



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at wvOASIS.gov. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at WVPurchasing.gov with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 5

[List View](#)**General Information** [Contact](#) [Default Values](#) [Discount](#) [Document Information](#) [Clarification Request](#)

Procurement Folder: 902761

Procurement Type: Central Master Agreement

Vendor ID: 

Legal Name: ARROW SAFETY DEVICE CO

Alias/DBA:

Total Bid: \$4,124.92

Response Date: Response Time: Responded By User ID: First Name: Last Name: Email: Phone:

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT2100000168

Published Date: 6/30/21

Close Date: 7/13/21

Close Time: 13:30

Status: Closed

Solicitation Description: 

Total of Header Attachments: 5

Total of All Attachments: 5



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 902761
Solicitation Description: CHANNELIZER CONES FOR 55 MPH AND BELOW ROADWAYS
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2021-07-13 13:30	SR 0803 ESR07132100000000156	1

VENDOR
 000000164192
 ARROW SAFETY DEVICE CO

Solicitation Number: CRFQ 0803 DOT2100000168
Total Bid: 4124.920000000000072759576141 **Response Date:** 2021-07-13 **Response Time:** 06:53:41
Comments:

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	COMPLETE FLEXIBLE PLASTIC CHANNELIZER CONE	100.00000	EA	40.740000	4074.00

Comm Code	Manufacturer	Specification	Model #
46161508			

Commodity Line Comments:

Extended Description:

COMPLETE FLEXIBLE PLASTIC CHANNELIZER CONE, TO INCLUDE SHEETING (PRE-APPLIED), AND RUBBER BASE

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE	1.00000	EA	34.000000	34.00

Comm Code	Manufacturer	Specification	Model #
46161508			

Commodity Line Comments:

Extended Description:

REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE, TO INCLUDE SHEETING PRE-APPLIED. MODEL SUPPLIED SHALL BE SAME AS MODEL SUPPLIED UNDER ITEM #1. (CHANNELIZER CONE ONLY)

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE RUBBER BASE	1.00000	EA	16.920000	16.92

Comm Code	Manufacturer	Specification	Model #
46161508			

Commodity Line Comments:

Extended Description:

REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE RUBBER BASE. MODEL SUPPLIED SHALL BE SAME AS MODEL SUPPLIED UNER ITEM #1. (BASE ONLY)

EXHIBIT A

BID SCHEDULE

Quantities listed in this RFQ are approximations only. It is understood and agreed that the contract shall cover the quantities actually ordered for delivery during the term of the contract, whether more or less than the quantities shown.

Item Number	Estimated Quantity	Unit of Measure	Description	Unit Cost	Extended Total Amount	Inventory Subcode (DOH Use Only) (Class 019 Type 008)
FLEXIBLE PLASTIC CHANNELIZER CONES - 55 MPH AND LESS						
1	100	EA	Channelizer Cone With Base	\$40.74	\$4,074.00	080614
2	1	EA	Channelizer Cone Without Base	\$34.00	\$34.00	080616
3	1	EA	Channelizer Cone Replacement Base	\$16.92	\$16.92	080617
CONTRACT TOTAL →					\$4,124.92	

DOH PERSONNEL PLEASE NOTE: ITEMS SUPPLIED ARE INTENDED FOR USE ONLY ON ROADWAYS WITH A NORMAL POSTED SPEED LIMIT OF 55 MPH OR LESS.

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Arrow Safety Device Company Address: 123 Dixon Street
PO Box 205
Name of Authorized Agent: David Speier Address: Selbyville, DE 19975
Contract Number: DOT2100000168 Contract Description: Channelizer Cones 55 MPH or Less
Governmental agency awarding contract: West Virginia Division of Highways

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

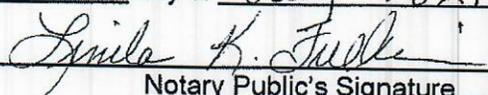
Signature:  Date Signed: 7-12-21
DAVID SPEIER

Notary Verification

State of DELAWARE, County of SUSSEX:

I, DAVID SPEIER, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 12th day of JULY 2021.


Notary Public's Signature

To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____



STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Arrow Safety Device Company

Authorized Signature: *[Signature]* Date: 7-12-21

DAVID SPETER

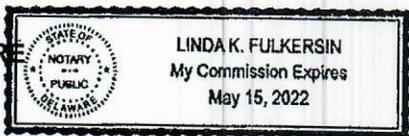
State of DELAWARE

County of SUSSEX, to-wit:

Taken, subscribed, and sworn to before me this 12th day of July 2021, 20 .

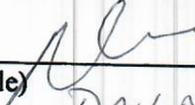
My Commission expires 5/15, 2022.

AFFIX SEAL HERE



NOTARY PUBLIC *Linda K. Fulkersin*

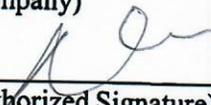
DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

 PRESIDENT
(Name, Title)
DAVID SPEIER, PRESIDENT
(Printed Name and Title)
123 DIXON STREET, SELBYVILLE DE 19975
(Address)
302-856-2516 F-302-856-1549
(Phone Number) / (Fax Number)
DSPEIER@ARROWSAFETYDEVICE.COM
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

ARROW SAFETY DEVICE COMPANY
(Company)

 PRESIDENT
(Authorized Signature) (Representative Name, Title)

DAVID SPEIER, PRESIDENT
(Printed Name and Title of Authorized Representative)

7/12/21
(Date)

302-856-2516 X 11 F-302-856-1549
(Phone Number) (Fax Number)



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Request for Quote
 Public Safety

Proc Folder: 902761		Reason for Modification:	
Doc Description: CHANNELIZER CONES FOR 55 MPH AND BELOW ROADWAYS			
Proc Type: Central Master Agreement			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-06-30	2021-07-13 13:30	CRFQ 0803 DOT2100000168	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code:

Vendor Name: ARROW SAFETY DEVICE CO.

Address: 123 DIXON STREET

Street:

City: SELBYVILLE

State: DE **Country:** USA **Zip:** 19975

Principal Contact: DAVID SPEIER

Vendor Contact Phone: 302-856-2516 **Extension:** 11

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X 

FEIN# 26-3237023 **DATE** 7/12/21

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

REQUEST FOR QUOTATION:
 The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract for Flexible Plastic Channelizer Cones - 55 mph or less.

INVOICE TO	SHIP TO
------------	---------

VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER No City WV US	STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER No City WV US
--	--

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	COMPLETE FLEXIBLE PLASTIC CHANNELIZER CONE	100.00000	EA	40.74	4,074.00

Comm Code	Manufacturer	Specification	Model #
46161508	PSS INNOVATIONS	NAVIGATOR 42" w/ 16lb BASE	N4246POB16

Extended Description:
 COMPLETE FLEXIBLE PLASTIC CHANNELIZER CONE, TO INCLUDE SHEETING (PRE-APPLIED), AND RUBBER BASE

INVOICE TO	SHIP TO
------------	---------

VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER No City WV US	STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER No City WV US
--	--

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE	1.00000	EA	34.00	34.00

Comm Code	Manufacturer	Specification	Model #
46161508	PSS INNOVATIONS	NAVIGATOR 42" CONE ONLY	N4246PO

Extended Description:
 REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE, TO INCLUDE SHEETING PRE-APPLIED. MODEL SUPPLIED SHALL BE SAME AS MODEL SUPPLIED UNDER ITEM #1. (CHANNELIZER CONE ONLY)

INVOICE TO		SHIP TO	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA	
No City WV		VARIOUS LOCATIONS AS INDICATED BY ORDER	
US		No City WV	
		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE RUBBER BASE	1.00000	EA	16.92	16.92

Comm Code	Manufacturer	Specification	Model #
46161508	PSS INNOVATIONS	NAVIGATOR 16" BASE ONLY	NB16

Extended Description:
 REPLACEMENT FLEXIBLE PLASTIC CHANNELIZER CONE RUBBER BASE. MODEL SUPPLIED SHALL BE SAME AS MODEL SUPPLIED UNER ITEM #1. (BASE ONLY)

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Tech Questions due by 10:00am	2021-07-07

Navigator™ 28" and 42" Channelizer

THE CHOICE FOR WORK ZONES THAT MOVE FREQUENTLY

Manufactured from low density polyethylene plastic with UV inhibitors.



**Compact and stackable design saves space.
Light weight allows for easier, safer installations.**

Molded handles accept Types A and C Warning Lights. The handle also serves as a "roping-off" mount.

Navigator shown with hexagonal base. Available in 10 or 16 lb. weights. 30 lb. base also available.

Channelizer bases are manufactured from 100% recycled material.

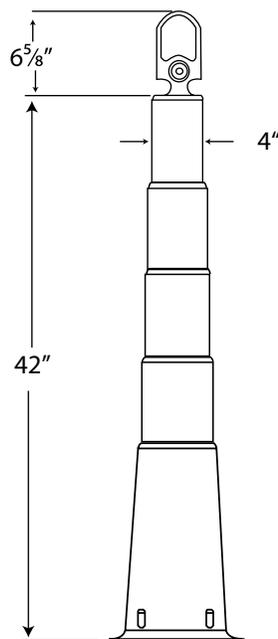
42" Navigator accommodates up to 5 bands of 6" sheeting.

28" Navigator can accommodate 3 bands.

