



# GENERAL WARNINGS AND CAUTIONARY STATEMENTS FOR COLLAPSIBLE BOLLARDS

In order to safely and effectively use any TrafficGuard Direct 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 Direct's products or literature, please contact TrafficGuard Direct at 877-727-7347, or email [sales@trafficguard.net](mailto:sales@trafficguard.net).



**READ AND FULLY UNDERSTAND THE INSTALLATION INSTRUCTIONS**

before attempting to install any TrafficGuard Direct bollard product.



**SUBSTITUTION OF COMPONENTS MAY IMPAIR THE PROPER FUNCTION** of TrafficGuard

Direct bollard products. If you need replacement parts, please contact TrafficGuard Direct at the number and email above.



**ALWAYS ENSURE THAT THE LOCK PIN IS LOCKED INTO PLACE** whether the bollard is in the upright or down position with collapsible bollards.



**WARNING: FAILURE TO LOCK THE LOCK PIN IN PLACE ON COLLAPSIBLE BOLLARDS MAY CAUSE THE BOLLARD TO FALL – ALWAYS LOCK THE LOCK PIN IN PLACE WITH A PADLOCK.**



**REPLACEMENT LOCK PINS ARE AVAILABLE** for purchase at TrafficGuard Direct. For purchase of replacement lock pins or other components, please contact TrafficGuard Direct at the number or email above.



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



**FOR MAXIMUM EFFECTIVENESS** of TrafficGuard Direct bollard products, be sure to properly maintain bollards by replacing any damaged, corroded or missing components, and reapply paint as required to maximize visibility.



**TO ENSURE VISIBILITY** of bollards, be sure to apply all decals that are provided with the product, and in the manner recommended by TrafficGuard Direct.


***IF IN DOUBT CALL TRAFFICGUARD DIRECT 877-727-7347***

INSTALLATION INSTRUCTIONS FOR:

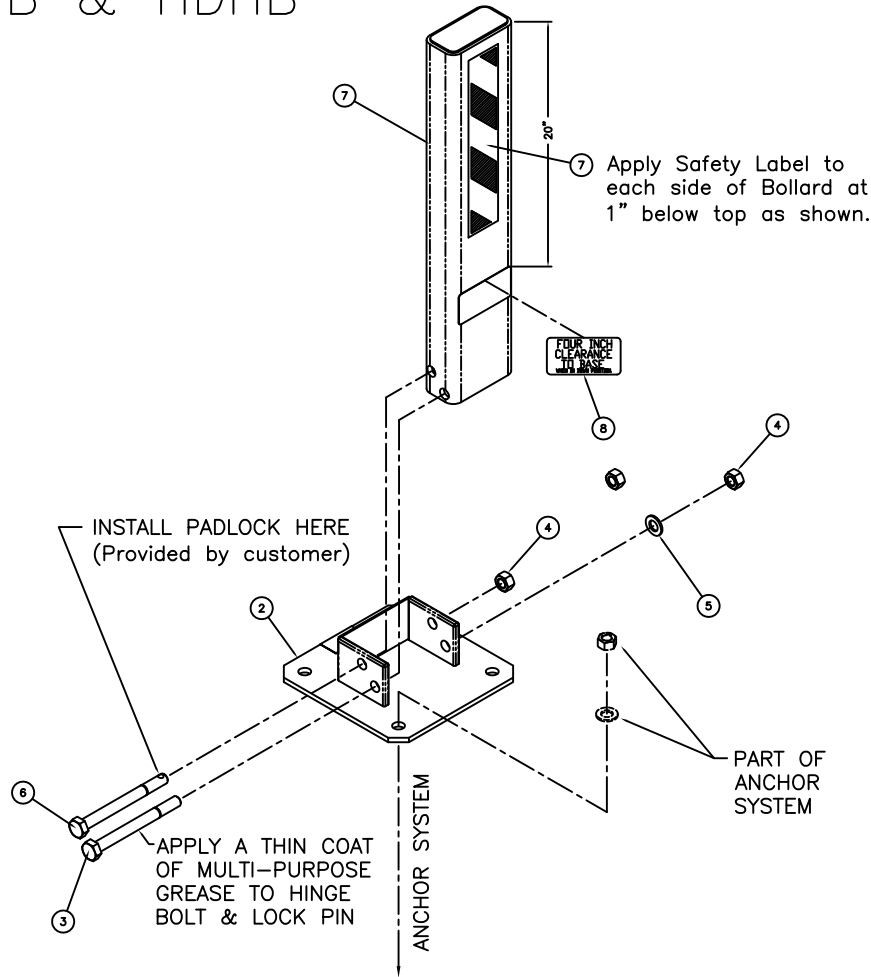
(HDHB & LPHDHB)

