U.S. Department of Transportation
Federal Highway Administration

April 27, 2009

1200 New Jersey Avenue, SE.
Washington, DC 20590

In Reply Refer To:
HSSD/WZ-278

Mr. Chuck Mettler
Engineering Manager
Plastic Safety Systems, Inc.
2444 Baldwin Road
Cleveland, OH 44104

Dear Mr. Mettler:

In your letter of April 9, 2009, you requested the Federal Highway Administration (FHWA) acceptance of the Safety Rail Type II barricade with a warning light attached as a crashworthy traffic control device for use in work zones on the National Highway System (NHS). You requested acceptance of the barricade units linked together with previously accepted "Wave" blow-molded (WZ-173) or generic extruded plastic (WZ-85) panels up to 12 feet in length with the Safety Rail internally ballasted with up to 25 pounds of sand. Your request for acceptance is based on the performance of your crashworthy F&A Type II barricade accepted by FHWA in WZ-102. Accompanying your letter was the FHWA Office of Safety Design forms that included a drawing and a detailed description of the Safety Rail. Drawings of the Safety Rail and the F&A Type II barricades are enclosed for reference. You requested that we find the Safety Rail Type II barricade device acceptable for use on the NHS under the provisions of the National Cooperative Highway Research Program Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features".

This letter acknowledges FHWA's acceptance of your request. The original completed forms have been modified by the addition of the FHWA acceptance letter number and the date of our review. The form will be posted on our Web site in the near future.

Sincerely yours,

David A. Nicol
Director, Office of Safety Design

Enclosures

MOVING THE AMERICAN ECONOMY

Attachment 1

| Page 1 | **FEDERAL HIGHWAY ADMINISTRATION**<br>**OFFICE OF SAFETY DESIGN**<br>**Category 2 Work Zone Device Acceptance Letter** | Letter Number<br>WZ-278<br>Date 4/14/09 |
|---|---|---|
| Contact Info | Petitioner / Developer Name and Address:<br>Plastic Safety Systems, Inc. / Chuck Mettler<br>2444 Baldwin Road<br>Cleveland, Ohio 44104 | |
| | I herby certify that the device(s) covered by this Acceptance Letter meet(s) the crash – worthiness test and evaluation requirements of the FHWA and NCHRP Report 350. | |
| Signature | Chuck Mettler | |
| Telephone # | (216) 231-8590 | |
| Email Address | cmmettler@plasticsafety.com | |
| | Laboratory / Engineer Name and Address<br>Plastic Safety Systems, Inc. / Chuck Mettler<br>2444 Baldwin Road<br>Cleveland, Ohio 44104 | |
| ☐ | I hereby certify that the testing that supports this Acceptance Letter was conducted in accordance with NCHRP Report 350 guidelines, that the device(s) tested is/are accurately described on this form, and that the test results indicate that the device meets all applicable NCHRP Report 350 evaluation criteria. | |
| ☑ | I have evaluated the requested modifications to these devices previously found acceptable by the FHWA in Acceptance Letter WZ-102 and hereby certify that, in my opinion, the modifications do not adversely affect the crash performance of the devices. I also certify that these devices are accurately described on this form. | |
| Signature | Chuck Mettler | |
| Telephone # | (216) 231-8590 | |
| Email Address | cmmettler@plasticsafety.com | |
| Keywords: | | |
| | Type of Device (See page 3)<br>TYPE II Barricade / ADA Pedestrian | |
| | Composition of Sign or Rail substrate (See Page 3)<br>Extruded Plastic-(WZ-85); Wave Blow Molded - (WZ-173) | |
| | Thickness of substrate (inches): | |
| | Height of sign from the ground (inches), if applicable: (See Page 3) | |
| | Flags and or lights present during test? Indicate number of each:<br># of flags: 0 # of lights: 1 Weight of lights: 3.80 ea. | |
| Device Name | | |
| Detailed Desc. Of Device. Materials, sizes. Fasteners. Substrates Foundation. Aux. Features Ballast, etc. | (May be attached on separate page(s)<br>See Attachment #1 | |