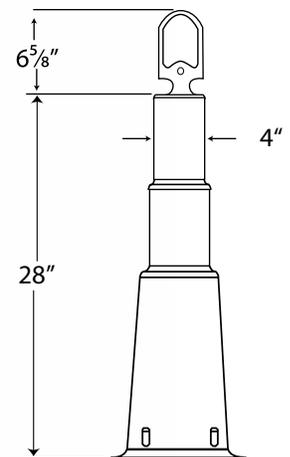
Retroreflective sheeting meets all state and federal specifications, and is available in Engineer, Hi-Intensity and Fluorescent grades.



42" Navigator Channelizer



28" Navigator Channelizer



30 lb. Rubber Base 100% recycled material.

US Patent No. D406,543.
Canadian Patent No. 2,264,975.

Navigator™ Channelizer Barricade™

FOR UNIQUE WORK ZONE CONDITIONS
AND CONFIGURATIONS



Navigator Channelizer Barricade can be arranged in many configurations, in angles up to 90°.



Plastic components are manufactured from polyethylene plastic with UV inhibitors. Rubber base is manufactured from 100% recycled material.

Molded handles accept Types A and C Warning Lights. The handle also serves as a “roping-off” mount.

Extruded Centerboards available in 4' and 6' lengths. Bases available in 10 and 16 lb. weights.

Retroreflective sheeting meets all state and federal specifications, and is available in Engineer, Hi-Intensity and Diamond grades.



Navigator Channelizer Barricade does not meet ADA guidelines.

PSS “Hot Stamp” Process BRANDED NAVIGATORS

Add your custom logo to our Navigator 42" channelizers.

Stencil ink does not permeate plastic. It lays on the surface, vulnerable to scuffs and scratches.

“Hot Stamp” ink permeates plastic and resists damage during normal use.

Hot Stamp your logo on your Navigator 42" Channelizers.



Compare “Hot Stamp” to the labor and material costs, and durability, of stencil.





ROADQUAKE
RAPTOR



LIFT HERE

LIFT HERE

SmartWall

PSS Full Product Catalog



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WHO WE ARE

WE ARE PSS:

For over 30 years, PSS has crafted breakthrough solutions that can safeguard worksites and save lives. We are powered by dedicated, creative people and fueled by continuous innovation.

Our focus is on the right-of-way — that point in time and place where motorists, workers, and pedestrians intersect and interact. Our goal is to design products and services that provide safe travels so that everyone can return home safely at the end of the day.

We don't just talk about Innovations for Safety® — we live it. We believe that audacious ideas and hard work produce outstanding results.

Our important work on, around, and through the right-of-way will result in real solutions for real people. Through continuous innovation and with consultation, education, and training, we work to save lives today, tomorrow, and for decades to come.



SECTION

01



SECTION

01

ROADQUAKE®

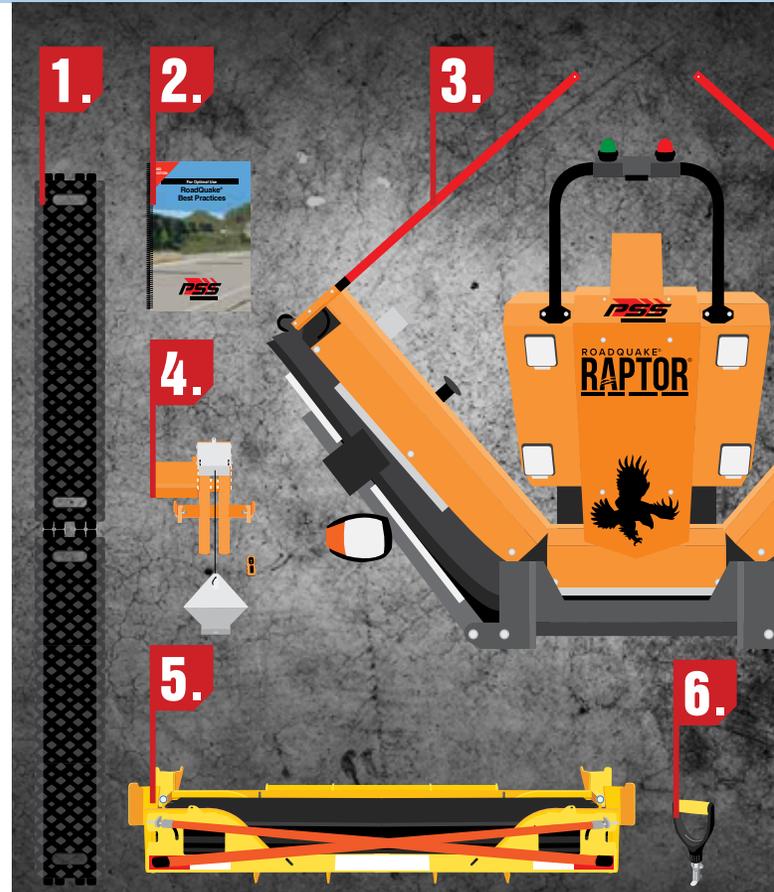
SAFETY SYSTEM

ROADQUAKE® SAFETY SYSTEM

ROADQUAKE® SAFETY SYSTEM:

RoadQuake® Safety System helps workers deploy and retrieve RQ TPRS arrays faster and safer. Workers' exposure to live traffic is reduced.

- 1. RoadQuake® Temporary Portable Rumble Strip (RQ TPRS):** Designed to reduce accidents and save lives, RQ TPRS alerts drivers to changing road conditions. RQ TPRS is the fundamental component of RoadQuake Safety System.
- 2. RoadQuake Best Practices Guide** provides users with deployment, retrieval, and maintenance practices to achieve optimal performance of RQ TPRS.
- 3. RAPTOR® Rumble Strip Handling Machine** transports, deploys, retrieves, and realigns RQ TPRS in work zones. Keeps workers off the road and safer.
- 4. RoadQuake® Retrieval System** pulls RQ TPRS into CRIB with little manual effort. Reduces workers' exposure to live traffic and reduces manual exertion, possible injury.
- 5. CRIB® Carriers** helps workers deploy and retrieve RQ TPRS. Reduces workers' time in live traffic.
- 6. RoadQuake T-Handle** reduces the potential for superficial injury caused by manually lifting and carrying RQ TPRS.

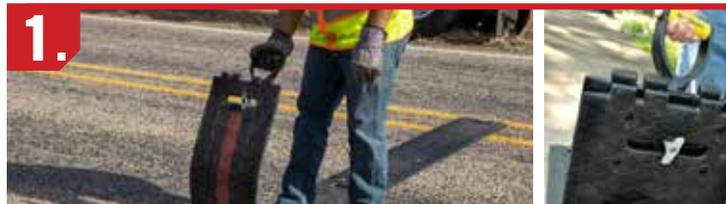


ROADQUAKE® 2F DEPLOYMENT METHODS:

Compared to manual handling, users can deploy and retrieve RQ TPRS faster and safer with PSS handling equipment.

1. Deploy and retrieve RQ TPRS manually with RoadQuake® T-Handle.
2. Deploy and retrieve RQ TPRS with RoadQuake® 2F CRIB® Carrier. Or deploy with CRIB and retrieve with CRIB and RoadQuake® 2F Retrieval System.*
3. Use RoadQuake® RAPTOR® Rumble Strip Handling Machine to transport, deploy, realign, and retrieve RQ TPRS. RAPTOR keeps workers safely off the road.

*CRIB and Retrieval System sold separately.



ROADQUAKE® FEATURES

ROADQUAKE® 2F TPRS FEATURES:

Designed to reduce accidents and save lives, RoadQuake 2F TPRS alerts distracted drivers to changing road conditions like work zones and checkpoints.

TEMPORARY:

- » Ideal for work zones where daily installation and removal is required.
- » Quick installation and removal. No cleanup required.

PORTABLE:

- » Transport RoadQuake® 2F TPRS with handling equipment like RoadQuake® CRIB® Carrier or RAPTOR® Rumble Strip Handling Machine.
- » Manually deploy and retrieve by a two-person crew.

DURABLE:

- » 3-5 year life under normal conditions.
- » Suitable for use in the rain and in temperatures as low as 0° F and as high as 180° F.
- » For use in posted speed limits up to 80 MPH.

ROADQUAKE 2F TPRS FEATURES (CONT'D):

- » Generates the same level of sound and vibration as milled strips.
- » 13" W x 3/4" H x 132" L when unfolded. Covers the width of an entire lane.
- » Folds to a compact 66" length. Weighs 105 lbs.
- » Ergonomic handles make installation and storage easy. The non-slip textured surface helps to keep RoadQuake 2F TPRS in place.
- » Bevels on both sides of RoadQuake take the guesswork out of a correct installation.
- » Meets Section 6F.87 of the MUTCD, 2009 Edition.

US Patent No. 7,736,087. Other Patents Pending



ROADQUAKE TPRS APPLICATIONS:

In December, 2008, we introduced our first commercially viable RoadQuake Temporary Portable Rumble Strip (RQ TPRS) traffic safety countermeasure.

Since then, users have deployed RQ TPRS arrays in thousands of work zones. Collectively, those strips have experienced well in excess of 5 billion vehicle hits, from motorcycles and sub-compacts to farm equipment and 80,000 lb. semi-trailers.

