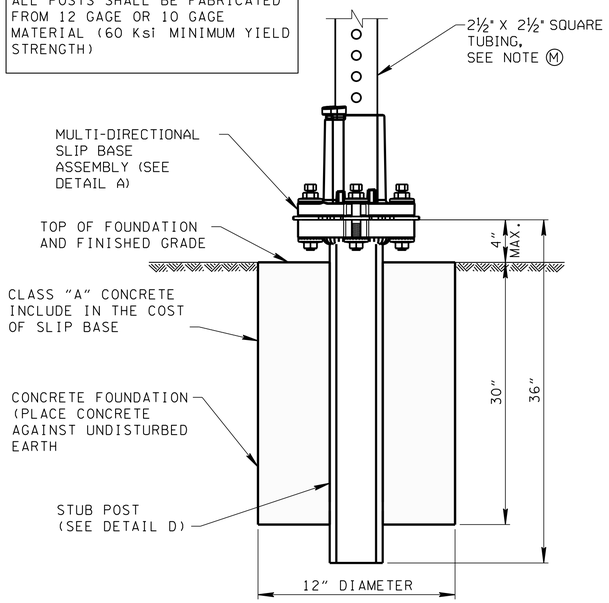
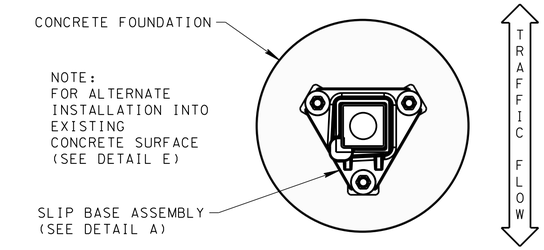
ALL POSTS SHALL BE FABRICATED FROM 12 GAGE OR 10 GAGE MATERIAL (60 Ksi MINIMUM YIELD STRENGTH)

