



# GENERAL WARNINGS AND CAUTIONARY STATEMENTS FOR COLLAPSIBLE BOLLARDS

In order to safely and effectively use any TrafficGuard<sup>®</sup>, Inc. product, please read and understand the General Warnings and Cautionary Statements contained below. If you have any questions about any of these General Warnings and Cautionary Statements, or about any aspect of TrafficGuard<sup>®</sup>, Inc.'s products or literature, please contact TrafficGuard<sup>®</sup>, Inc. at 877-727-7347, or email [sales@trafficguard.net](mailto:sales@trafficguard.net).



## **BOLLARD SELECTION AND PLACEMENT**

based on vehicle weight, speed and other site specific factors to be determined by owner.



## **FAILURE TO UTILIZE TRAFFICGUARD<sup>®</sup>, INC. AUTHORIZED PARTS, OR MODIFICATIONS**

to the TrafficGuard<sup>®</sup>, Inc. products, or failure to follow the recommended installation procedures, will result in your warranty being null and void.



## **READ AND FULLY UNDERSTAND THE INSTALLATION INSTRUCTIONS**

before attempting to install any TrafficGuard<sup>®</sup>, Inc. bollard product.



## **SUBSTITUTION OF COMPONENTS MAY IMPAIR THE PROPER FUNCTION**

of TrafficGuard<sup>®</sup>, Inc. bollards products. If you need replacement parts, please contact TrafficGuard<sup>®</sup>, Inc. at the number and email above.



## **ALWAYS ENSURE THAT THE LOCK PIN IS LOCKED INTO PLACE**

in the upright position with all collapsible bollards.



## **WARNING: FAILURE TO RETURN COLLAPSIBLE BOLLARD TO UPRIGHT, LOCKED POSITION IMMEDIATELY AFTER USE POSES A SIGNIFICANT HAZARD.**



## **REPLACEMENT LOCK PINS ARE AVAILABLE**

for purchase at TrafficGuard<sup>®</sup>, Inc. For purchase of replacement lock pins or other components, please contact TrafficGuard<sup>®</sup>, Inc. at the number or email above.



## **CAUTION: LOCK PIN MUST ALWAYS BE SECURED WITH PADLOCK WHEN BOLLARD IS IN UPRIGHT POSITION.**



## **FOR MAXIMUM EFFECTIVENESS**

of TrafficGuard<sup>®</sup>, Inc. bollard products, be sure to properly maintain bollards by replacing any damaged, corroded or missing components, and reapply paint as required to maximize visibility. Failure to properly maintain product can negatively impact the bollards performance over time.



## **TO ENSURE VISIBILITY**

of bollards, be sure to apply all decals that are provided with the product, and in the manner recommended by TrafficGuard<sup>®</sup>, Inc.

***IF IN DOUBT CALL TRAFFICGUARD<sup>®</sup>, INC. 877-727-7347***

**DOUBLE POST HINGED BOLLARD INSTALLATION INSTRUCTIONS**


1. Verify that all Double Post Hinged Bollard parts are in the shipment package as shown on the "Bill of Material".
2. Provide Double Post Hinged Bollard Anchor System (see included Anchor System Drawings-CPAS12) at a location to suit your specific needs.
3. Install DHB Base true and level on Anchor System using the flat washers and hex nuts included in your Anchor System Kit. Use S.S. shims to level if needed. Torque hex nuts to Minimum 100 ft-lbs for Anchor Systems CPAS12.
4. Install DHB Posts (Item 1) to DHB Base (Item 2) using Hinge Bolts (Item 5) and Hex Nuts (Item 6) as shown. Tack Weld Hex Nuts to Hinge Bolts or Chisel Hinge Bolt Threads such that Hex Nuts cannot be easily removed.
5. Install Locking Pin thru UP Position Bollard Posts, and install Padlocks as needed.
6. Install the four Labels at the locations shown.
7. Install Post Adjusting Screw (Item 9) in threaded hole in center of DHB Base (Item 2). Adjust Screw to keep DHB Posts (Item 1) from rocking while in upright Padlocked position.
8. Check the functional operation of the Hinged Bollard Posts.
- 9 Note: S.S. shims, tools, grease, and padlocks are not provided.
10. LEVELING BOLT INSTRUCTIONS:
  - A. START 1/2" (13) X 1 3/4" 18-8 STAINLESS STEEL HEX IN CENTER HOLE OF BASE PLATE. (THREADS HAVE BEEN LEFT PAINTED FOR A TIGHT FIT). TURN BOLT SLIGHTLY THROUGH BASE.
  - B. INSTALL POSTS IN LOCKING UPRIGHT POSITION. BEGIN RAISING LEVELING BOLT WITH WRENCH UNTIL CONTACT IS MADE WITH POSTS. RESULTS WILL BE A STABLE SET OF POSTS.

