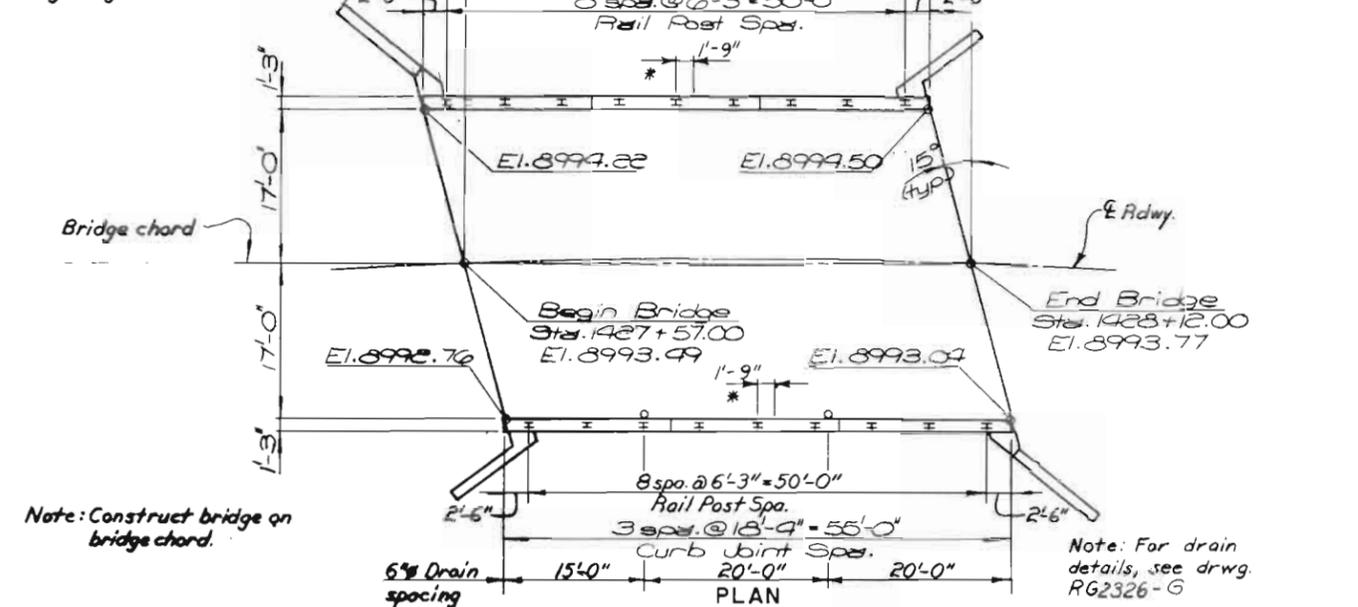


Note: Curb joint, drain and rail post spacings are measured along the gutterline.

Note: Curb joints are 1/4" joint filler thru curb to deck. Chamfer all exposed edges 1/2".

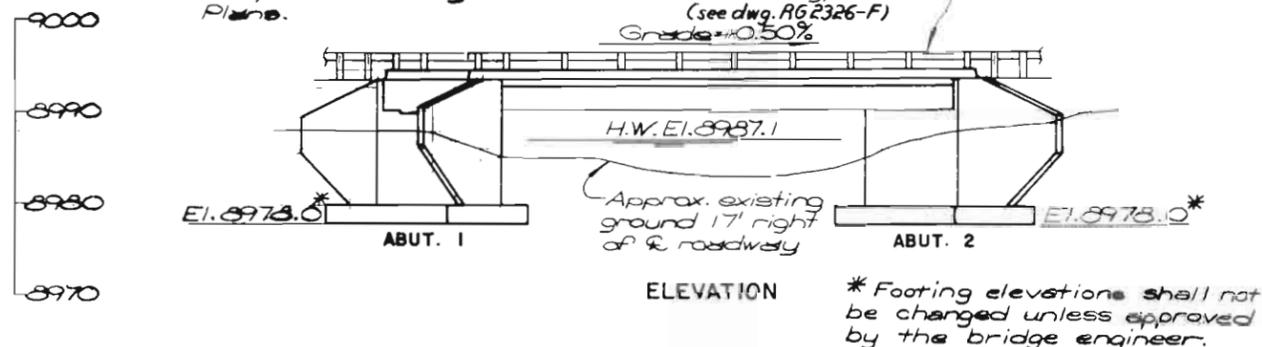


* Provide splice in railing channel - See drwg. R62326-F

Note: Construct bridge on bridge chord.

