

October 12, 2004

Refer to: HSA-10/WZ-180

Mr. Peter Speer  
Bunzl Extrusion Tacoma Incorporated  
3110 70<sup>th</sup> Avenue East  
Tacoma, Washington 98424

Dear Mr. Speer:

Thank you for your letter of April 14, 2004, requesting Federal Highway Administration (FHWA) acceptance of a revision to your Parade-style Type I or II Barricades as a crashworthy traffic control device for use in work zones on the National Highway System (NHS). You requested that we find these barricades acceptable for use with this barricade on the NHS under the provisions of National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

### **Introduction**

The FHWA guidance on crash testing of work zone traffic control devices is contained in two memoranda. The first, dated July 25, 1997, titled "INFORMATION: Identifying Acceptable Highway Safety Features," established four categories of work zone devices: Category I devices are those lightweight devices which are to be self-certified by the vendor, Category II devices are other lightweight devices which need individual crash testing but with reduced instrumentation, Category III devices are barriers and other fixed or heavy devices also needing crash testing with normal instrumentation, and Category IV devices are trailer mounted lighted signs, arrow panels, etc., for which crash testing requirements have not yet been established. The second guidance memorandum was issued on August 28, 1998, and is titled "INFORMATION: Crash Tested Work Zone Traffic Control Devices." This later memorandum lists devices that are acceptable under Categories I, II, and III.

A brief description of the device follows:

Molded polyethylene or polypropylene "A-frame" legs measuring 40 to 44 inches high are molded to accommodate rectangular or "I-beam" shaped retroreflective barricade rails. A pair of legs can support a single barricade rail, or additional legs and rails can be connected in series to form a longer channelizing device.

| Component            | Composition          | Dimensions / notes                         | Weight  |
|----------------------|----------------------|--|---------|
| A-frame, Economy     | Molded polypropylene | 2 x 30 x 43 in., 1 or 2 rails              | 6.1 lb  |
| A-frame, Sand-filled | Molded polyethylene  | 2 x 30 x 44 in., 1 rail                    | 7.1 lb  |
| A-frame, Molded      | Molded polypropylene | 2 x 28 x 40 in., 1 or 2 rails              | 7.4 lb  |
| 1 x 8 inch rails     | Thermoplastic        | $\frac{3}{4}$ x 8 $\frac{1}{4}$ x 96 in.   | 5.25 lb |
| 2 x 8 inch rails     | Thermoplastic        | 1 $\frac{1}{2}$ x 7 $\frac{3}{4}$ x 96 in. | 5.37 lb |
| Barricade light      | Empco-lite           | Model 100 or 2000                          | 3.3 lb  |

Parade style barricades, using your sand-filled A-frame, were crash tested by TrafFix Devices and received the FHWA acceptance letter, WZ-24, dated December 28, 1999. The Bunzl thermoplastic rails may be considered equivalent to the I-shaped rails tested by TrafFix Devices (which weigh approximately 6.8 pounds). Therefore, your company's parade style barricades, using rails up to 8 feet long, are acceptable for use on the NHS under the range of conditions tested, when proposed by a State.

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

- Our acceptance is limited to the crashworthiness characteristics of the devices and does not cover their structural features, nor 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 the FHWA and the NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance, designated as number WZ-180 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.
- This acceptance letter shall not be construed as authorization or consent by the FHWA 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.

