

May 1, 1996

Refer to: HNG-14

Mr. Don H. Johnson  
President  
Syro, Inc.  
2525 Stemmons Freeway  
Dallas, Texas 75356-8887

Dear Mr. Johnson:

With your April 15 letter to Mr. Gerald L. Eller, you transmitted copies of Southwest Research Institute's (SwRI) April 1996 report entitled "Full-Scale Crash Evaluation of the C-A-T System Test 3-34" and requested acceptance of the CAT as an NCHRP Report 350 TL-3 crash cushion/guardrail terminal. We have reviewed this report, and two earlier SwRI reports, Full-Scale Crash Evaluation of the C-A-T System, dated July 1995, and "Full-Scale Crash Evaluation of the C-A-T System Test 3-39," dated November 1995, which were submitted with your letters of August 31, 1995, and December 7, 1995, respectively. This review indicated that the CAT has successfully passed all required tests and is acceptable for use on the National Highway System (NHS) when such use is proposed by a highway agency. Since the CAT remains a proprietary item, its use on Federal-aid highway projects, except exempt, non-NHS projects, is subject to the conditions set forth in Title 23, Code of Federal Regulations, Section 635.411, copies of which have previously been provided to you.

We noted also that the only change made in the design of the CAT was the addition of an extra row of slots in the downstream ends of both the 12-gauge and 10-gauge w-beam rail elements, as shown in Enclosure 1. Enclosure 2 is a summary of the NCHRP Report 350 tests that were conducted and the results of each. As reflected in Enclosure 2, we consider test SYRO-6 to be a substitute for

NCHRP Report 350 test 3-30 because the test conditions for both are essentially the same and the changes made in the CAT design since running SYRO 6 would not likely change the test results. You will note that the occupant ride down accelerations that we have shown in the summary table for test 3-34 (SwRI Number 335B) are the 10-millisecond values from Figure 8 on page 25 of the April 1996 report, not the 50-millisecond values on page 23 that appear to have been inadvertently recorded in Figure 7 of the report.

Copies of this letter will be sent to our field offices for information. Please call Mr. Powers at (202) 366-1320 if you have any questions regarding this acceptance letter.

Sincerely yours,

(original signed by Seppo I. Sillan)

Seppo I. Sillan, Acting Chief  
Federal-Aid and Design Division

2 Enclosures

Acceptance Letter CC-33

**MR DON H JOHNSON**  
**PRESIDENT**  
**SYRO STEEL INC**  
**2525 STEMMONS FREEWAY**  
**DALLAS TEXAS 75356-8887**