

(Use with rehab modifications of B-606-10MASH A&B, A-S, C&D, or C-S&D)

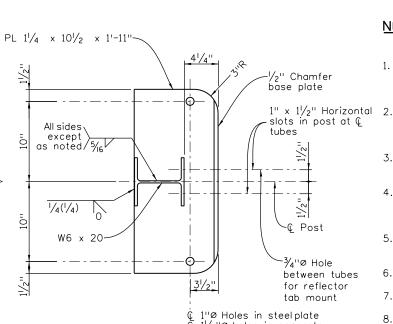
## NOTES:

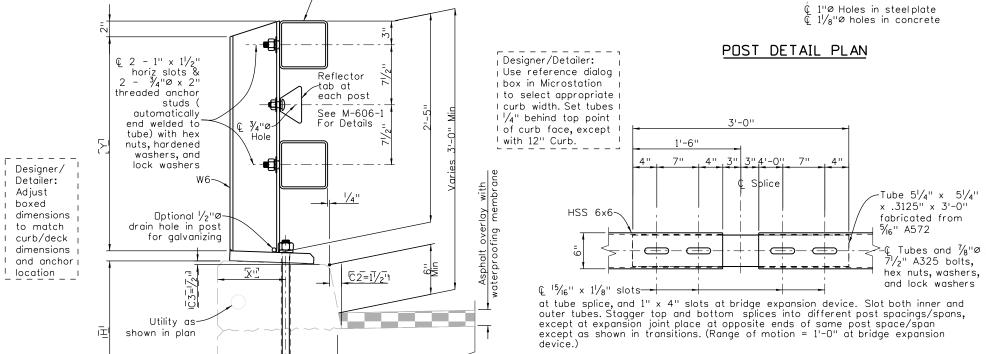
- 1. All tubes shall be ASTM A1085. All posts, base plates, and splice tubes fabricated by welding shall be ASTM572 Grade 50. All other steel shall be Grade 36 unless otherwise noted.
- 1" x  $1\frac{1}{2}$ " Horizontal 2. The above material and all anchor bolts and miscellaneous bolts, nuts, and washers shall be galvanized after fabrication in accordance with AASHTO M111. Structural steel elements shall conform to the requirements of Section 509.
  - 3. The tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 1,800 feet.
  - 4. Tubes shall be continuous over not less than two posts, preferably 4 posts except at approach slab end joint. No welded butt splices will be allowed in the
  - 5. The centerline of the tube splice shall be 1'-8" minimum and 2'-6" maximum from the centerline of the posts.
  - 6. All bolts that have lock washers shall be tightened to snug tight only.
  - 7. Posts shall be perpendicular to the longitudinal roadway grade.
  - 8. One or more 10'-0" post spaces may be reduced (6'-8" Min) in order to maintain dimensions from the end of the rail and expansion joints or concrete transition.
  - 9. Payment will be made under item 606, Bridge Rail Type 10R MASH, for all posts, base plates, anchor bolts, miscellaneous bolts, nuts, washers, tubes, tube expansion devices, tube splices, end plates and reflector tabs.
  - 10. Prior to fabrication of this item, an electronic PDF which complies with the requirements of Section 105, shall be submitted to the Engineer for information only (Working Drawing).

## DESIGN DATA

Design: AASHTO MASH 2016 TL-4 (a) for overlay thickness over 1" (by calculation), with assumed existing curb stirrup of #4 @ 18" (fy=60ksi). AASHTO MASH 2016 TL-3 for overlay thickness over 1" (by calculation), with assumed existing curb stirrup of #4 @ 12" (fy=40ksi).

AASHTO M270 Gr 36 (ASTM A709 Gr 36) fv = 36 ksify = 50 ksi fy = 50 ksiAASHTO M270 Gr 50 (ASTM A992/A572 Gr 50) ASTM A1085





 $2-\frac{7}{8}$ "Ø fully threaded A-449 or ASTM F1554

Grade 105 galvanized rods with hex nuts and

lock washers. Rods to be set in  $1\frac{1}{8}$ " occed

holes with an approved epoxy grout. Project

rod  $2\frac{3}{4}$ " at top and no more than 2" beyond

nut at bottom. If hole can't be drilled through,

be 2'-0" deep. The coring of holes and epoxy grout to be included in the bid price for Item

No 606 Bridge Rail Type 10R MASH.

and bottom projection is unavailable, hole shall

Designer/Detailer: Use I

references dialog box I

ı in Microstation to

I show appropriate

I transition. Adjust

6.41+

I transitions for final

| bridge rail heights \_

See BXX for

Transition Details

Limits of pay length for Bridge Rail Type 10R MASH

31/2" Min to Joint (Typ)-

-1'' × 11/2''

Slotted

holes in

at tubes

each post

BRIDGE RAIL ELEVATION

1" x 4" Slotted-

holes at bridge

-HSS 6x6x<sup>1</sup>/<sub>4</sub> (Typ)

Exp device

(For post spacing, see BXX)

Typical post spacing

10'-0" Max, 6'-8" Min

holes at splices

Post

¾"Ø hole

reflector

at each

post

for

PLAN - TUBE SPLICE

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Designer/De

only for mul

structures.

## FOR INFORMATION ONLY For 26" Anchor Bolt and 10'-0" Post Spacing

or zo function Bolt and 10 0 1 05t 5	pacing	
DESCRIPTION	UNIT	PER LF
Structural Steel (Galvanized)	LB	57.4

All seals for this set of drawings are applied to the cover page(s)

Bar 3x3/8x3" with 15/16"Ø-

centered hole (Typ)

Print Date: \$DATE\$ Sheet Revisions ile Name: sheet\_B-606-10R MASH.dgn Date: Comments Init. loriz, Scale: None Vert. Scale: As Noted Jnit Information Unit Leader Initials

C1=1'-3''

Colorado Department of Transportation



Staff Bridge Branch

Structure No

2829 West Howard Place, 3rd Floor Denver, CD 80204 Phone: 303-512-4079 FAX: 303-757-9197

C1

C2

C3

	Initials

	As Constructed	BRIDGE RAIL	Project No./Code	
	No Revisions:	15" CURB		Project Number
	Revised:	Designer: XXXXXXXX	NI sala a sa	Code
		Detailer: XXXXXXXX	Numbers X-XX-XX	
•	Void:	Sheet Subset: BRIDGE	Subset Sheets: BXX of XXX	Sheet Number