Sincerely yours,

*/Original Signed by/*

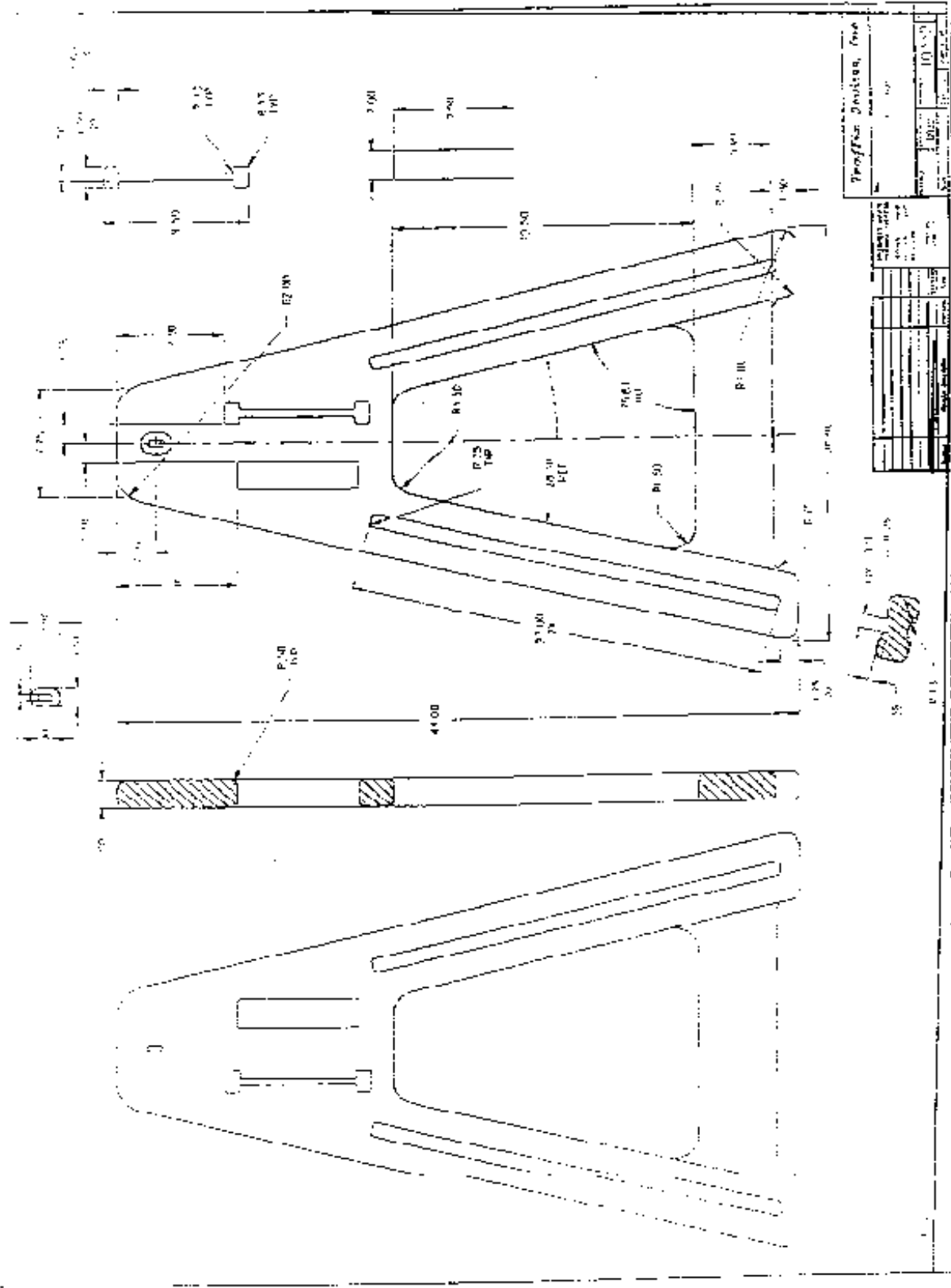
John R. Baxter, P.E.  
Director, Office of Safety Design  
Office of Safety

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cc: HSA-10 (Reader, HSA-1; Chron File, HSA-10;  
N. Artimovich, HSA-10)

