Mr. William B. Wilson, P.E.
Standards Engineer
Wyoming Department of Transportation
3500 Bishop Blvd
Cheyenne, WY 82009

Dear Mr. Wilson:

Thank you for your letter of March 17, 2006, requesting the Federal Highway Administration’s (FHWA) acceptance of your State’s w-beam to thrie beam transitions to the Wyoming test level 3 (TL-3) and TL-4 bridgerails for use on the National Highway System (NHS). Accompanying your letter were drawings and a discussion of the proposed transition designs. Based on the similarity of these designs to the crash-tested Alaska transition, you requested that we find the Wyoming designs acceptable as TL-3 or TL-4 transition, respectively, for use 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 roadside safety hardware is contained in a memorandum dated July 25, 1997, titled “INFORMATION: Identifying Acceptable Highway Safety Features.” A brief description of the transition designs follows:

As shown in detail in the enclosed drawings, both transitions consist of two nested 12-gauge thrie-beam panels connected to a TL-3 or TL-4 Wyoming Two-Rail Bridge Rail with a standard thrie-beam terminal connector and a fabricated steel connection plate. The connection plate was designed to attach to either the TL-3 or TL-4 versions of the bridge rail. A 12-gauge thrie-beam to w-beam transition piece is used from posts 1 through 3. Posts 1 through 9 are W6 x 9, with post 1 having a 6” x 8” x 14” wood blockout, post 2 having a 6”x 8”x 19” wood blockout, and posts 3 through 9 each having W8x15 steel blockouts. Post 9, immediately adjacent to the bridge, is offset 47.5” from the first bridge rail post. The concrete curb is flared back 4.5” over its last 18” to minimize wheel snagging at that point.
As noted above, this transition design is based on the Alaska transition, originally found acceptable in the FHWA acceptance letter B-55A dated September 2, 1999, except for minor connection details, including:

- Different dimensions for the transition plates to account for variations in heights and widths of bridge rail elements.
- Extending the transition plates beyond the back of the bridge rail elements.
- Different bolt locations on the thrie beam end plate to account for variations in heights and widths of bridge rail elements.

**Findings**

Based on staff review of the Wyoming designs compared to the Alaska transition, I concur that the Wyoming thrie-beam transition design to your TL-3 and TL-4 bridge rails may be used on the NHS when such use is requested by a transportation agency. I understand that the design, like the bridge rail, is non-proprietary and that copies of detailed plans and specifications can be obtained from your office.

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.
- 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 B-151 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,

/signed by/

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