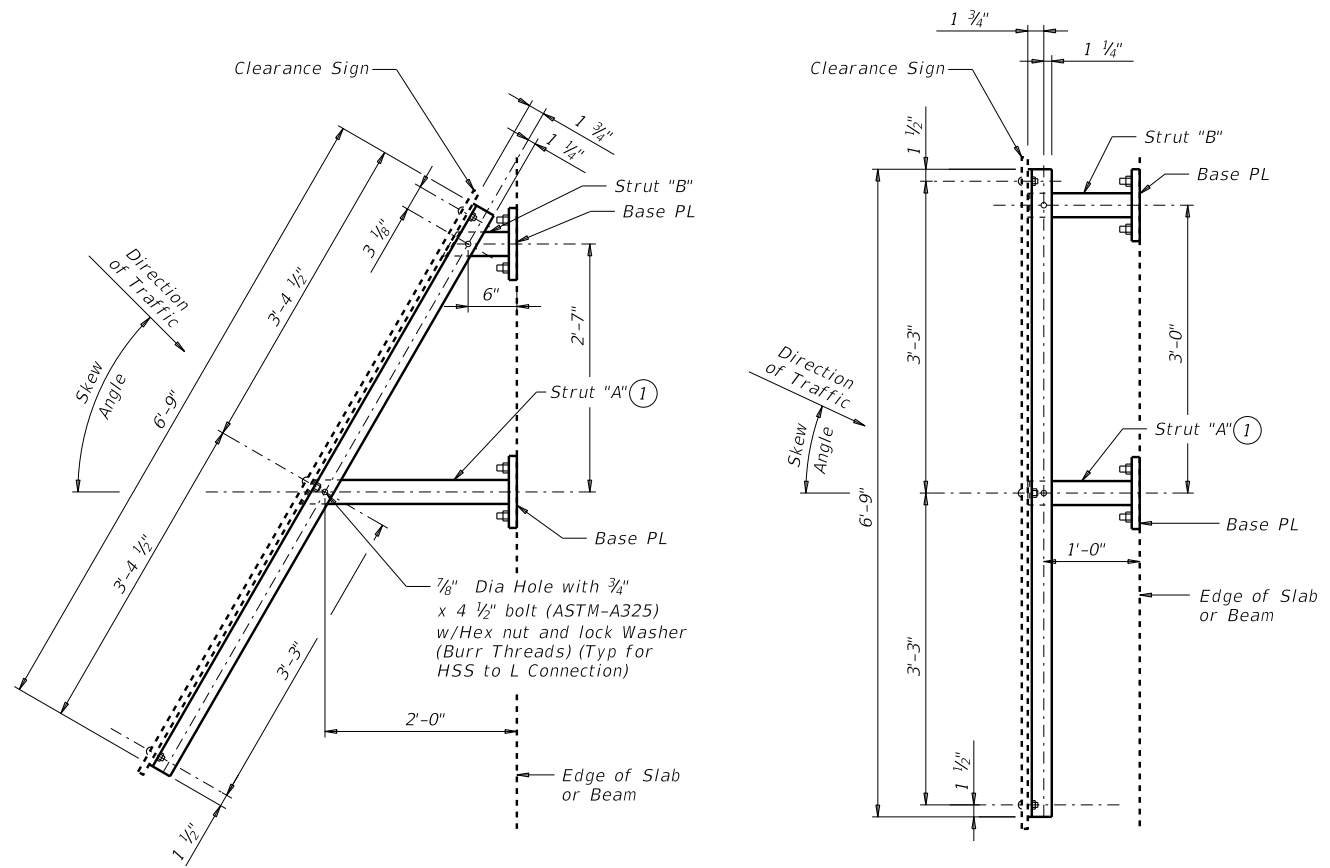


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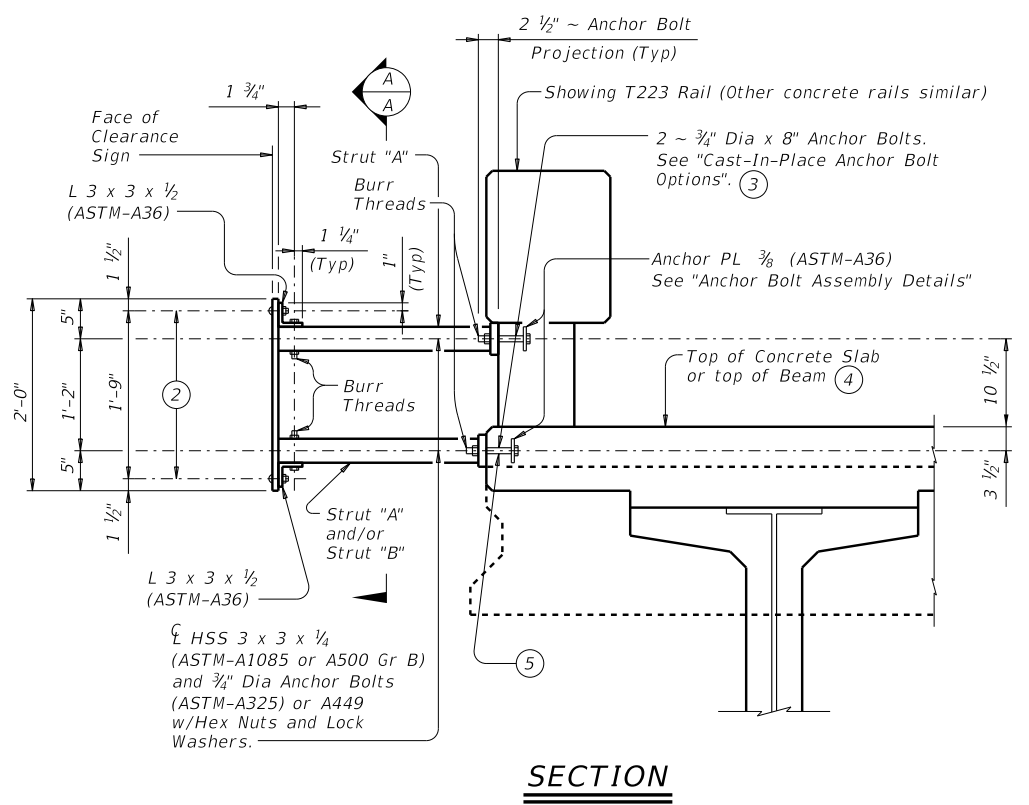


PLAN OF TYPE S MOUNT
(Used for Skews over 30°)

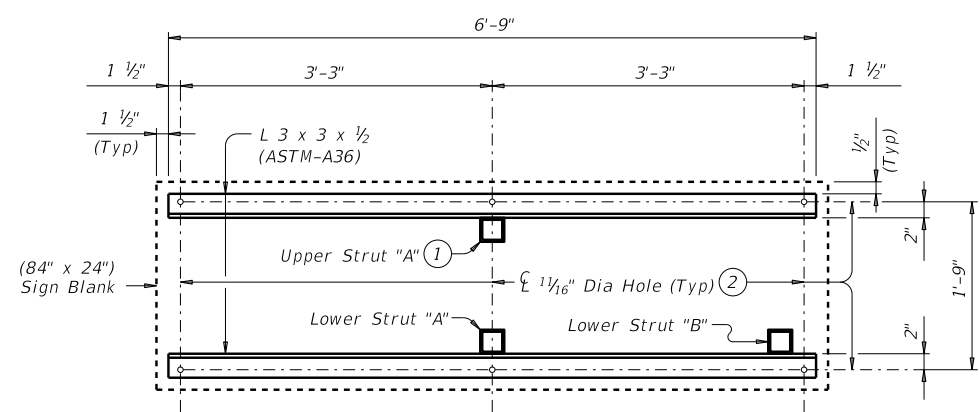
PLAN OF TYPE N MOUNT
(Used for 0° to 30° Skews)

- ① Locate centerline of Strut A no closer than 12" from a vertical concrete edge.
- ② 1/8" Dia x 2" Hexagon Socket Button Head Cap Screws (ASTM A574) w/Hex Nuts. Attach hex nuts to L 3 x 3 x 1/2 by tack welding in two places. Threads must have Class 3A fit tolerance in accordance ASME B1.1. Six screws required.
- ③ Epoxy anchors utilizing 3/4" Dia ASTM-A193 Grade B7 or F1554 Grade 105 fully threaded anchor rods (no expansion anchors) can be substituted for the anchor bolts detailed at all locations. Minimum pullout strength of epoxy anchors must exceed 7 kips, taking spacing and edge distances into consideration. Install according to the manufacturer's specifications. Minimum embedment allowed is 6". Galvanize anchor rods, heavy hex nuts, regular lock washers and hardened washers used with optional epoxy anchors.
- ④ For Decked Slab Beams topped with a 2 course surface treatment and ACP overlay.
- ⑤ Anchor bolts to be cast in Decked Slab Beams topped with a 2 course surface treatment and ACP overlay. Anchor Bolts with heavy hex nuts, regular lock washers, hardened washers and anchor plate that is embedded in the beam will be provided by the beam Fabricator.