| Page 2 | **FEDERAL HIGHWAY ADMINISTRATION**<br>**OFFICE OF SAFETY DESIGN**<br>**Category 2 Work Zone Device Acceptance Letter** | Letter Number<br>WZ-278<br>Date 4/14/09 |
|---|---|---|
| | **Mandatory Attachments** | |
| | **Attachment # 1**: Test data summary page(s) | |
| | Attach. #1a — Test # N/A | |
| | Attach. #1b — Test # N/A | |
| | Attach. #1c — Test # N/A | |
| | Attach. #1d — Test # N/A | |
| Alternative | **Attachment # 1:** Description and discussion of modification(s) to crash tested and/or accepted device. | |
| | Date: 04/09/2009 | |
| | **Attachment # 2**: PDF drawing(s) of device(s) | |
| | Attach. #2a — Drawing Title: Safety Rail up-right | |
| | Drawing #: SR-38B4 | |
| | Attach. #2b — Drawing Title: Safety Rail Barricade Board Notch Detail | |
| | Drawing #: Wave-8'-N | |
| | Attach. #2c — Drawing Title: | |
| | Drawing #: N/A | |
| | Attach. #2d — Drawing Title: | |
| | Drawing #: | |
| | Attach. #2e — Drawing Title: | |
| | Drawing #: | |
| | Attach. #2f — Drawing Title: | |
| | Drawing #: | |
| | Attach. #2g — Drawing Title: | |
| | Drawing #: | |

| Page 3 | **FEDERAL HIGHWAY ADMINISTRATION**<br>**OFFICE OF SAFETY DESIGN**<br>**Category 2 Work Zone Device Acceptance Letter** | Letter Number<br>WZ-278<br>Date 4/14/09 |
|---|---|---|

**Please select from the following Keywords for "Type of Device":**

Longitudinal Channelizing Barricade
Curb (Curb channelizer system with or without road tubes or other channelizers)
Drum
H-Footprint Sign Stand
X-Footprint Sign Stand
Trailer Mounted Signs (Does not include arrow boards or variable message signs or other Category 4 trailer mounted devices.)
Automated Flagger Device (not trailer mounted)
Tripod Sign Stand
Type I Barricade
Type II Barricade
Type III Barricade
Vertical Panel
Intrusion Detector
Ballast (Action relates to ballast on one or more devices)
Channelizer (Individual units unlike cones, road tubes, or drums)

**Please select from the following Keywords for "Sign Substrate":**

Roll-up / Fabric (with fiberglass spreaders – aluminum or steel spreaders are not allowed.)
Plywood
Aluminum – Solid
Aluminum – Laminate
Corrugated Plastic
Extruded Plastic
Waffleboard Plastic
Wood / Lumber

**Please select from the following Keywords for "Height of Sign":**

The distance to the lowest point on the sign is:

