

**PROCUREMENT SPECIFICATION
MODEL: XMB EXTREME MOBILE BARRIER**

SYNOPSIS

This specification defines a BARRIER SYSTEM Model XMB; for placement as a non-reusable barrier to safeguard Strategic Access Control Points, Protect High-Risk Security Assets, Facilities and Personnel and serve as a high-volume Traffic Control Device.

The basic XMB barrier system is a mobile system which can be fully assembled or disassembled in less than 15 minutes without the use of any tools. The barrier also has the option for permanent mounting to the roadway. The barrier can be connected to any passive barrier available for anchoring including Jersey barriers, bollards, and stanchions.

The system is available as a powered or manual barrier, with power options including 12/24 VDC and 120 VAC. The barrier can be integrated with hard-wired or remote controls, as well as card readers and ground loops.

1.0 PATENT LICENSE

The XMB BARRIER SYSTEM shall be fully licensed for manufacture under U.S. Patents or patents pending.

2.0 SYSTEM CONFIGURATION

The system configuration shall include the following:

2.1 BARRIER STANDARD CONFIGURATION

2.1.1 Barrier Application. The XMB Barrier System shall be configured in accordance to the site conditions. A single XMB Barrier can accommodate a 12ft lane width. For single lanes wider than 12ft, the XMB's passive barrier anchors can be arranged to neck the lane down to 12ft.

2.1.2 Multiple Barrier Application. For multiple lane applications, multiple barriers can be set up and connected in parallel. Each barrier shall have its own control logic and operate independently from each other with the option to be operated simultaneously if necessary.

2.2 CONSTRUCTION

2.2.1 Foundation. The XMB does not require a foundation if it is located on a flat surface. For applications on a crowned road or otherwise curved road surface, it is necessary to excavate to a depth of 5 inches below grade and fill with a smooth concrete foundation for the barrier.

2.2.2 Anchoring. For mobile applications, the XMB barrier shall not be anchored to the roadway. For permanent installations, the two bases of the barrier shall each have four (4) holes for mounting to the road surface or barrier foundation. Threaded inserts shall be placed into pre-drilled holes in the roadway and secured using epoxy. The barrier is then bolted into place at each base.

2.2.3 Passive Barrier Anchoring. Each side of the XMB barrier shall be anchored to at least one (1) passive barrier for transference of energy upon impact. Passive barriers include but are not limited to Jersey barriers, bollards, and anchor stanchions. The beams of the XMB shall be recessed between ramps to ensure smooth vehicle crossing over the barrier. When deployed, the energy of the impact shall first be absorbed by the beams and then transferred through the slings to the passive barrier anchors.

2.2.4 XMB Barrier (Beams). The beams are constructed of steel and coated with Xtreme liner for increased durability. The slings inside the beams are encased in a black waterproof cordura casing. The top beam of the XMB sits at 43 inches above road grade when the barrier is deployed.

2.2.5 Pre-Deployment Position. The XMB Beams shall be recessed between ramps, which act as a speed deterrent as well as providing smooth travel over the barrier. Typical barriers use a lightweight polyurethane ramp which is attached to the angle connecting the bases. For permanent installations, a longer, heavy-duty rubber ramp is anchored to the roadway on both sides of the barrier.

2.2.6 Lifting Base Assembly. Automatically powered XMB barriers shall each be equipped and operated by two (2) linear actuators. The type of actuator is determined by the power supplied to the barrier (12/24 VDC or 120 VAC). Actuators are gasketed and sealed, using industrial quality lubricants for longer life. The extension tubes are constructed of stainless steel to prevent corrosion.

2.2.7 Main Power. The XMB barrier utilizes different actuators to conform to multiple power requirements. The barrier can operate using 12 or 24 VDC from an automobile battery, or 120 VAC from a typical outlet or generator.

2.2.8 Loss of Power Operation. During loss of power with the XMB in the down position, the barrier can be switched to manual mode. The barrier is quickly and easily operated with the use of one hand in manual operation.

2.2.9.1 Finish. Metal surfaces shall be Xtreme liner finished for protection against harsh climates. Mating metal surfaces which are not Xtreme liner finished shall be Powder Coat finished.

2.2.9.2 Color. All Xtreme liner and Powder Coat shall be black. Polyurethane bumpers shall be yellow with red reflectors.

2.3 LOGIC CIRCUITS AND CONTROLS

The following circuits and control station shall be furnished:

2.3.1 Control Circuit. A control circuit shall be provided to interface between the operator controls and the XMB Barrier. This control circuit shall contain all relays, timers, and other devices necessary for normal barrier operation. The use of inductive loops or PLC control may require an additional control box.