LOW PROFILE HEAVY DUTY HINGED BOLLARD

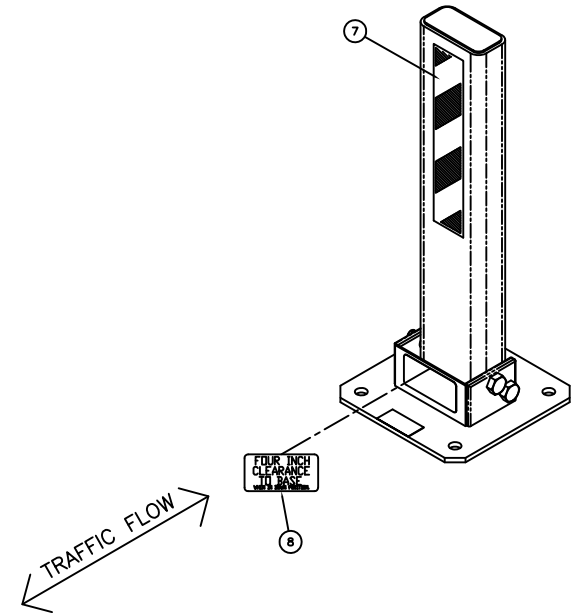
1. Verify that all Low Profile Heavy Duty Hinged Bollard parts are in the shipment package as shown on the "Bill of Material".
  2. Provide Low Profile Heavy Duty Hinged Bollard Anchor System (see included Anchor System Drawing-BAS) of your choice at a location to suit your specific needs.
  3. Install LPHDHB Base (Item 2) true and level on your selected 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 CPAS and ESAS. Torque hex nuts for other Anchor Systems to Manufacturers Specification.
  4. Install LPHDHB Post (Item 1) to LPHDHB Base (Item 2) using Hinge Bolt (Item 3), Flat Washer (Item 5), and Hex Nut (Item 4) as shown. Tack Weld Hex Nut to Hinge Bolt or Chisel Hinge Bolt Threads such that Hex Nut cannot be easily removed.
  5. Install Locking Pin thru UP Position Bollard Post, and install Padlock where shown. A Hex Nut (Item 4) is included in case a padlock is not available.
  6. Install the four Labels at the locations shown.
  7. Check the functional operation of the Low Profile Heavy Duty Hinged Bollard.
- \* Note: S.S. shims, tools, grease, and padlocks are not provided.

<b>LOW PROFILE HEAVY DUTY HINGED BOLLARD</b>		THIRD ANGLE PROJECTION 	<b>TrafficGuard®</b>	
<b>ASSEMBLY DRAWING</b>		Do not scale from drawing	P.O. Box 201, Geneva, IL 60134	
ZABEL ENGINEERING CONSULTING ENGINEERS		Design by	Drawn by	Toll Free: 877-727-7347 Fax: 800-814-7194
800 South Riverside Av., Aurora, IL 60009 Ill: 630-589-0080 Fax: 630-589-1097		Checked by	Size	Assembly Shipping Weight
Rev.	by	Date	Description	Drawing Name
---	---	---	---	LPHDHB A2
This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard.			Scale: 3"=1'	Drawing Date: 9-25-2002 Sheet: 2 of 2
			Drawing Dimension: 34" x 22"	Copyright 2002