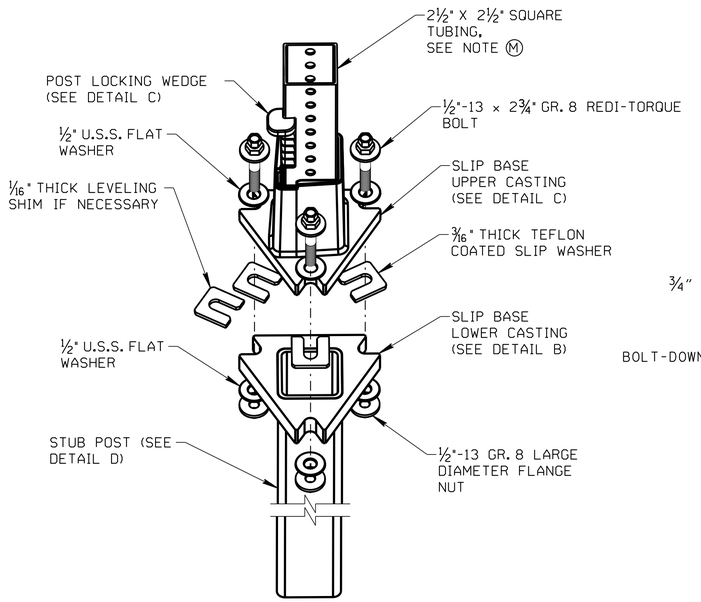



## ELEVATION



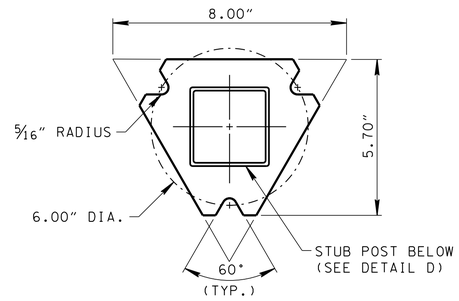

## TOP VIEW

## SLIP BASE SIGN SUPPORT FOR SQUARE TUBE



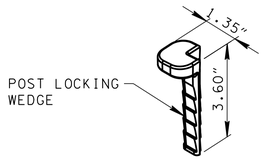

## DETAIL A

TRIANGULAR SLIP BASE

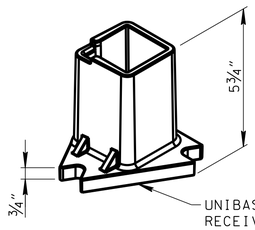



## DETAIL B

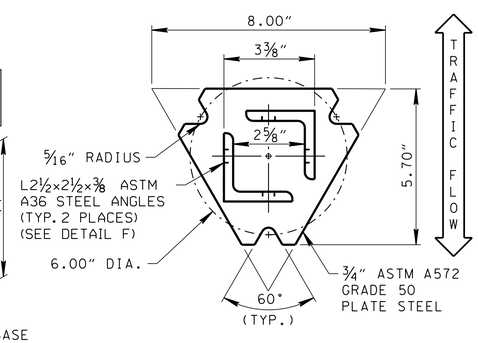
SLIP BASE LOWER HALF




DUCTILE IRON CASTING, CLASS 65-45-12, HOT DIP GALVANIZED PER ASTM A153.



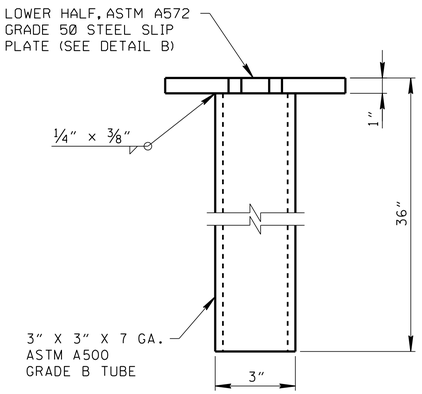

## UNI-BASE




## RECEIVER BY ANGLES

## DETAIL C

SLIP BASE UPPER CASTING OPTIONS

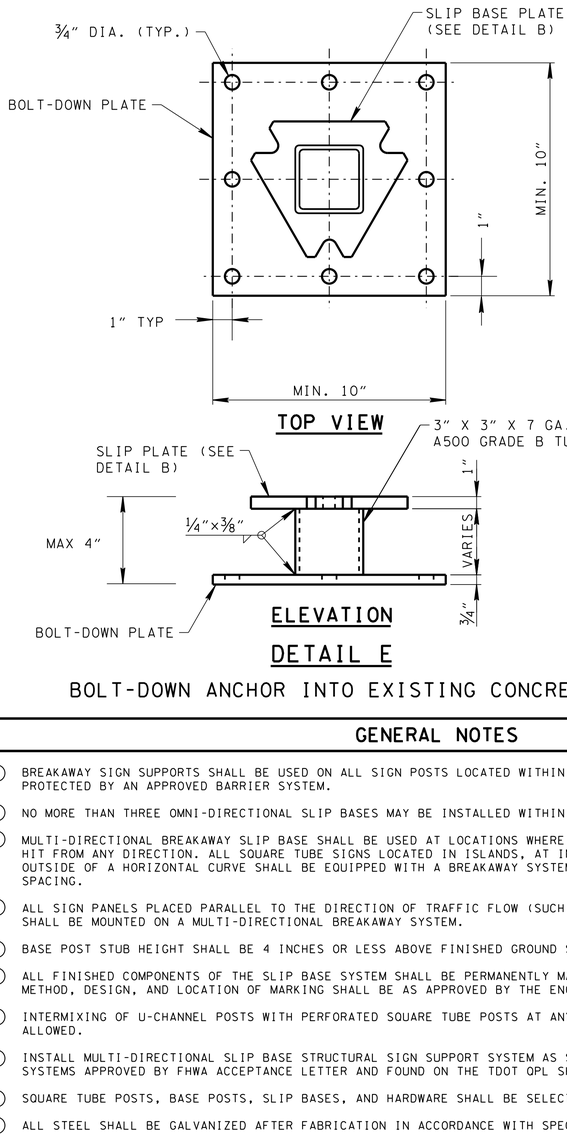



## DETAIL D

SLIP BASE LOWER HALF




## ANCHOR DETAIL



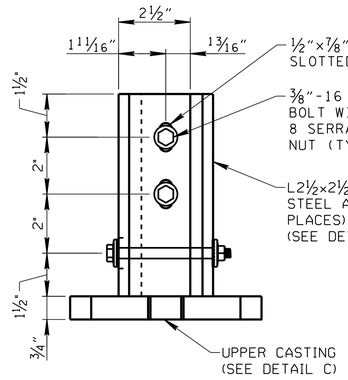

## TOP VIEW




## ELEVATION

## DETAIL E

BOLT-DOWN ANCHOR INTO EXISTING CONCRETE




## DETAIL F

## GENERAL NOTES

Ⓐ BREAKAWAY SIGN SUPPORTS SHALL BE USED ON ALL SIGN POSTS LOCATED WITHIN THE CLEAR ZONE OF A ROADWAY AND NOT PROTECTED BY AN APPROVED BARRIER SYSTEM.