GENERAL NOTES:
This standard provides details to mount a vertical clearance sign (84" x 24") to bridges. Rail Types T631, T631LS, T77, PR1, PR2 and PR3 are not accommodated.
Install the vertical face of clearance sign plumb unless otherwise approved by the Engineer.
Galvanize all steel components after fabrication unless otherwise noted.
The Engineer will furnish the clearance to be shown on the sign.
See Bridge Layout for sign location and mounting type (Type N or S).
Cost of furnishing, installing, relocating or removing a clearance sign, including structural steel for sign mount, is included in unit price bid for Item 644, "Small Roadside Sign Assemblies".
One Sign Blank (84" x 24") is 14 SF.
Average steel weight for one complete Type N Mount is 219 Lb.
Average steel weight for one complete Type S Mount is 233 Lb.



SECTION



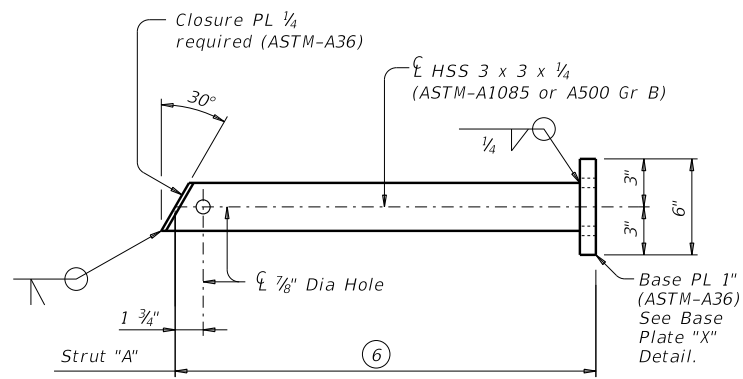
SECTION A-A

SHEET 1 OF 3

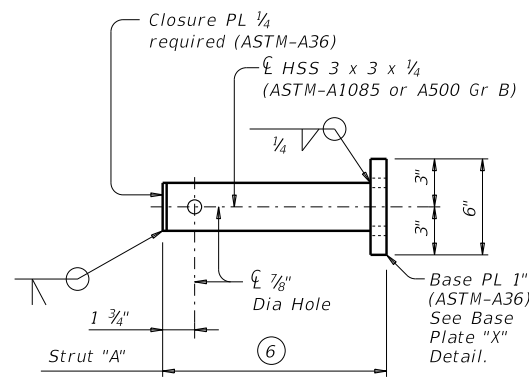
		Bridge Division Standard	
BRIDGE MOUNTED CLEARANCE SIGN ASSEMBLY			
BMCS			
FILE: bmcste1.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT
©TxDOT January 2015	CONT	SECT	JOB
REVISIONS			HIGHWAY
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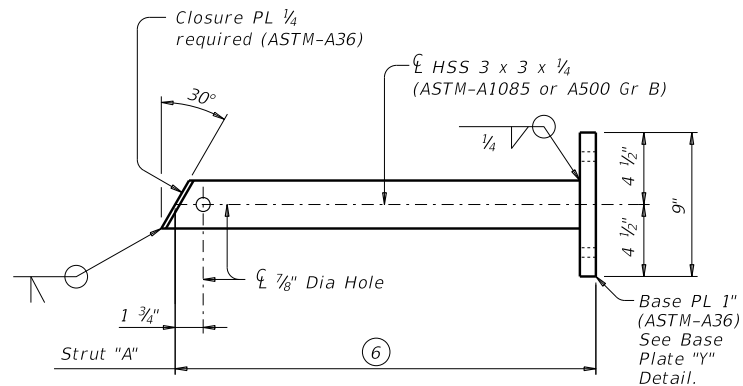
DATE: FILE:



FOR T411 AND C411 RAIL TYPES



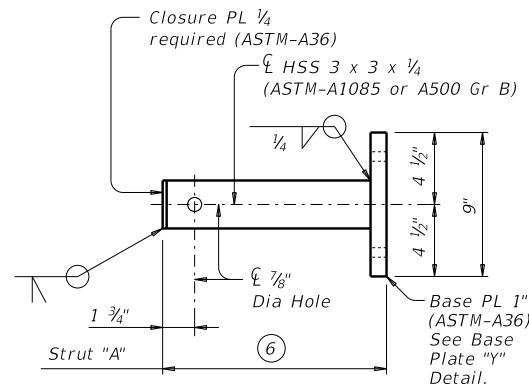
FOR T411 AND C411 RAIL TYPES



FOR T221, C221, T223, C223, T401, T402, C402, T551, T552, T80HT, T80SS AND SSTR RAIL TYPES

UPPER STRUT DETAIL FOR (TYPE S MOUNT)

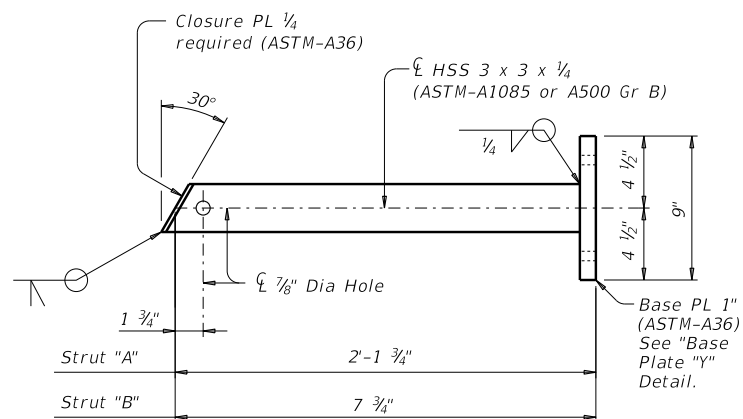
(Used for Skews over 30°)



FOR T221, C221, T223, C223, T401, T402, C402, T551, T552, T80HT, T80SS AND SSTR RAIL TYPES

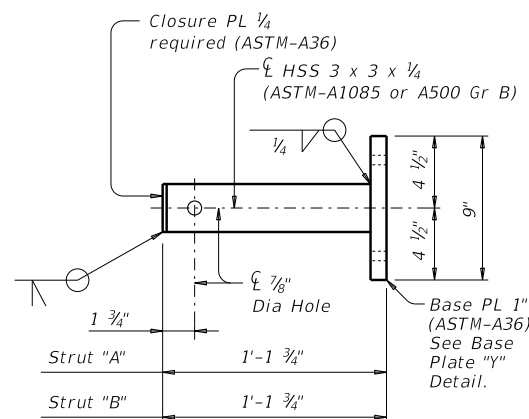
UPPER STRUT DETAIL FOR (TYPE N MOUNT)

(Used for 0° to 30° Skews)



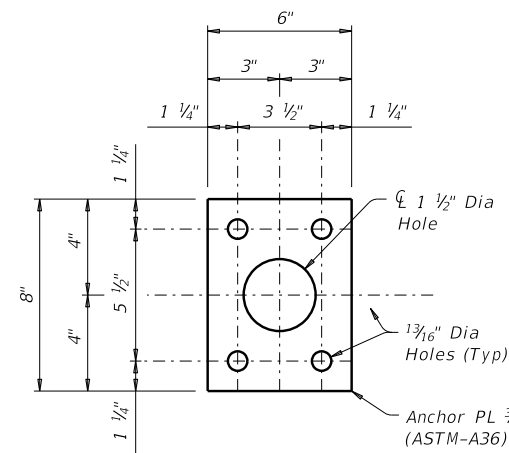
LOWER STRUT DETAILS FOR (TYPE S MOUNT)

(Used for Skews over 30°)

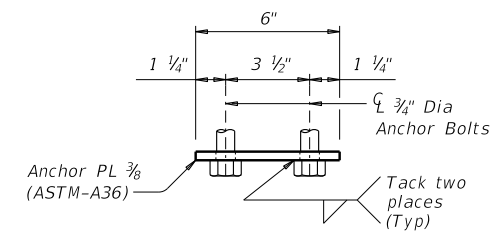


LOWER STRUT DETAILS FOR (TYPE N MOUNT)

