



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

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

October 27, 1993

Refer to: HNG-14/SS-38

Mr. Herbert J. Henry
Telespar Product Manager
Unistrut Corporation
35660 Clinton Street

Dear Mr. Henry:

Thank you for your September 23 letter to Mr. James H. Hatton, Jr., requesting acceptance of a revised Telespar post and slip-base assembly as meeting Federal Highway Administration's breakaway requirements. Our acceptance of the original three-bolt, slip-base design was dated May 1, 1991. The revised design shown on the enclosed drawings, uses heavier gauge base and sign posts as well as a heavy-duty cast iron slip-base assembly.

Specifically, the hardware consists of a TL-200-B5B5 slip-base assembly with 76-mm x 76-mm x 4.76-mm (3-inch x 3-inch x 3/16-inch) structural tubing for both base post and sign post. The TL-200-B5B5 is composed of two cast iron TL-199-B-5 sub-assemblies, a Teflon keeper plate between the sub-assemblies, two stainless steel bushings around each attachment bolt, (one above and one below the keeper plate), and two plate washers, (one under the head and one under the nut of each of the three attached bolts). The surfaces in contact with the Teflon keeper plate are milled flat. The TL-199-B5 has thicker slip plates than your company's previous sum-assemblies [19-mm versus 13-mm (3/4-inch versus 1/2-inch)].

We note that the mass of the components in the new design is greater than that of the previously accepted design. However, it does not begin to approach that of the typical large ground-mounted sign supports that commonly use slip-base breakaway technology. Since the accepted design resulted in low test occupant impact velocities, we conclude that the moderate increase in post mass would not results in the new design causing unacceptable occupant impact velocities if it were to be tested. Therefore, based on the successful testing of the lighter gauge breakaway three-bolt slip-bases and the similarities between the cast design and the accepted fabricated design, we find the new design acceptable for use on the National Highway System (NHS) if requested by a State.

A caution is appropriate for all of your company's cast iron slip-base assemblies. While you state that the slip plane surfaces will be milled smooth, and the drawings show that the galvanizing is to be wiped smooth of these surfaces, no mention is made of the opposite surfaces of the sub-assemblies. Since the clamping forces of the bolts and washers act on these surfaces, they too, must be smooth enough to permit the washers to slide. We assume that your company's quality control is sufficient to assure that there are no irregularities between these surfaces and the washers that would increase friction over your earlier designs.