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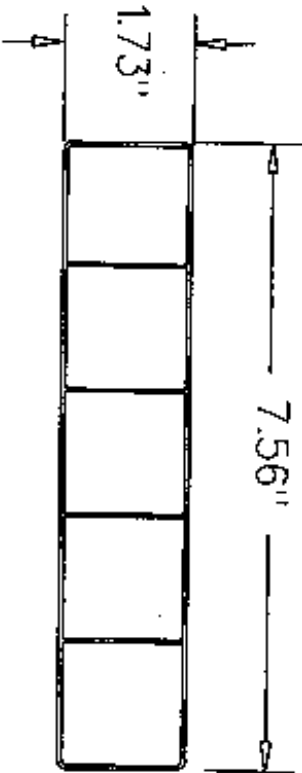
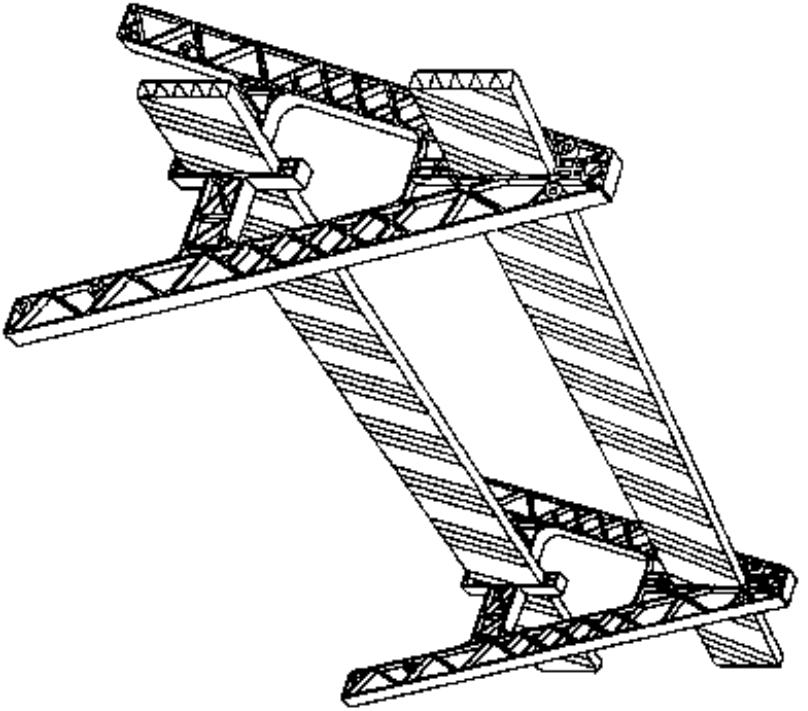
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PART NAME

# 2"x8" PARADE PANEL

DATE

ENGINEER NAME

DATE



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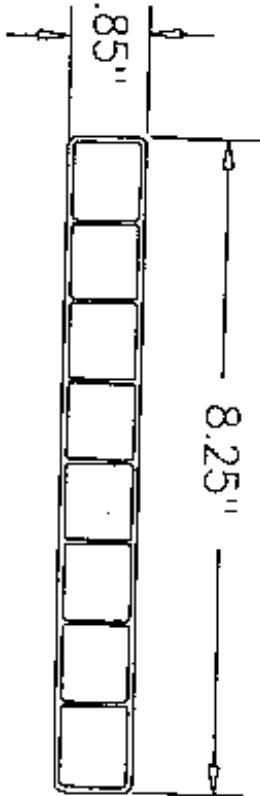
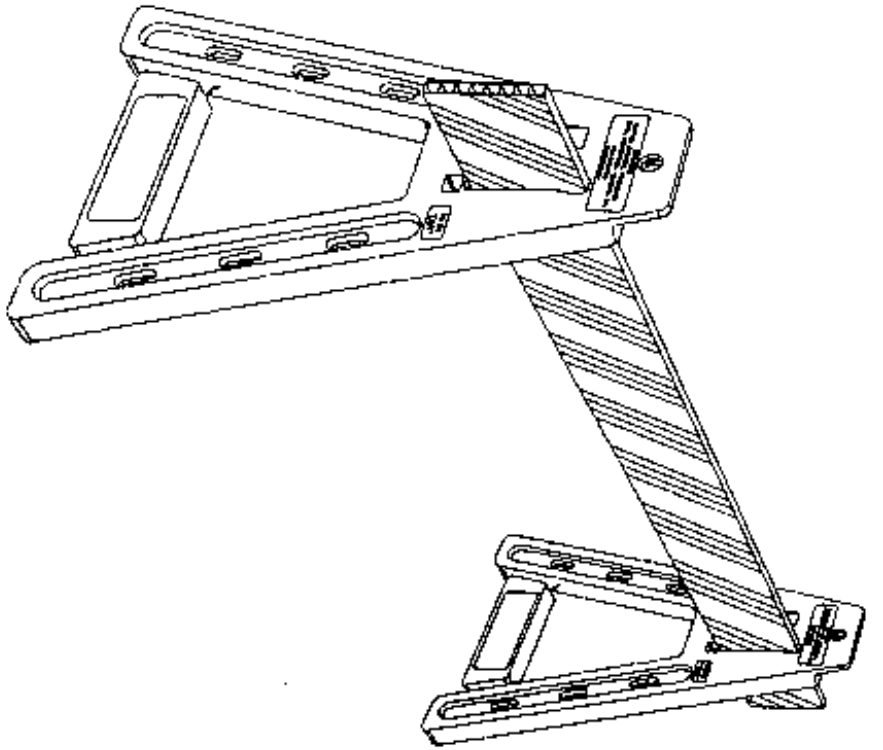
218 7th Ave. East  
 Broomfield, Colorado 80020  
 (303) 440-4000