Note: For approach rail, see Roadway Plans.

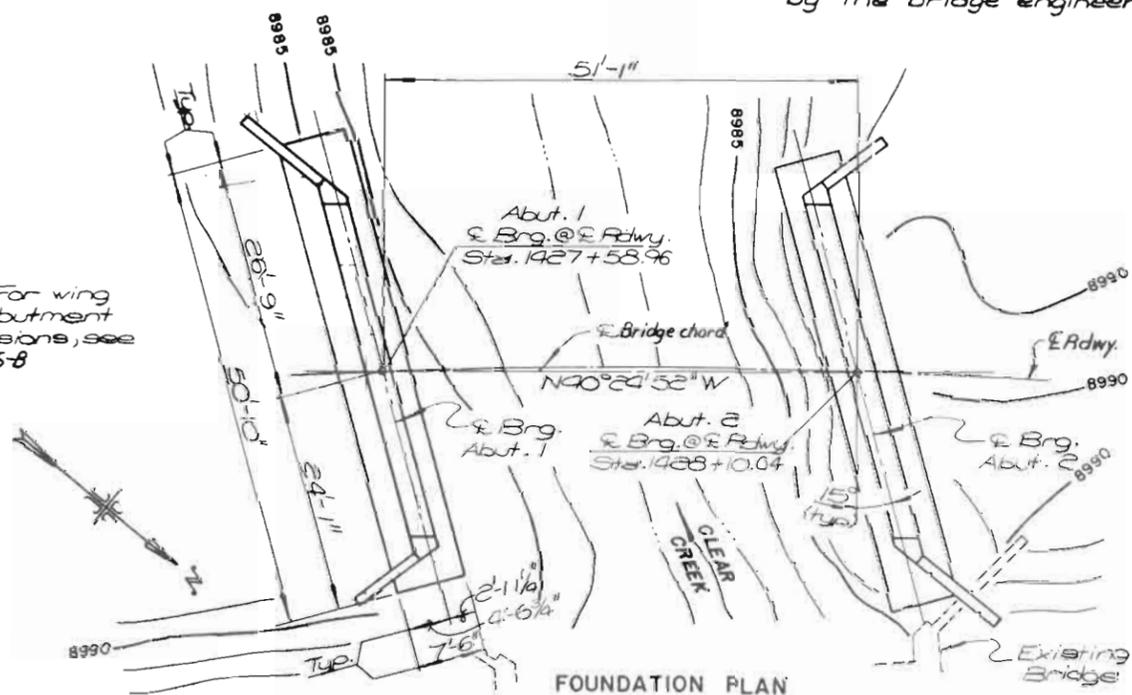
Colo. Std. Bridge Rail - Type 3A (see drwg. R62326-F) Grade = +0.50%



ELEVATION

* Footing elevations shall not be changed unless approved by the bridge engineer.

Note: For wing and abutment dimensions, see R62326-B



FOUNDATION PLAN

GENERAL NOTES:

SPECIFICATIONS: Design, AASHTO Standard Specifications for Highway Bridges, 1977, with 1978 and 1979 Interim Specifications. Construction, Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-79.

DEAD LOAD: Concrete, 150 lbs. per cu.ft. Steel, 490 lbs. per cu.ft. Paving allowance, 25 lbs. per sq.ft. of roadway surface. Earth backfill, 120 lbs. per cu.ft. Earth pressure equivalent to a fluid weighing 36 lbs. per cu.ft.

LIVE LOAD: HS20-44 loading. Impact, $I = \frac{50}{L+125}$ (L = span length). Maximum I = 30%.

UNIT STRESSES: Allowable stresses in (QC) Class A(AE) concrete: $f_c = 1,320$ psi based on an assumed 28-day design compressive strength of 3,300 psi, except for slab design where $f_c = 1,200$ psi. Allowable stress in reinforcing steel, $f_s = 24,000$ psi, except for slab design where $f_s = 20,000$ psi. Modular ratio $n = 9$, except for slab design where $n = 8$. Allowable stresses in structural steel as per AASHTO design specifications.

CONCRETE: All concrete shall be (QC) Class A(AE). All concrete shall be mixed with an approved air-entraining admixture and shall be vibrated. Chamfer exposed edges 3/4" unless otherwise noted. No additives containing calcium chloride shall be used. Cement shall be low alkali. Concrete in the deck shall have a 28-day design compressive strength of 4,500 psi. All other concrete shall have a 28-day design compressive strength of 3,300 psi. All substructure concrete shall be made with Type II cement.

