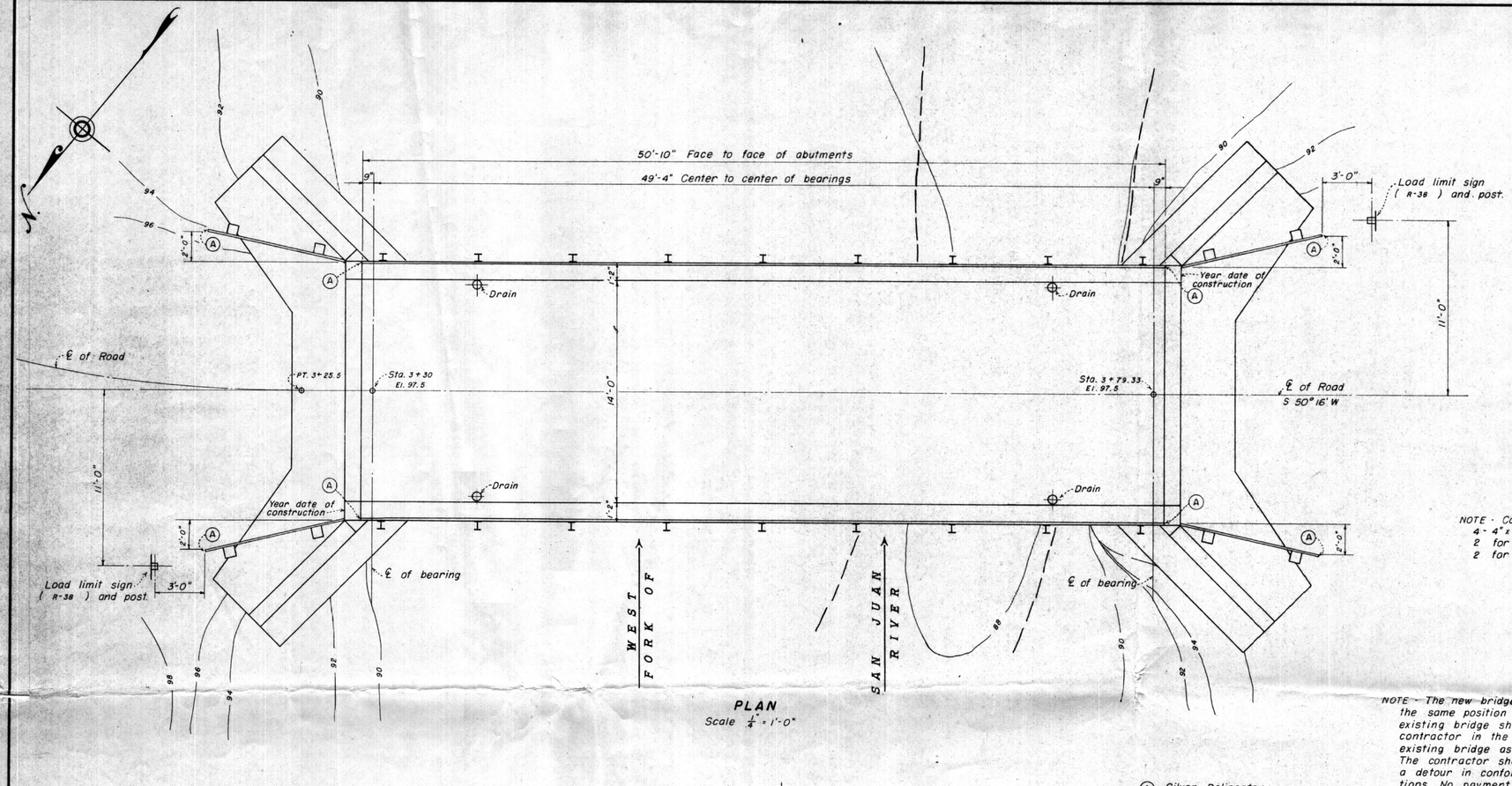
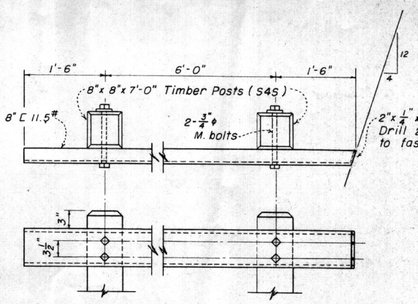


PLAN
Scale 1/4" = 1'-0"



DETAIL GUARD RAIL AND POSTS
Scale 3/4" = 1'-0"

NOTE - Contractor shall furnish
4 - 4" x 4" x 7'-0" Posts (S4S)
2 for Load Limit Signs
2 for One Lane Bridge Signs.

