



DETAIL A: SLIPBASE ASSEMBLY

DETAIL B: FOUNDATION

OMNI-DIRECTIONAL SLIPBASE WITH TUBE POST

SSS03a

SHEET NO.	DATE:
1 OF 2	2006

INTENDED USE

The omni-directional slipbase tube post sign support system is a single-post (SSS03a) sign support system. The system may also be used as a two-post system as long as the posts are at least 2100 mm apart. The total mass of all the sign posts above the slip-plane must be less than 270 kg. The system has been successfully crash tested with the base embedded in concrete. The system is considered to meet the requirements of the 1985 AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*.

COMPONENTS

The omni-directional slipbase sign support system consists of a sign post (PTFOSa), a base post (PTFOSb), three FBX16b bolts and nuts, three FWC16b hardened steel washers for each bolt and a FPS30 keeper plate. Slipbase shims (FPP12a-b) may be added between the keeper plate and upper slipbase as needed to level the sign post. The three FBX16b bolts pass through the keeper plate fitted between the two slipbase plates, one on each end of the sign and base posts. The keeper plate (FPS10) keeps the bolts from sliding out of the assembly in windy conditions. The bolts tear through the keeper plate during a collision allowing the sign post and base post to separate. The three slipbase nuts, coated with a dry lubricant, shall be tightened to a torque of $10 \text{ N}\cdot\text{m} \pm 2 \text{ N}\cdot\text{m}$. The base-post assembly (PTFOSb) shall be embedded in 20 MPa concrete with cement conforming to AASHTO M85 (ASTM C150) Type II. The concrete foundation shall be reinforced with 8 vertical bars of Grade 400 MPa bars conforming to either AASHTO M284M (ASTM D3936D) or AASHTO M31M (ASTM A615M). The spiral reinforcing shall conform to either ASTM A306 or AASHTO M32 (ASTM A82) and shall have 2 flat turns at the top and bottom and a 150-mm pitch.

REFERENCES

T. J. Hisch, "Crash Test and Evaluation of Single Post Highway Signs," Texas Transportation Institute, Research Report No. 146-1 1, College Station, TX, August 1973.

J. R. Morgan and L. D. Breaux, "Generic Small Sign Support System and Validation of Acceptable Support Performance," Texas Transportation Institute, Research Report No. FHWA-TX-90-1122-IF, College Station, TX, April 1990.

L. A. Staron, "Breakaway Sign Supports," Geometric and Roadside Design Acceptance Letter SS-34, Federal Highway Administration, April 20, 1993.

D. L. Bullard, "Crash Testing of Louisiana's Multidirectional, single post, small sign support," Texas Transportation Institute, College Station, March 1993.

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