



X-TENSION<sup>®</sup> MEDIAN GUARDRAIL TERMINAL (XMAS<sup>®</sup>)



LINDSAY TRANSPORTATION SOLUTIONS  
 180 River Road  
 Rio Vista, CA 94571  
 Tel: 888-800-3691  
 www.barriersystemsinc.com

SEW21

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## INTENDED USE

The X-Tension® Median Attenuator System (XMAS®) is a fully re-directive non-gating end treatment designed for unidirectional bidirectional applications. It can be used to protect motorists from unforgiving termination of longitudinal barriers in medians or gore points. The XMAS® system absorbs the energy and gradually decelerates an impacting vehicle when hit end-on or redirects it around the hazard if impacted on the side. The XMAS® system integrates directly into a corrugated guardrail system.

The XMAS® system utilizes tension loaded cables to absorb the impact energy of a vehicle. This method does not transfer the impact load down the rail and greatly reduces the potential of the guardrail panels to buckle and create an unsafe condition. The system consists of an impact head, slider panels and slider brackets, shear bolt sets, cable bracket, soil anchor, ground strut, breakaway steel post, and two cables in addition to standard guardrail components such as posts, blockouts, and rails. The XMAS® system exhibits a high level of reusability after impacts (particularly the impact head) with little or no debris scatter.

The length of need starts at Post 1. The system utilizes 11.4M [37½ ft] of guardrail on each side. No additional guardrail is required beyond the length of need for this terminal.

## APPROVALS

The XMAS® system has been fully tested in conformance with NCHRP Report 350 Test Level 3 and accepted by FHWA.

FHWA Acceptance Letters: CC-91, June 9, 2005  
CC-102, November 5, 2007

## CONTACT INFORMATION

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