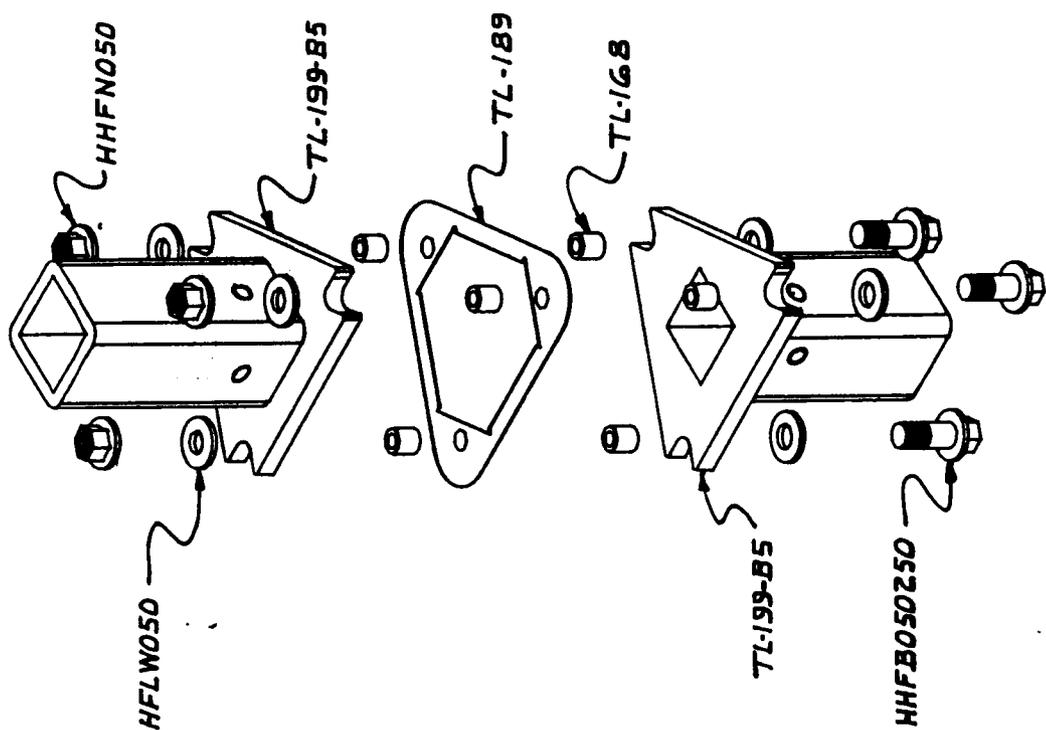
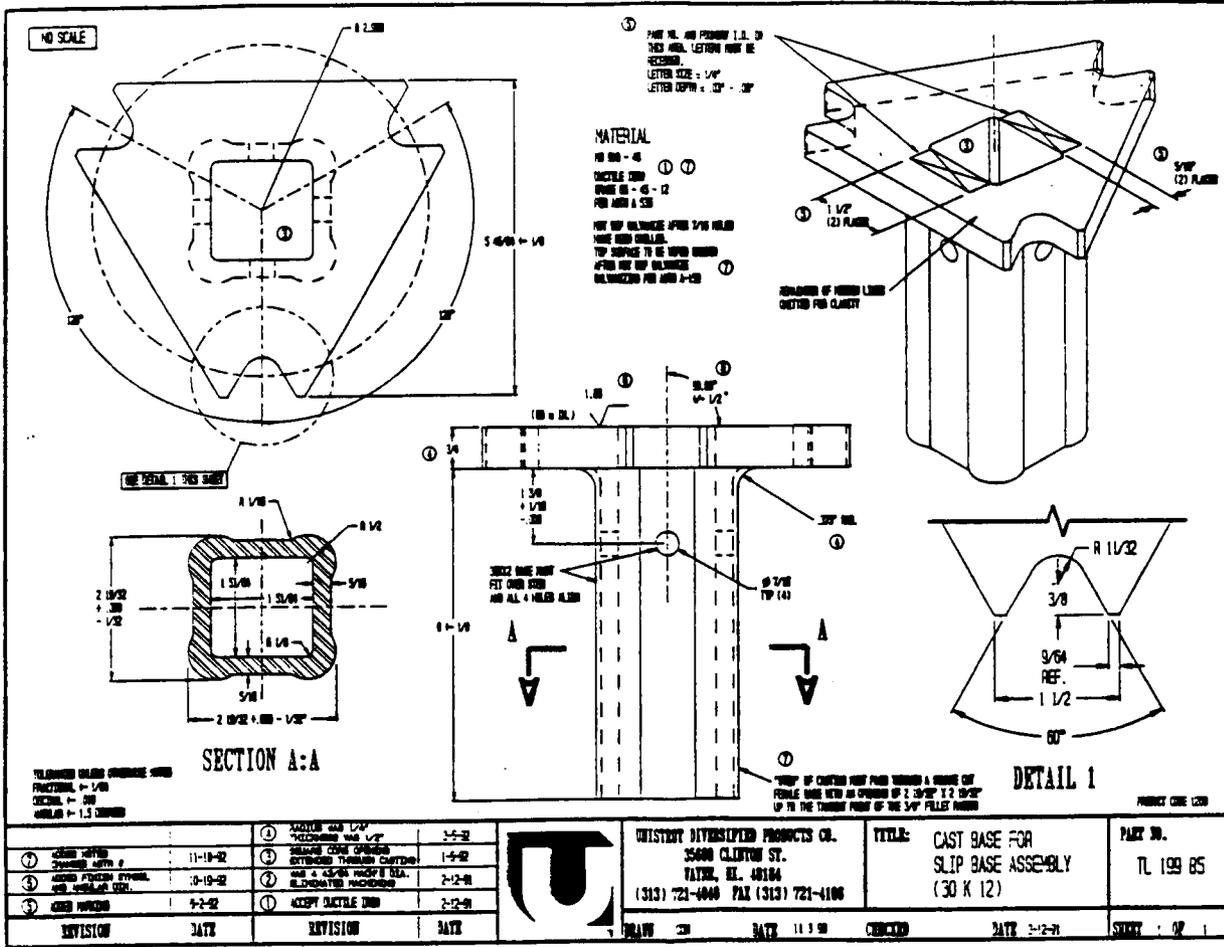
All other conditions in our earlier letter on the Unistrut three-bolt slip-base are applicable.

