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

400 Seventh St., S.W.
Washington, D.C. 20590

MAY 13 1992

Refer to: HNG-14

Ms. Kimberley L. Ahern
Marketing Director
Paving and Public Works
National Ready Mixed Concrete Association
900 Spring Street
Silver Spring, Maryland 20910

Dear Ms. Ahern:

In your letter of April 30 to Mr. Thomas O. Willett you requested Federal Highway Administration approval of the use on Federal-aid highway projects of a concrete traffic barrier (Tall Wall) that was developed by the Ontario Ministry of Transportation. You further suggested that this barrier could be considered "innovative" (or experimental) and thus be used to satisfy the requirements for experimental barriers as set forth in Section 1058 of the 1991 Intermodal Surface Transportation Efficiency Act.

The 100 m (328-ft.) Tall Wall test section was slipformed of nominal 35-MPa (5,100-psi) unreinforced concrete. Actual average 28-day strengths of test cylinders were 38.1 MPa (5,558 psi) for field-cured cylinders and 39.0 MPa (5,678 psi) for moisture-cured cylinders. The overall height of the barrier was 1125 mm (44.3 inches). The barrier was symmetrical about its vertical axis. At its base, and to a height of 75 mm (3 inches) the barrier had a width of 800 mm (31.5 inches). In the next 250 mm (9.8 inches), the width narrowed at a constant rate to 450 mm (17.7 inches). From that point it narrowed at a lesser constant rate to a top width of 290 mm (11.4 inches). The barrier was cast on top of a 750 mm (30 inches) deep, well-compacted base course. Asphaltic concrete pavement 75 mm (3 inches) deep was placed against both sides of the barrier, giving the barrier an effective height of 1050 mm (41.3 inches).

Because the lower portion of the barrier is very similar to the F shape barrier and other satisfactorily tested shapes, the Tall Wall, if constructed essentially as tested, may be used on Federal-aid highway projects when requested by a State agency.

Because the barrier is taller than the standard New Jersey shape and has no reinforcing steel, yet performs satisfactorily when struck by a 36,287 KG (80,000 pound) tractor semi-trailer, we would consider the Ontario Tall Wall innovative if its use is proposed by a State highway agency to meet the requirements of Section 1058.

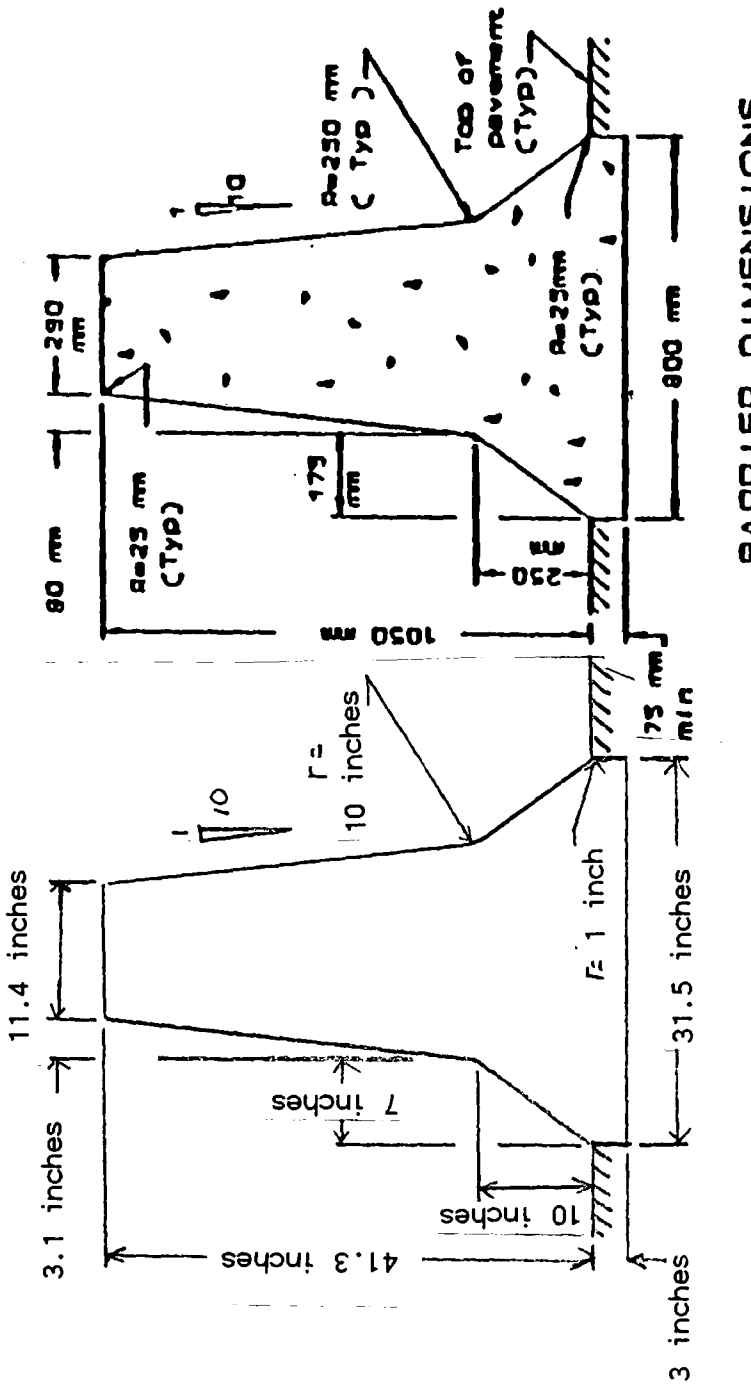
By copy of this letter, our field offices are being so advised.

Sincerely yours,

L. A. Staron

L. A. Staron
Chief, Federal-Aid and Design Division

Federal Highway Administration
HNG-14:RPowers:gm:5-11-92:61320
cc: HNG-1 HNG-10 HNG-14 Reader, 3212 Reader, 3206
Reader, 3128 File, 3128 RAs HRT-20 HHS-20



BARRIER DIMENSIONS

(S.I.)