# LPHDHB & HDHB



BILL OF MATERIAL			
ITEM	PART #	DESCRIPTION	QTY.
1	LPHDHB1	LPHDHB POST	1
2	LPHDHB2	LPHDHB BASE	1
3	0010	#3/4" x 8" HEX HEAD HINGE BOLT -- 18-8 SS	1
4	0008	#3/4" HEX NUT -- 18-8 SS	2
5	0009	#3/4" FLAT WASHER -- TYPE A NARROW -- 18-8 SS	1
6	2007	#3/4" x 8" HEX HEAD LOCKING PIN -- 18-8 SS	1
7	0107	SAFETY LABEL 3" x 12"	2
8	0102	FOUR INCH CLEARANCE LABEL	2

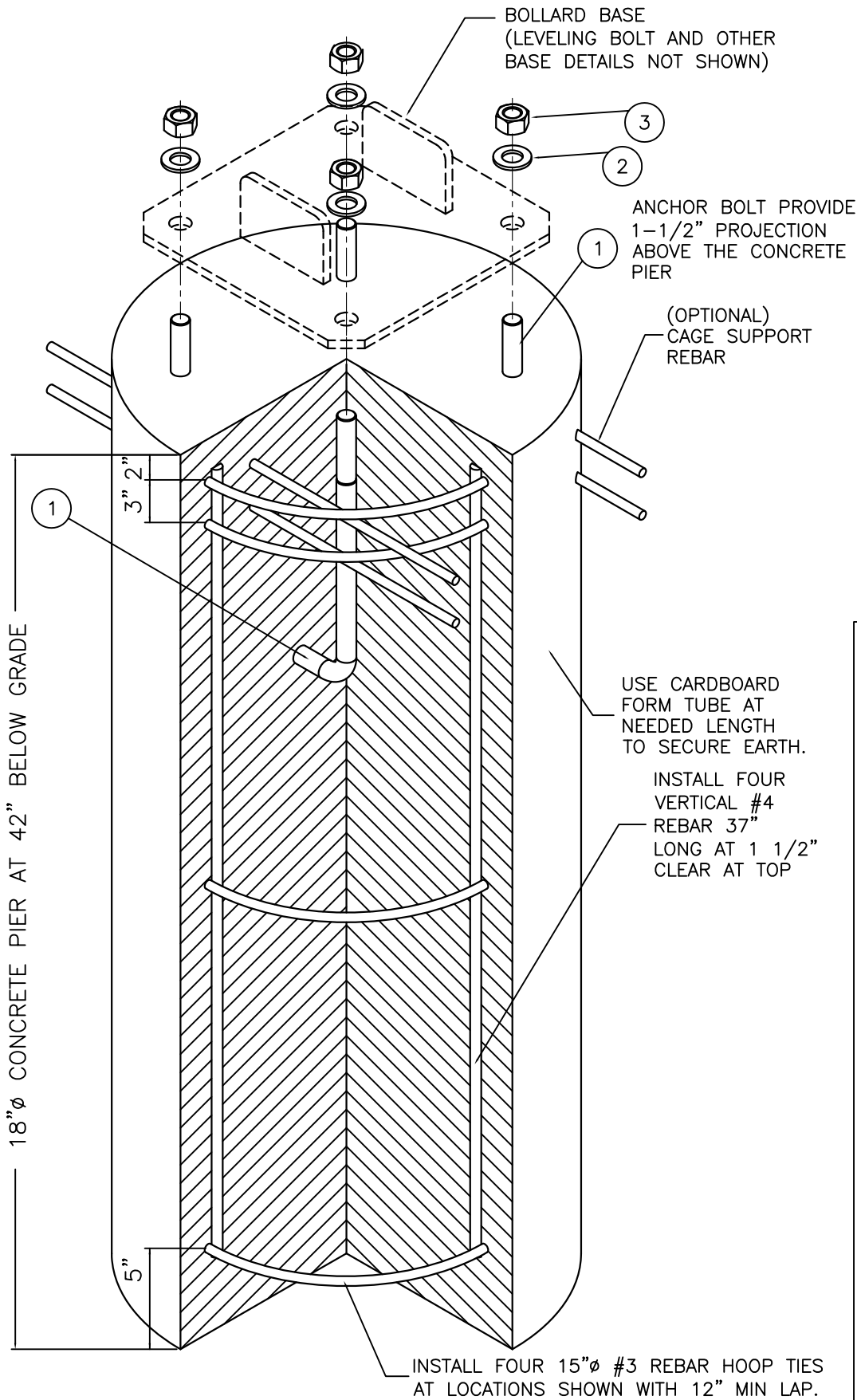


<b>LOW PROFILE HEAVY DUTY HINGED BOLLARD</b>		THIRD ANGLE PROJECTION		<b>TrafficGuard®</b> P.O. Box 201, Geneva, IL 60134 Toll Free: 877-727-7347 Fax: 800-814-7194
<b>ASSEMBLY DRAWING</b>		Do not scale from drawing		
Rev.	By	Date	Description	Action by Drawn: WCZ Drawn: GJM Checked: WCZ Size: Assembly Shipping Weight D 70.64 Pounds Drawing Number: LPHDHB2 Scale: 3/4"=1" Drawing Date: 9-25-2002 Sheet: 2 of 2 Drawing dimension = 34" x 25"
1	info	1.28.10	Safety Label replace arrows	

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# CPAS12 COLLAPSIBLE POST ANCHOR SYSTEM ASSEMBLY



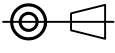
### BILL OF MATERIAL

### OPTIONAL CPAS12 KIT IF ORDERED

ITEM #	PART #	DESCRIPTION	QTY.
*	9001	CPAS12 KIT - INCLUDES THE FOLLOWING PART NUMBERS	*
1	0002	$\phi$ 3/4" x 12" TYPE L ANCHOR BOLT-H.D.G.	4
2	0007	$\phi$ 3/4" TYPE A FLAT NARROW WASHER GALVANIZED STEEL	4
3	0006	$\phi$ 3/4" HEX NUT GALVANIZED STEEL	4