FINISHING CONCRETE: The roadway slab shall be given a "Float Finish". The following surfaces shall be given a "Class 2 Finish": outside faces of roadway slab, both faces of curbs, and exposed faces of abutment wings and walls to one foot below ground line. All other surfaces shall be given a "Class 1 Finish".

REINFORCING STEEL: All reinforcing steel shall conform to AASHTO M31, Grade 60 (ASTM A615, Grade 60). The minimum covering to the face of any bar shall be 2" unless otherwise shown. Minimum splice length for all bars shall be as shown on the plans. No payment will be made for bar splices other than those shown on the plans. Abutment reinforcement shall not be fabricated until footing elevations have been verified in the field.

STRUCTURAL STEEL: All structural steel shall conform to AASHTO M183 (ASTM A36). Welding shall conform to AWS Welding Code, AWS D1.1 except as modified by AASHTO Standard Specifications for Welding of Structural Steel Highway Bridges. Unless otherwise noted, field connections shall be made with 7/8" ϕ friction type bolts conforming to AASHTO M164 (ASTM A325). Bearing anchor bolts shall conform to ASTM A307. Pipe for drains shall conform to ASTM A53. Steel for guard angles and drain bars shall conform to AASHTO M183 (ASTM A36). All guard angles, drains, and bearing anchor bolts shall be galvanized after fabrication. Unless otherwise noted on the plans, all structural steel shall be painted with the basic lead zinc-chromate paint system (gray finish coat). Elastomeric bearing pads shall be 60 hardness and shall conform to AASHTO Spec. 2-25. Payment for furnishing, fabricating, painting or galvanizing (as required), and erecting all structural steel, drains, and guard angles, and for furnishing and placing elastomeric bearing pads shall be made under the contract item "Structural Steel, furnished, fabricated, and erected". Structural steel for girders and attached cover plates shall meet longitudinal Charpy V notch toughness requirements S3, Zone 3 of AASHTO M183 (ASTM A36).

STEEL BRIDGE RAILING: See drwg. R62326-F

ESTIMATE:

① Bridge Excavation	350	Cu. Yds.
★ ② Structural Concrete (QC) Class A(AE)	196	Cu. Yds.
★ Reinforcing Steel	25,000	Lbs.
③ Structural Steel, furnished, fabricated, and erected	As Req'd.	Lump Sum
Steel Bridge Railing	125	Lin. Ft.

- ① Does not include excavation to regrade channel or irrigation ditch.
- ② Estimated substructure concrete = 129 Cu. Yds.
- Estimated superstructure concrete = 67 Cu. Yds.
- ③ Estimated quantity = 37,500 Lbs.

* Final Quantity

Curve data:
 $R = 2064.79$
 $DC = 2^\circ$
 $\Delta = 32^\circ 29' 56''$
 $LC = 1624.94'$
 $e = 0.0445'$