Field evidence overwhelmingly demonstrates that RQ TPRS effectively alerts distracted drivers, possibly reducing crashes and saving lives, in work zones.

Ten years ago, we described RQ TPRS as ideal for work zones where daily installation and removal is required.



That statement, still in use, still accurate, captured our vision of the initial RQ TPRS application: work zone projects on secondary, two-lane roads with two-way traffic, usually with flagging or pilot car operations, at 45-50 MPH posted speed limits.

Since its introduction, we steadily increased the upper limit of RQ TPRS speed tolerances to 80 MPH, and the spacing distances between deployed strips. Concurrently, we developed a line of handling technology, to better protect workers who deploy and retrieve RQ TPRS.

EXPANDED RQ TPRS APPLICATIONS:

With RAPTOR Rumble Strip Handling Machine, we can now recommend RQ TPRS in work zones beyond single lane, lane-closure applications. With RAPTOR, users can effectively deploy RQ TPRS in high-speed, high volume, multilane roadways. RAPTOR also allows use of RQ TPRS in most short-term, short-duration mobile work zone operations.

RQ TPRS and our ancillary handling equipment can help reduce distracted driving, protect workers, and possibly save lives in your work zones. Let us show you how.

Please visit pss-innovations.com/our-team to contact your PSS Roadway Safety Consultant for a product demonstration.

ROADQUAKE® RAPTOR

RAPTOR RUMBLE STRIP HANDLING MACHINE:

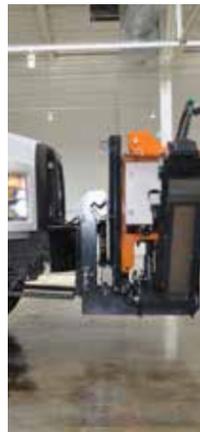
RAPTOR transports, deploys, realigns, and retrieves RoadQuake 2F TPRS in work zones. RAPTOR keeps your workers off the road.

RAPTOR revolutionizes the usage of RoadQuake 2F TPRS:

- » Workers operate RAPTOR from the safety of the vehicle. Workers no longer deploy or retrieve RoadQuake 2F TPRS manually.
- » Workers no longer risk superficial injuries that could be caused by lifting objects like RoadQuake.
- » Deploys a three-strip array in under 90 seconds and retrieves a three-strip array in under 2.5 minutes.

RAPTOR IMPROVES WORK ZONE SAFETY:

- » RAPTOR extends the practical use of RoadQuake 2F TPRS in work zones.
- » With RAPTOR, RoadQuake is now ideal for most short-duration, short-term, and mobile operations.
- » RAPTOR can provide protection in work zones.
- » RAPTOR mounts to the front of the vehicle. The back of the vehicle is free for other safety equipment like a Truck or Trailer Mounted Attenuator (TMA).



TRANSPORT



REALIGN



RETRIEVE & DEPLOY

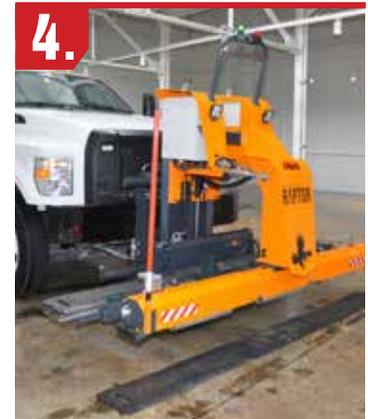
FUNCTIONS OF RAPTOR:

In the pictures on right, RAPTOR, shown in Operational Mode, simulates deployment of RQ TPRS:

1. Magnet Bar pulls one RQ TRPS from TPRS Tray to deploy on road surface.
2. RAPTOR Arm moves out from and in front of TPRS Tray.
3. Arm moves down to deployment location of RQ TPRS.
4. Magnet Bar releases RQ TPRS at installation location.

To deploy more strips, return RAPTOR Arm and Magnet Bar to TPRS tray. Pick up another strip for installation, repeat until installation is complete.

Use the same functions of RAPTOR, though in reverse order, to retrieve and remove RQ TPRS from the work zone.



CRIB® CARRIERS



ROADQUAKE® 2F CRIB® FEATURES:

CRIB is a fully integrated cargo carrier designed specifically for the safe transport, deployment, removal, storage, and safekeeping of RoadQuake® 2F TPRS.

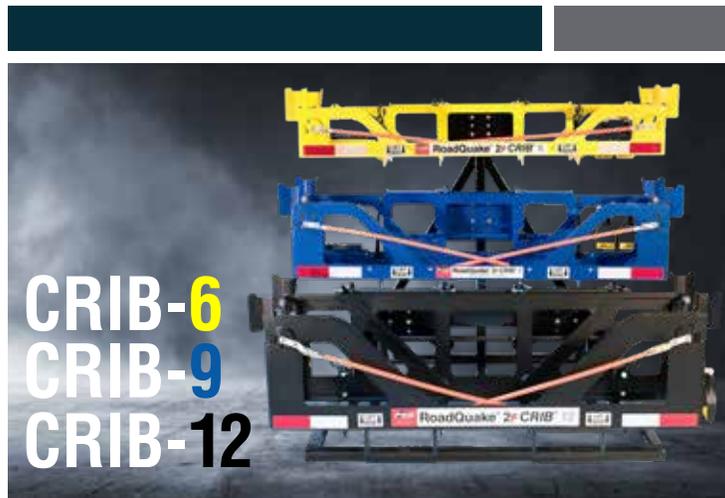
CRIB Carrier Sizes:

- » CRIB-6 holds six RQ 2F TPRS
- » New Size: CRIB-9 holds nine RQ 2F TPRS
- » CRIB-12 holds twelve RQ 2F TPRS

Each CRIB carries a multiple of three strips, enough for the deployment and retrieval of up to four, three-strip arrays.

CRIB® BENEFITS:

- » Shortens workers' time in traffic to deploy and retrieve strips, compared to manual handling.
- » Reduces possible superficial stress or injury that could be caused by manual handling.
- » Deployment and removal of RQ 2F TPRS can be a one-person job.
- » CRIB mounts to exterior of vehicle. Strips do not consume space in vehicle.
- » Easier to place RQ 2F TPRS in alignment with deployment location.



CRIB® SPECIFICATIONS

	CRIB-6	CRIB-9	CRIB-12
Dimensions (WxHxL)	19 5/8" x 15" x 74 1/4"	19 5/8" x 19 9/16" x 74 1/4"	19 5/8" x 24 5/16" x 74 1/4"
Material of Construction	Steel, Powder Coated Yellow	Steel, Powder Coated Blue	Steel, Powder Coated Black
TPRS Capacity	6	9	12
Weight (Empty)	92 lbs (41 kg)	111 lbs (50 kg)	133 lbs (60 kg)
TPRS Weight	630 lbs (286 kg)	945 lbs (429 kg)	1,260 lbs (572 kg)
Total Weight (TPRS & Carrier)	722 lbs (327 kg)	1,056 lbs (479 kg)	1,393 lbs (632 kg)
Mounting / Receiver	Class IV or V	Class V, or Custom by User	Custom by User
Pintle Mount	Included (2")	Included (2 1/2")	N/A
Quik-Detach	1 Each Included (Black)	1 Each Included (Blue)	2 Each Included (Black)
Roadquake® T-Handle	2 Each Included	2 Each Included	2 Each Included
T-Handle Holder	1 Each Included	1 Each Included	1 Each Included
Retractable Transport Straps	2 Each Included	2 Each Included	2 Each Included
Guide Markers	36" Included (91 cm)	48" Included (122 cm)	48" Included (122 cm)
Conspicuity Tape	3 Sides Included	3 Sides Included	3 Sides Included
Literature Canister	1 Each Included	1 Each Included	1 Each Included
RoadQuake Best Practices	1 Each Included	1 Each Included	1 Each Included
Breakaway Pin Kit (1 TPRS)	1 Each Included	1 Each Included	1 Each Included

CRIB® FEATURES

NEW DESIGNS:

We recently redesigned and added new features to CRIB and CRIB XL Carriers. With new features comes new names. CRIB is now CRIB-6, CRIB XL is now CRIB-12. And we added another size: CRIB-9 Carrier, which holds nine RQ TPRS. Our new designs are available summer, 2020!

NEW FEATURES:

- 1. Weight Reduction:** With design integration, we significantly reduced the weight of new CRIBs but retained the strength and integrity of CRIB. We reduced the weight of an empty CRIB-6 by 39%, and an empty CRIB-12 by 34%. This weight reduction now allows CRIB-6 to be used on a Class IV receiver and CRIB-9 to be used on a Class V receiver.
- 2. Redesigned Guide Fins*:** The fins guide RQ TPRS in and out of CRIB for easier handling. We redesigned the fins so they are stronger. Fins can now support the weight of loaded, like-sized CRIBs, when stacked for more efficient storage:
 - » CRIB-6: stack a max. of four loaded CRIB-6.
 - » CRIB-9: stack a max. of three CRIB-9.
 - » CRIB-12: stack a max. of two CRIB-12.

- 3. Design Integration:** We integrated several features into the new CRIB designs. Once optional, they are now standard on all new designs.
 - A.** Guide Markers
 - B.** T-Handle Holder
 - C.** Quik-Detach Mounting System**
 - D.** Retractable Ratchet Straps
- 4. Literature Canister:** New to CRIB, our water-tight canister holds a print copy of our Best Practices Guide and a Breakaway Pin Connection Replacement Kit, which contains enough components to repair 1 RQ TPRS. We include a Best Practices and pin kit with each CRIB shipment.