(Used for 0° to 30° Skews)



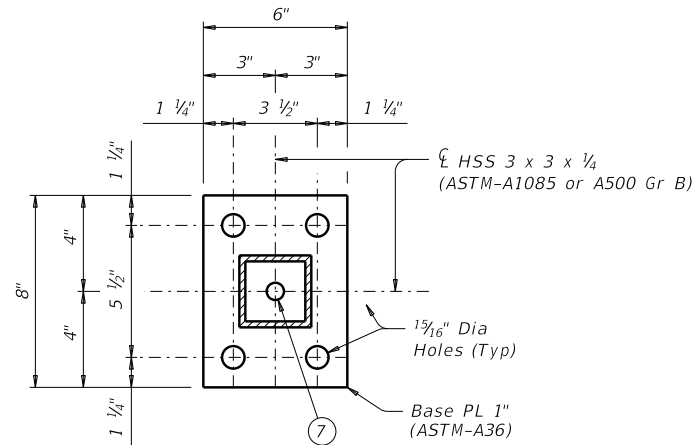
PLAN OF ANCHOR PLATE



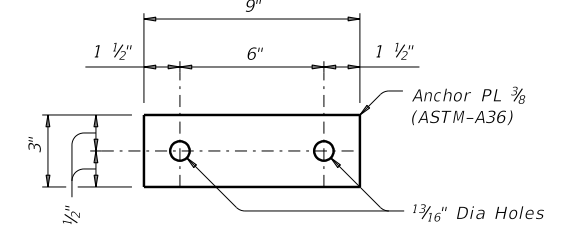
ELEVATION

ANCHOR BOLT ASSEMBLY DETAILS ③

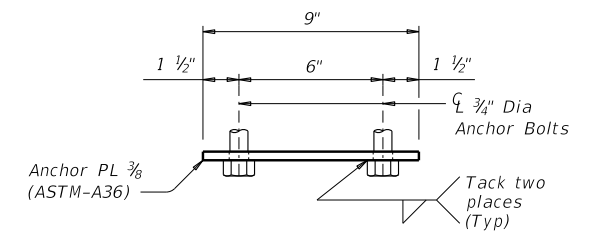
(USED ON BASE PLATE "X" WITH T411 & C411 RAIL TYPES)



BASE PLATE "X" DETAIL



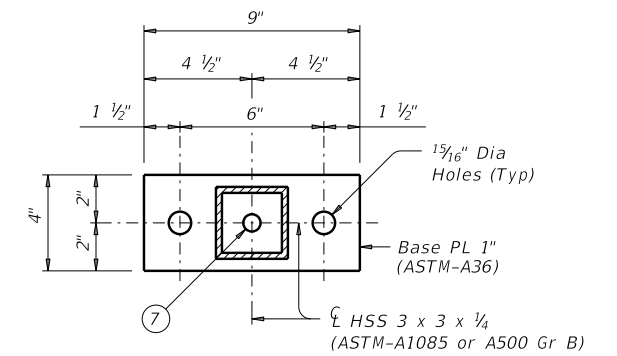
PLAN OF ANCHOR PLATE



ELEVATION

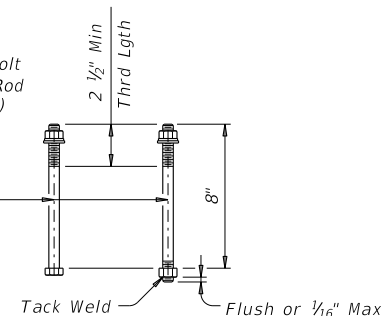
ANCHOR BOLT ASSEMBLY DETAILS ③

(USED ON BASE PLATE "Y" AND WITH T1F, T1P, T1W, C1W, T66 AND C66 RAIL TYPES)



BASE PLATE "Y" DETAIL

③ 3/4" Dia Heavy Hex Head Anchor Bolt (ASTM-A325 or A449) or Threaded Rod (ASTM A193 Gr B7 or F1554 Gr 105) with one Hardened Washer and one Regular Lock Washer placed under Heavy Hex Nut (ASTM-A563). One additional Heavy Hex Nut must be furnished for each Threaded Rod.