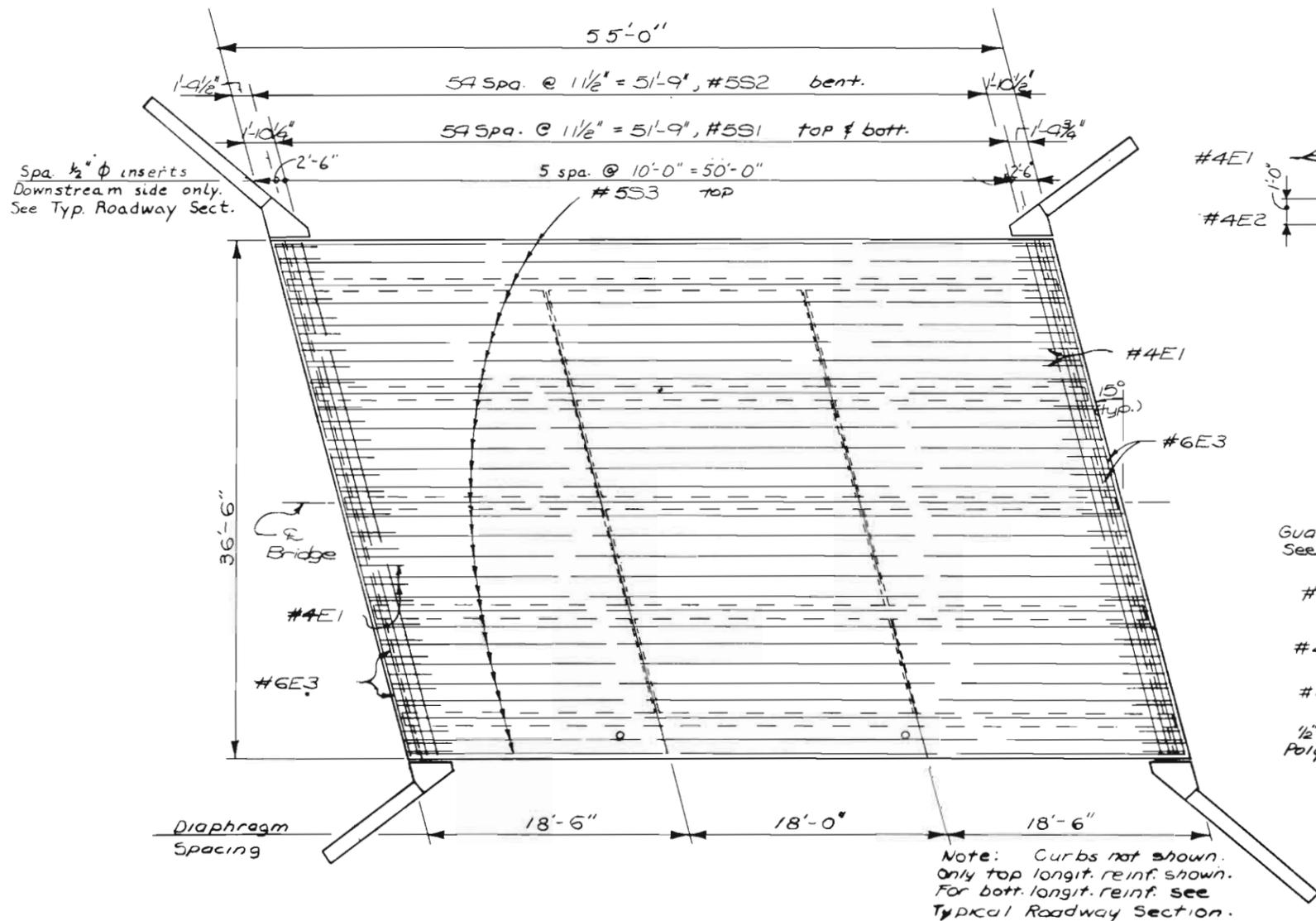
HYDRAULIC DATA

Drainage Area = 14.8 Sq. Miles
 $N = 0.04$ $S = 0.016'$
 $Q_{50} = 1306$ cfs $V = 9.2$ fps Stages 8987.1
 $Q_{100} = 1494$ cfs $V = 9.8$ fps Stages 8987.4

