

## MSKT – (MASH SEQUENTIAL KINKING TERMINAL)

### REVISION REGISTER

Issue & Revision	Description	Date
1	Issued for use.	24/03/2020
1 A	TL2 Configuration accepted.	13/01/2022

The MSKT (MASH Sequential Kinking Terminal) is an extruding, gating end treatment for w-beam barrier that is accepted for use by Main Roads. The MSKT may be installed parallel to the roadway or on a flare and when hit end on the impact head is forced along the W-beam, extruding the beam onto the verge side.

Note that the SKT – SP and SKT – 350 end treatments were previously accepted by Main Roads. These end treatments are no longer accepted for new installations.

#### Images:



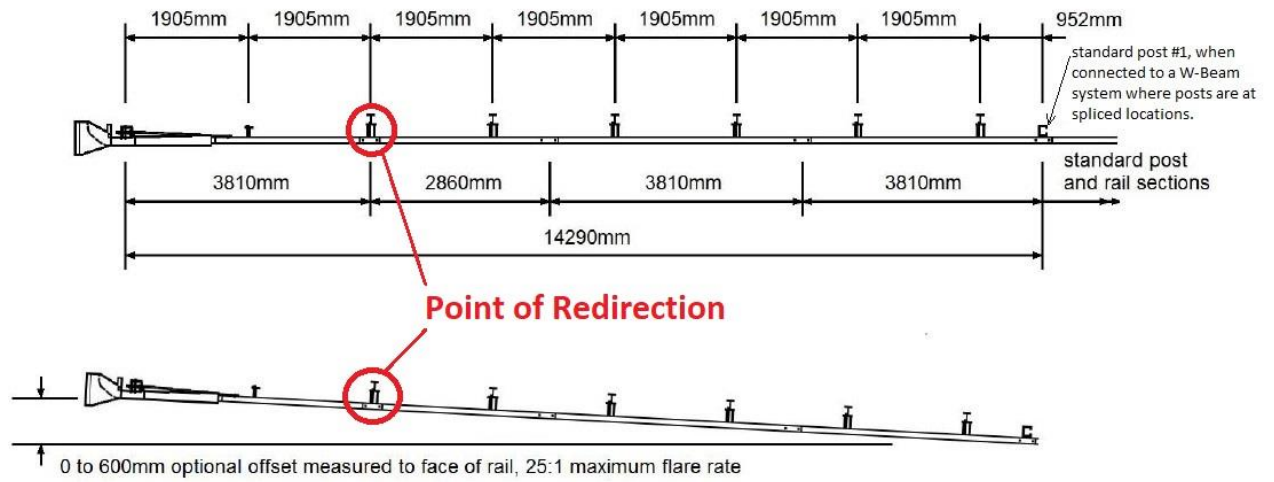
Photograph of Installation



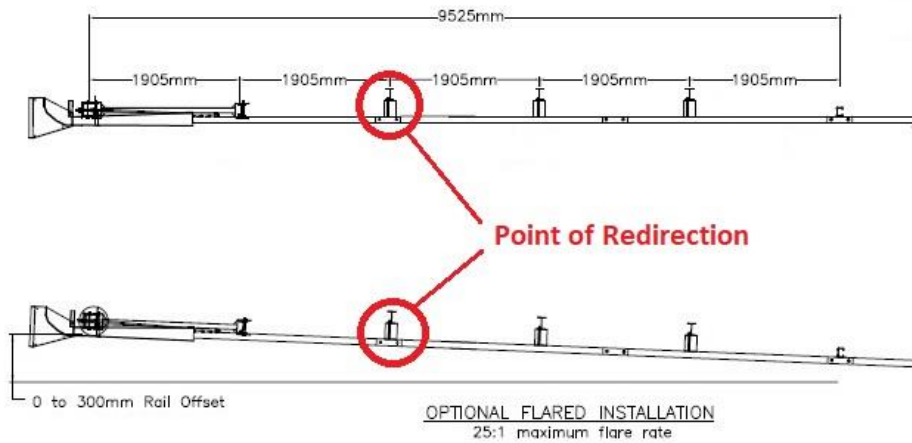
Photograph showing W-Beam extruded onto verge side

# MSKT – (MASH SEQUENTIAL KINKING TERMINAL)

## Drawings:



MSKT Plan (TL3 Configuration)