Sincerely yours,

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

3 Enclosures (Drawing Sheets)

Geometric and Roadside Design Acceptance Letter SS-38



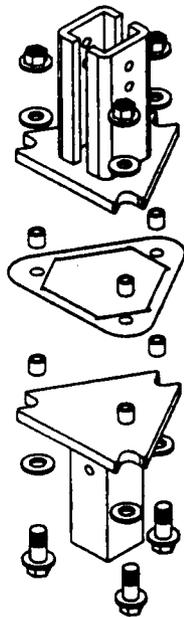
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| TITLE | | MATERIAL | |
|----------------------------------|-----------|-------------------------------|----------|
| Telespar Slip Base Assembly | | UNISTRUT DIVERSIFIED PRODUCTS | |
| BASE ASSEMBLY | | WAYNE, MI. 48184 | |
| TOLERANCE UNLESS OTHERWISE NOTED | | MS NUMBER | |
| DECIMAL ± .005" | | 313 721 4040 | |
| FRACTION ± 1/64" | | FAX 313 721 4106 | |
| NO. | DATE | DR. | DATE |
| | | CHO. | 9-20-93 |
| REVISIONS | STD. FIN. | PRODUCT CODE | PART NO. |
| | | | S-572 |
| | | WT. KGS. | |

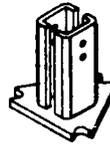
TELESPAR® POST ANCHOR SYSTEM

SLIP BASE BREAKAWAY ASSEMBLY

Note: Recommended torque on slip-base flanged head bolt & nut 40 ft. lbs.



Top Subassembly



Bottom Subassembly



| Part Number | Finish | Post Size |
|-------------|--------|-----------|
| TL 198-T1 | HG | 2" |
| TL 198-T2 | HG | 2 1/4" |
| TL 198-T3 | HG | 2 1/2" |
| *TL 198-T3H | HG | 2 1/2" |

Note: Sign post must fit inside subassembly anchor.

| Part Number | Finish | Ground Anchor Size |
|-------------|--------|--------------------|
| TL 199-B1 | HG | 2" |
| TL 199-B2 | HG | 2 1/4" |
| TL 199-B3 | HG | 2 1/2" |
| *TL 199-B5 | HG | 3" |

Note: Bottom assembly must fit inside ground anchor.

*Heavy-duty assembly

Each Slip Base Assembly Consists Of:

| Description | Part Number | Finish | Number of Pieces |
|--------------------------|-------------|--------|------------------|
| One Top Subassembly | (See Above) | | |
| One Bottom Subassembly | (See Above) | | |
| Retainer Gasket | TL 189 | PL | 1 pc |
| Flange Head Bolt | | | |
| 1/2" x 2" | HHFB050200 | EG | 3 pcs |
| 1/2" x 2 1/4" | HHFB050250 | EG | 3 pcs |
| Flange Head Hex Nut 1/2" | HHFN 050 | EG | 3 pcs |
| Flat Washer 1/2" | HFLW 050 | EG | 6 pcs |
| Release Bushing | TL 168 | SS | 6 pcs |

To order a complete Slip Base Assembly use the part number TL 200. In addition, indicate the top and bottom subassembly part numbers to complete your ordering process.

Example: 2" top subassembly & 2 1/4" bottom subassembly

Part #: TL 200-T1B3

Note: When ordering separate components, please use the individual part numbers.