Design Criteria

The Hinged Bollard is designed to fail at a static (or equivalent impact load) load of approximately 1,200 pounds horizontal force applied at 27 inches above grade. The Hinged Bollard System should fail in one of the following modes.

1. The Hinge Bolt connection will shear and the Bollard will rotate to grade.
2. The Anchor System will fail and the Bollard Base will rotate.
3. The Earth will yield and the foundation will tip in rotation.

If installation conforms to the specifications and these drawings, TrafficGuard,® Inc. expects the failure to occur in the sequence shown with the Hinge Bolt connection shear as the governing failure.

<b>DOUBLE POST HINGED BOLLARD INSTALLATION DRAWING</b>		<b>THIRD ANGLE PROJECTION</b>		Do not scale from drawing	
2	11.14.10	wkz	Locking Pins & Note		
1	1.30.10	wkz	Safety Labels replace arrows & change revision block		
Rev.	Date	by	Description		
					
			Action	by	Checked
			Design	wkz	wkz
			Drawn	wkz	wkz
			Dwg. Scale:	nts	Assembly
			Free	P.O. Box 201, Geneva, IL. 60134	
			Bus: 1.877.727.7347		
			Dwg. Copywrite: 2010	84 Pounds	Shipping Weight
			Dwg. Size: Letter	84 Pounds	Drawing Number:
			Dwg. Date: 12.10.10	84 Pounds	DHB-1
			Dwg. Date: 12.10.10	84 Pounds	Sheet: 1 of 2