On the next page, we use CRIB-6 to show our new design features. CRIB-9 and CRIB-12 also enjoy the same features.

US Patent No. 10,661,697

**New CRIB models do not stack with older models.*

***Quik Detach for CRIB-6 (black) works for CRIB-6 and CRIB-9. Quik Detach for CRIB-9 (blue) works for CRIB-6, CRIB-9, and CRIB-12.*

CRIB-6 FRONT



CRIB-6 BACK



ROADQUAKE® 2F RETRIEVAL SYSTEM

RETRIEVAL SYSTEM FEATURES:

Retrieval System pulls RoadQuake 2F Temporary Portable Rumble Strips (RQ TPRS) into a CRIB Carrier with little manual effort.

- » Features a powerful 4.1 HP, 12 V electric motor that pulls a 105 lb. RQ TPRS into CRIB in less than ten seconds.
- » Reduces workers' exposure to live traffic. Also reduces manual handling and exertion and possible injury.
- » Removal of RQ TPRS can be a one-person operation.
- » Attaches quickly to either end of CRIB for retrieval of strips from either driver or passenger side.
- » Power Pack Unit is a self-contained, charging electrical system. Charges from a 12-Volt automotive system. Maintains charge when plugged into running host vehicle. Power Pack Unit is weather-resistant.
- » For use with CRIB-6, CRIB-9, and CRIB-12.

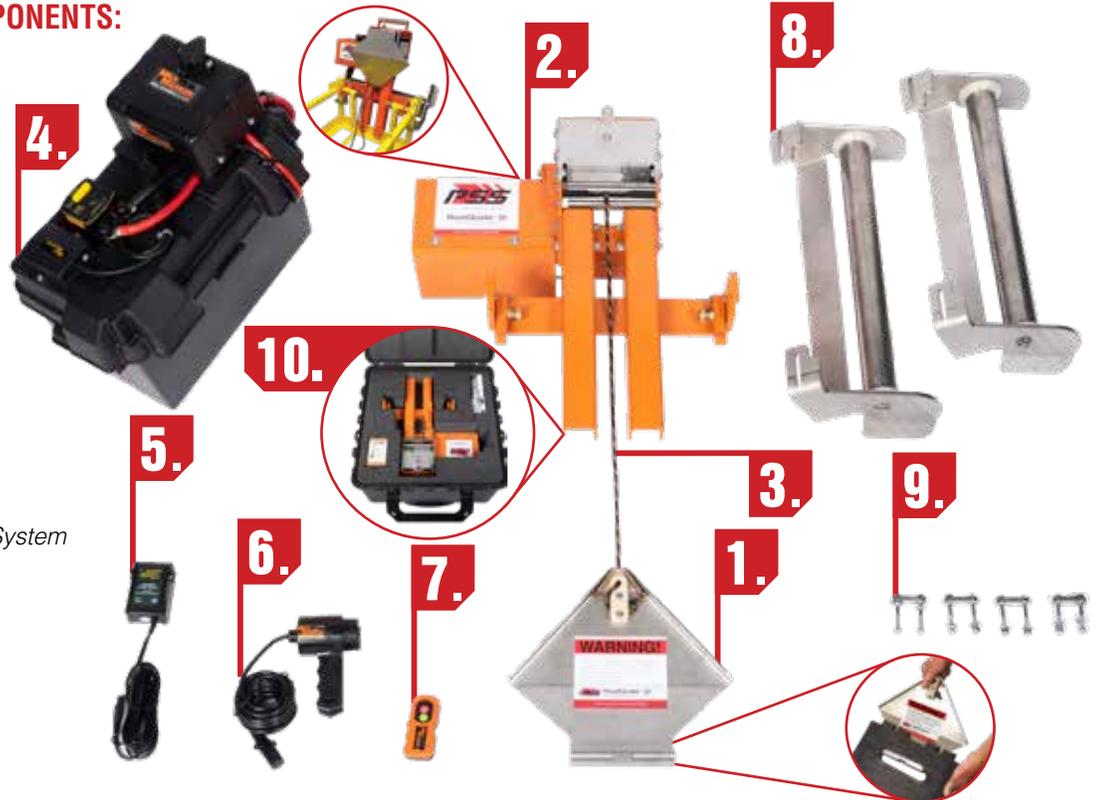
RoadQuake® 2F Retrieval System is designed to only retrieve PSS RoadQuake 2F Temporary Portable Rumble Strips from the roadway.

US Patent No. 10,662,042



RETRIEVAL SYSTEM COMPONENTS:

1. Retrieval Hook
2. Retrieval Winch
3. Retrieval Rope
30 Feet
4. Power Pack Unit
5. Power Pack Charger
6. Back-up Wired Controller
7. Wireless Remote Controller
8. Roller Bracket Assembly
Two Each
9. CRIB Roller Clamps
Four Each
10. Hard-Shell Plastic Case
Not Included with Retrieval System



SECTION

02



SECTION

02

ADA-COMPLIANT
SAFETY DEVICES

BOARDWALK RAMP

TEMPORARY PEDESTRIAN MODULAR RAMP:

BoardWalk RAMP provides accessible, detectable, and safe guidance where temporary access routes cross curbs at locations other than permanent sidewalk crossings. BoardWalk RAMP is installed perpendicular to the curb.

BoardWalk RAMP replaces curb transitions and temporary ramps that are non-compliant.

ADA-COMPLIANT FEATURES:

- » Allows for any slope of 1" rise for 12" run.
- » Modular Edge Support Castings provide guidance for canes and walking devices. Castings accommodate handrails, which provide detectable guidance.
- » Modular Edge Support Castings accommodate handrail assemblies.
- » PSS-supplied lumber has a slip-resistant surface.
- » Suspended design allows for normal street drainage.
- » Approach Plates are 48" W x 18" L and feature slip-resistant surface. 48" width is wheelchair friendly.

MODULAR FEATURES:

- » Modular sections connect for ramp length needed. No hardware required. Ramp rated at 800 lb. capacity for 48" maximum width. Sections weigh 30 lbs.
- » Modular cast-iron Edge Support Castings measure 8" x 12". Designed for 2" x 6" lumber. The lumber PSS provides features slip-resistant coating.
- » Metal Approach Plates, 48" W x 18" L, feature slip-resistant grip tape.



US Patents Nos. 9,534,394

BOARDWALK PLATFORM

BOARDWALK BI-DIRECTIONAL PLATFORM:

BoardWalk Bi-Directional Platform is designed for use with BoardWalk RAMP when the alternate pedestrian pathway is parallel to the curb or sidewalk.

PLATFORM FEATURES:

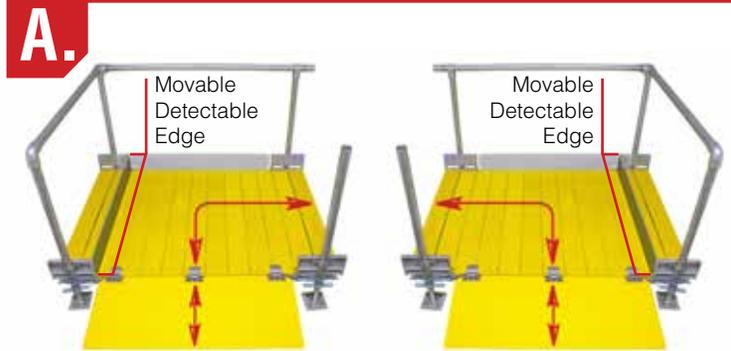
Platform features the same components as BoardWalk RAMP. See previous page.

Platform measures 4' x 5' and is wheelchair friendly.

Four adjustable Screw Jacks support Platform, and can accommodate curb heights from 2" to 14". For RAMPs exceeding nine sections use a Midway Support, as shown on Page 23.

Platform is easily converted from left-turning to right-turning orientation. To change the guiding direction, attach the Moveable Detectable Edge and the horizontal handrail to the corresponding side of the platform. See Figure A.

Figure B shows BoardWalk RAMP with Bi-Directional Platforms installed in the curb lane parallel to the sidewalk. The curb lane serves as the temporary pedestrian pathway. RAMP and Platform are installed at either end of the sidewalk work zone.



BOARDWALK RAMP AND PLATFORM

RAMP HEIGHT SPECIFICATIONS:

The correct ramp slope is a 1:12 ratio.

The number of modular ramp sections determines the slope of BoardWalk RAMP. The number of sections differs when using BoardWalk RAMP or BoardWalk RAMP and Platform. The number of sections required is not the same.

To determine the correct number of ramp sections for either BoardWalk RAMP or RAMP with Platform:

- » Which orientation of ramp do you require?
- » What is the height of the curb at the installation site?



Perpendicular to Curb



Parallel to Curb

With those questions answered, use the chart to determine the number of sections required per ramp orientation.

To maintain a 1:12 ratio, how many RAMP sections are needed?

Curb Height (In.)	Perpendicular	Parallel
1	3	N/A
2	4	3
3	5	3
4	6	3
5	7	4
6	8	5
7	9	6
8	10*	7
9	11*	8
10	12*	9
11	13*	10*
12	14*	11*
13	15*	12*

* Midway supports required for RAMPs longer than 9 sections.

