U.S. Department
Of Transportation
Federal Highway
Administration

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

January 4, 1991

Refer to: HNG-14/SS-22

Christopher Meyer, P.E.
Product Development Engineer
Trus Joist Corporation
P.O. Box 7923
2600 E. Amity Road
Boise, Idaho 83707

Dear Mr. Meyer:

Thank you for your letter of December 13 to Mr. Thomas O. Willett in which you requested Federal Highway Administration (FHWA) acceptance for your company's revised Type "L" MICRO=LAM laminated veneer lumber signposts as breakaway structures. Our letter of August 19, 1986, accepted the original MICRO=LAM design based upon full-scale crash testing in weak soil. In support of your current request you submitted reports dated November 1990,of tests conducted at the Southwest Research Institute. Four tests were conducted to assess the compliance of the MICRO=LAM post with a revised sawcut pattern with the breakaway requirements of the 1985 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. These specifications have been adopted, with minor modifications, by the FHWA. The pendulum testing also included posts with the old sawcut design to permit comparison between the full scale and the pendulum test results.

Testing was conducted using an 1,800-pound instrumented pendulum with a 10-stage crushable nose. The speed of the pendulum at impact was 20 mph (29.3 fps). Details of the tested 14 7/8 inch x 7 7/8 inch posts are shown in the enclosures. Test results are summarized below:

Test Number	TJ-10	TJ-11	TJ-12	TJ-13
Sawcut Type	Old	New	Old	New
Soil Type	Strong	Strong	Weak	Weak
Pendulum Velocity Change	7.6 fps	9.0 fps	*6.9 fps	8.2 fps
Est. 60 mph Velocity Change	7.2 fps	7.6 fps	*6.9 fps	7.4 fps
Stub Height	3.0 in	3.0 in	3.0 in	3.0 in
Weight of Test Article	319 lb	319 lb	319 lb	319 lb

*Compare to 1986 tests with 1840# Rabbit:
20 mph test, weak soil, velocity change 8.4 fps
60 mph test, weak soil, velocity change 9.2 fps

The above information shows that the tested posts meet the change in velocity and stub-height requirements adopted by the FHWA. Therefore MICRO=LAM posts spaced further than 7 feet apart with the new sawcut design are acceptable for use on Federal-aid projects when requested by a State.

This acceptance is limited to breakaway characteristics of the posts and does not cover the structural features. Presumably, you will supply potential users with sufficient information on structural design and installation requirements to ensure proper performance. We anticipate that the States will require certification from Tros Joist Corporation that the posts furnished have essentially the same mechanical properties and geometry as those used in the tests, and that it will meet the FHWA change in velocity requirements.

Since your company's MICRO=LAM posts are proprietary items, to be used in a Federal-aid highway project they: (a) they must be supplied through competitive bidding with equally suitable unpatented items; (b) the State highway agency certifies that they are essential for synchronization with existing highway facilities or that no equally suitable alternate exists; or (c) they are 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.

Sincerely yours,

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

Enclosures

TRUS JOIST CORPORATION
a division of TJ International

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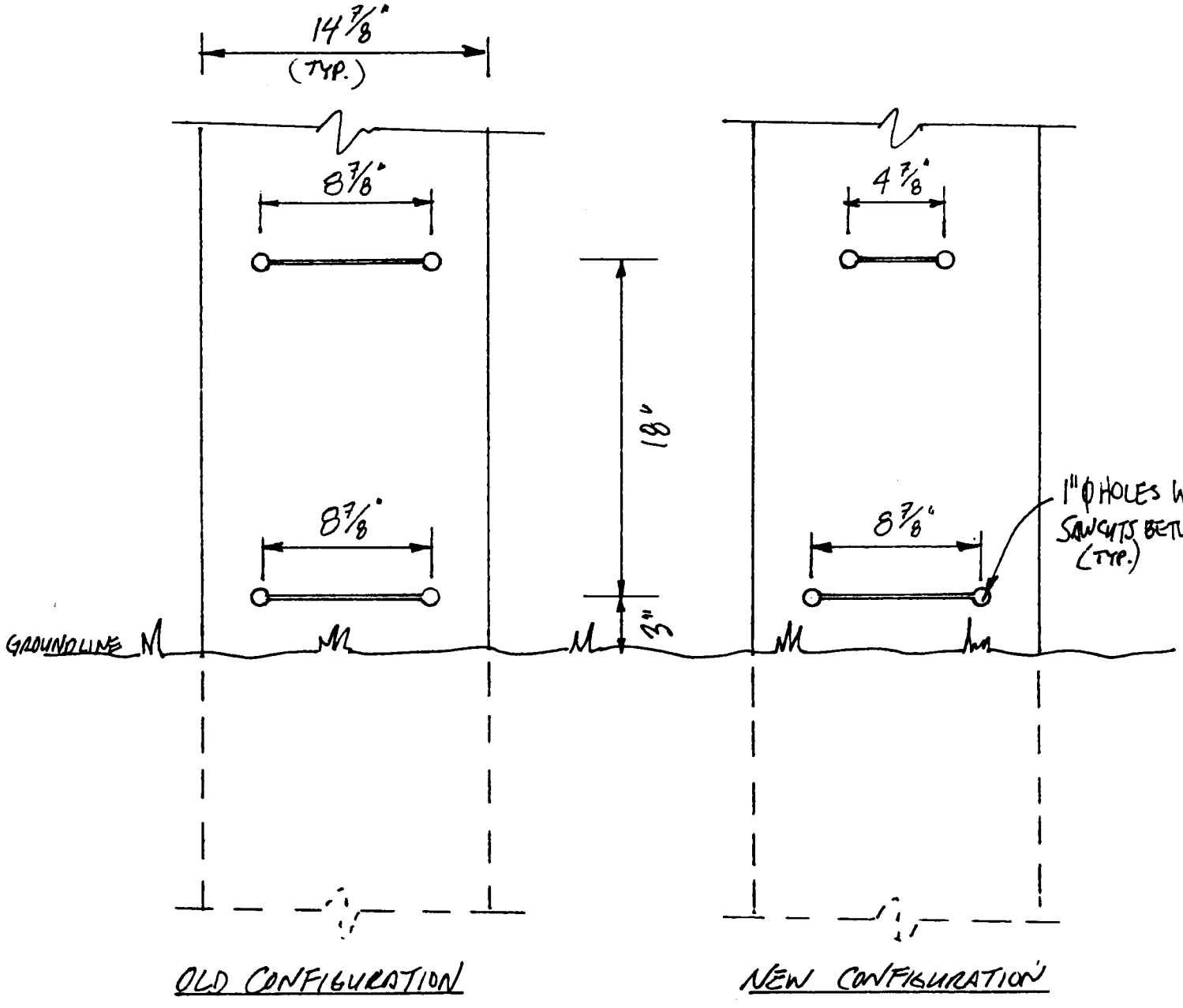

FIGURE 1. - TYPE "L" SIGNPOST SAWCUT GEOMETRY

NAME: _____ JOB # _____

LOCATION: _____ SHEET 1 OF 1

SALESMAN: _____ BY CM DATE: 12-1-90