

INTENDED USE

The Quickchange Movable Barrier is a variation of the concrete safety shape barrier that has the added capability of being quickly and safely moved laterally by a transfer vehicle. The safety performance of this system is similar to other free-standing temporary concrete safety shape barriers. The profile is that of the standard New Jersey safety shape with the addition of an overhang at the top to allow the transfer vehicle to engage and move the barrier. This barrier has been tested and passed the NCHRP Report 350 criteria for median barriers.

The vertical end faces of the barrier segments are tapered back to allow for rotation between the segments. The segments are interlocked using a hinge pin inserted into the overlapping hinge assemblies. The hinge assemblies are attached to continuous steel through-rods that are embedded into the concrete segments to assure a strong, positive connection between segments.

A specially constructed transfer vehicle is used to lift the barrier off the roadway, shift it into its new position and lower it into place. The transfer vehicle can be adjusted to move the barrier from 1. 2m to 5.5 m across the roadway in one operation. One mile of barrier can be moved in 15 to 20 minutes.

The barrier can be moved laterally at speeds up to 8 kph. It has been used successfully as a median barrier on congested bridges where it is desirable to open and close lanes of traffic to adapt to changing traffic volumes. It is also used to open and close construction zones on a periodic basis to increase the work space, reduce congestion and improve construction worker productivity and quality of work.

The FHWA has approved this barrier as both a temporary barrier (July 15, 1986) and as a permanent barrier in lanechange operation (October 24, 1991).

REFERENCE

D. L. Glauz, J. Groza, R. L. Stoughton, J. J. Folsom, *Vehicle Crash Tests of a Movable Concrete Barrier*, Report FHWA-CA-TL-89-08, Office of Transportation Materials and Research, California Department of Transportation, Sacramento, CA, June, 1989

APPROVALS

The Quickchange Movable Barrier has been fully tested in conformance with NCHRP Report 350 Test Level 3 and is approved by FHWA.

FHWA Acceptance Letter: HMHS-B63

CONTACT INFORMATION

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QUICKCHANGE MOVABLE BARRIER

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