BOARDWALK BRIDGE

BOARDWALK BRIDGE FEATURES:

PSS BoardWalk Temporary Pedestrian Modular RAMP with Platform provides ADA-Compliant temporary pathways over curbs in sidewalk work zones.

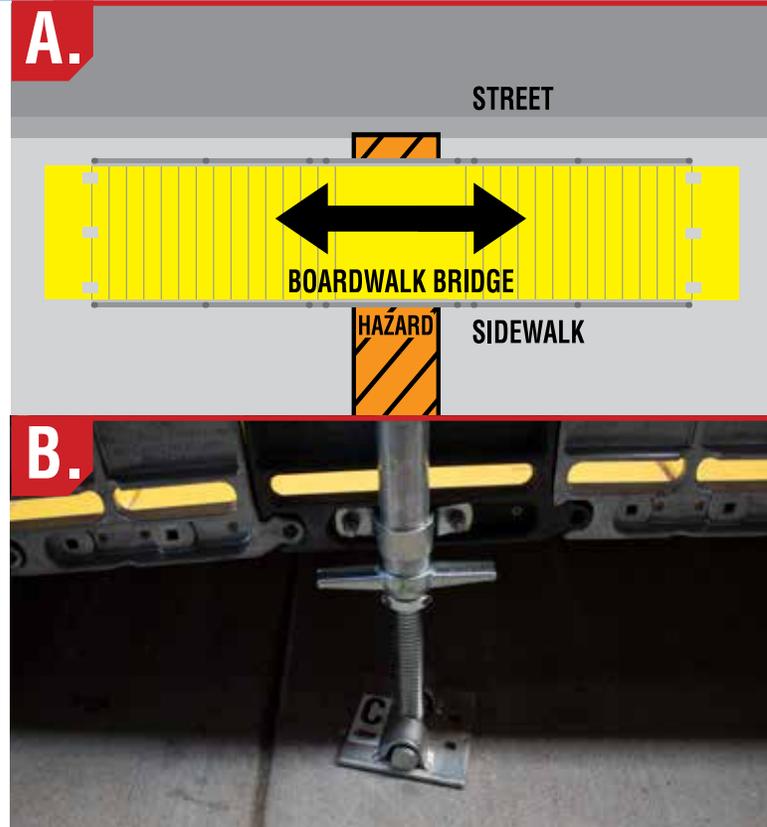
Because of its modular design, we can create BoardWalk RAMP and Platform in several configurations while maintaining the ADA slope requirement of 1:12.

BoardWalk Bridge satisfies a new application: it provides a temporary pathway over an obstruction that is perpendicular to the sidewalk and street.

For the application shown in the graphic, Figure A, BoardWalk Bridge is installed on the sidewalk, parallel to it, and over the hazard. The height of the hazard and the ADA slope requirement determine BoardWalk Bridge's length.

Figure B shows Midway supports, which are required for RAMPs longer than nine sections.

To discuss your custom BoardWalk Bridge application, please contact us at **800.662.6338**.



SAFETYWALL® PEDESTRIAN BARRICADE

SAFETYWALL® ADA-COMPLIANT BARRICADE:

Dimensions: 3" W x 36.25" H x 74" L

Weight: 35 lbs

Material: Made with high-density polyethylene plastic with UV stabilizers. Steel legs.

SafetyWall, a continuous, interlocking device, is ideal for creating accessible work zones. Meets ADA guidelines and MUTCD 2009 Edition Standards as a sidewalk closure barricade or longitudinal channelizer. SafetyWall provides the same level of pedestrian guidance as concrete or plastic barrier but is easier to transport, install, and remove.

Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Diamond grades. Made from high-density polyethylene plastic with UV-stabilizers. SafetyWall accepts sheeting on one or both sides.

SAFETYWALL® FEATURES:

1. SafetyWall provides continuous guidance. Hand-Trailing top is smooth, safer for hand guidance.
2. Accepts Audible Information Devices, Warning Lights.
3. SafetyWall is an interlocking device. Assembles quickly. No tools required. A one to two-person crew can easily create an accessible work zone in minutes.
4. Centrally located carry handle allows for easy carry of one or two SafetyWall units.
5. SafetyWall stacks for easy transportation and storage.
6. Continuous bottom for guidance with cane. Gap between bottom of unit and ground is less than 2", reducing potential for trapping cane tips.
7. Common vertical plane eliminates obstacles in the walkway for safer, continuous guidance.
8. Legs fold in for easy storage. Recessed bottom edge allows for use of pry bar to deploy both legs.

US Patent No. D665,689.





FHWA LETTER:

Letter: WZ-315

Tested to Manual for Assessing Safety Hardware
(MASH) Test Level: 3

SAFETYRAIL™ PEDESTRIAN BARRICADE

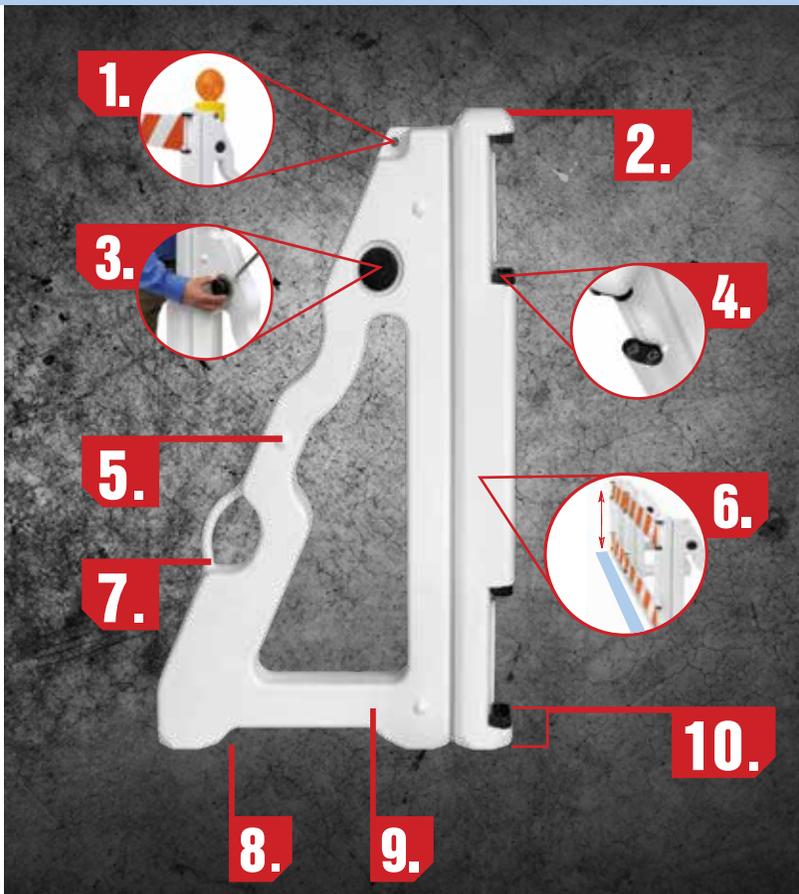
SAFETYRAIL™ ADA-COMPLIANT BARRICADE:

SafetyRail, a continuous, interlocking device, is designed for creating accessible work zones. Meets ADA guidelines and MUTCD 2009 Edition Standards as a sidewalk closure barricade or longitudinal channelizer.

SAFETYRAIL™ FEATURES:

1. Audible Information Device or Warning Light Mount.
2. SafetyRail provides continuous hand guidance. Top is smooth for transition to Wave® Guide Rail.
3. Oversized fill hole for internal sand ballast.
4. Top and bottom guide rail bushings hold guide rails in place. No installation tools required.
5. Molded-in lug for easy stacking also located by the fill hole and the ergonomic handle.
6. Common vertical plane eliminates obstacles in the walkway for safer, continuous guidance.
7. Ergonomic handle for easy transport.
8. Relief in the bottom to clear terrain.
9. Support for optional sand bags.
10. Measures 1.5" from ground, reducing potential for trapping cane tips.

US Patents Nos. 8,302,937; 7,536,973 B2.



SAFETYRAIL FEATURES:

Dimensions: 3.25" W x 38" H x 24" L at base

Weight: 7 lbs empty or up to 25 lbs with sand

Material: High-density polyethylene plastic, UV inhibitors

FHWA Letters: SafetyRail: WZ-359, Wave Panel: WZ-173

Wave Guide Rail: 0.8" x 7.5" x 48" or 72"

High-density polyethylene plastic, UV inhibitors

PSS WAVE GUIDE RAIL:

Available in four-foot or six-foot lengths. Encapsulated ends eliminate cane or hand snagging hazards.

Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Diamond grades. Wave accepts sheeting on one or both sides.



SafetyRail is designed for use with PSS Wave® Guide Rail. Upper Rail is smooth, continuous, and safer for the hand. Lower Wave Guiderail measures 1.5" from the ground which reduces potential for trapped cane tips. Wave "Notch" design (see insert) keeps guide rails securely in bushings.

SECTION

03



SECTION

03

CRASH CUSHIONS,
DRUMS & CHANNELIZERS

CRASHGARD® SAND BARREL SYSTEM

CRASHGARD® FEATURES:

CrashGard® Sand Barrel System is a non-redirective, gating sand barrel, or crash cushion.