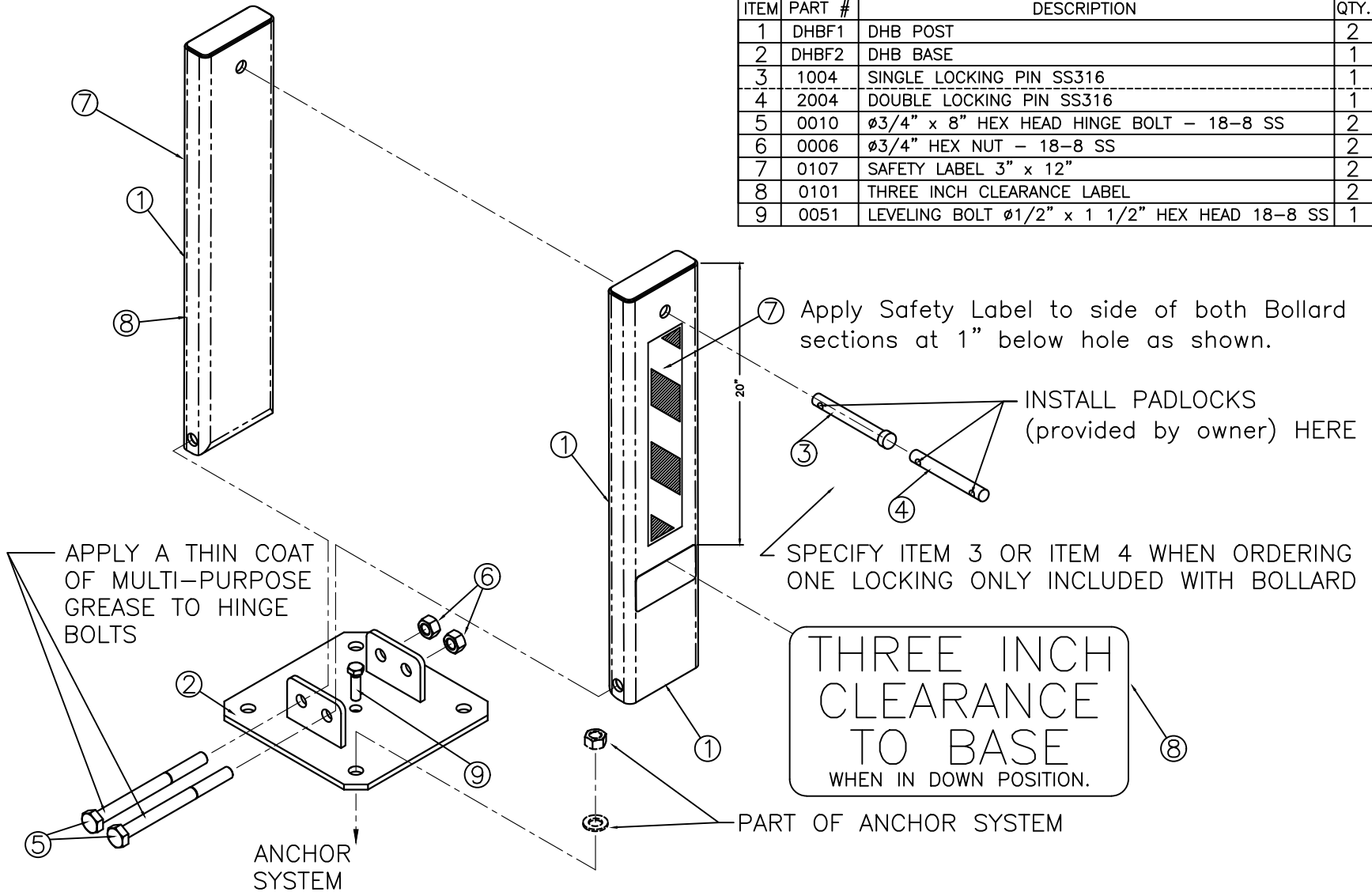
**Toll Free TrafficGuard,® Inc.**

# General Specifications and Notes for all Parts and Weldments

1. All Steel Work shall conform to the AISC "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings" – Latest Edition unless noted on the dwg.
2. All Welding shall be performed by qualified welders and shall conform to the American Welding Society ANSI/AWS D1.1– Latest Edition of the Structural Welding Code–Steel.
3. All Material shall be new and shall be as noted on the drawing and/or in the Bill of Material. SS indicates Stainless Steel and HDG indicates Hot Dip Galvanized.
4. All Painting Work shall conform to the manufacturer's specification and installation instructions and the SSPC (Steel Structures Painting Council) and as noted on the dwg.
5. All hole center dimensions shall have a tolerance of 1/16 inch± and other dimensions shall have a tolerance of 1/8 inch± unless noted on the drawing.
6. All work shall be packaged and shipped per specific instructions by PARS Direct.

## BILL OF MATERIAL

ITEM	PART #	DESCRIPTION	QTY.
1	DHBF1	DHB POST	2
2	DHBF2	DHB BASE	1
3	1004	SINGLE LOCKING PIN SS316	1
4	2004	DOUBLE LOCKING PIN SS316	1
5	0010	Ø3/4" x 8" HEX HEAD HINGE BOLT – 18-8 SS	2
6	0006	Ø3/4" HEX NUT – 18-8 SS	2
7	0107	SAFETY LABEL 3" x 12"	2
8	0101	THREE INCH CLEARANCE LABEL	2
9	0051	LEVELING BOLT Ø1/2" x 1 1/2" HEX HEAD 18-8 SS	1