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DATE

DB-

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# 1'x8" BARRICADE PANEL

DET: HEAD

ENGINEERING MANAGER

DATE

PART NAME



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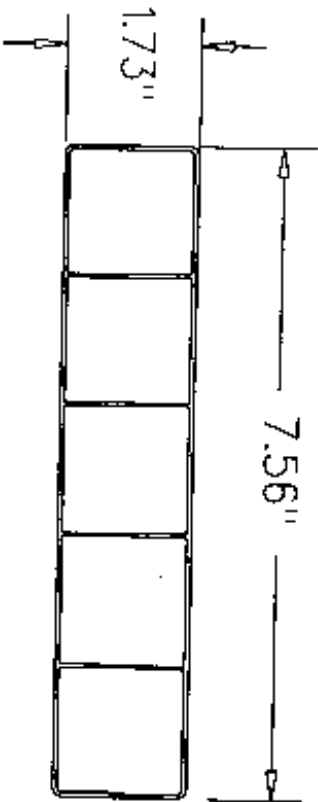
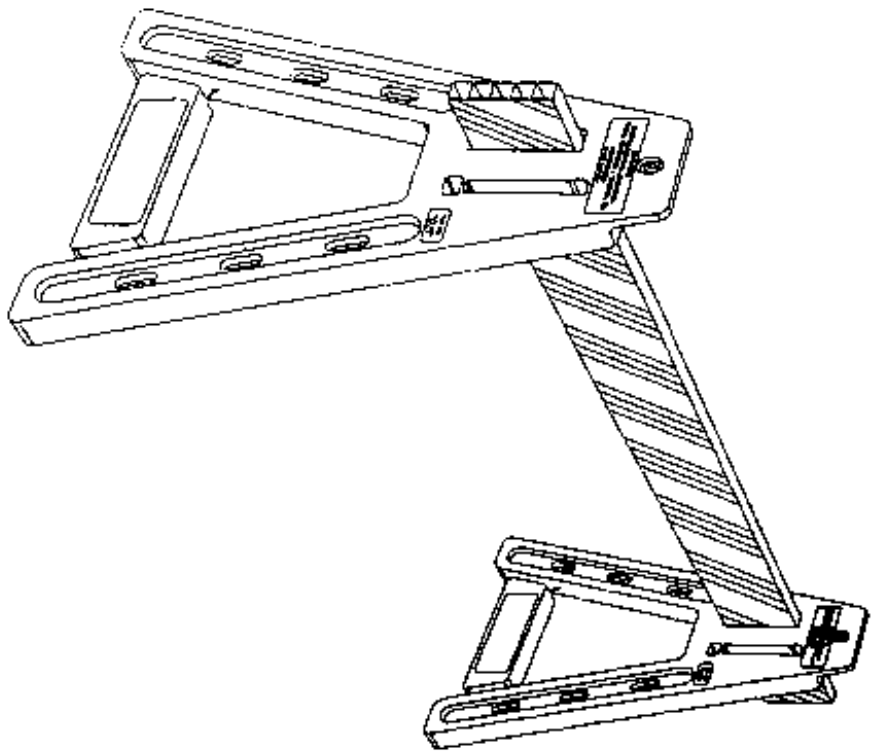


**EXTRUSION**

300 70th Ave, Lakewood, CO 80424  
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7624 PART NUMBER

DATE: 01/05/04  
 DESIGNED BY: DB-  
 CHECKED BY: A 01/05/04



# 2"x8" PARADE PANEL

ID# \_\_\_\_\_ LEAD \_\_\_\_\_ ENGINEERING MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

PART NAME



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| REV. # | 8138     | REV. # | 8008138 | DATE |          |