DURABLE:

CrashGard is blow-molded from high molecular, high-density polyethylene plastic (HLM/HDPE) that produces a stronger sand barrel. UV stabilizers maximize product life. Color-stable pigments resist fading. CrashGard withstands minor impacts during routine handling:

- » Filling or dumping sand.
- » Loading or unloading a truck.
- » Nesting for storage and transport.

PRACTICAL:

Designed for easy transport:

- » Barrels nest easily for convenient storage.
- » Squared bottom accepts forklifts.
- » Tiered top accepts CrashGard Hoist.

Designed for 4" and 6" wide retroreflective sheeting.

Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Fluorescent grades.



UNIVERSAL:

One CrashGuard Sand Barrel accommodates all weight requirements:

- » With insert: 200, 400, 700, or 1,400 lbs.
- » Without insert: 2,100 lbs.

One barrel eliminates the need to stock different sizes of barrels, accommodates all weight requirements, and reduces inventory costs and confusion.

CrashGuard is designed for use in posted speed limits from 25-75 mph. Contact us for other speeds.

See CrashGuard Manual for recommended design arrays by speed limit.



CRASHGARD HOIST SAND BARREL LIFT RING:

CrashGuard Hoist provides safer and easier transport of CrashGuard Sand Barrel System.

- » Transport of barrels can be a one-person operation.
- » Operates with a simple scissor action.
- » Made of welded steel. Weighs 140 lbs.
- » Powder-coated paint helps deter corrosion.



CRASHGARD® FHWA LETTERS

FHWA LETTERS:

In March, 2007, the Federal Highway Administration (FHWA), issued PSS Acceptance Letter CC-97 for CrashGard® Sand Barrel System. CC-97 acknowledges that CrashGard passed NCHRP-350 Crash Tests. The letter confirms that CrashGard meets the criteria of NCHRP-350 Test Level 3 for non-redirective, gating crash cushions.

In March 2009, FHWA issued CC-97-A, an amendment to the original letter. The amendment accepts the use of CrashGard in “mixed array” configurations.

AASHTO Manual for Assessing Safety Hardware (MASH), test requirements supersede NCHRP-350 test requirements. Crash cushions are required to comply with MASH test guidelines by December 31, 2018.

FHWA issued Eligibility Letter CC-145 for CrashGard in September 2018. In CC-145 FHWA agrees CrashGard meets MASH test and evaluation requirements. CC-145 also states FHWA finds CrashGard eligible “for reimbursement under the Federal-Aid Highway Program.”



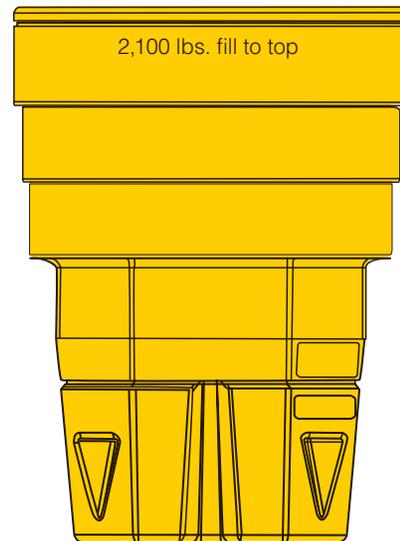
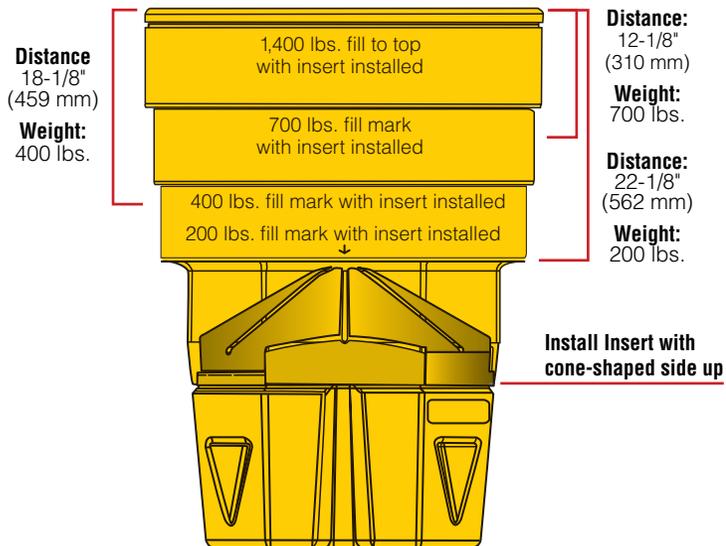
MASH SAND-FILL MEASUREMENTS

MASH REQUIREMENTS:

Barrels shipped after April 1, 2019 show a “1,400 lbs. fill to top with insert installed” mark at the top of the barrel.

The 2,100 lbs. barrel does not require an Insert to meet MASH requirements. Fill with sand to the “2,100 lbs. fill to top” mark.

To Meet MASH requirements:



**MASH: Install Insert for 200, 400, 700, 1,400 lbs.
Fill to marks.**

MASH: No Insert for 2,100 lbs. Fill to top.

LIFEGARD II® TRAFFIC DRUM



Ballast made from 100% recycled material.

LIFEGARD II® DRUM FEATURES:

1. Manufactured from high-density polyethylene plastic with UV inhibitors. Molded handle accommodates Type A and C warning lights.
2. Intermittent Stacking Rims prevent drums from locking when stacked and protect sheeting.
Anti-Roll Feature: A flat section of the flange (not shown) slows drum rolling if impacted.
3. Designed for up to five bands of retroreflective sheeting. Sheeting available in 4" and 6" widths. Sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Fluorescent grades.
4. Designed for use with rubber tire collar ballast. Internal rubber base, 25 or 40 lbs, also available. Ballast made from 100% recycled material.
5. "Hot Stamp" ink permeates plastic and resists damage during normal use. (Stencil ink lays on surface, does not permeate plastic.) Add your company logo to the bottom of LifeGard II or 42" Navigator to better identify your product and reduce possible theft.



US Patent Nos. 6,817,805 B2 and 7,059,798. Canadian Patent 2,438,071.

NAVIGATOR® CHANNELIZERS

3M We use 3M Reflective Sheeting.

NAVIGATOR® CHANNELIZER FEATURES:

1. Manufactured from low-density polyethylene plastic with UV inhibitors. Molded handle accepts Types A and C warning lights. The handle also serves as a “roping-off” mount.
2. 42” Navigator accommodates up to five bands of 4” or 6” sheeting, 28” Navigator (see insert) up to three bands. Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Fluorescent grades.
3. “Hot Stamp” ink permeates plastic and resists damage during normal use. (Stencil ink lays on surface, does not permeate plastic.) Add your company logo to the bottom of LifeGard II or 42” Navigator to better identify your product and reduce possible theft.
4. Navigator shown with hexagonal base. Available in 10 or 16 lb. weights. 30 lb. base available. Manufactured from 100% recycled material.

Canadian Patent No. 2,264,975



SECTION

0

44



ROAD CLOSED
2.5 MILES AHEAD
LOCAL TRAFFIC ONLY

← DETOUR

SECTION

04

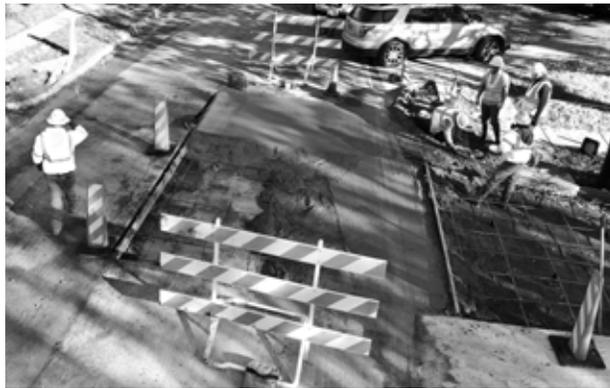
BARRICADES
& WAVE[®] CENTERBOARD

LANEGARD® 3 FOLDING TYPE III

LANEGARD® 3 FEATURES:

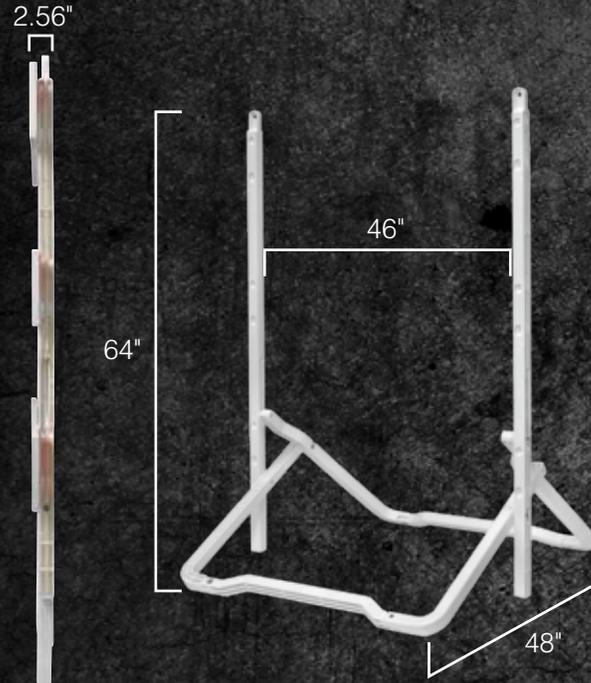
One-piece design folds for storage and transport and unfolds for use. Sets up and tears down in seconds. One person can easily fold and unfold LaneGard 3 for transport and deployment. Weighs 17 lbs without centerboards.