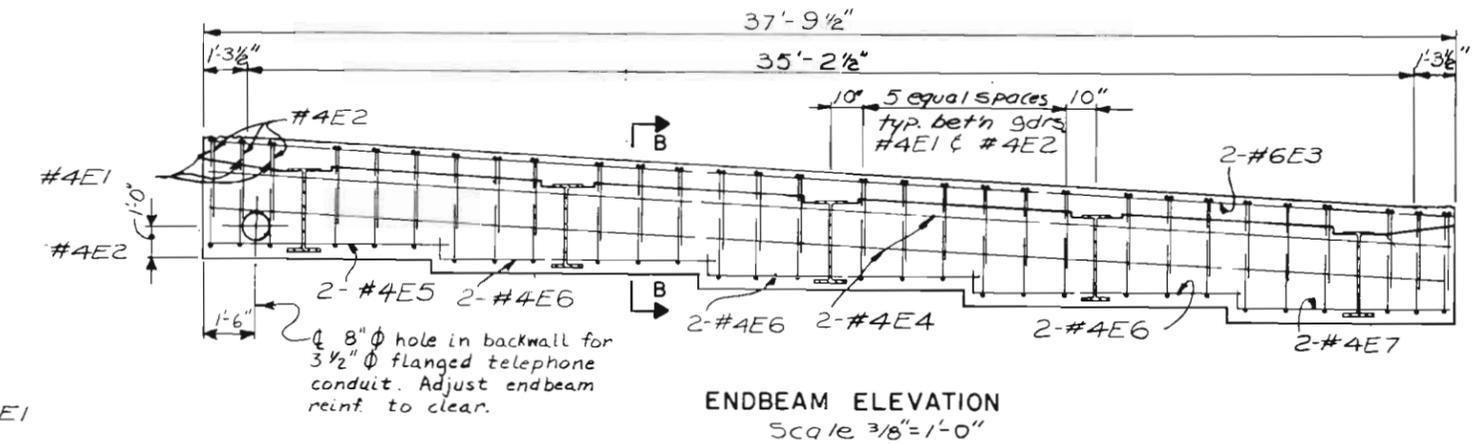
Colorado Structure No. M-8-H

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF WESTERN BRIDGE DESIGN CENTRAL-DIRECT FEDERAL DIVISION DENVER, CO 80240	
DESIGNED BY LBS	BRIDGE OVER CLEAR CREEK STA. 1427 + 84.50
DRAWN BY DBN	SOUTH FORK - LAKE CITY ROAD RIO GRANDE NATIONAL FOREST COLORADO F.H.P. 7-2 (a)
CHECKED BY JDR	SCALE: 1" = 10'-0" DATE: OCT. 1980
APPROVED: <i>Lubna A. Lawrence</i>	BRIDGE NO. 1 OF 8 DRWGS. R62326-6

1/13/81 Added Charpy requirements. VMB

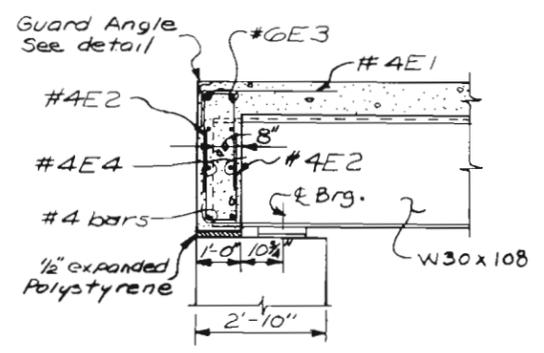


DECK PLAN
Scale 3/16" = 1'-0"

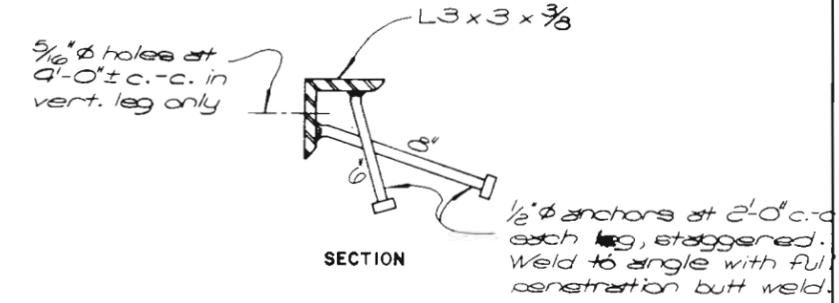


ENDBEAM ELEVATION
Scale 3/8" = 1'-0"

Note: 3 1/2" flanged telephone conduit will be placed at time of construction by others. 8" hole will be plugged by others before backfilling.

