not including the Absorb 350 terminals (for TL2 conditions).

Refer to Figure 2.2 of the Defender Barrier™ Product Design and Installation Manual, as reproduced below:



DEFENDER 70

Limitations:

- The cross slope shall be not greater than 10% for the area between the edge of travelled way and the barrier, and the area immediately behind the barrier for the width of the deflection.
- Cannot be placed adjacent to kerbs or other objects within the deflection limits of the barrier, which may prevent lateral displacement.
- Standard 3.9m long units cannot be used on radii less than 230 m.
- Objects should not be placed on top of the barrier as they are designed to move under impact. "Anti-Gawk" screens are not to be attached.

Installation and Maintenance Requirements:

In accordance with the Defender Barrier™ Product Design and Installation Manual Version 1.0, dated 28 June 2017.

Parts to be Replaced after Impact:

Units may need to be repaired after impact or replaced depending on the extent of damage.

Parts Typically Re-Useable after Impact:

Undamaged units.

References:

Item	Description
1	System tested on 27 April and 11 May, 2017 by Holmes Solution to MASH TL 2. A copy of this testing can be found on Main Roads file 17/6332.

Relevant FHWA Approval Letters:

Not applicable.