



# GENERAL WARNINGS AND CAUTIONARY STATEMENTS FOR REMOVABLE 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.



**WARNING: FAILURE TO FILL/COVER AN OPEN GROUND SLEEVE ON ALL REMOVABLE BOLLARDS MAY RESULT IS DAMAGE TO VEHICLES OR INJURY TO PEDESTRIANS. ALWAYS FILL/COVER THE GROUND SLEEVE PER TRAFFICGUARD<sup>®</sup>, INC. INSTRUCTIONS.**



## **REPLACEMENT GROUND SLEEVE FILLER PIECES ARE AVAILABLE**

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



**CAUTION: BOLLARD MUST ALWAYS BE SECURED WITH LOCK MECHANISM WHEN BOLLARD IS IN THE GROUND SLEEVE TO AVOID MISUSE.**



## **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**

4

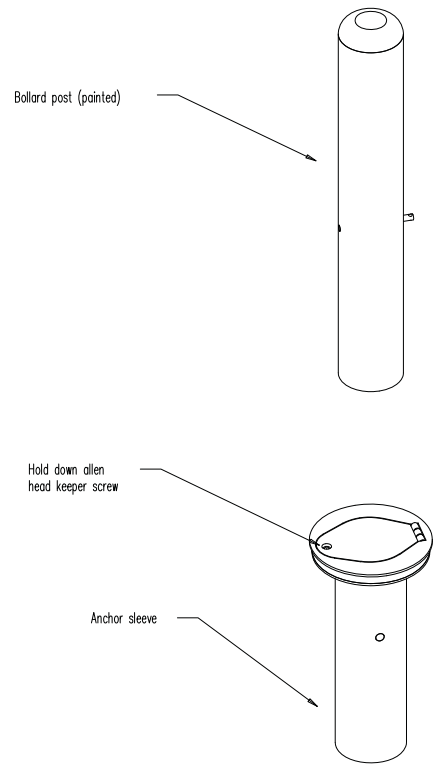
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2

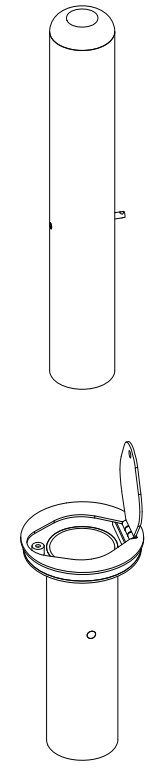
1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

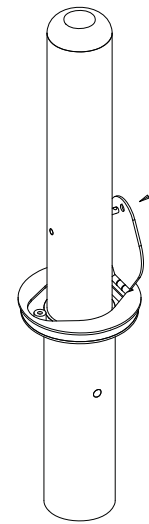
Note:  
 - All dimensions given in inches  
 - Grind and smooth all edges, burrs, and corners



Removed position



Removed position (with cover open)



Installed position (with cover open)

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 Buildings" - Latest Edition unless noted on the drawing.
- 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 Dipped Galvanized steel
- 4). All painting work shall conform to the manufacturers specification and installation instructions and the SSPC (Steel Structures Painting Council) and as noted on the drawing.
- 5). All hole center dimensions shall have a +/- 1/16 inch tolerance and all other dimensions shall have a +/- 1/8 inch tolerance unless noted on the drawing.
- 6). All work shall be packaged and shipped per specific instructions by PARS Direct.

This drawing may not be used or reproduced except when authorized in writing by Traffic Guard.

TrafficGuard, Inc.  
 P.O. Box 205, Orem, Utah 84054  
 Tel: (801) 733-7540  
 Fax: (801) 733-7547

DESIGNER	SCALE	RELEASE DATE	WEIGHT	SHEET	REV

4

3

2

1

D

D

C

C

B

B

A

A


# CONSTRUCTION DATA SCHEDULE RPAS

1. THE DESIGN LOAD IS A STATIC LOAD "P" APPLIED AT 27 INCHES ABOVE GRADE.
2. THE EARTH PRESSURE VALUE IS SHOWN AT DESIGN LOAD AND THE OWNER SHOULD VERIFY THAT THE EARTH IS ADEQUATE TO WITHSTAND THE NOTED EARTH DESIGN PRESSURE.
3. ANCHORAGE SYSTEMS BY OTHERS THAN TRAFFICGUARD,<sup>®</sup> INC. MAY CAUSE PREMATURE FAILURE OF THE BOLLARD.