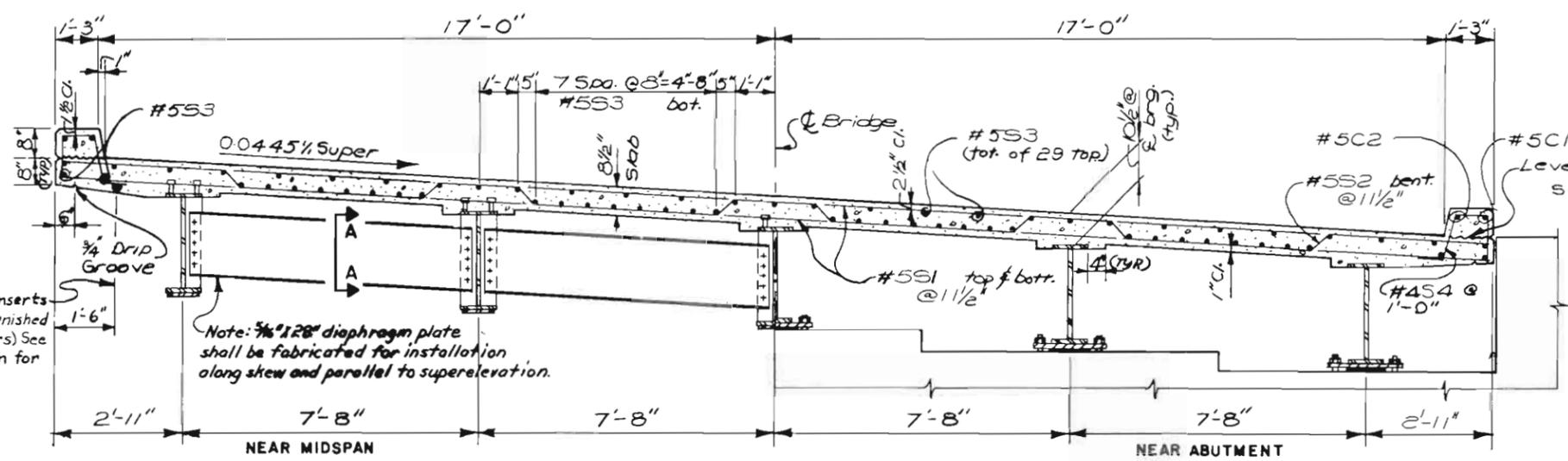


SECTION B-B
Scale 1/2" = 1'-0"

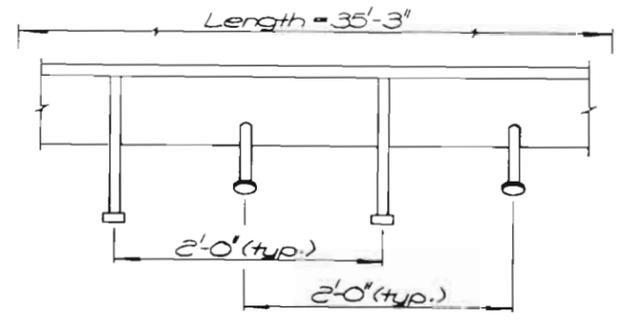


SECTION

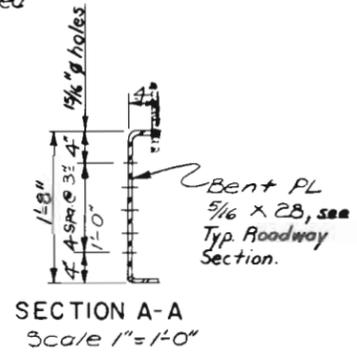
Note: Railing not shown. For details, see drwg. RG2326-F



TYPICAL ROADWAY SECTION
Scale 1/2" = 1'-0"

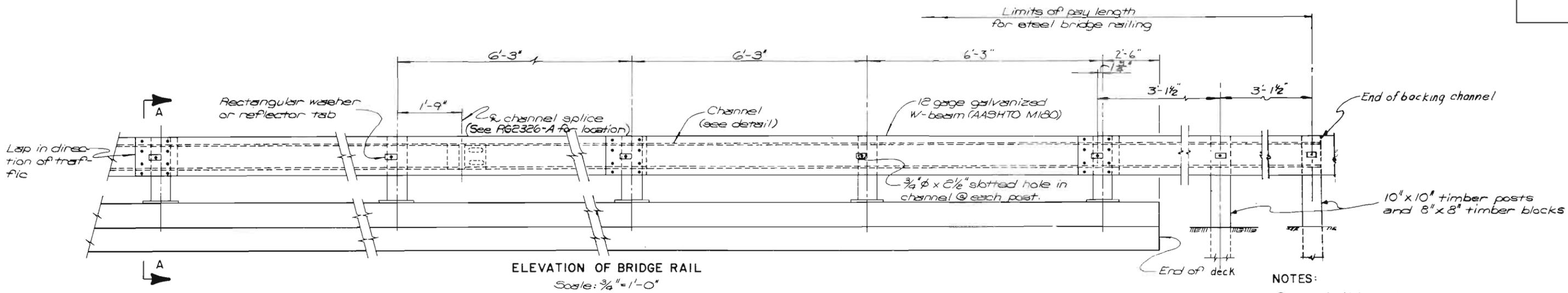


ELEVATION GUARD ANGLE DETAIL
No Scale (2 Reqd)



SECTION A-A
Scale 1" = 1'-0"

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF WESTERN BRIDGE DESIGN CENTRAL DIRECT FEDERAL DIVISION DENVER, COLORADO	
DESIGNED BY L.R.S.	BRIDGE OVER CLEAR CREEK STA. 1427 + 84.50
DRAWN BY L.R.S.	SOUTH FORK-LAKE CITY ROAD RIO GRANDE NATIONAL FOREST COLORADO F.H.P. 7-2(4)
CHECKED BY J.D.B.	SCALE: AS NOTED DATE: OCT. 1980
BRIDGE DRWG. 5 OF 8 DRWGS. RG2326-E	



NOTES:

Posts shall be set vertical.

