Refer to: HSA-10/LS-53

Mr. Robert A. Sik
Vice President
Akron Foundry
2728 Wingate Avenue
Akron, Ohio 44314

Dear Mr. Sik:

Thank you for your letter of May 1, 2002, requesting Federal Highway Administration (FHWA) acceptance of a modification to your company's TS-1000 Threaded Traffic Signal Pedestal Base and TS-1000 Modified Threaded Traffic Signal Pedestal Base as breakaway bases for use on the National Highway System (NHS). Accompanying your letter were drawings of the original and modified bases. You requested that we find the modifications to these bases acceptable 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
Testing of the supports was in compliance with the guidelines contained in the NCHRP Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features. Requirements for breakaway supports are those in the American Association of State Highway and Transportation Officials' Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Testing
Full-scale automobile testing was conducted on the TS-1000 bases, and they were accepted in our November 19, 1997, letter LS-47. The proposed change to the bases involves adding a collar to the top to provide a more secure anchorage for the pole that is threaded into the top of the base. Because these bases' crash performance is by virtue of their breaking at the bottom, the addition of the collar and/or gussets at the top should have no adverse affect on their breakaway performance.

Findings
Because the performance of the subject bases modified with the collar (designated TS-1000-L) and/or gussets (designated TS-1000-L With Gussets) is expected to be similar to the crash tested bases, the devices described above and shown in the enclosed drawings for reference are acceptable for use as Test Level 3 devices on the NHS under the range of conditions tested, when proposed by a State.

Please note the following standard provisions, which apply to FHWA letters of acceptance:

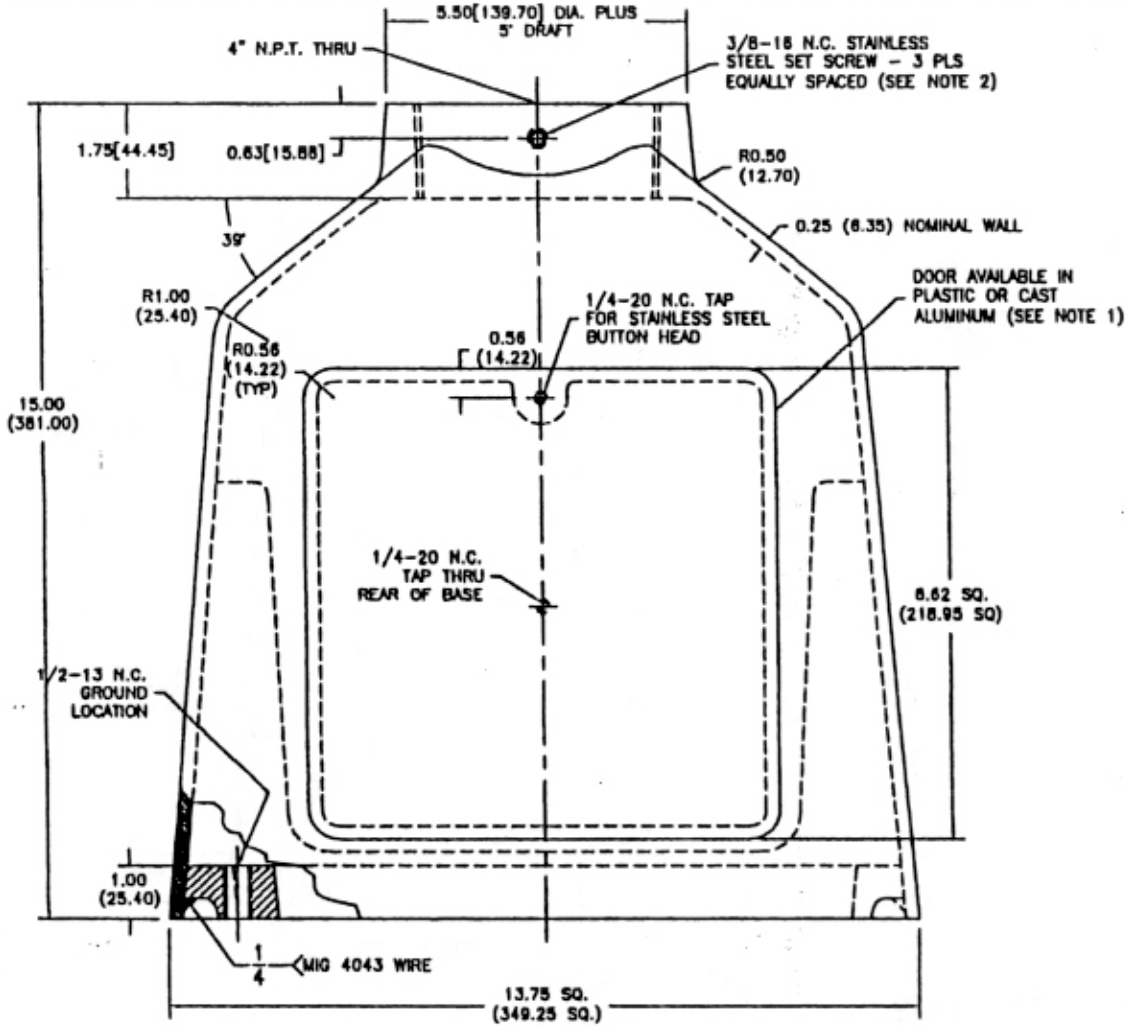
- Our acceptance is limited to the crashworthiness characteristics of the devices and does not cover their structural features, nor conformity with the Manual on Uniform Traffic Control Devices.
- Any changes that may adversely influence the crashworthiness of the device will require a new acceptance 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 FHWA and NCHRP Report 350.
- To prevent misunderstanding by others, this letter of acceptance, designated as number LS-53 shall not be reproduced except in full. As this letter and the supporting documentation which support it become public information, it will be available for inspection at our office by interested parties.

