

# Memorandum

SENT VIA ELECTRONIC MAIL

Subject: Sign Sheeting Proprietary Products

Date: January 13, 2006

From: John R. Baxter   
Acting Associate Administrator for Safety

Reply to  
Attn. of: HSA-10

To: Division Administrators  
Federal Lands Highway Division Engineers

We have recently had questions raised by field offices regarding traffic sign sheeting and regulations concerning sole source requirements. Specifically, we have been asked how Divisions should treat Type VII and Type IX sign sheeting. Since these products have an ASTM designation, are they considered generic and not proprietary, or are they sole-source products? Should the required use of these sheeting types be justified through a public interest finding? This memorandum is meant to assist you with those questions and to let you know that FHWA has resources at your disposal to assist you with those questions.

On the question of ASTM designation, ASTM D4956 designates sign sheeting by "Type." Some Types are so narrowly specified that only a single provider satisfies the criteria. Agencies specifying certain ASTM D4956 types need to be careful so that a proprietary product is not unintentionally specified. Currently the ASTM Type VII sheeting criteria can only be satisfied by a product from one company. It is therefore a proprietary product. The ASTM Type IX has also been a proprietary product until just recently (Fall 2005). As of January 2006, ASTM has not approved addition of a Type XI to the existing Types in ASTM D4956, even though some States have incorrectly specified Type XI in bid documents.

The FHWA regulation in 23 CFR 635.411, "Material or Product Selection" prohibits the expenditure of Federal-aid funds on a Federal-aid highway project "for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications . . ." (referred to hereafter as "proprietary product"), unless specific conditions are met. This regulation is intended to ensure competition in the selection of materials, products, and processes while also allowing the opportunity for innovation where there is a reasonable potential for improved performance.

The evaluation and approval of a public interest finding is ultimately a Division office decision; however, it is important that Divisions are applying the facts on sheeting materials in a consistent manner. For example, a new sheeting material may have higher retroreflectivity levels at certain testing geometries, and it may even have higher luminance curves than other sheeting materials when presented under various assumptions. However, if the differences in retroreflectivity or luminance (or any other material property) do not result in credible benefits for road users, then the differences may not support a public interest finding.

A higher ASTM Type designation does not necessarily mean it performs better than the lower designations. While that was true in the past, it has not been true with the introduction of microprismatic sheetings. Research ([FHWA/TX-02/4049-1](#)) has shown that guide signs made with Type IX sheeting do not have statistically significant longer viewing distances than those made with Type VII or VIII sheeting, even when viewed from large trucks ([FHWA/TX-03/4269-1](#)). Recent research ([FHWA/TX-04/0-1796-4](#)) has shown that guide sign legends made with Types VII, VIII, and IX sheeting produce statistically similar legibility distances when viewed from passenger cars. This indicates that, before a finding of public interest is approved, a Division office should request unbiased documented evidence supporting how the needs of the public will be better met by requiring a proprietary product than by allowing competition with other equally suitable products. In addition, if the issue is maintenance of the product over time, the use of a warranty or other maintenance agreement (which can be bid competitively) should be considered.

The Office of Safety will provide additional guidance on how best to evaluate new sheeting. A research consultant has been engaged to provide FHWA with assistance on the technical aspects of sign sheeting currently on the market and to provide advice on the evaluation of new sheeting. We anticipate receiving a draft report with that information within a few months. In addition, the Office of Program Administration recently issued a memorandum providing clarification and guidance on FHWA's current regulations concerning patented and proprietary products.

We hope this information is helpful in the short term and that the guidance being developed will further assist Divisions with making reasonable decisions on sign sheeting. If you have further questions before the future information is distributed please feel free to contact:

- Greg Schertz – Retroreflectivity Team Leader – (720) 963-3764;
- Dee Chappell – Office of Highway Safety (replaced Peter Hatzi) – (202) 366-0087; or
- Carl Andersen – TFHRC – (202) 493-3366.

Additional information, including the latest Sign Sheeting ID Guide, is available at [www.fhwa.dot.gov/retro](http://www.fhwa.dot.gov/retro).

cc: Safety Field  
Safety Headquarters