LaneGard 3 is designed for use with PSS Wave® Centerboards. Available in 4', 6', and 8' lengths. Retroreflective sheeting is available in Engineer, Hi-Intensity, and Diamond Grades. Retroreflective sheeting meets all state and federal specifications. Wave accepts sheeting on one or both sides. See page 44 for more details.



LANEGARD® 3 FOLDING SPECIFICATIONS:

When folded, LaneGard measures less than 3" thick, including PSS Wave Centerboards.



LANEGARD® 3 UPRIGHT FEATURES:

LaneGard 3 folds for transport and storage and unfolds for use with PSS Wave Centerboards attached. Measures less than 3" thick when folded. Once assembled, always assembled.

1. Molded-in Warning Light Mount accepts LED Types A and C warning lights.
2. Molded through-holes recessed for flush-mounted hardware.
3. Use sandbags or PSS tire collars for additional ballast.
4. Anti-Skid Feet can provide additional stability. Two per crossbar.



FHWA LETTER:

Letter: WZ-336

Tested to Manual for Assessing Safety Hardware
(MASH) Test Level: 3

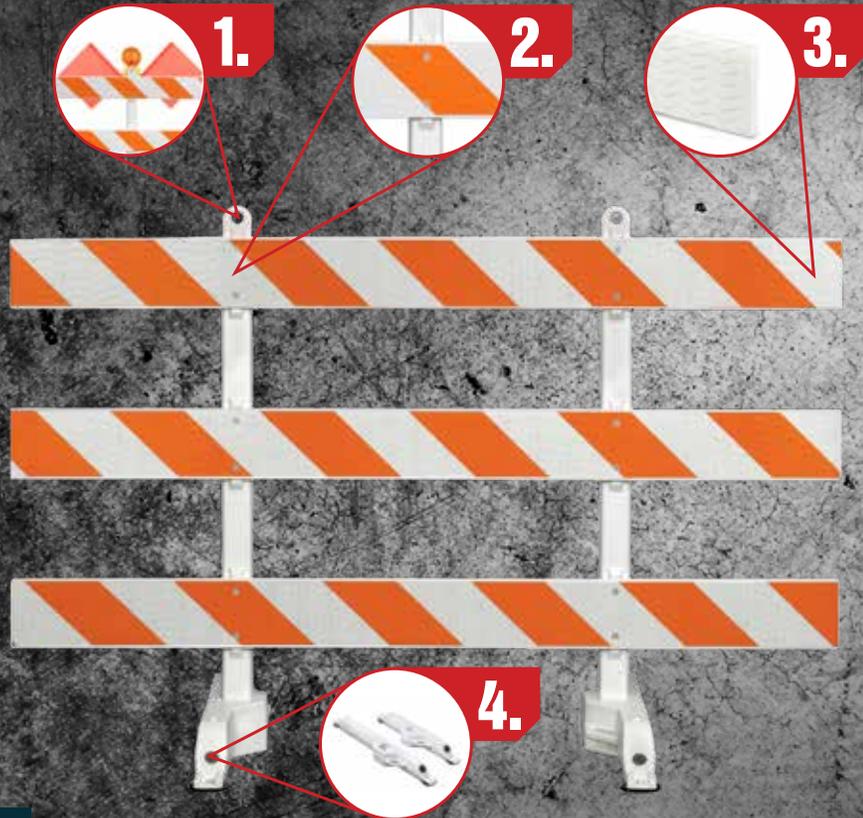
ANCHOR® MAST® TYPE III BARRICADE

ANCHOR® MAST® FEATURES:

Anchor Mast Type III Barricade consists of Anchor Mast Upright, Anchor Base, and Wave Centerboard.

Manufactured from high-density polyethylene plastic with UV stabilizers.

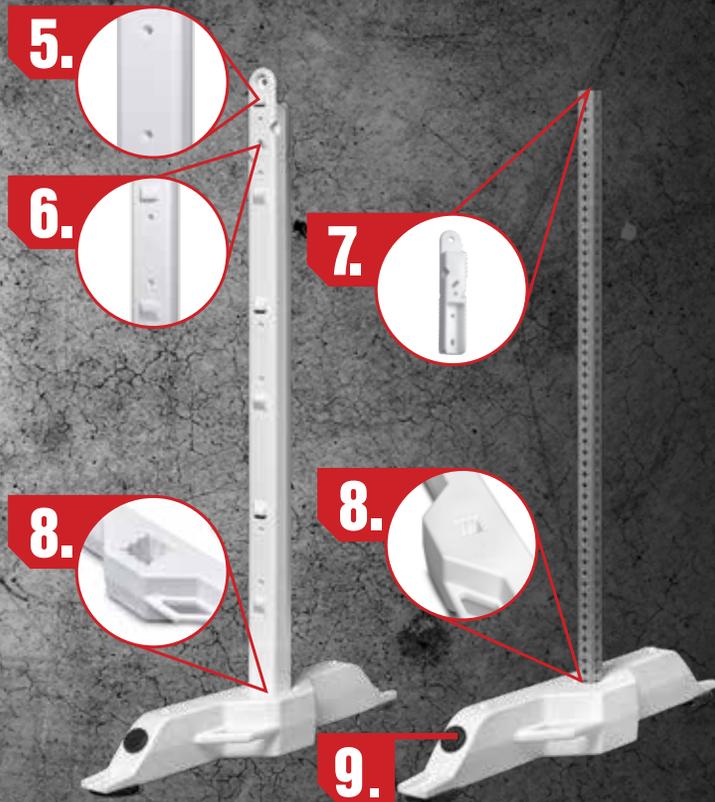
1. Mast Upright features molded-in warning light mount for Type A and C warning lights. Mounting holes hold two flags, front and back.
2. Mast Upright's molded through-holes add strength and support; attachment of Wave Centerboards is faster.
3. Wave Centerboards available in 4', 6', 8' lengths. Retroreflective sheeting is available in Engineer, Hi-Intensity, and Diamond Grades. Retroreflective sheeting meets all state and federal specifications. Wave accepts sheeting on one or both sides.
4. Anchor Base available in two lengths — 48", 60".



FHWA LETTER:

Letter: WZ-244

US Patent: 7,111,815 B2, 7,523,715, 7,681,857



MAST® UPRIGHT FEATURES:

5. Molded through-holes are recessed for flush-mounted hardware which protects sheeting.
6. Raised Centerboard Locators make installation of Wave Centerboards easier and faster.

LIGHT AND FLAG MOUNT FEATURES:

7. Light and flag mount (LFM) accessory, sold separately, attaches to perforated stainless steel tube (PSST) uprights. Accepts one or two flags and one warning light. Manufactured from high-density polyethylene plastic with UV stabilizers. PSS does not offer PSST uprights for sale.

ANCHOR® BASE FEATURES:

8. Available in two styles: for plastic uprights or PSST uprights. Anchor Base for plastic uprights features a 4" x 4" mount. Anchor Base for PSST uprights features a 1 3/4" x 1 3/4" mount. "Press-fit" installation means no tools required to attach uprights. Includes molded-in carrying handle.
9. Features molded in fill-hole and cap to fill with sand. Anchor 48" holds 45 lbs, Anchor 60" holds 60 lbs.
Rubber anti-skid pad on bottom helps increase traction and decrease movement.

F&A FRAME™ BARRICADE

F&A FRAME™ BARRICADE FEATURES:

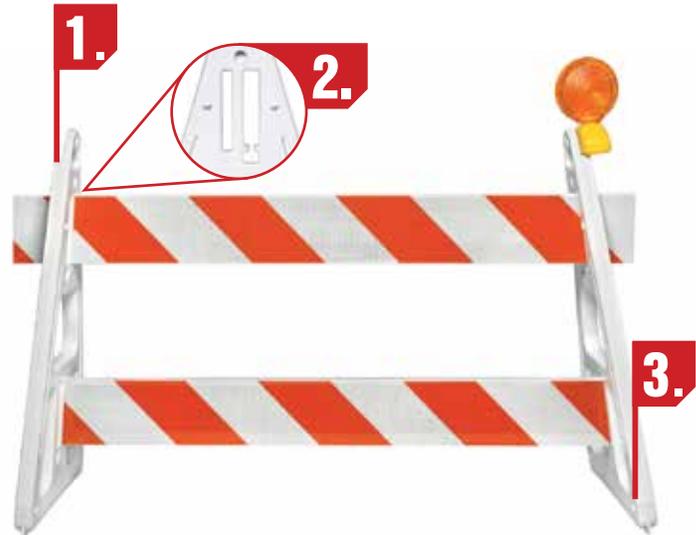
F&A Frame Barricade functions as a Type I or Type II barricade. F&A Frame is manufactured from high-density polyethylene plastic with UV inhibitors.

PSS Wave® centerboard is ideal for use with F&A Frame. See page 44 for more on Wave Centerboards.

Other features include molded ridges that add strength and durability and an oversized sand-fill hole that allows for added ballast.