The Akron Foundry bases are or will be patented products and are considered "proprietary." The use of proprietary devices specified on Federal-aid projects, except exempt, non-NHS projects: (a) must be supplied through competitive bidding with equally suitable unpatented items; (b) the highway agency must certify that they are essential for synchronization with existing highway facilities or that no equally suitable alternative exists or; (c) they must be 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.

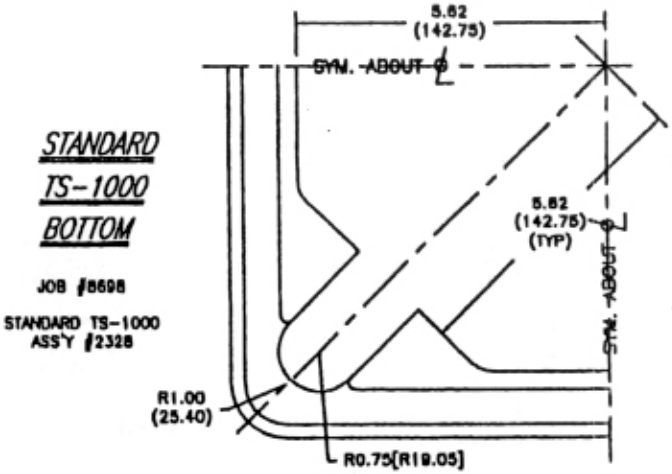
Sincerely yours,

Carol H. Jacoby, P.E.
Director, Office of Safety Design

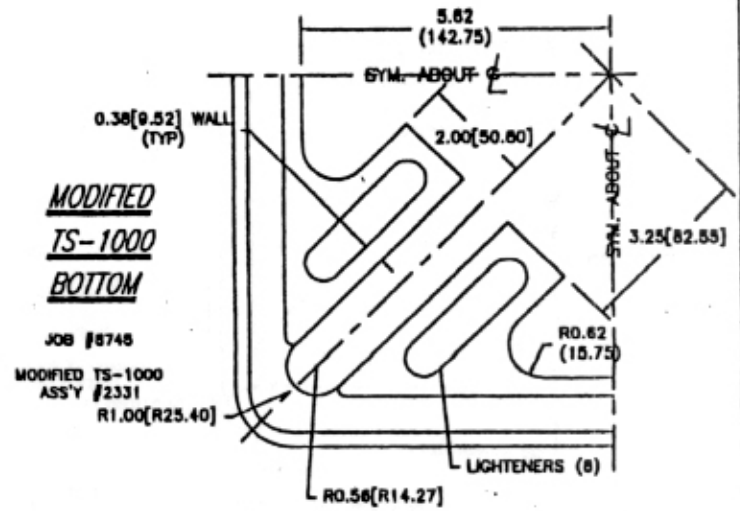
Enclosure



TS-1000
TOP & DOOR
JOB #2327 JOB #8699



STANDARD
TS-1000
BOTTOM
JOB #8698
STANDARD TS-1000
ASS'Y #2328



MODIFIED
TS-1000
BOTTOM
JOB #8745
MODIFIED TS-1000
ASS'Y #2331

NOTES:

1) FOR RAILROAD FLASHER POLE APPLICATION THE FRONT HOLE IS TO BE DRILLED THRU 13/32. USE 3/8-16 X 1-1/4 S.S. HEX BOLT, LOCK WASHER & NUT

DO NOT SCALE PRINT

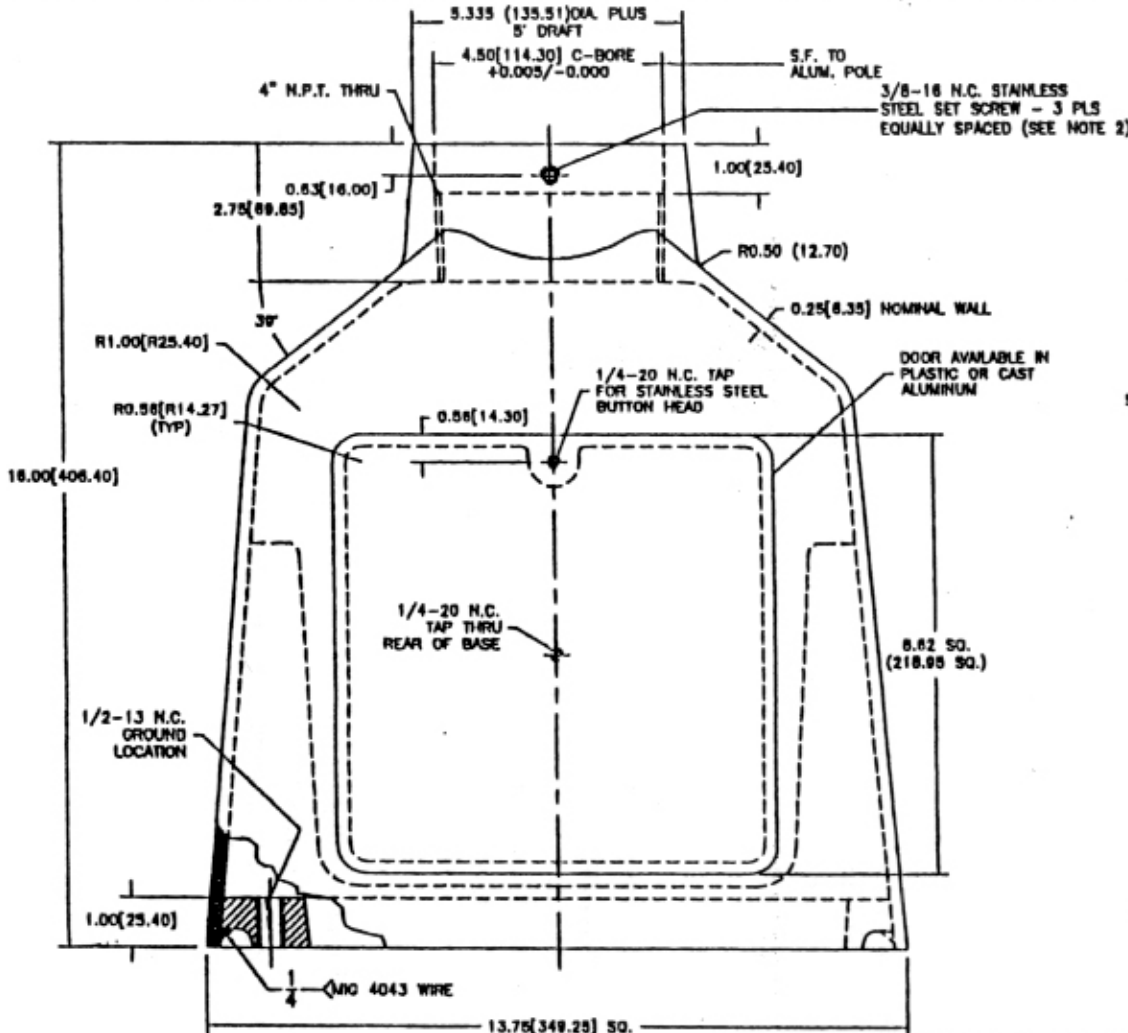
TOLERANCES
Unless Otherwise Specified
.X ±.015
.XX ±.010
.XXX ±.005
ANG. ±1/2°
FRAC. ±1/64