Ⓑ NO MORE THAN THREE OMNI-DIRECTIONAL SLIP BASES MAY BE INSTALLED WITHIN A SEVEN FOOT SPAN.

Ⓒ MULTI-DIRECTIONAL BREAKAWAY SLIP BASE SHALL BE USED AT LOCATIONS WHERE THE POSSIBILITY EXISTS OF THE SIGN BEING HIT FROM ANY DIRECTION. ALL SQUARE TUBE SIGNS LOCATED IN ISLANDS, AT INTERSECTIONS, OR LOCATED ALONG THE OUTSIDE OF A HORIZONTAL CURVE SHALL BE EQUIPPED WITH A BREAKAWAY SYSTEM, REGARDLESS OF THE NUMBER OF POSTS OR SPACING.

Ⓓ ALL SIGN PANELS PLACED PARALLEL TO THE DIRECTION OF TRAFFIC FLOW (SUCH AS ONE-WAY SIGNS ON A DIVIDED HIGHWAY) SHALL BE MOUNTED ON A MULTI-DIRECTIONAL BREAKAWAY SYSTEM.

Ⓔ BASE POST STUB HEIGHT SHALL BE 4 INCHES OR LESS ABOVE FINISHED GROUND SURFACE.

Ⓕ ALL FINISHED COMPONENTS OF THE SLIP BASE SYSTEM SHALL BE PERMANENTLY MARKED TO INDICATE THE MANUFACTURER. METHOD, DESIGN, AND LOCATION OF MARKING SHALL BE AS APPROVED BY THE ENGINEER.

Ⓖ INTERMIXING OF U-CHANNEL POSTS WITH PERFORATED SQUARE TUBE POSTS AT ANY SIGN INSTALLATION LOCATION WILL NOT BE ALLOWED.

Ⓗ INSTALL MULTI-DIRECTIONAL SLIP BASE STRUCTURAL SIGN SUPPORT SYSTEM AS SHOWN OR APPROVED EQUAL. ONLY THOSE SYSTEMS APPROVED BY FHWA ACCEPTANCE LETTER AND FOUND ON THE TDOT OPL SHALL BE USED.

Ⓘ SQUARE TUBE POSTS, BASE POSTS, SLIP BASES, AND HARDWARE SHALL BE SELECTED FROM THE OPL.

Ⓙ ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SPECIFICATION ASTM-A123.

Ⓚ CLASS "A" CONCRETE CONSTRUCTION AND MATERIALS SHALL MEET THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 604."

Ⓛ ANCHORS MAY BE EXPANSION TYPE AS SHOWN OR ADHESIVE TYPE LISTED ON THE OPL MEETING THE STRENGTH REQUIREMENTS. EXPANSION ANCHORS SHALL CONSIST OF 5/8 INCH DIAMETER STUD BOLT WITH UNC-SERIES BOLT THREADS ON THE UPPER END WITH HEAVY HEX NUT PER ASTM A563, AND HARDENED WASHER PER ASTM F436. THE STUD BOLT SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI AND ULTIMATE TENSILE STRENGTH OF 75 KSI.

Ⓜ PERFORATED/KNOCKOUT POSTS SHALL BE SQUARE TUBE FORMED 10 OR 12 GUAGES, ASTM A1011 GRADE 50 STEEL. THE SQUARE TUBES SHALL BE WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL. THE POSTS SHALL BE EXTERNALLY SCARFED TO AGREE WITH STANDARD CORNER RADII OF 5/32±1/64 INCHES.

Ⓝ TO BE PAID FOR UNDER ITEM NO. 713-11.21 P POST SLIP BASE PER EACH (INCLUDES COST OF SLIP BASE AND STUB). SYSTEMS LISTED ON OPL NUMBER 33 MAY BE USED.

☐ REV. 7-19-13: ADDED NOTE Ⓝ. MINOR EDITS TO DRAWINGS. MODIFIED NOTE Ⓜ.

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# MULTI-DIRECTIONAL SLIP BASE BREAKAWAY SQUARE TUBE SIGN SUPPORT

09-01-12 | T-S-23A

NOT TO SCALE