

## **ARCHITECTURAL DESIGN SPECIFICATION SATYR-12CW - CRASH RATED BEAM VEHICLE BARRIER MANUAL OPERATION**

### **PART I – General**

#### **1.1 SECTION INCLUDES**

- A. This section covers the furnishing and installation of a Satyr-12CW Vehicle Barrier system. Provide complete system that has been fabricated and tested for proper operation at the factory.
- B. All tube steel conforms to ASTM A500-10A. All round, plate and shaped steel to ASTM A36. All welds conform to AWS ASTM D1.1, D1.3 for sheet metal. Aluminum to conform to ASTM 6060-T52.
- C. System includes barrier arm (beam) section, hinge buttress, receiver buttress, and safety devices to provide a fully operational barrier system. Clear width of barrier arm may be between 10 to 25 feet at roadway surface.
- D. Design and materials are identical as those used in crash test of Satyr-12CW to ASTM F2656-07 M-50/P1 standard (equivalent to DOS K-12).

#### **1.2 RELATED SECTIONS**

- A. Section 03 11 00 Concrete Forming
- B. Section 03 20 00 Concrete Reinforcing

#### **1.3 CRASH RATING, TESTING AND QUALITY ASSURANCE**

- A. The Satyr-12CW vehicle barrier model is ASTM F2656-07 M50 certified, (equivalent to Department of State (DOS) K12 as per publication SDSTD02.01, Revision A, dated March 2003) for Vehicle Crash Testing of Perimeter Barriers and Gates, in which the impact conditions are:

- Crash rating           ASTM M50/P1
- Vehicle Weight       15,000 pounds
- Impact Speed K12    50MPH

*Note: The Satyr-12CW vehicle barrier system must be installed per manufacturer's specifications and design. Failure to comply with all installation requirements will void the Crash Rating and the Warranty.*

- B. Manufacturer shall be a company specializing in the supply of security vehicle barriers.

#### **1.4 SUBMITTALS**

- A. Submit generic drawings of standard product and finish samples if required.
- B. Indicate pertinent dimensions, general construction, component connections and location, anchorage methods and location, hardware, and installation details.

#### **1.5 DELIVERY, STORAGE AND HANDLING**

- A. Deliver material to job site in manufacturer's packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather and construction activities.

#### **1.6 PROJECT/SITE CONDITIONS**

- A. Install Satyr-12CW Crash Rated Beam Vehicle Barrier including excavation, trenching and concrete foundation pads as per manufacturer's printed instructions. Installer/owner to supply required permits/inspections.

#### **1.7 WARRANTY**

Perimeter Security Partners (PSP) warrants its products against defects in material and workmanship for a period of one year from date of shipment. This warranty excludes normal wear on finishes or damage that occurs due to impact, abuse, misuse or acts of God.

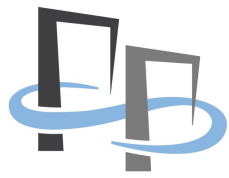
### **PART II – Products**

#### **2.1 MANUFACTURER**

Satyr-12CW: Crash Rated Beam vehicle barrier as manufactured by;



Perimeter Security Partners  
5038 Thoroughbred Lane, Brentwood, TN 37027  
Ph 615.953.8872 Fax 615.468.6311  
[www.PerimeterSecurityPartners.com](http://www.PerimeterSecurityPartners.com)



## 2.2 CONSTRUCTION

- A. Buttresses (stanchions): The hinge and receiver buttresses are manufactured of steel components and welded steel elements. The hinge and receiver buttress assemblies are finish painted black.
- B. Hinge Buttress The hinge buttress assembly includes internal bearings and stainless steel axle allowing the beam arc from 0 degrees up to 83 degrees (+/- 2 degrees) when in fully open position. A cushioning device is included to reduce beam oscillation. Covers are included to conceal operating system and prevent debris, ice or snow accumulation.
- C. Receiver Buttress: Receiver buttress is designed to guide the beam into place when lowered and retain the beam during vehicle impact. The receiver buttress includes a locking pin to prevent unauthorized operation of the unit when unattended.
- D. Concrete: Above ground concrete/forming for buttresses/stanchions is not permitted allowing for stanchion placement to be close to adjacent objects, walls etc.
- E. Beam: Beam is constructed of a fabricated rectangular aluminum beam. The beam is finished with white paint and reflective red and white safety tape to increase visibility. Reinforcement provided by custom nylon straps installed in the beam and anchored with stainless steel rods.
- F. No power unit or Hydraulic controller is supplied as this unit is counterweighted and is for manual (non-motorized) usage.
- G. Hinge buttress/beam arm incorporates a locking device to hold the beam arm in the “open” or “up” position for extended periods of time.

## 2.3 EQUIPMENT

- A. Barrier Operation: Up and down operation is via manually moving the arm to elevate the arm (create a clear passage for vehicle traffic) or move the arm into the lowered position fitting into the receiver buttress (closed or secure, forbidding passage of vehicles). The beam is not to be allowed to slam down to the closed position as damage may occur and the warranty may be void.

## 2.4 FINISHES

- A. Satyr-12CW is delivered painted black (buttresses) with the beam finished with white paint and reflective red and white safety tape to increase visibility.
- B. Zinc primer to conform to SSPC Paint Specification #20 and SSPC-LO for zinc rich primers. Zinc dust is to meet ASTM D520, Type II.
- C. Intermediate primer must meet or exceed SSPC #36 level 3. Finish Paint to meet or exceed SSPC paint #22.
- D. Zinc-arc Galvanization OPTIONAL

## **PART III – EXECUTION**

### **3.1 INSTALLATION**

- A. Inspection: Installer must examine the location and advise the Contractor/Owner of any site conditions unacceptable for proper installation of product. These conditions include but are not limited to the following:
  - 1. Existing underground utilities or unforeseen issues.
  - 2. Removal of pavers, stones, road surfaces or landscaping.
- B. Buttress Installation: The hinge and receiver buttress are cast in a concrete foundation below grade.
- C. Erection: Install Satyr-12CW unit in accordance with manufacturer's printed instructions. Set units' level and plumb and in line with adjacent structures or roadway.
- D. Anchor securely into place Use installers with experience in the installation of vehicle barriers. For a list of qualified installers, please contact PSP sales department.
- E. Adjustment: Installer shall adjust beam arm and hardware for smooth operation and proper performance.
- F. Maintenance: Follow maintenance procedures as outlined in the Instruction and Operation Maintenance Manual.
- G. Cleaning: Clean surfaces carefully after installation to remove excess concrete, caulk, dirt and labels.