NOTE: CONCRETE, FORM, ROCK, PVC DRAIN AND REBAR PROVIDED BY OTHERS										
DESIGN LOAD P	BOLLARD		EARTH "Q" MAX.	PIER HT. "C" MIN.	VERT. REBAR		HOOP TIES	PIER CONCRETE	FRENCH DRAIN	PIER "D"
	Out Dia.	Ins Dia.			LENGTH	QTY				
600 #	1.910"	1.620"	992 PSF	42 INCH	38 INCH	3	6 EA.	6 Cu Ft	1.2 CF	8"
1200 #	2.440"	2.064"	1984 PSF	42 INCH	38 INCH	3	6 EA.	6 Cu Ft	1.2 CF	8"
3000 #	3.500"	3.068"	2204 PSF	42 INCH	38 INCH	4	6 EA.	6 Cu Ft	0.5 CF	18"
6000 #	4.500"	4.026"	4408 PSF	42 INCH	38 INCH	4	6 EA.	6 Cu Ft	0.5 CF	18"
6000 #	4.500"	4.026"	2667 PSF	54 INCH	50 INCH	4	7 EA.	8 Cu Ft	0.5 CF	18"
10000#	5.563"	5.047"	4444 PSF	54 INCH	50 INCH	4	7 EA.	8 Cu Ft	0.5 CF	18"
10000#	5.563"	5.047"	3600 PSF	60 INCH	56 INCH	4	8 EA.	9 Cu Ft	0.5 CF	18"
10000#	5.563"	5.047"	2975 PSF	66 INCH	62 INCH	4	8 EA.	10 Cu Ft	0.5 CF	18"
15000#	6.625"	6.065"	3750 PSF	72 INCH	68 INCH	4	9 EA.	11 Cu Ft	0.5 CF	18"
15000#	6.625"	6.065"	3195 PSF	78 INCH	72 INCH	4	9 EA.	12 Cu Ft	0.5 CF	18"
15000#	6.625"	6.065"	3240 PSF	60 INCH	56 INCH	8	8 EA.	25 Cu Ft	1.6 CF	30"
15000#	6.625"	6.065"	3333 PSF	54 INCH	50 INCH	8	7 EA.	32 Cu Ft	1.8 CF	36"

THIS IS A GUIDELINE FOR ESTIMATING, SITE SPECIFIC CONDITIONS SHOULD BE VERIFIED.  
 This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard,<sup>®</sup> Inc.

## ROUND POST BOLLARD RPAS ANCHORAGE SYSTEM DETAILS

THIRD ANGLE PROJECTION   
Do not scale from drawing

Toll Free **TrafficGuard,<sup>®</sup> Inc.**  
 P.O. Box 201, Geneva, IL. 60134  
 Bus: 1.877.727.7347 Fax: 1.800.814.7194

3	-	-	-	Action	by	Dwg. Scale: nts	Assembly Shipping Weight	Drawing Number:
2	-	-	-	Design	wkz	Copywrite: 2010	Varies per Model	RPAS-2
1	-	-	-	Drawn	wkz	Dwg. Size: Letter	Drawing Date: 12.10.10	Sheet: 2 of 2
Rev.	Date	by	Description	Checked	wkz			

VEHICLE DESIGN STATIC LOAD "P"  
AT 27 INCHES ABOVE GRADE (NTS)