**DOUBLE POST HINGED BOLLARD**  
**ASSEMBLY DRAWING**

THIRD ANGLE PROJECTION

Do not scale from drawing

Rev.	Date	by	Description
2	11.14.10	wkz	Locking Pins & Note
1	1.30.10	wkz	Safety Labels replace arrows & change revision block

Action	by	Checked
Design	wkz	wkz
Drawn	wkz	wkz

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P.O. Box 201, Geneva, IL. 60134			
Dwg. Scale: nts	Assembly	Shipping Weight	Drawing Number:
Copywriter: 2010	84 Pounds	DHB-2	
Dwg. Size: Letter	Drawing Date: 12.10.10	Sheet: 2 of 2	

This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard.

LEVELING BOLT INSTRUCTIONS:

1. START 1/2" (13) X 1 3/4" 18-8 STAINLESS STEEL HEX IN CENTER HOLE OF BASE PLATE.  
(THREADS HAVE BEEN LEFT PAINTED FOR A TIGHT FIT)
2. TURN BOLT SLIGHTLY THROUGH BASE.
3. INSTALL POSTS AND LOCKING UPRIGHT POSITION.
4. BEGIN RAISING LEVELING BOLT WITH WRENCH UNTIL CONTACT IS MADE WITH POSTS.  
RESULTS WILL BE A STABLE SET OF POSTS.

TrafficGuard

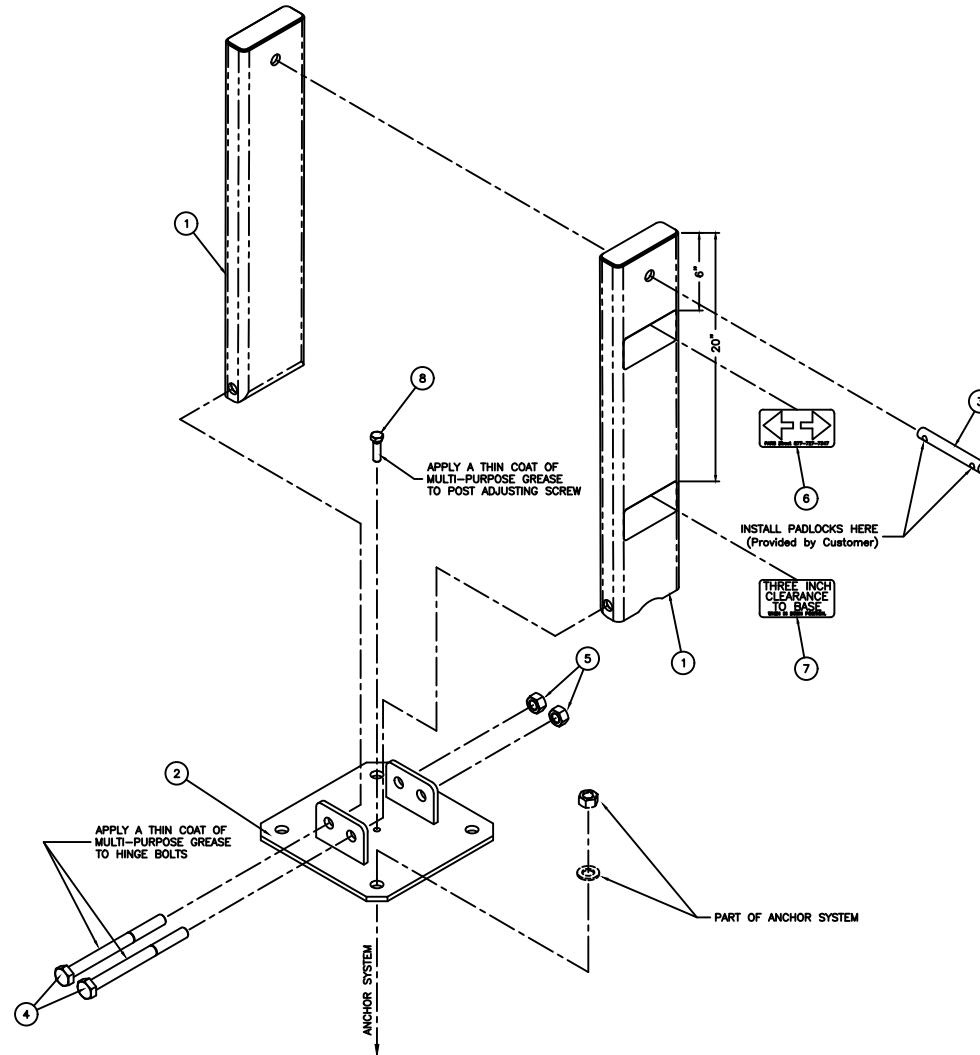
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P.O. Box 201, Geneva, IL. 60134