**FHWA Acceptance Letter WZ-102*

1. Molded-in, ergonomic handle accepts Types A and C warning lights.
2. In addition to Wave centerboards, also accepts plastic, I-beam, or wood centerboards.
3. Molded, heavy gauge feet add balance and durability.



MVP® VERTICAL PANEL



Ballast made
from 100%
recycled material.



We use 3M
Reflective
Sheeting.

MVP® VERTICAL PANEL FEATURES:

MVP serves as a channelizer to direct traffic or as a barricade to divide lanes. MVP is manufactured from high-density polyethylene plastic with UV inhibitors.

MVP's recessed panel protects the retroreflective sheeting. Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Diamond grades.

1. Molded handle accepts Types A and C warning lights.
2. Recessed Panel is 12" wide. Available in 24" or 36" lengths. 12" x 36" panel shown. Panel can be removed for reuse.
3. Stacks for compact transport and storage.
4. Features molded foot step for easy press-fit assembly into base.
5. Base weighs 45 lbs Manufactured from 100% recycled material.

FHWA Acceptance Letter WZ-166.



WAVE[®] CENTERBOARD

3M We use 3M Reflective Sheeting.

WAVE[®] CENTERBOARD FEATURES:

Wave Centerboard is blow-molded from UV-stabilized, high density polyethylene plastic with a reinforced structure.

Wave design (See Figure B):

- » Strengthens and stiffens the centerboard
- » Reduces sagging and warping
- » Greatly improves reboundability

Closed ends prevent dirt and moisture from collecting. Also prevents bees and hornets from building nests.

Retroreflective sheeting meets all state and federal specifications and is available in Engineer, Hi-Intensity, and Diamond grades.

Wave is available in 4', 6', and 8' lengths. Accepts sheeting on one or both sides.

Ideal for use with Anchor Mast, LaneGard 3 Type III Barricades, SafetyRail Pedestrian Barricade, and F&A Frame Barricade.

FHWA Acceptance Letters WZ-173 and 244

US Patent No. 7,536,973 B2.



Figure A: Designed with Anchor Mast Upright for a close-tolerance barricade system.



Figure B: Molded through-holes add strength and support. Recessed holes accommodate flush-mounted hardware, which protects installers and sheeting.

EXTERNAL BALLAST OPTIONS



Ballast made from 100% recycled material.

RUBBER TIRE COLLAR FEATURES:

Weight: 22-25 lbs

Color: Black, no paints or markings of any color

Inside Diameter: 21.75"

Outside diameter: 35" - 36.5"

Rubber Tire Collar provides significant ballast for drums, barricades, and other traffic control devices.

Makes positive contact with road when installed on drums.

Cut from 22.5" truck tires, 100% recycled material.



PLASTIC SAND BAG FEATURES:

Weight: Holds up to 25 lbs of sand

Color: Safety Orange

Dimensions: 14" W x 26" L

Plastic sand bags provide significant ballast for drums, barricades, and other traffic control devices.

Made of 850 lb. weight denier polypropylene plastic with UV stabilizers.



SECTION

05



StandGard® Base

SECTION

05

STANDGARD®

PORTABLE STANDING STATION

STANDGARD® BASE

APPLICATIONS:

- » Work Zone Flaggers
- » Parking Lot Attendants
- » Parking Valets
- » Venue/Event Parking Attendants
- » School Crossing Guards
- » Tailgaters at special events

PROVIDES A HOME BASE FOR WORKERS:

StandGard® Base Temporary Portable Standing Assistant provides a tangible home base for workers who stand adjacent to traffic, including flaggers and parking lot attendants. When workers are in a predictable, consistent location it is easier for drivers to see them quickly.

StandGard can also reduce or deter a natural tendency among workers to “drift” away from their stationary positions and close to the work zone site. With StandGard, workers have a designated standing location with an appropriate, predetermined buffer space between a worker and the work zone. StandGard creates a recognizable location at which a worker should remain. Workers are safer adjacent to live traffic as drivers can more readily see them.

PROTECT FROM EXCESSIVE TEMPERATURES:

For those who work outdoors, extreme temperatures can pose a hazard. Outdoor workers, especially those who remain in a stationary position for hours, can lose significant body heat in cold weather and overheat in hot weather.

StandGard® Base Temporary Portable Standing Assistant reduces the transference of heat between workers and street, sidewalk, or parking lot surfaces. With an R-Value that exceeds six, StandGard reduces the transference of heat by up to 84% when compared to shoes alone. With StandGard Base, feet remain cooler in hot weather and warmer in cold up to six times longer.



STAND LONGER.
STAND SAFER.
STANDGARD®

STANDGARD® BASE

PORTABLE STANDING STATION

3M We use 3M Reflective Sheeting.

StandGard helps reduce the transfer of heat by 84%. StandGard has an R-Value of 6.

Integrated Relief Handle makes carrying StandGard easier.

Rectangular Shape provides nearly three square feet of functional standing area.

Replaceable, weather-resistant Anti-Fatigue Mat reduces wear on feet, knees, and backs and extends life of foam base.

Flush design between mat and base resists water build-up on mat.

Reflective tape increases visibility at night and in low-light conditions.

Stores vertically to take up less space in vehicles.

Lightweight, wear-resistant foam base with Polyurea coating for increased durability.



WEIGHT & DIMENSIONS:

Overall Dimensions: 21" W x 28" L x 1.75" Thick

Standing Area Dimensions: 16.75" W x 24.5" L

Weight: 4.5 lbs

SECTION

06



SECTION

06

DELINEATORS

NITELITE™ II REFLECTIVE SAFETY FENCE

NITELITE II™ APPLICATIONS:

Day or night, NiteLite II Reflective Fence protects pedestrians and drivers with continuous visual delineation. Ideal for work zones, crowd control, and construction sites.

- » Satisfies Iowa DOT safety closure specifications for road closures.
- » Delineates fixed objects, such as utility poles, that are located close to pedestrian or vehicular traffic.
- » Delineates excavations within traffic lanes or close to the edge of the road.
- » Directs foot traffic after sporting events, concerts, and other high-traffic occurrences.

NITELITE II FEATURES:

- » Features three, 1"-wide, retroreflective high-intensity prismatic (HIP) stripes.
- » Made of orange UV-protected polyethylene plastic.
- » Standard roll: 4' x 50'. Weighs: 25 lbs.
- » Reusable, lightweight, and easy to install.
- » Rolls easily for storage.



QUIK-MARK™ OBJECT MARKER



We use 3M
Reflective
Sheeting.

QUIK-MARK™ FEATURES:

Quik-Mark Object Marker delineates temporary or permanent barriers and other objects near the roadway.

- » Consists of a durable, flexible, high-density polyethylene plastic reflective panel that mounts on a high-impact plastic "L"-shaped bracket.
- » Standard panel sizes are 6" W x 12" H and 8" W x 12" H reflective area. Other sizes available. Quik-Mark accepts sheeting on one or both sides.
- » Retroreflective sheeting meets all state and federal specifications. Available in Hi-Intensity and Fluorescent grades.
- » Standard sheeting colors are orange, white and yellow. Other colors available.



QUIKGARD™ GUARDRAIL DELINEATOR

QUIKGARD™ FEATURES:

QuikGuard Guardrail Delineator is ideal for entrance/exit ramps, work zones, low-visibility areas, high speed roads.

- » “Patented Notch” provides vertical and horizontal alignment for fast, easy installation.
- » Manufactured from durable, flexible, high-density polyethylene plastic with UV stabilizers.
- » Retroreflective sheeting meets all state and federal specifications. Available in Hi-Intensity and Fluorescent grades. Available in white, yellow, and red. Accepts sheeting on one or both sides.



3' x 4"
reflective area
Delineator "I"

4' x 6½"
reflective area
Delineator "L"

4' x 13"
reflective area
Delineator "T"



BAM™ BARRIER DELINEATOR

3M We use 3M
Reflective
Sheeting.

BAM™ BARRIER DELINEATOR FEATURES:

BAM Barrier Delineator is designed for top-mounted or side-mounted applications for permanent or temporary barriers.

- » Unique, flexible hinge design can reduce replacement costs. Available with retroreflective sheeting or acrylic reflective lenses.
- » BAM accepts sheeting or lenses on one or both sides. Retroreflective sheeting provides 11.5 square inches of reflective area. Acrylic lens provides 8.9 square inches.
- » Standard sheeting colors are white and yellow. Other colors available. Acrylic lens colors include amber, red, blue, or clear.
- » Retroreflective sheeting meets all state and federal specifications. Available in Hi-Intensity and Fluorescent grades.



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1-800-662-6338 • PH: 216-231-8590 • FAX: 216-231-2702

RE: Self-certification of category I devices pertaining to NCHRP-350.

To Whom It May Concern,

Please allow this letter to serve as notification of self-certification for **category I** traffic safety devices pertaining to guidelines outlined in **NCHRP-350**, as stated in WZ-03 by the Federal Highway Administration.

Manufacturer: PSS
Chuck Mettler – Quality Control / R&D
2444 Baldwin Road
Cleveland, OH 44104

Phone: (216) 231-8590 / 800-662-6338

Fax: (216) 231-2702

WEB: www.pss-innovations.com

Products Self-certified:

Navigator®Channelizer

Please call if you have any questions or concerns. Thank you for your interest in our products.

Sincerely,

Amanda Lamb
Customer Service Manager
Amanda.lamb@pss-innovations.com
800-662-6338