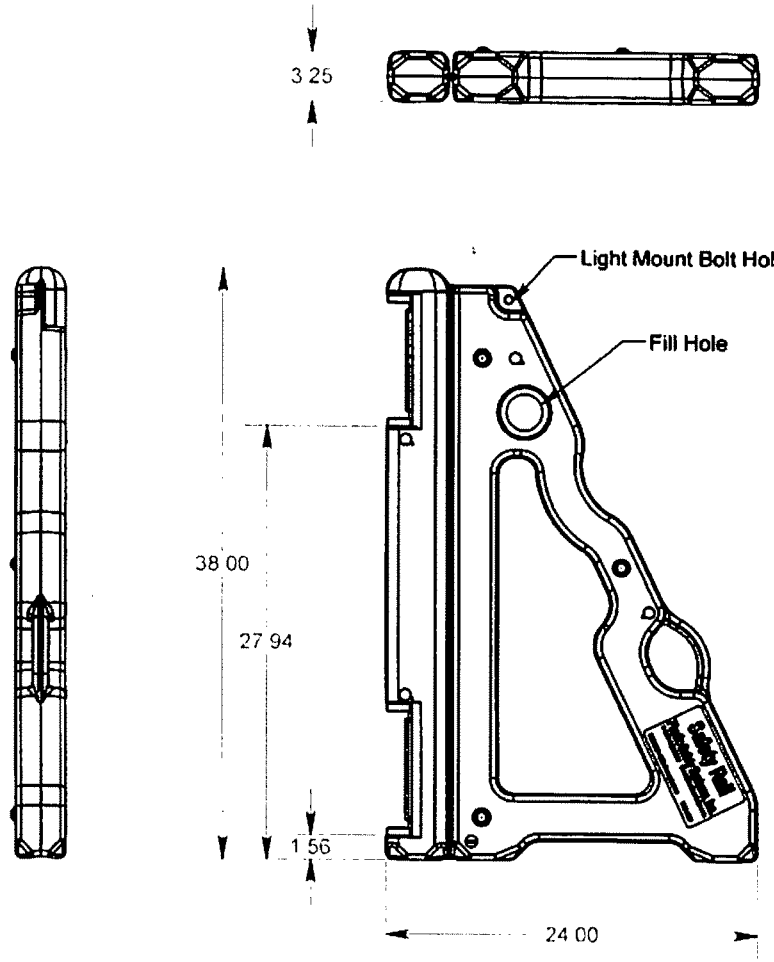
| | |
|---|---|
| Low | 12 to 18 inches above the pavement |
| Mid-A | 20 to 24 inches above the pavement |
| Mid-B | 25 to 36 inches above the pavement |
| Mid-C | 37 to 59 inches above the pavement |
| Tall | 60 to 71 inches above the pavement |
| Oversized | 72 inches and taller |

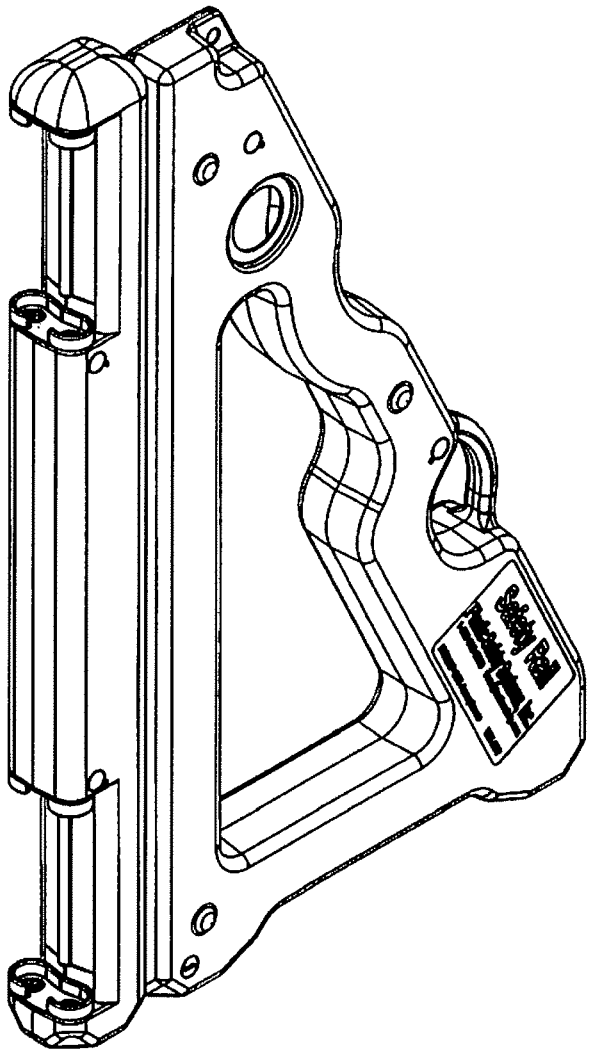
| Page 4 | FEDERAL HIGHWAY ADMINISTRATION<br>OFFICE OF SAFETY DESIGN<br>Category 2 Work Zone Device Acceptance Letter | Letter Number<br>WZ-278<br>Date 4/14/09 |
|---|---|---|