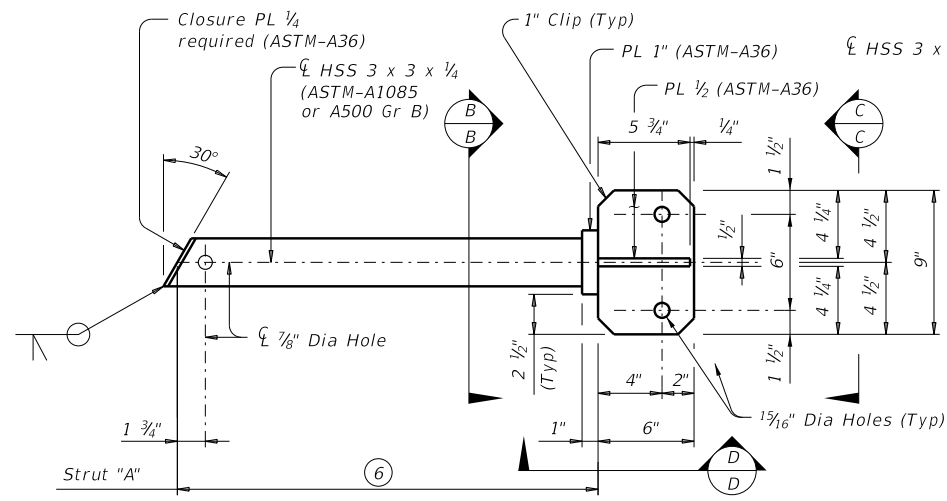
CAST-IN-PLACE ANCHOR BOLT OPTIONS ③

- ③ Epoxy anchors utilizing 3/4" Dia ASTM-A193 Grade B7 or F1554 Grade 105 fully threaded anchor rods (no expansion anchors) can be substituted for the anchor bolts detailed at all locations. Minimum pullout strength of epoxy anchors must exceed 7 kips, taking spacing and edge distances into consideration. Install according to the manufacturer's specifications. Min embedment allowed is 6". Galvanize anchor rods, heavy hex nuts, regular lock washers and hardened washers used with optional epoxy anchors.
- ⑥ Adjust length to accommodate edge of slab to back of rail for specific project conditions and to help plumb the vertical face of clearance sign.
- ⑦ Hole required to drain zinc from base plate during galvanizing.

		Bridge Division Standard	
BRIDGE MOUNTED CLEARANCE SIGN ASSEMBLY			
BMCS			
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	DIST	COUNTY	SHEET NO.

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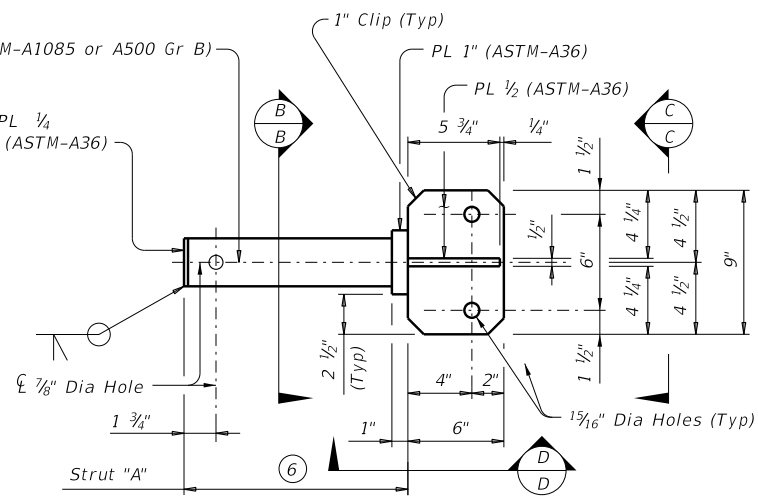


FOR T1F, T1P, T1W, CIW, T66 AND C66 RAIL TYPES

UPPER STRUT DETAIL FOR (TYPE S MOUNT)

(Used for Skews over 30°)

- ② 1/8" Dia x 2" Hexagon Socket Button Head Cap Screws (ASTM A574) w/Hex Nuts. Attach hex nuts to L 3 x 3 x 1/2 by tack welding in two places. Threads must have Class 3A fit tolerance in accordance ASME B1.1. Six screws required.
- ③ Epoxy anchors utilizing 3/4" Dia ASTM-A193 Grade B7 or F1554 Grade 105 fully threaded anchor rods (no expansion anchors) can be substituted for the anchor bolts detailed at all locations. Minimum pullout strength of epoxy anchors must exceed 7 kips, taking spacing and edge distances into consideration. Install according to the manufacturer's specifications. Min embedment allowed is 6". Galvanize anchor rods, heavy hex nuts, regular lock washers and hardened washers used with optional epoxy anchors.