877-727-7347

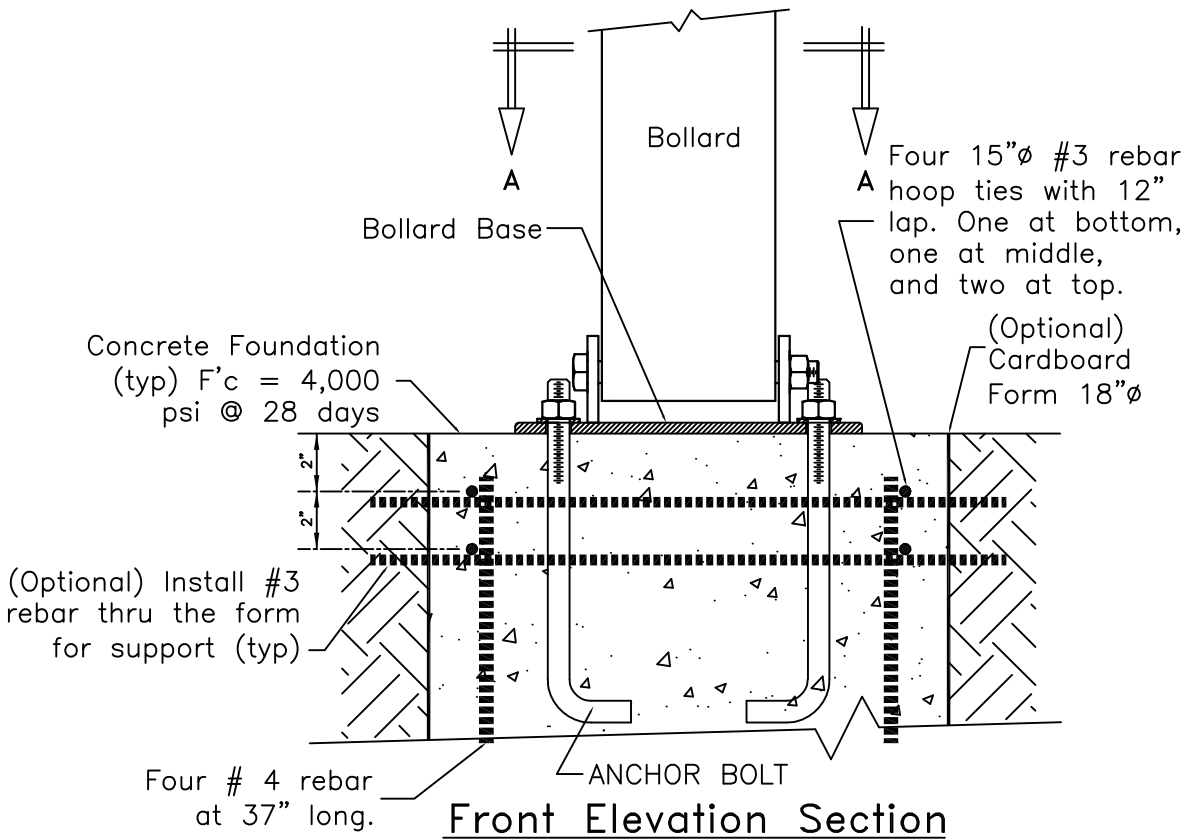
www.trafficguard.net

DHB

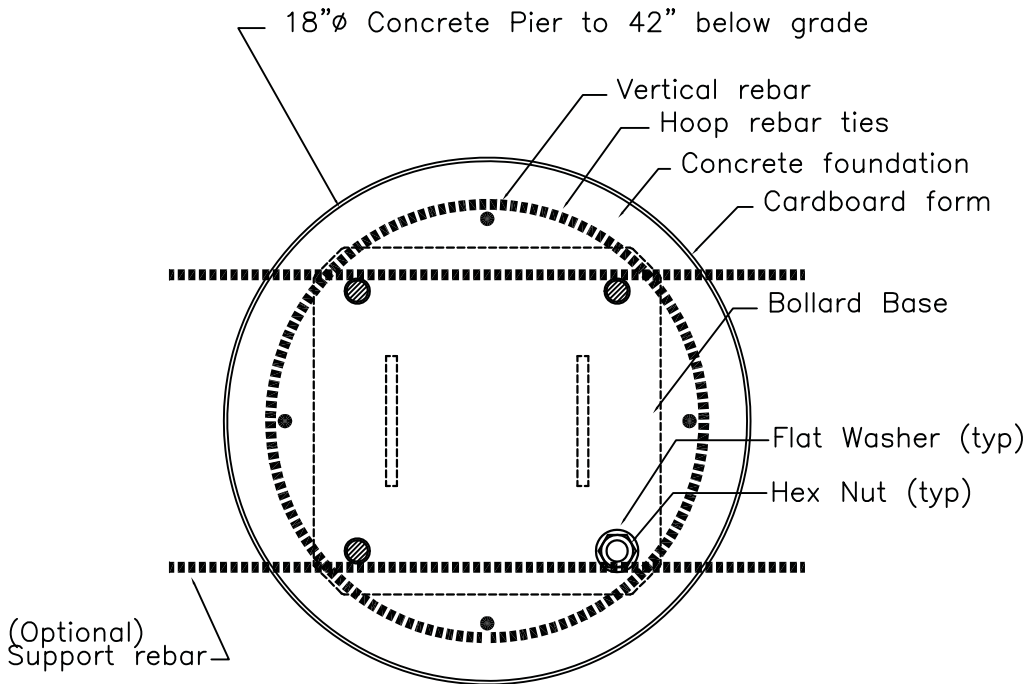




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**Front Elevation Section**



**Plan Section "A-A"**

**CPAS12 COLLAPSIBLE POST ANCHOR SYSTEM DETAILS**

These Anchorage systems are designed for the noted loading based on a quality substrate material and proper installation, by the customer's contractor. The installation shall conform to the drawing and the manufacturer's instructions. The customer is responsible to determine the adequate quality of new or existing concrete and the earth substrate. The concrete shall be solid and uncracked with adequate thickness for the anchors and a compressive strength of  $F_c'$  (minimum)=4,000 pounds per square inch. The earth shall have an unconfined strength of  $Q_u$  (minimum)=4,000 pounds per square foot. If you have questionable substrates, contact your local structural engineer for appropriate anchorage evaluation and/or anchorage design. A test installation may be required to determine the adequacy of the anchorage system for your specific installation. Call for guidance, if needed.

**CONCRETE PIER ANCHOR SYSTEM  
DETAIL DRAWING CPAS12**

THIRD ANGLE PROJECTION  
Do not scale from drawing

Toll Free TrafficGuard,® Inc.  
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Rev.	Date	by	Description	Action	by	Dwg. Scale:	Assembly Shipping Weight	Drawing Number:
2	11.14.10	wkz	Locking Pins & Note	Design	wkz	nts	84 Pounds	CPAS12
1	-	-	-	Drawn	wkz	Copywrite: 2010		
				Checked	wkz	Dwg. Size: Letter	Drawing Date: 12.10.10	Sheet: 2 of 2