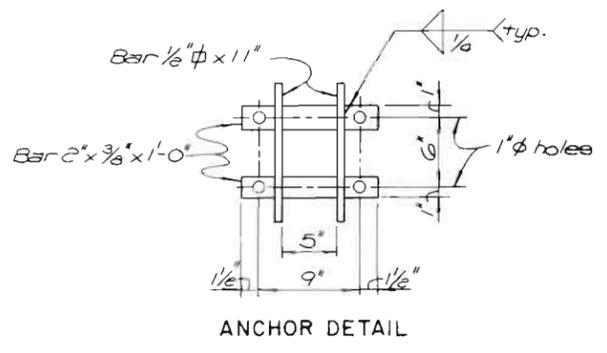
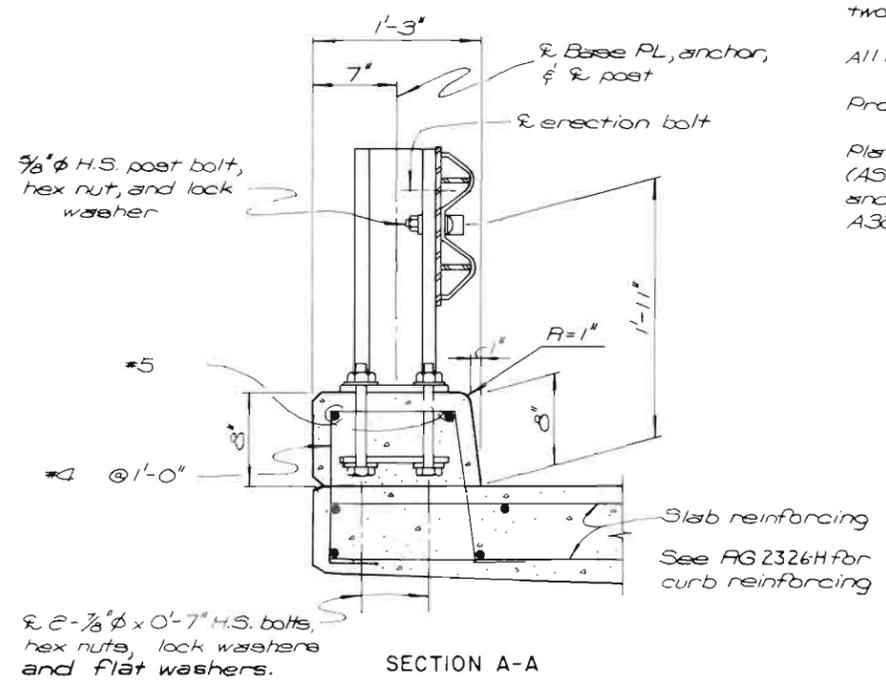
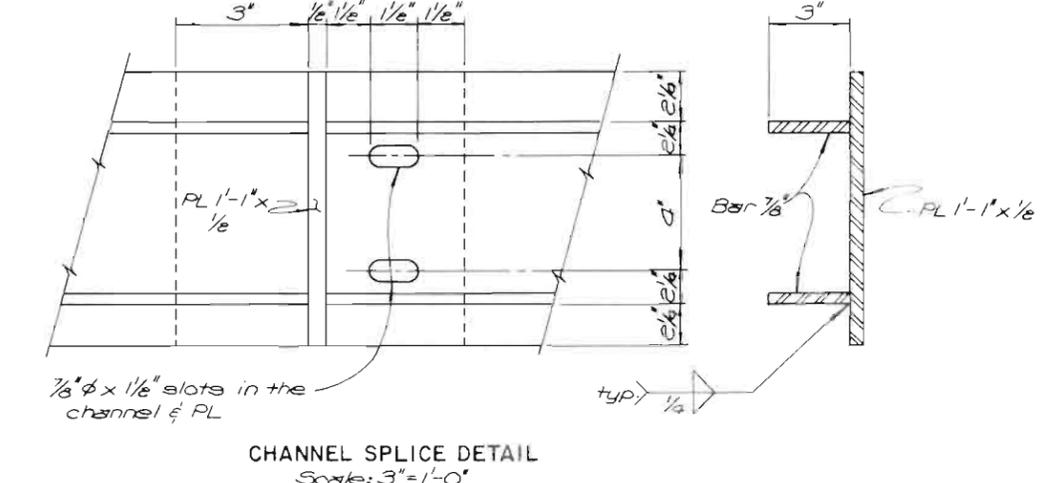
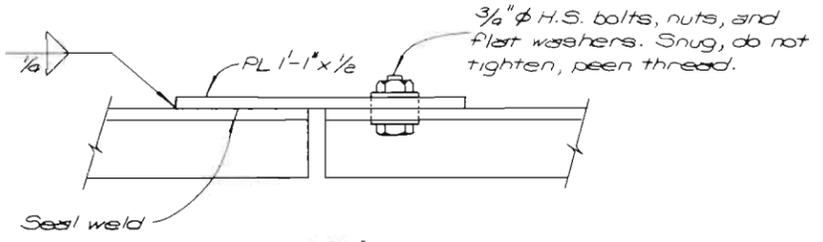
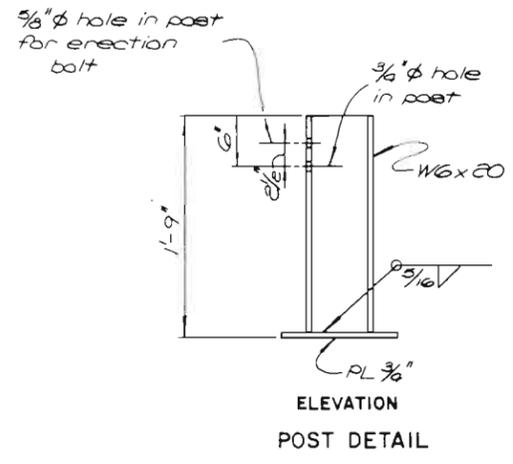
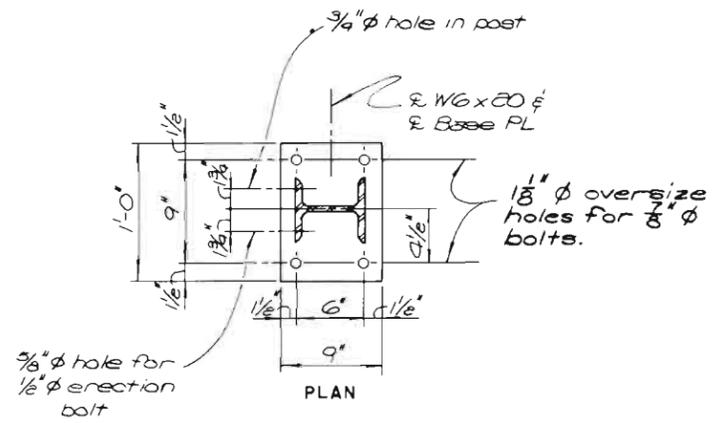
All posts, channel, channel splice, reflector tabs, bolts, nuts, and washers shall be galvanized after fabrication.

Channel shall be continuous over not less than two (2) posts.

All exposed corners shall be ground smooth.

Provide metal shims for alignment.

Plates and posts shall conform to AASHTO M183 (ASTM A36). H.S. bolts ($\frac{3}{8}$ " ϕ , $\frac{3}{4}$ " ϕ , & $\frac{7}{8}$ " ϕ), washers, and nuts shall conform to AASHTO M164 (ASTM A325).



Note: The rail details shown on this sheet were reproduced from Colorado Division of Highways Bridge Standard-10-(Bridge Rail Type 3) dated 10-7-77.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF WESTERN BRIDGE DESIGN CENTRAL DIRECT FEDERAL DIVISION, DENVER, COLORADO			
DESIGNED BY <i>L.B.S.</i>	BRIDGE OVER CLEAR CREEK STA. 1427 + 84.50		
DRAWN BY <i>D.K.H.</i>	SOUTH FORK-LAKE CITY ROAD RIO GRANDE NATIONAL FOREST COLORADO F.H.P. 7-2(4)		
CHECKED BY <i>V.D.B.</i>	SCALE 1/2" = 1'-0", OR AS NOTED	DATE OCT. 1980	
BRIDGE DRWG 6 OF 8 DRWGS.			RG2326-F