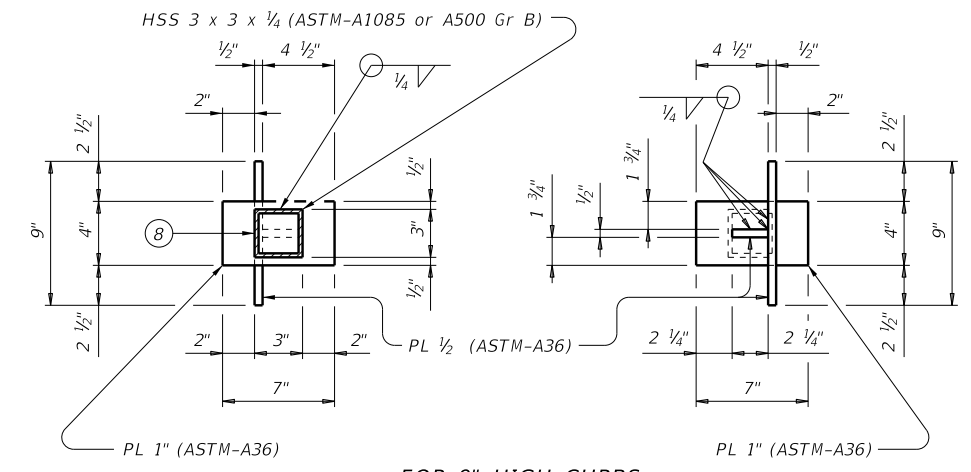


FOR T1F, T1P, T1W, CIW, T66 AND C66 RAIL TYPES

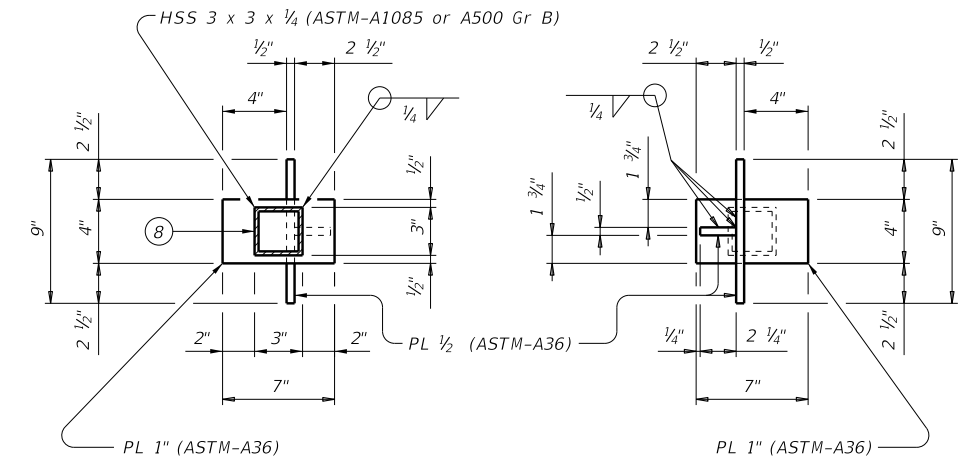
UPPER STRUT DETAIL FOR (TYPE N MOUNT)

(Used for 0° to 30° Skews)

- ④ For Decked Slab Beams topped with a 2 course surface treatment and ACP overlay.
- ⑥ Adjust length to accommodate edge of slab to back of rail for specific project conditions and to help plumb the vertical face of clearance sign.
- ⑧ Hole required in bottom of HSS to drain zinc during galvanizing.
- ⑨ 11" curb is for structures with 2" ACP Overlay.



