# HR-8 HORIZONTAL RESISTANCE BARRIER
# Specifications

***GENERAL***: The resistance barrier shall be Model HR-8, as manufactured by B&B Roadway, LLC, (888) 560-2060.

***APPLICATIONS***: The barrier shall be designed for use as a penetration resistance barrier. The barrier shall be explicitly designed for traffic control on movable bridges, HOV and reversible lanes and similar applications. A primary feature of the HR-8 shall be a shape fabricated to match standard fixed "Jersey" barriers or a shape custom-fabricated to match the fixed roadside barrier being used.

***BARRIER BEAM*** : The barrier beam shall be fabricated from 3/8" (9.5mm) structural steel, hot dip galvanized after fabrication. Beam cross section shall match the "Jersey" barrier shape. Top of beam shall be 32" (813mm) above the roadway with a 3" (76mm) clearance under the beam to accommodate operation over crested or uneven roadway surfaces. Overall width shall be 23" (584mm). [*OPTION: Beam cross section shall be custom modified and manufactured to match the shape of the fixed roadside barrier, as specified by the project engineer.*]

The upper face of the traffic side of the beam shall be covered with alternating stripes of red and white engineering grade reflective sheeting. Stripes shall slope at 45 degrees down and away from the pivot.

Nominal length of the beam shall be measured from the center of the pivot to the far end of the beam. Manufacturer shall be consulted for applications requiring beams exceeding 60 feet (18.2m).

***OPERATING MECHANISM***: Concealed within the barrier beam, near the far end, shall be a tractor unit which shall drive the barrier. The tractor unit shall consist of wheels, wheel drive mechanism, motor, brake, and a gear reducer coupled directly to the motor. Design shall permit manual operation during emergency conditions and for convenience during installation.

Motor horsepower shall be determined by the manufacturer to suit the installation, but shall be not less than 1.5 hp.

Wheels shall have a minimum capacity of 120% of the load at the wheels. Wheel tread shall be of urethane elastomer or similar material to provide traction. Wheel shaft shall be AISI 4150 with a minimum tensile strength of 140,000 psi. The shaft shall be mounted in heavy duty relubricable ball bearings.

***MOUNTING***: The barrier shall be fixed at the pivot to a suitable foundation, as specified by the project engineer. Anchor bolt size and pattern shall be determined based on installation details and requirements. Mounting base plate shall be 1" thick, recessed into the pavement.

***ENDLOCKS***: [*OPTION: For additional resistance capacity when required, the barrier shall be equipped with actuator-driven endlocks at the far end of the barrier. The endlocks shall engage a suitable anchorage post or wall.*]

***SERVICE ACCESS*** : Access panels or doors shall be located to permit servicing of all equipment. Access openings shall be designed to provide a weather resistant enclosure for equipment. All fasteners shall be corrosion resistant.

***PIVOT***: The pivot shaft shall turn on self-lubricating bronze radial and thrust bearings.

***LIMIT SWITCH***: The barrier limit switch assembly shall be a self-contained unit. The assembly shall provide 8 independent SPDT control switches. Switches shall be rated for 15 amps at 460 VAC. Switches shall be controlled by individually adjustable cams. The limit switch assembly design shall permit adjustment of all cams with the barrier in any position. The limit switch assembly shall have a removable cover to help prevent accidental contact with switch terminals. Shaft, cams, bushings and housing pieces shall be of non-ferrous corrosion resistant materials.

***SAFETY SWITCHES, TERMINAL BLOCKS AND WIRING***: A manual disconnect switch shall be provided, pre-wired at the factory to break the main motor leads, to protect personnel during service. A handcrank safety switch shall be provided to prevent powered actuation of the barrier during manual operation. Control components and terminal blocks shall be mounted inside an electrical enclosure. Pressure-type, modular terminal blocks shall be fully labeled and clearly

coded to wiring diagrams. All control wiring shall be cleared coded to wiring diagrams and shall terminate at the terminal block. Connections to screw-type terminals shall have lugs. Conductors shall be #16 AWG stranded, minimum. Wiring shall be run in conduit where practical.

***WARNING LIGHTS***: The barrier shall be equipped with suitable warning lights spaced along the length of the barrier, typically 5' to 9' (2m to 3m) apart. A solid state flasher shall flash the lights alternately, except the light at the far end of the barrier, which shall be steady burn. Warning lights shall be lit during barrier operation (approximately 5 degrees from full open traffic position) and while the barrier is in the closed to traffic position. Light lenses shall be red fresnel plastic. Lights shall use 120V, rough service type lamps.

***ENERGY ABSORPTION CAPACITY***: Typical barrier configuration shall be capable of absorbing the energy of a 15,000 pound vehicle coasting at 40 mph (or 10,000 pound vehicle at 50 mph). Actual capacity shall necessarily vary based on individual barrier configuration.

***ACCESSORIES AND MODIFICATIONS***: All common accessories and modifications shall be available. Custom modifications and accessories shall be available through coordination with manufacturer.

***WARRANTY***: A 2 year warranty shall cover the barrier and related equipment against defective material and components. Manufacturer shall furnish replacement parts for a minimum of 10 years. Replacement parts for standard components shall normally be available within 1 working day. Lamps, fuses and other components designed for a life less than 2 years shall be covered for the rated life of the component or the warranty period of the component manufacturer.

***PARTIAL LIST OF AVAILABLE OPTIONS***:

Beam Finishes, Striping Materials and Colors
Barrier Shape
Anchor Bolts (provided by manufacturer)
Mounting Template
Sidewalk Extension
Pedestrian Rail or Fence
Heater and Thermostat

*Revised 4/05*