NOTE: CONCRETE, FORM AND REBAR PROVIDED BY OTHERS

## CONCRETE PIER ANCHOR SYSTEM INSTALLATION DRAWING CPAS12

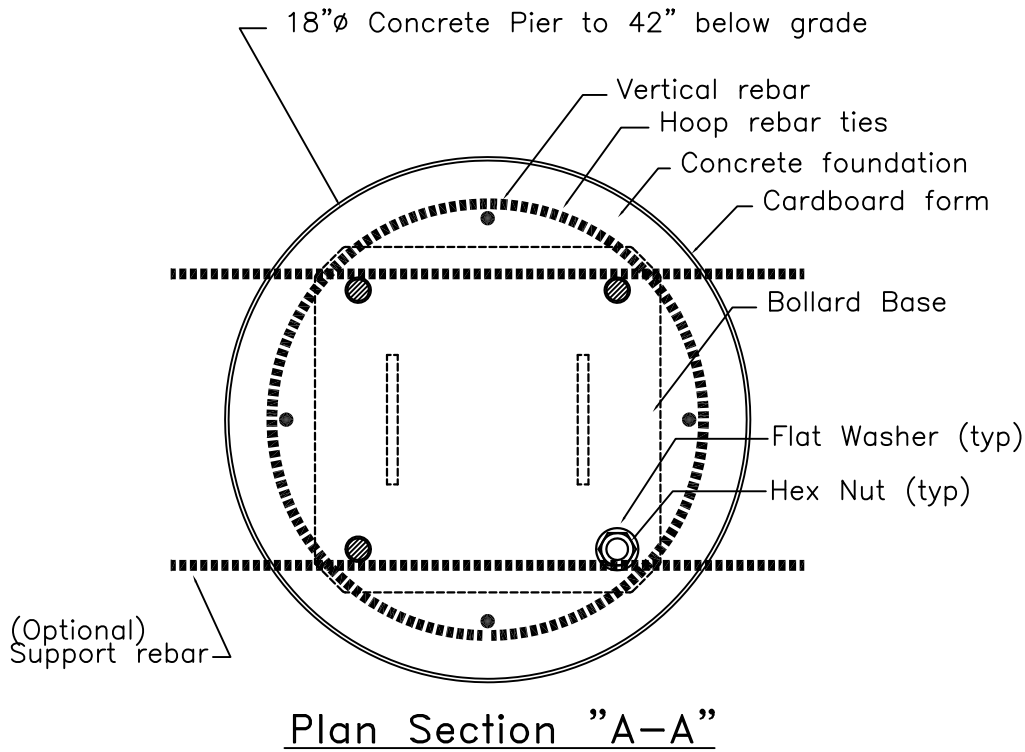
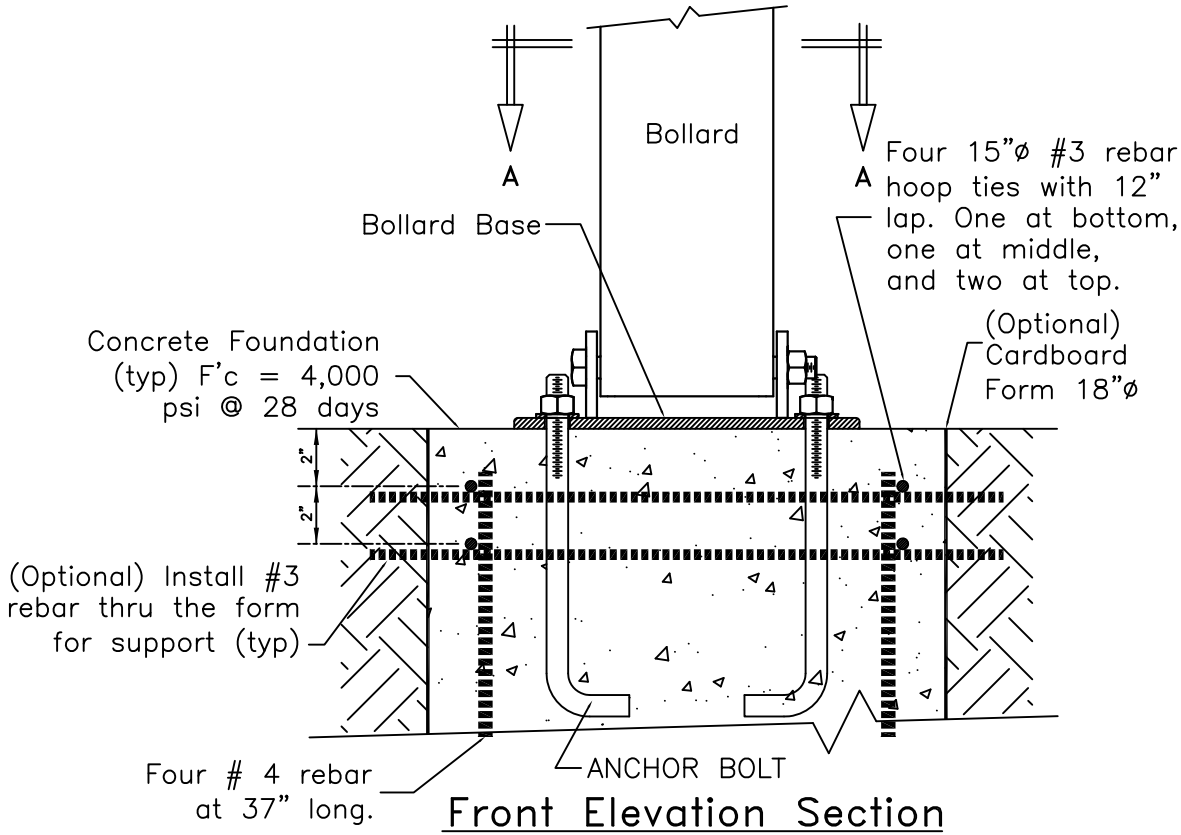
THIRD ANGLE  
PROJECTION   
Do not scale from drawing

Toll Free  
P.O. Box 201, Geneva, IL. 60134  
Bus: 1.877.727.7347 Fax: 1.800.814.7194

# TrafficGuard®

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

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



## 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®**

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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