Please note the following standard provisions that apply to FHWA letters of acceptance:

- Our acceptance is limited to the crashworthiness characteristics of the devices and does not cover their structural features, or conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may adversely influence the crashworthiness of the device will require a new acceptance letter.
- Should the FHWA discover that the qualification testing was flawed, that in-service performance reveals unacceptable safety problems, or that the device being marketed is significantly different from the version that was crash tested, it reserves the right to modify or revoke its acceptance.
- You will be expected to supply potential users with sufficient information on design and installation requirements to ensure proper performance.
- You will be expected to certify to potential users that the hardware furnished has essentially the same chemistry, mechanical properties, and geometry as that submitted for acceptance, and that they will meet the crashworthiness requirements of FHWA and NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance shall not be reproduced except in full. This letter, and the test documentation upon which this letter is based, is public information. All such letters and documentation may be reviewed at our office upon request.
- If the subject of this letter is a patented device it is considered "proprietary." The use of proprietary work zone traffic control devices in Federal-aid projects is generally of a temporary nature. They are *selected by the contractor* for use as needed and removed upon completion of the project. Under such conditions they can be presumed to meet requirement "a" given below for the use of proprietary products on Federal-aid projects. On the other hand, if proprietary devices are *specified by a highway agency* for use on Federal-aid projects they: (a) must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with existing highway facilities or that no equally suitable alternative exists or; (c) they must be used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes. Our regulations concerning proprietary products are contained in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is enclosed.
- This Acceptance Letter shall not be construed as authorization or consent by the Federal Highway Administration to use, manufacture, or sell any patented device for which the applicant is not the patent holder. The Acceptance Letter is limited to the crashworthiness characteristics of the candidate device, and the FHWA is neither prepared nor required to become involved in issues concerning patent law. Patent issues, if any, are to be resolved by the applicant.

Attachment #2a



Note: HDPE
Estimated Part Weight 7.0 lbs
Color White with U.V.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/32
ANGULAR: MACH ±1° BEND ±1°
TWO PLACE DECIMAL ±0.015
THREE PLACE DECIMAL ±0.005

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL
HDPE

FINISH

DO NOT SCALE DRAWING

| NAME | DATE |
|---|---|
| DRAWN | |
| CHECKED | |
| ENG APPR. | |
| MFG APPR. | |
| Q.A. | |
| COMMENTS: | |
| CMM | 4/9/09 |

**Plastic Safety Systems, Inc.**

TITLE:

Safety Rail up-right
P/N SR-38B4

SIZE DWG. NO. REV
A SR-38B4

SCALE: 1:12 WEIGHT: SHEET 1 OF 1

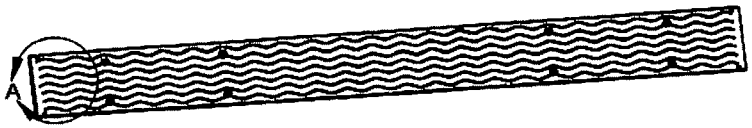


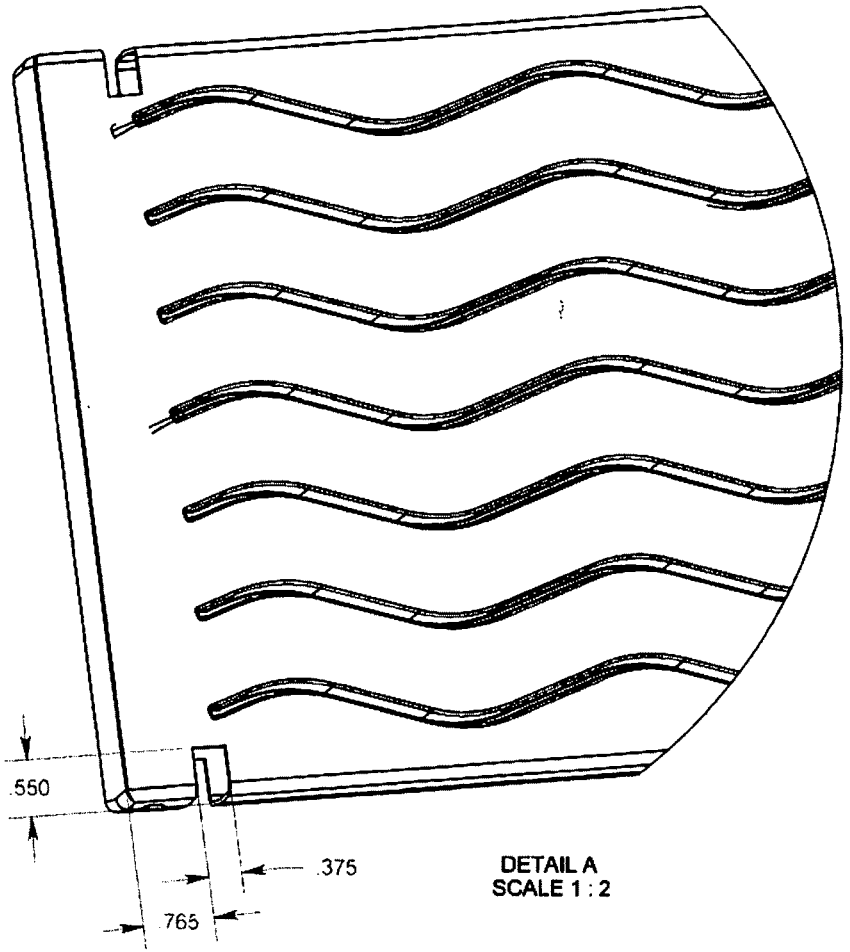
NEXT ASSY USED ON

APPLICATION

5 4 3 2 1

Attachment #2b




DETAIL A
SCALE 1 : 2

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/32
ANGULAR: MACH ±1° BEND ±1°
TWO PLACE DECIMAL ±0.015
THREE PLACE DECIMAL ±0.005

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL HDPE

FINISH

| | NAME | DATE |
|---|---|---|
| DRAWN | CMM | 4/9/09 |
| CHECKED | | |
| ENG APPR. | | |
| MFG APPR. | | |
| Q.A. | | |
| COMMENTS: | | |

**Plastic Safety Systems, Inc.**

TITLE:

Safety Rail Barricade
Board Notch Detail

SIZE DWG. NO. REV
A Wave-8'-N

SCALE: 1:24 WEIGHT: SHEET 1 OF 1



NEXT ASSY USED ON

APPLICATION

DO NOT SCALE DRAWING

5 4 3 2 1

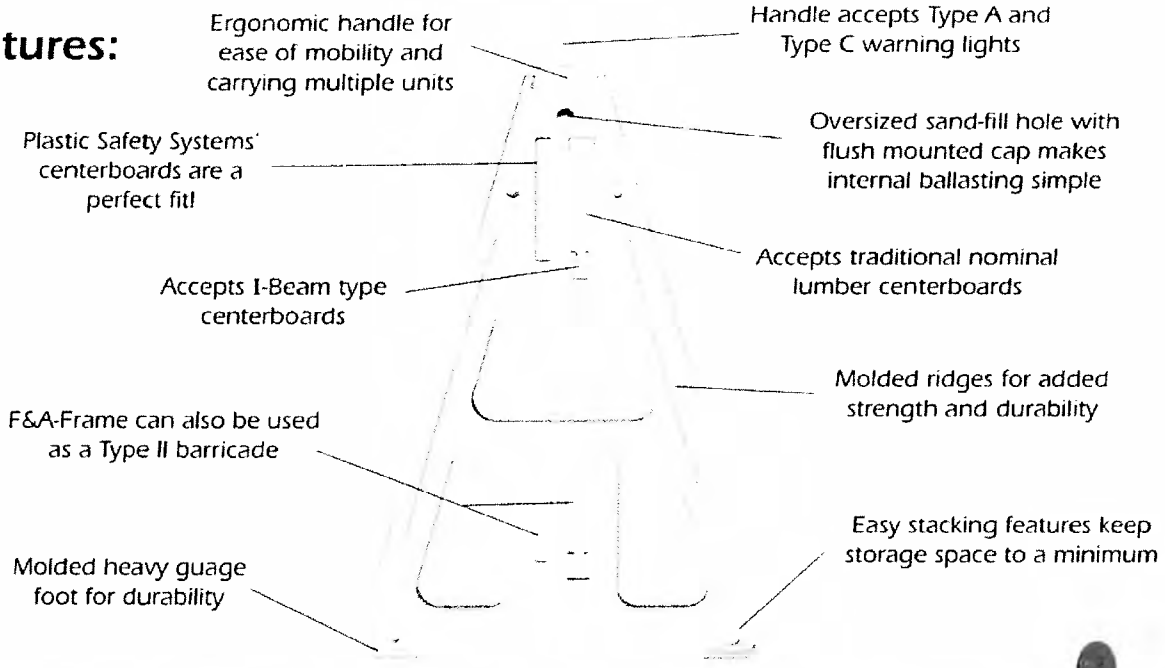
# F&A-Frame™

## Type I & II A-Frame Barricade System

Plastic Safety Systems, Inc.

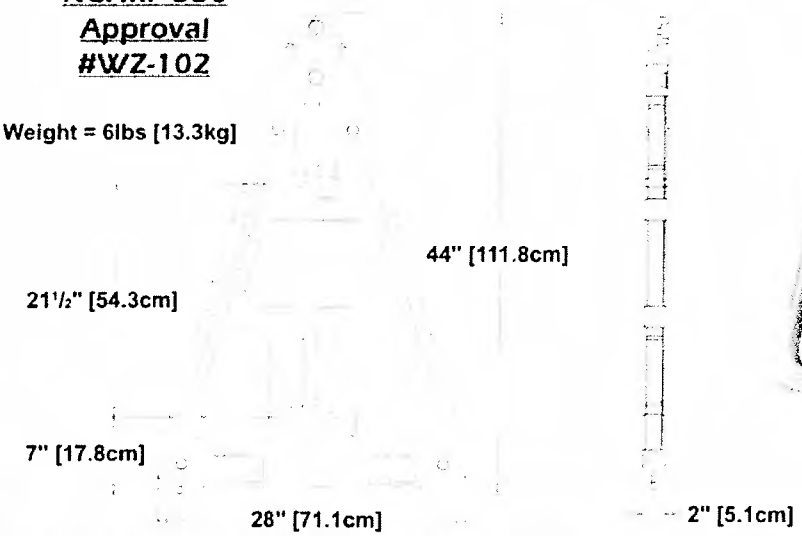
- **Versatile** - accepts virtually any centerboard on the market including PSS centerboards, nominal lumber & I-beam style boards.
- **Durable** - made of U.V. stabilized polyethylene.
- **Ergonomic** - user-friendly handle molded in for easy set-up & take-down.
- **Stackable** - designed with a stacking feature to use minimal space in storage or during transit.
- **User-Friendly** - includes an oversized sand-fill hole for quick & easy internal ballasting.

## Features:




**NCHRP-350 Approval #WZ-102**

**Weight = 6lbs [13.3kg]**

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**"On the Roadway For Safety"®**

**800-662-6338 / 216-231-8590**

plasticsafety.com



Rev. 2/02