Work Zone Installations: Permanent and temporary

QPL Product Information

QuadGuard, Wide QuadGuard

Purpose: The QuadGuard is an end treatment for concrete barrier and beam guardrail and is also used to mitigate fixed objects up to 7 feet-6 inches wide.

Description: The system consists of a series of Hex-Foam cartridges surrounded by a framework of steel diaphragms and quadruple corrugated fender panels.

Functionality: The internal shearing of the cartridges and the crushing of the energy absorption material absorb impact energy from end-on hits. The fender panels redirect vehicles impacting the attenuator on the side.

Foundation: The system is installed on a concrete foundation.

Slope: If the site has excessive grade or cross slope, additional site preparation or modification to the units in accordance with the manufacturer's literature is required. Excessive is defined as steeper than 8% for the QuadGuard.

Manufacturer/Supplier: Energy Absorption Systems

QuadGuard Elite

QPL Product Information

Purpose: The QuadGuard Elite is an end treatment for concrete barrier and beam guardrail and is also used for fixed objects up to 7 feet-6 inches wide.

Description: The system consists of telescoping quadruple corrugated fender panels mounted on both sides of a series of polyethylene cylinders.

Functionality: The cylinders are compressed during a head-on impact and will return to their original shape when the system is reset. It is anticipated that this system will require very few replacement parts or extensive repair.

Foundation: The system is installed on a concrete foundation.

Slope: If the site has excessive grade or cross slope, additional site preparation or modification to the units in accordance with the manufacturer's literature is required. Excessive is defined as steeper than 8% for the QuadGuard Elite.

Manufacturer/Supplier: Energy Absorption Systems

Reusable Energy Absorbing Crash Terminal (REACT 350), Wide REACT 350

QPL Product Information

Purpose: The REACT 350 is an end treatment for concrete barriers and is also used for fixed objects up to 9 feet wide.

Description: The system consists of polyethylene cylinders with varying wall thickness, redirecting cables, a steel frame base, and a backup structure.

Functionality: The redirecting cables are anchored in the concrete foundation at the front of the system and in the backup structure at the rear of the system. When hit head-on, the cylinders compress and absorb the impact energy, but the system returns to approximately 80% of its original length immediately. For side impacts, the cables restrain the system enough to prevent penetration and redirect the vehicle. It is anticipated that this system will require very few replacement parts or extensive repair.

Foundation: The system is installed on a concrete foundation.

Slope: If the site has excessive grade or cross slope, additional site preparation or modification to the units in accordance with the manufacturer's literature is required. Excessive is defined as steeper than 8% for the REACT 350.

Manufacturer/Supplier: Energy Absorption Systems: REACT 350, Wide REACT 350

Inertial Barrier (Sand Barrel arrays)

QPL Product Information

Purpose: Inertial barrier is an end treatment for concrete barrier and to mitigate fixed objects. This system does not provide redirection from a side impact.

Description: This system consists of an array of plastic containers filled with varying weights of sand.

Functionality: The inertial barriers slow an impacting vehicle by the transfer of the momentum of the vehicle to the mass of the barrier. This system is not suitable where space is limited to less than the widths shown in the Standard Plans. Whenever possible, align inertial barriers so that an errant vehicle deviating from the roadway by 10 degrees would be on a parallel path with the attenuator alignment. In addition, inertial barriers do not provide any redirection and are not appropriate where high angle impacts are likely.

Foundation: A paved surface is not required.

Slope: If the site has excessive grade or cross slope, additional site preparation or modification to the units in accordance with the manufacturer's literature is required. Excessive is defined as steeper than 5% for inertial barriers.

Manufacturer/Supplier: Energy Absorption Systems: Energite III, Universal Barrels (Fitch)
Traffix Devices, Inc.: Big Sandy Impact Attenuator Sand Barrels

SCI100GM

QPL Product Information

Purpose: The SCI100GM is an end treatment for concrete barrier and beam guardrail.
Description: The system consists of telescoping quadruple corrugated fender panels mounted on both sides of a series of tubular steel support frames.

Functionality: A hydraulic cylinder is compressed during a head-on impact. It is anticipated that this system will require very few replacement parts or extensive repair.

Foundation: The system is installed on a concrete foundation.

Slope: 10H:1V or flatter slope between the edge of the traveled way and the near face of the unit.

Manufacturer: SCI Products, Inc.
Information source: Work Area Protection Corp.