2.3.2 Voltage. The XMB Barrier is available in models which are powered by 12 VDC, 24 VDC, and 120 VAC.

3.0 ACCESSORY EQUIPMENT

Any or all of the following may be selected:

- Safety Equipment
 - Traffic signals
 - Audible warning devices
 - Inductive loops

- Customizable logic controls designed to integrate seamlessly with customer overall security and traffic control strategy.

4.0 PERFORMANCE

The following performance criteria shall apply:

4.1 EXPERIENCE

4.1.1 The XMB Barrier System shall be of proven design. Manufacturer shall have installed multiple vehicle barriers in field operation and documented real-world experience for all major components and features. The XMB Barrier System shall function without the use of hydraulic pumps, hoses, or reservoirs.

4.2 QUALIFICATION TESTS

4.2.1 Normal Operation. The XMB Barrier System shall provide a secure method of control of normal traffic conditions in a bi-directional operation. This barrier shall also provide a rapid-deploy impenetrable obstacle to unauthorized vehicles.

4.2.1.1 The barrier system shall be designed to stop a vehicle attempting to gain unauthorized entry from either direction (Bi-directional Barrier).

4.2.1.2 The barrier system shall be designed to arrest and immobilize the vehicle without significant risk to the operator and property.

4.2.1.3 The barrier shall be engineered to stop a vehicle weighing up to 15,000 pounds traveling at 30 mph with proper anchorage to passive barriers.

4.3 SPEED OF OPERATION

4.3.1 Normal Operation. The XMB Barrier shall be capable of being raised or lowered in 3 seconds or less (customer specifiable). Barrier direction shall be instantly reversible at any point in its down cycle by activating the UP button.

4.4 FREQUENCY OF OPERATION

4.4.1 The GRAB-XMB shall be capable of continuous operation of 50,000 cycles per year with little or no maintenance.

5.0 QUALITY ASSURANCE PROVISIONS

The following quality controls shall be present in the manufacturing process.

5.1 QUALITY CONTROL

5.1.1 System Testing. Upon completion, the Barrier system components will be fully tested by manufacturer. In addition to Control Panel and Lift Arm Assembly testing, the following checks and inspections shall apply:

5.1.2 Workmanship. The Barrier system components shall have a finished look in appearance and workmanship.

5.1.3 Finish. Powder Coat and Xtreme Liner process shall be visually inspected and verified against order information and shall have a finished look in appearance and workmanship.

6.0 PREPARATION FOR SHIPMENT

6.1 SHIPPING ASPECT

6.1.1 The XMB Barrier system shall be crated or mounted on pallets/skids as necessary to facilitate ease of transport and prevent damage from handling. Packaging shall be of sufficient structural integrity to enable the assembly to be lifted and transported by pallet jack, forklift, or crane.

7.0 DISCLAIMER

Please note. Due to the nature and intended use of this technology, special provision and consideration must be given to the specific placement, model selection, and site conditions associated with the installation of the XMB Barrier System. Special care must be undertaken with regard to the installation, use, and maintenance of any device designed as a vehicle barricade, especially those equipped for rapid deployment and traffic control capabilities. In addition, you must ensure that approaching vehicles and pedestrians are fully aware of the Barrier and operational procedures. To affect the safety of oncoming vehicles and pedestrians the following considerations are strongly recommended:

- Install clear and visible warning signs noting the presence of vehicle barriers
- Properly illuminate the vehicle approach path and control points
- Incorporate the use of traffic signals (stop-go), audible warning devices, horns, buzzers, and/or flashing beacon or strobe lights
- Incorporate the use of wash board speed bumps on road surfaces at appropriate intervals to alert the vehicle operator upon approach

These recommendations can be used in their entirety or in various combinations so as to alert vehicle operators and pedestrians. Universal Safety Response, Inc. can also provide additional information regarding safety and transportation warning devices that can be employed in association with the operation of the XMB Barrier System not specifically described herein. It is strongly recommended that a traffic or safety engineer and/or architect be consulted prior to the installation of the XMB Barrier System. Universal Safety Response, Inc. can also offer assistance in the design of system operation, barrier controls, and integration.

8.0 PROCUREMENT SOURCE

The Model, **XMB** Barrier System shall be purchased from:

UNIVERSAL SAFETY RESPONSE, INC.

277 Mallory Station Road

Suite 112

Franklin, TN 37067-8251

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