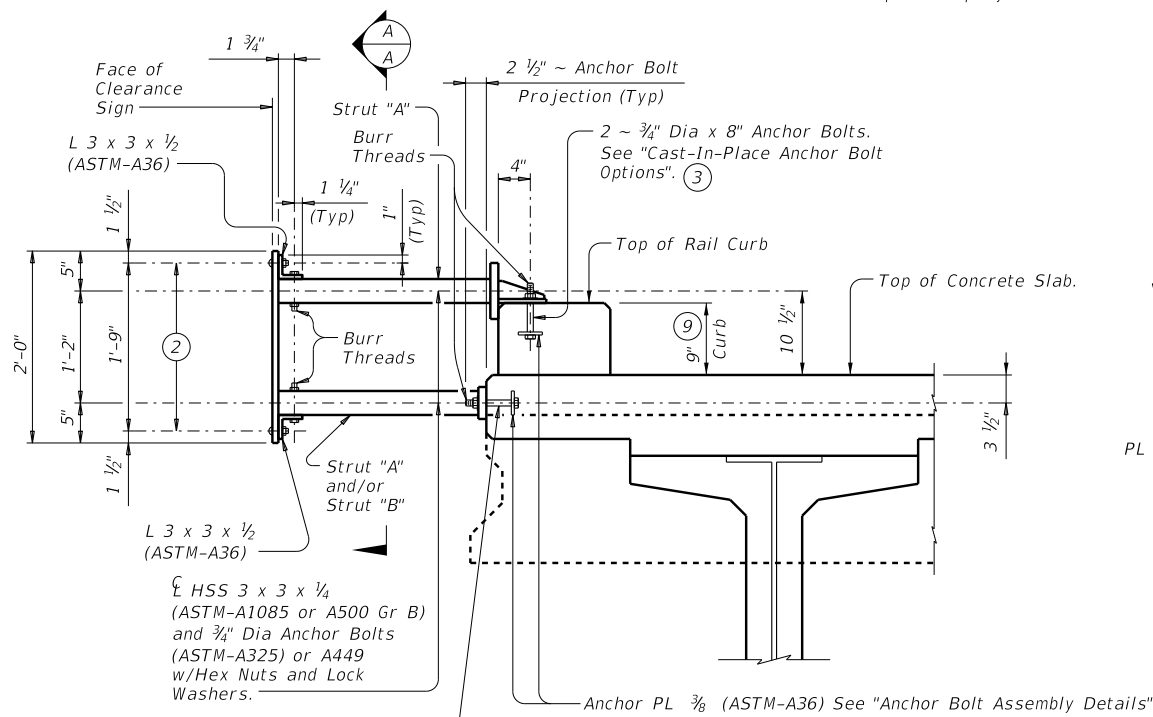
FOR 9" HIGH CURBS



FOR 11" HIGH CURBS

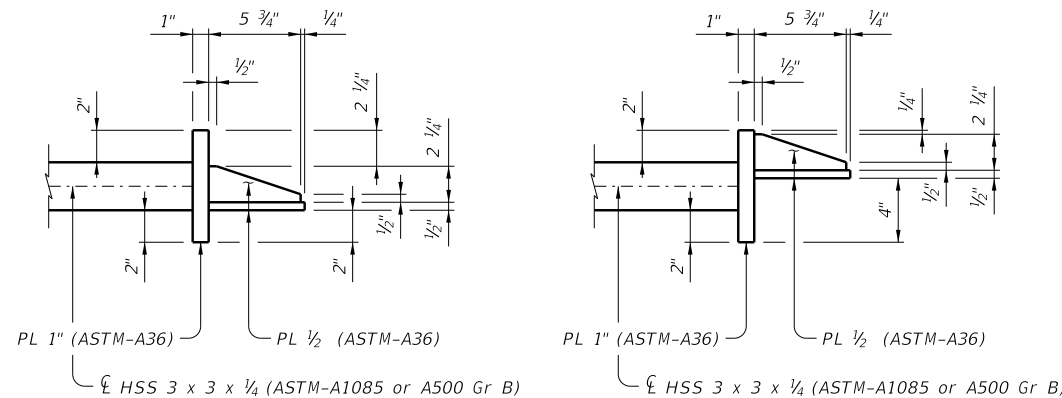
SECTION B-B

VIEW C-C



SECTION THRU T1F, T1P, T1W, CIW, T66 AND C66 RAIL CURB

Showing sign mount on a 9" high curb, 11" high curb similar.



FOR 9" HIGH CURBS

FOR 11" HIGH CURBS

VIEW D-D

SHEET 3 OF 3

		Bridge Division Standard	
BRIDGE MOUNTED CLEARANCE SIGN ASSEMBLY			
BMCS			
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