

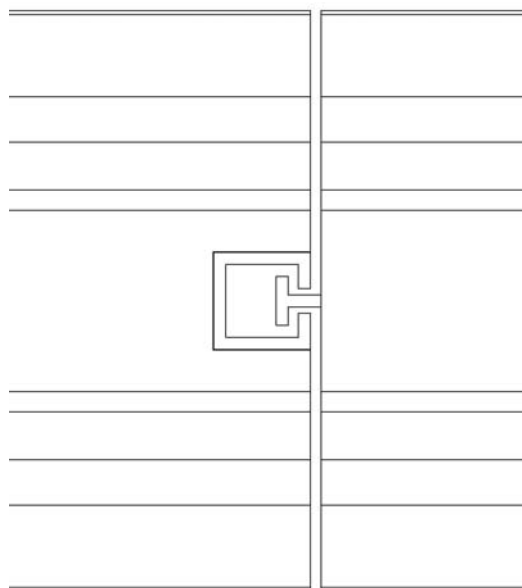
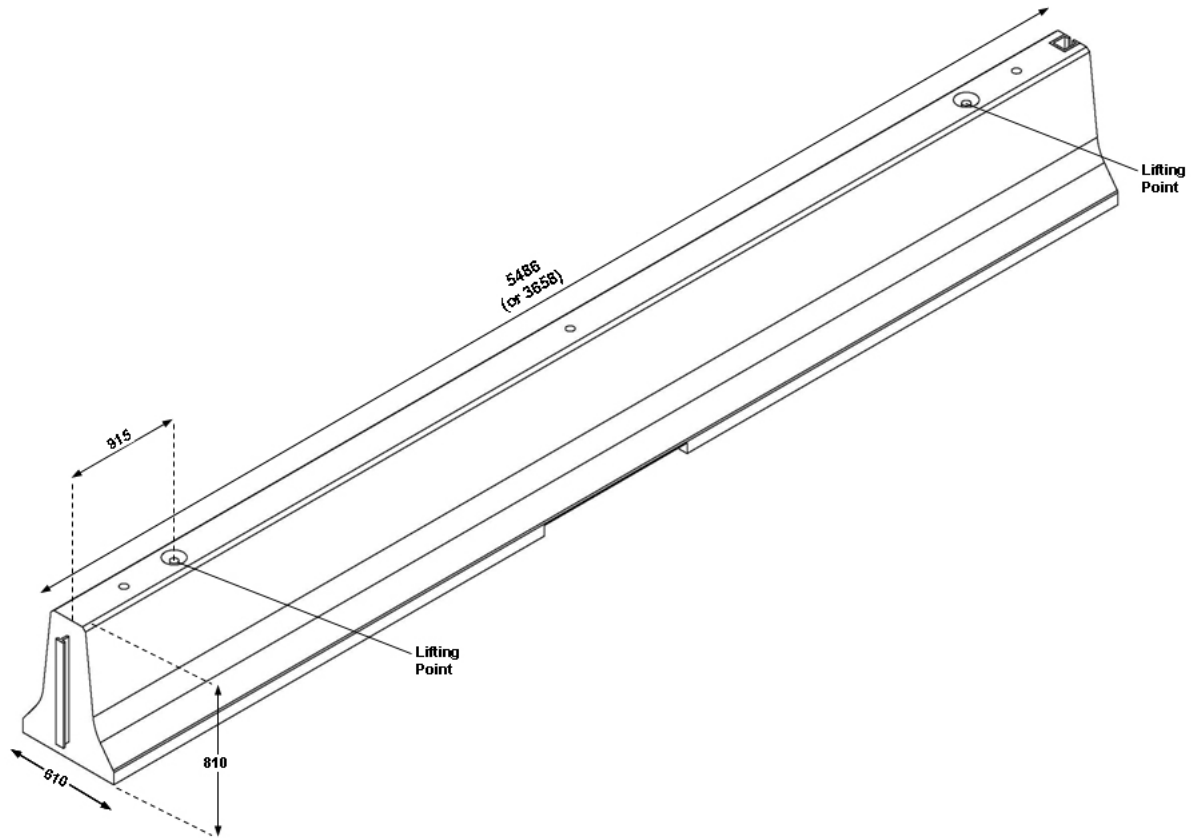
T-LOK TYPE F BARRIER

REVISION REGISTER

Revision	Description	Date
1	Issued for use.	1/10/2008

T-Lok is a semi-rigid temporary concrete barrier system which has a Type F profile.