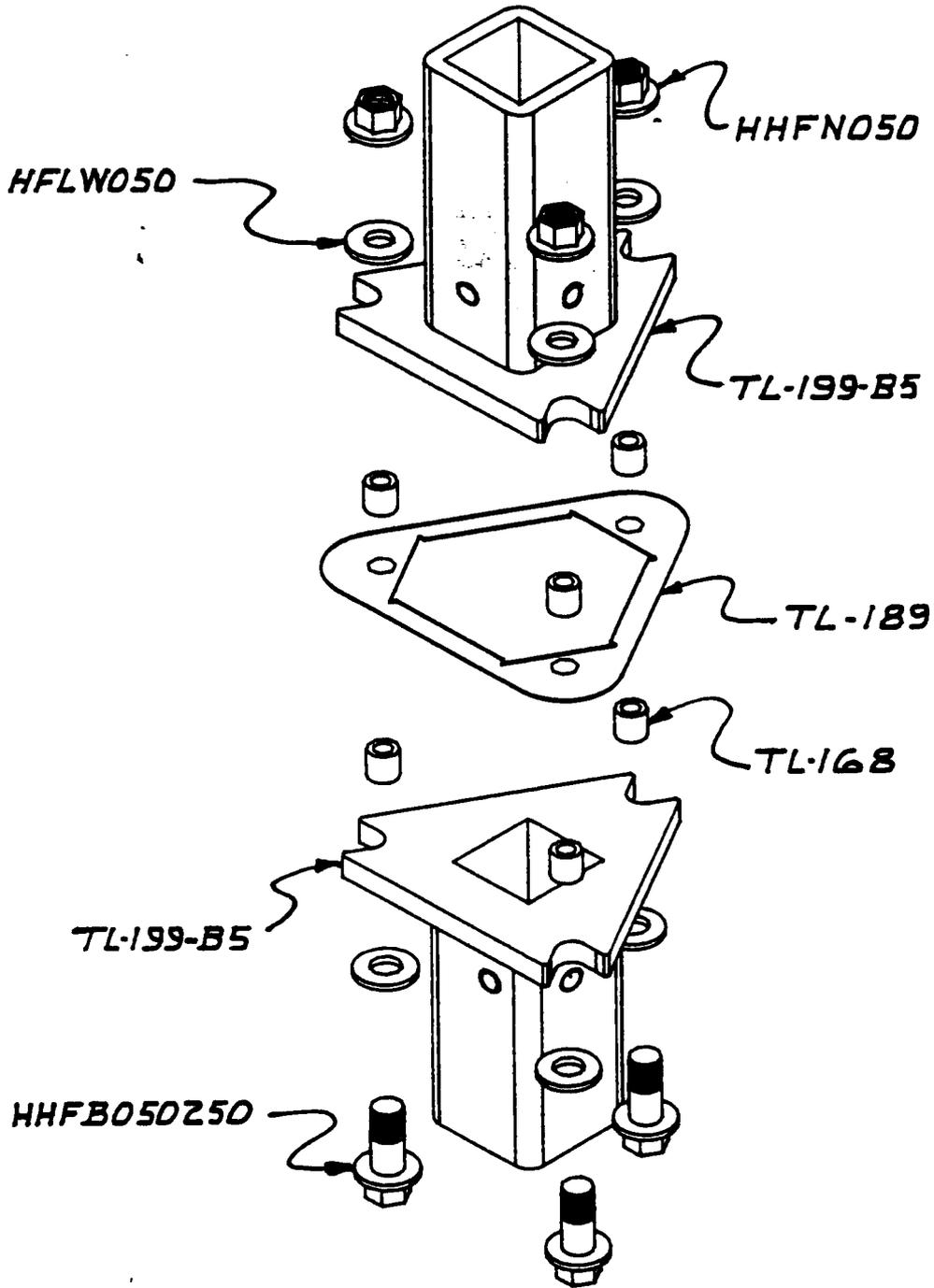
Telespar Sign Support Systems offer a complete line of sign post assemblies and anchors. Your local Unistrut Service Center has information and trained representatives ready to assist you in meeting your sign post requirements. Contact them today to find out how Telespar Sign Support Systems can better service you and your community.

Note: For maximum performance of Telespar Anchor Systems, the Telespar Installation Brochure (TI-87) should be consulted.



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585 Finley Avenue
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Wayne, Michigan 48184
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| | | | | | | | |
|-----------|------|--|-----|--|---------------------|------------------|--------------|
| | | TITLE <i>TELESPAR SLIP BASE ASSEMBLY</i> | | UNISTRUT DIVERSIFIED PRODUCTS WAYNE, MI. 48184 313 721 4040 FAX 313 721 4106 | | MATERIAL | |
| | | TOLERANCE UNLESS OTHERWISE NOTED | | DECIMAL $\pm .005"$ FRACTION $\pm 1/64"$ | | MS NUMBER | |
| NO. | DATE | SCALE | DR. | CHD. | DATE 9-20-93 | PART NO. | |
| REVISIONS | | STD. FIN. | | PRODUCT CODE | | WGT. LBS. KG. | |
| | | | | | | | S-572 |