XXXX0000.DWG | MATERIAL 356-T6 (AFTER WELDING)

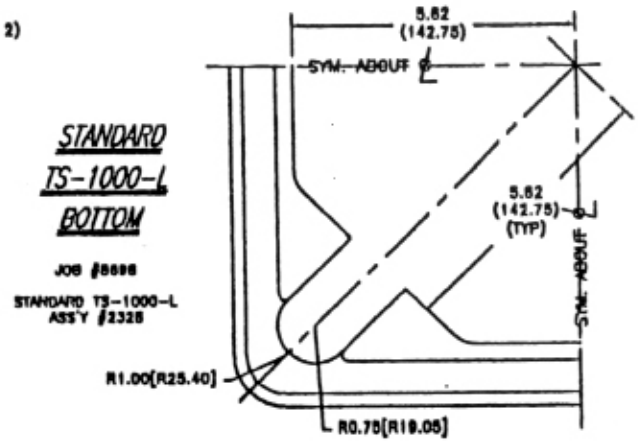
REV.	DESCRIPTION	BY	DATE
A	ENGINEERING RELEASE		

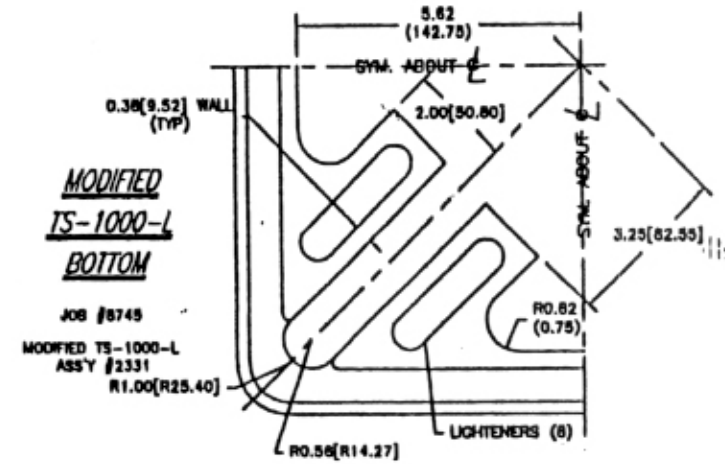
AKRON FOUNDRY CO. AKRON, OHIO

DRAWN BY R. SIK	APPROVED BY	SCALE	7 : 16
DATE 6/15/88	DATE APPROVED	PAGE	1 OF 1
DESCRIPTION	TRAFFIC SIGNAL PEDESTAL BASE		
CAT. NO.		DWG. NO.	B - TS-1000



TS-1000-L
TOP & DOOR
JOB #2327 JOB #8699





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TOLERANCES
Unless Otherwise Specified
.X ±.015
.XX ±.010
.XXX ±.005
ANG. ±1/2°
FRAC. ±1/64

REV.	DESCRIPTION	BY	DATE
A	ENGINEERING RELEASE		

AKRON FOUNDRY CO. AKRON, OHIO

DRAWN BY	R. SIK	APPROVED BY	
DATE	6/15/88	DATE APPROVED	
SCALE	7 : 16	PAGE	1 OF 1

DESCRIPTION: TRAFFIC SIGNAL PEDESTAL BASE

TS1000-L.DWG	MATERIAL 356-T6 (AFTER WELDING)	CAT. NO.	DWG. NO. B-TS-1000-L

CAUTION: THIS BASE DESIGN REQUIRES CONCENTRICITY OF POLE O.D. & THREAD WITHIN 0.010 T.I.R. AS SUPPLIED BY AKRON FOUNDRY.