Drawing:



T-Lok connection

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Ownership:

Rockingham Pre-Cast
<http://www.t-lok.com/>

Supplier:

Units can be hired from many of the hire companies. Saferoads sells the units and contacts details are:

Saferoads PO Box 340 Drouin, Victoria 3818.
 Ph 1800 060 672 Fax 1800 060 673
www.saferoads.com.au

Test Level:

NCHRP TL 3.

Configuration:

Units must be interconnected using T connection and requires a sufficient length to resist impact. The approved system configuration is shown in Table 1.

Table 1 Approved Configurations

Item	System Anchorage		
	Freestanding	Tethered to anchored Quadguard CZ	Triton CET
Point of Need TL 3	18 m. (Refer to Figure 2 of the T-Lok Installation Manual).	Point of need commences at the start of the Quadguard. (Refer to Figure 3 of the T-Lok Installation Manual).	20 m from the start of the Triton CET. (Refer to Figure 4 of the T-Lok Installation Manual).
Minimum length of barriers excluding terminals	48 m.	20 m.	20 m.
Terminal conditions	End of the unit shall be placed beyond the clear zone.	Quadguard CZ terminal with the last T-Lok unit prior to the Quadguard anchored at three locations.	Triton Concrete End Terminal which is a gating end terminal and therefore requires the use of a hazard free area 22.5 m x 6 m.
Deflections	Refer to Table 2.		
Units	Both 3.65 m and 5.4 m nominal units are acceptable but shall not be used in conjunction other than for curve applications.		

Note all references to figures in the T-Lok installation manual are to correct for Version 4.1.2 dated October 2008.

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Design Considerations:

Deflection:

Refer to Table 2. As the barrier is designed to resist loadings by deflection the units should be free to move, therefore the barrier shall not be placed onto a mortar or a concrete blinding as this may overload the connections between the units.

Table 2 T-Lok Deflections for 2000 kg impacting vehicle

Angle of Impact	5°	10°	15°	20°	25°
Design speed (km/h)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)	Deflection (m)
50	0.01	0.05	0.11	0.20	0.30
60	0.02	0.07	0.16	0.28	0.43
70	0.03	0.10	0.22	0.39	0.59
80	0.03	0.13	0.29	0.50	0.77
90	0.04	0.16	0.36	0.64	0.97
100	0.05	0.20	0.45	0.79	1.20

Angle of Impact	5°	10°	15°	20°	25°
Design speed (km/h)	Working Width (m)	Working Width (m)	Working Width (m)	Working Width (m)	Working Width (m)
50	0.62	0.66	0.72	0.81	0.91
60	0.63	0.68	0.77	0.89	1.04
70	0.64	0.71	0.83	1.00	1.20
80	0.64	0.74	0.90	1.11	1.38
90	0.65	0.77	0.97	1.25	1.58
100	0.66	0.81	1.06	1.40	1.81

Notes:

1. Deflections have been interpolated from the TL 3 crash test based on the impact severity formula contained within NCHRP 350.
2. Impacts near the start / end of the barrier will result in greater deflections.
3. The working width includes the width of the system.

Minimum Length:

The minimum length is a function of the end anchorage provided refer to Table 1.

Offset from Kerbing:

Kerbing is not to be placed in front of the barrier. Refer to Clause 3.9 of AS / NZS 3845. Kerbing should not be placed behind the barrier within the deflection limits of the system. Barrier shall not be placed on top of kerbing as this negates the effects of the profile.

Approach to barrier:

The approach to the barrier should be a trafficable running surface at a slope of 1 in 10 or flatter clear of objects and grade changes to allow an errant vehicle to hit the barrier at an appropriate height.

Vehicle Roll:

Where the hazard being protected by a barrier extends above the height of the barrier the Designer should ensure that adequate separation from the face of the barrier to the hazard is provided to allow for the roll of high vehicles (such as trucks) hitting the hazard. Refer to Table 4.5 of the Assessment of Roadside Hazards.

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End Treatments:

As per Table 1.

Limitations:

- The use of T-Lok is limited to work site situations and units shall be interconnected using the T-Lok connections.
- Objects should not be placed on top of the barrier as they are designed to move under impact. "Gawk" screens are not acceptable.
- Although the barrier is considered semi-rigid, flare rates and shy line distances used for T-Lok shall be those applicable to rigid barriers.
- When designing a T-Lok barrier the flare rates used shall be those for a rigid barrier so as to minimise impact angles.
- The tightest radius that the barrier can be installed in is 30 m.

References:

Relevant FHWA Approval Letters:

(Refer to website http://safety.fhwa.dot.gov/roadway_dept/road_hardware/listing.cfm
Temporary Concrete/Steel Barriers)

Code	Description
B-42	TL3 Approval.

Drawings:

Not applicable.