



U.S. Department
of Transportation
**Federal Highway
Administration**

400 Seventh St., S.W.
Washington, DC 20590

In Reply Refer To:
HSSD/WZ-230

Mr. Peter Speer
Davidson Traffic Control Products
Filtrona Extrusion, Inc.
3110 70th Avenue East
Tacoma, WA 98424

Dear Mr. Speer:

Thank you for your letter requesting the Federal Highway Administration (FHWA) acceptance of your company's Green Cross in-street delineators, made up of an FG 300 PE post with one or two signs attached and mounted on a 10 or 20 pound portable rubber base as a crashworthy traffic control device for use in work zones on the National Highway System (NHS). Accompanying your letter was a drawing of the product and a video of the informal crash testing conducted. You've requested we find the device acceptable for use on the NHS under the provisions of the National Cooperative Highway Research Program (NCHRP) Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

The Green Cross in-street delineator is comprised of the following components. The lightest combination is as follows:

Component	Composition/Brand	Dimensions (inches)	Weight	Quantity
12 x 12 inch Flex sign	Roll-up sign substrate	12 x 12 x 0.08 thick	0.3 lbs	1-2 each
FG 342 PE post	Low Density polyethylene	3 x 2 x 42 tall x 0.15 thick	1.7 lbs.	1 each
FG 300 round base	Recycled Rubber	12 in. round x 2 in. tall	10 lbs.	1 each

The heaviest combination is as follows:

Component	Composition/Brand	Dimensions/Notes	Weight	Quantity
12 x 36 inch R1-6 sign	Roll-up sign substrate	12 x 36 x 0.08 thick	2.0 lbs.	1 -2 each
FG 342 PE post	Low Density polyethylene	3 x 2 x 42 tall x 0.15 thick	1.7 lbs.	1 each
FG 300 20 lb. base	Recycled Rubber	12 in. round x 2 in. tall	20 lbs.	1 each



The components listed above are assembled into a complete portable sign as shown in the enclosed drawing. As you describe, the FG 300 post is friction fitted into the rubber base. The small signs are attached to the post with two pop rivets per sign; the larger signs are attached with ¼ inch molly-jack nuts. Mountable signs allowed include either flexible roll-up sign material, 1/8 inch Acrylonitrile Butadiene Styrene (ABS) or 1/8 inch Ultra High Molecular Weight (UHMW) polyethylene.

In support of your request, you submitted informal crash test video for FHWA review. The crash tests were conducted on two configurations of your Green Cross in-street delineators, one with a flexible 12 x 36 inch roll up sign and one with a rigid 14 x 24 ABS plastic sign. Both signs were fitted into the 20 pound rubber base. When impacted, the posts with signs detached from the base and were carried forward in the direction of the vehicle path. The signs remained attached to the post.


The FHWA has routinely accepted hazard marker panels, up to and including an 18 inch by 18 inch panel, without testing. Based on our review of the crash video submitted, your portable delineator device with mounted ABS or UHMW signs has been successfully crash tested. Therefore, we will accept your company's request to use the Green Cross in-street delineators, made up of an FG 300 PE post with one or two signs attached and mounted on a 10 or 20 pound portable rubber base as a crashworthy traffic control device for use in work zones on the NHS under the range of conditions tested. The range of conditions tested includes an overall maximum of 432 square inches of total sign area (12 x 36 inches) using up to two ABS or UHMW signs mounted on one FG 342 PE post.

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-230, 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.

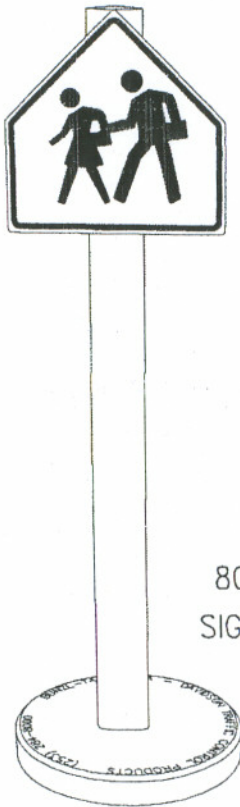
- The Green Cross in-street delineator device described above is patented and considered "proprietary." The use of proprietary work zone traffic control devices in Federal-aid projects is generally of a temporary nature. They are *selected by the contractor* for use as needed and removed upon completion 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 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,

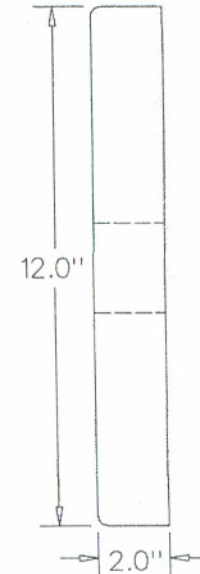
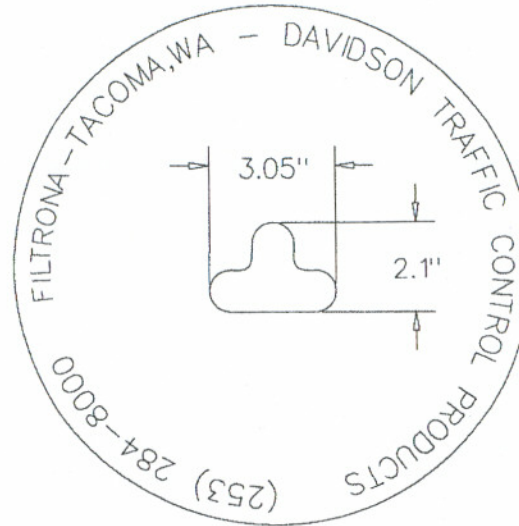


John R. Baxter, P.E.
Director, Office of Safety Design
Office of Safety

Enclosure



800BASE160 W/ S1-1 FYG
SIGN & 42" FG300-PE POST



PART NAME

FG300 10LB RUBBER BASE

DEPT. HEAD

ENGINEERING MANAGER

DATE



Davidson Traffic Control Products

"Creating Products to Save Lives"

www.filtronaextrusion.com
hwysales@filtronaextrusion.com

This drawing and other Davidson products are available in AutoCAD format with simple drag and drop features to transfer product information directly into design drawings. Davidson's product CD works with all software packages, and the CAD library allows for fluid transfer of files across all OS platforms. To register for your free copy, please contact your Davidson Sales Representative or email hwysales@filtronaextrusion.com.

AutoCAD CD Available



FILTRONA EXTRUSION

TACOMA PLANT
3110 70th. Ave. East
Tacoma, Washington
98424
Phone: (253)284-8001
Eng.Fax: (253)284-8094

DIE NUMBER

7194

PART NUMBER

GREEN CROSS 1

DATE

12/22/05

DRN BY

DB~

LAST REV

A 12/22/05