MSKT Plan (TL2 Configuration)

**Ownership:** Road Systems Inc, Texas. USA  
[www.roadsystems.com](http://www.roadsystems.com)

**Supplier:** Safe Direction  
Unit 2, 5 Simpson Close  
SMEATON GRANGE NSW 2567  
Phone 1300 063 220  
Website [www.safedirection.com.au](http://www.safedirection.com.au)

## MSKT – (MASH SEQUENTIAL KINKING TERMINAL)

**Test Level:** Tested in accordance with MASH TL2 and TL3.

TL	Length (m)	Design Speed (km/h)	Point of Redirection - Leading	Point of Redirection - Trailing	Suppliers Drawing Reference
2	9.52	70	3.81	3.81	K-MSKT TL2 Revision A
3	14.29	100	3.81	3.81	K-MSKT TL3 Revision A

Point of redirection is at post #3 for TL2 and TL3 configuration

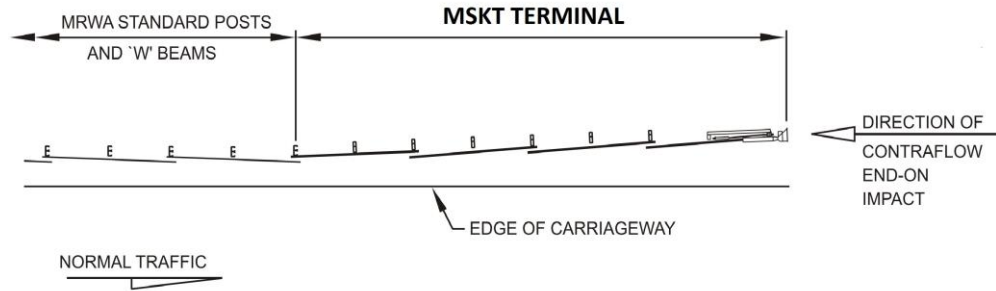
### Configuration:

- The system is to be installed with bolted hinged posts at post locations 1 and 2. Steel line posts are installed at post location 3 and beyond.
- The sticker on the impact head which is to be Black bands on White Class 1 reflective backgrounds with the width marker pattern as shown in Australian Standard 1742.2 Sign D4-3 (L,R).
- System should be supplied with the 200mm width Mondo Block recycled composite plastic block.

### Design:

- Design to be in accordance with the MSKT Product & Installation Manual (Ref: PM 022/02) which can be found on the Safe Directions website.
- Preferred plan layout is to install the end treatment at the maximum allowable flare to reduce nuisance impacts.
- In locations of constrained width or on high embankments where the cost to provide additional embankment width is not warranted then the terminal may be installed parallel to the road.
- Refer to Main Roads Drawings 201531-0096 and 201531-0097 for grading and run-out area requirements around MSKT.
- As part of the design, the Designer shall check to ensure that there are no site constraints such as rock, cover to services or pipes or other factors that would preclude the use of the normal post lengths.
- Terminal has been crash tested when installed in AASHTO standard soil (i.e. CBR  $\geq$  60). Refer to supplier for installation details in other soil conditions.
- When the MSKT is installed on the departure end of a barrier system the terminal is to be oriented as per Sketch 1.

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- Departure end terminal guardrail to be lapped against the normal traffic flow as shown.
- Post associated with the end treatment are to be orientated for an end-on impact on the extruder head, that is, against the normal traffic flow.

Sketch 1: Departure End Treatment Layout  
(Based on SES 01/03)

### Limitations:

- Must be installed on a straight flare or parallel to the travel way.
- Shall not be used in median situations where there is less than 7.5 m from the outlet side of the head and the adjacent edge of the traffic lane.

### Installation and Maintenance Requirements:

- The end treatment shall be installed and repaired after impact in accordance with the MSKT Product & Installation Manual (Ref: PM 022/02) which can be found on the Safe Directions website.
- If an SKT – SP or SKT – 350 is impacted then the complete terminal should be replaced with an MSKT.

### Parts to be Replaced after Impact:

Rail and posts.

### Parts Typically Re-Useable after Impact:

Impact head.

### References:

Relevant FHWA Approval Letters

Refer to website:

[https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/reduce\\_crash\\_severity/](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/)

Code	Description
CC-126	MASH TL 3 approval for MSKT.

Refer to Main Roads file 17/8952