INSTALL TOP OF CONCRETE AND  
ANCHOR POST AT GRADE

USE NOTED PIER "D"  
DIAMETER SONOTUBE  
IF NEEDED TO AVOID  
CAVE IN AT TOP

ROUND POST ANCHOR  
SLEEVE BY TRAFFICGUARD,<sup>®</sup>  
Inc. AT CENTER OF PIER

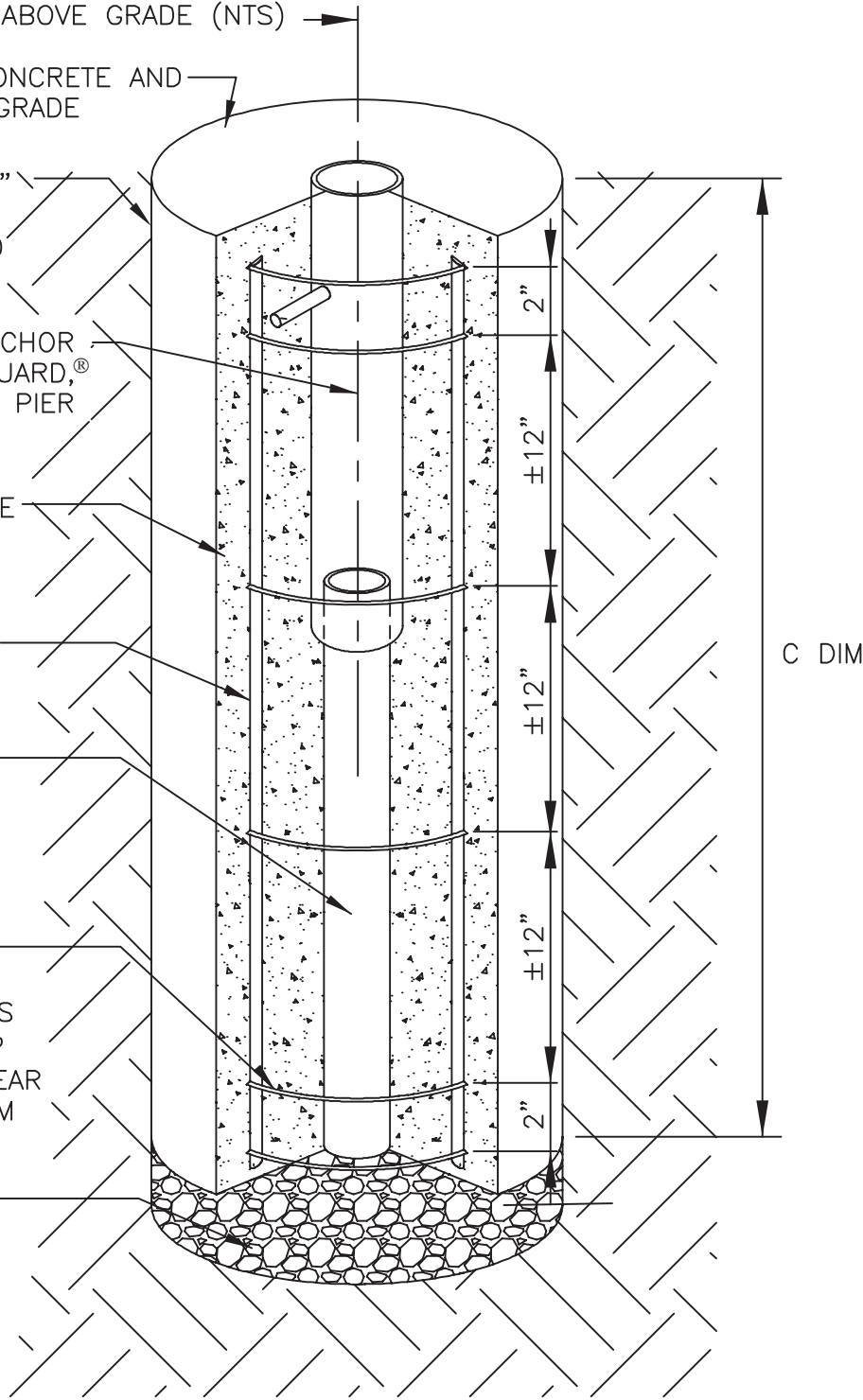
4,000 PSI CONCRETE  
PIER AT NOTED  
DIAMETER & HEIGHT

#4 VERTICAL REBAR  
AT NOTED QUANTITY  
& LENGTH.

PVC DRAIN PIPE  
AT LENGTH FROM  
ROCK TO BOLLARD  
AT DIAMETER TO  
MATCH BOLLARD

#3 REBAR HOOP  
TIES AT THE NOTED  
PIER DIAMETER MINUS  
4" WITH 12" TIE LAP  
INSTALLED AT 2" CLEAR  
FROM TOP & BOTTOM  
OF PIER AS SHOWN

3 INCHES MIN.  
THICK ROCK  
FRENCH DRAIN  
PIER BASE.



**PIER ELEVATION SECTION**

NOTE REFER TO RPAS-2 FOR THE ANCHORAGE SYSTEM DIMENSIONS, DESIGN LOADS, BOLLARD AND REBAR SIZE, QUANTITIES, AND EARTH PRESSURES THIS IS A GUIDELINE FOR ESTIMATING, SITE SPECIFIC CONDITIONS SHOULD BE VERIFIED.

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<b>ROUND POST BOLLARD RPAS ANCHORAGE SYSTEM ASSEMBLY</b>				THIRD ANGLE PROJECTION		Toll Free <b>TrafficGuard,<sup>®</sup> Inc.</b>		
Do not scale from drawing						P.O. Box 201, Geneva, IL. 60134		
3	-	-	-	Action	by	Bus: 1.877.727.7347	Fax: 1.800.814.7194	
2	-	-	-	Design	wkz	Dwg. Scale: nts	Assembly Shipping Weight	
1	-	-	-	Drawn	wkz	Copywrite: 2010	Varies per Model	
Rev.	Date	by	Description	Checked	wkz	Dwg. Size: Letter	Drawing Date: 12.10.10	
							Drawing Number: <b>RPAS-1</b>	Sheet: 1 of 2