TYPICAL SINGLE BRACKET

TYPICAL BACK TO BACK

IMPORTANT:
- *U-BOLT TO BE MADE IN ACCORDANCE WITH STANDARD MANUFACTURING PROCEDURE. 1/2” OR 5/16” DIAMETER STOCK IS PERMISSIBLE. AMERICAN STANDARD REGULAR SERRATED HEX NUTS AND SPRING LOCK WASHERS.*

- *SLAT TO HOLD HEAD OF 1/2” HEX HEAD BOLT. THE BOLT SHALL BE 1/2” LONG WITH FULL THREAD, A MEDIUM WASHER, AND GALVANIZED STEEL OR ALUMINUM SELF-LOCKING HEX HEAD NUT. THE BOLT HEAD MUST NOT TURN IN THE SLOT.*

- *SECTION X-X MOUNTING CLAMP FOR SOCKET OR SLIPBASE*
CAST-IN-PLACE SLIPBASE FOR NEW INSTALLATIONS

SLIPBASE CASTING REQUIREMENTS

FOR 3 1/8 INCH POSTS (OR P2 POSTS)

Galvanized Steel Slipbase Casting ASTM A-536

MOUNTING HARDWARE

3 - EACH \( \frac{1}{8} \) x 2 1/4 INCH LONG HEX BOLT
3 - EACH \( \frac{1}{4} \) x 1 INCH LONG ZINC-PLATED, Grade 5
3 - EACH \( \frac{1}{4} \) x 1 INCH LONG ZINC-PLATED, Grade 5
3 - EACH 30 GAUGE STEEL BOLT RETAINING PLATE ASTM A-563, 4-90 COATING

ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.

TUBULAR STEEL SIGN SUPPORT SLIPBASE NOTES

1. REFER TO SIGNING PLANS FOR SIGN LOCATIONS AND HEIGHT
2. MINIMUM ALLOWABLE TENSION CAPACITY FOR WEDGE ANCHORS - 3000 LBS.
3. MAXIMUM ALLOWABLE MOMENT FOR SIGN BASE - 2.0 k-in.
4. PAY ITEM "STEEL SIGN SUPPORT-\( \frac{1}{8} \) INCH ROUND PIPE" SHALL INCLUDE SLIPBASE CASTING, MOUNTING HARDWARE AS SHOWN ON STD S-614-8, SHEET 3.
5. PAY ITEM "STEEL SIGN SUPPORT CASTING" SHALL INCLUDE CEMENT AND MOUNTING HARDWARE.
6. PAY ITEM "STEEL SIGN ROUND BASE 3\( \frac{1}{8} \) INCH" SHALL INCLUDE SLIPBASE STUB BASE.
SURFACE MOUNT SLIPBASE FOR RETROFIT INSTALLATIONS

SURFACE MOUNT SLIPBASE BASE PLATE FABRICATION REQUIREMENTS

BASE PLATE - 1/8 INCH ASTM A-36 PLATE STEEL
PIPE Stub - 3 INCH NOMINAL SCHEDULE 40, ASTM A-500 Grade B
TOP PLATE - MEET REQUIREMENTS OF STD PLAN NO. S-644-8, SHEET 3
MEET ASTM A-253 GALVANIZING AFTER FABRICATION IS COMPLETE

SURFACE MOUNT SLIPBASE TUBULAR STEEL SIGN BASE REQUIREMENTS

FOR 2-7/8 INCH POSTS (P1 OR P2 POSTS)
FOR CONCRETE SURFACES GREATER THAN 2 INCHES THICK
FOR CONCRETE SURFACES GREATER THAN 12 INCHES IN WIDTH

MOUNTING HARDWARE

- EACH 1/4 X 5/8 INCH LONG "MULTIHANG HUS-EZ" SCREW ANCHORS
- EACH 1/4 INCH FLAT WASHERS
- EACH 1/4 INCH LOCK WASHERS
- EACH 1/4 INCH NUTS

ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.

TUBULAR STEEL SIGN SUPPORT SURFACE MOUNT SLIPBASE NOTES

1. REFER TO SIGNING PLANS FOR SIGN LOCATIONS AND HEIGHT
2. REFER TO STD PLAN NO 5-644-8 SHEET 3 FOR SLIPBASE CASTING INFORMATION
3. MAXIMUM ALLOWABLE TENSION Capacity FOR WEDGE ANCHORS - 3000 LBS.
4. MAXIMUM ALLOWABLE MOMENT FOR SIGN BASE - 800 IN-FT/LBS
5. PAY ITEM "STEEL SIGN SURFACE MOUNT BASE PLATE (SLIPBASE) SHALL INCLUDE BASE PLATE, CASTING AND ALL NECESSARY HARDWARE (SURFACE MOUNT SLIPBASE MOUNTING HARDWARE AS SHOWN ON STD 5-644-8, SHEET 3 AND SURFACE MOUNT SLIPBASE CASTING MOUNTING HARDWARE AS SHOWN ON STD 5-644-8, SHEET 4)
6. PAY ITEM "STEEL SIGN SURFACE MOUNT BASE PLATE (SLIPBASE) SHALL INCLUDE BASE PLATE AND NECESSARY HARDWARE (SURFACE MOUNT SLIPBASE MOUNTING HARDWARE AS SHOWN ON STD 5-644-8, SHEET 4)
1. Z-Bar length shall be 3 in. + 1/2 in. short of the edge of the sign or row of signs on both sides. The accompanying table gives the Z-Bar length for most typical panel combinations.

2. First and last holes shall be 2 in. from edge of Z-Bar. The holes in between shall be 2 in. to 3 in. apart.

3. T and U brackets shall terminate 2 in. to 3 in. from edge of sign panel. When a ZEE is connected to a T-bracket, they shall be the same length except when the ZEE must extend beyond the maximum length of a T-bracket.

4. Two mounting clamps are required on ZEEs where there is only one ZEE for the panel and the ZEE is attached to only one post.

5. ZEEs shall be attached to T-brackets and U-brackets with U-bolts or mounting clamps.

6. Vertical spacing between sign panels shall be 1 in. to 1 in. typical.

7. In special cases U-brackets may be used to mount signs that face different directions. The engineer shall determine the orientation of the sign panels and verify that the maximum allowable wind loads for the post are not exceeded.
CLASS II SIGN COMBINATIONS USING U-BRACKETS

SEE NOTE 4 ON SHEET 5

CLASS II SIGN COMBINATIONS USING TWO POSTS

NOTE: THIS CONFIGURATION IS PREFERABLE TO USING TWO SEPARATE SIGNS.

SEE NOTE 5 ON SHEET 5

# COMPUTER FILE INFORMATION

Date: 07/04/12

# SHEET REVISIONS

Date: Comments

# COLORADO DEPARTMENT OF TRANSPORTATION

2829 W. Howard Pl.
Denver, CO 80204
Phone: 303-757-9436
Fax: 303-757-9219

Traffic & Safety Engineering

# TUBULAR STEEL SIGN SUPPORT DETAILS

STANDARD PLAN NO. S-614-8

Standard Sheet No. 7 Of 7

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