NOTE - The new bridge is located in approximately the same position as the existing bridge. The existing bridge shall be disposed of by the contractor in the immediate vicinity of the existing bridge as directed by the Engineer. The contractor shall construct and maintain a detour in conformance with the specifications. No payment shall be made directly for the bridge removed and site clean up.

GENERAL NOTES

SPECIFICATIONS - Design A.A.S.H.O. Standard Specifications for Highway Bridges (1949).

DEAD LOAD - Concrete 150# per cu. ft. Paving allowance = 25# per sq. ft. of roadway surface.

LIVE LOAD - H15-S12-44. Trucks impact 30%.

UNIT STRESSES - Reinforcing steel f_s = 20,000 p. s. i.; Structural steel f_s = 18,000 p. s. i.; Concrete f_c = 1,000 p. s. i. n = 10.

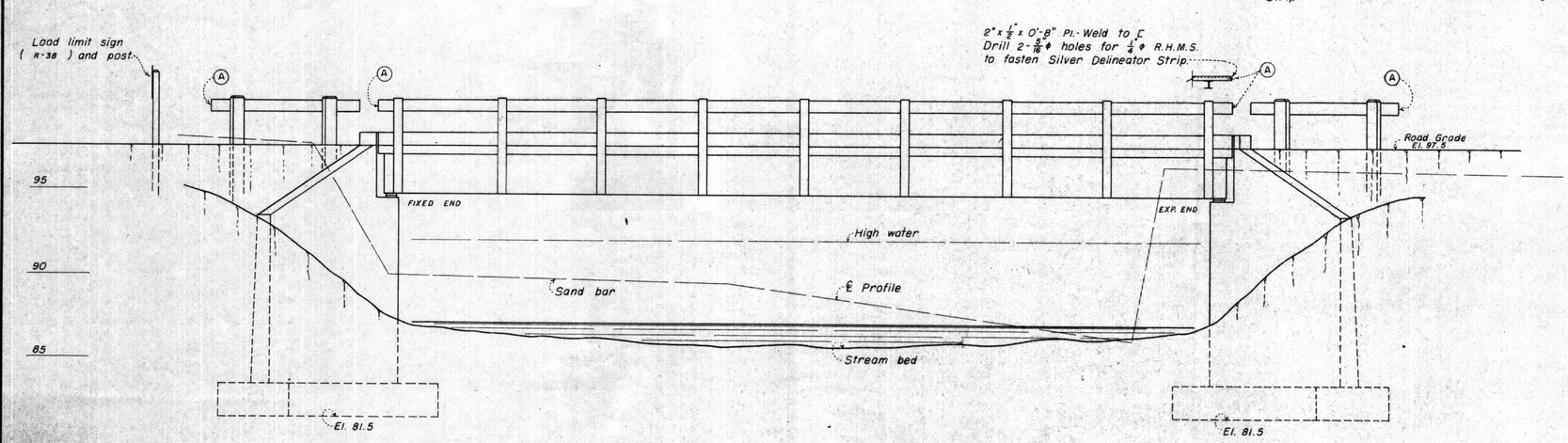
CONCRETE - All concrete is to be Class "A". Maximum size of coarse aggregate to be 1 1/2". All concrete shall be vibrated. All exposed corners to be chamfered 3/4" unless otherwise noted.

FINISHING CONCRETE - Roadway slabs and curbs are to be finished according to specifications. Curbs and outside edge of floor slab and the exposed surfaces of abutment wings above one foot below finished ground line shall be given a "rubbed finish". All other exposed corners shall be given an "ordinary finish".

REINFORCING STEEL - All bars are to be deformed. All bars in floor slab are to be supported on "metal chairs". Unless otherwise noted all dimensions refer to centers of bars.

STRUCTURAL STEEL - All structural steel shall conform to the Specification A.S.T.M. Designation A7. Shop rivets are to be 3/4" diameter, unless otherwise noted, and are power driven. Field connections are to be made with approved "rivet bolts". All structural steel is to be given one shop coat of paint. Shop plans must be approved by the Engineer before fabrication is started. Roadway drains and guard angles are to be paid for as structural steel.

TIMBER POSTS FOR GUARD RAILS - No. 1 Douglas Fir Posts shall be creosote treated to a height of 1'-0" above ground line. Parts above ground to have 2 coats of aluminum paint.



ELEVATION LOOKING DOWNSTREAM
Scale 1/4" = 1'-0"

ESTIMATE

Structural Excavation	291	cu. yds.
Class "A" Concrete	102	cu. yds.
Reinforcing Steel	10,878	lbs.
* - Structural Steel	26,600	lbs.
Guard Rail Posts	8	each.
Sign Posts	4	each.
Load Limit Signs (20 tons)	2	each

* - Includes drains, bolts and nosing angles.

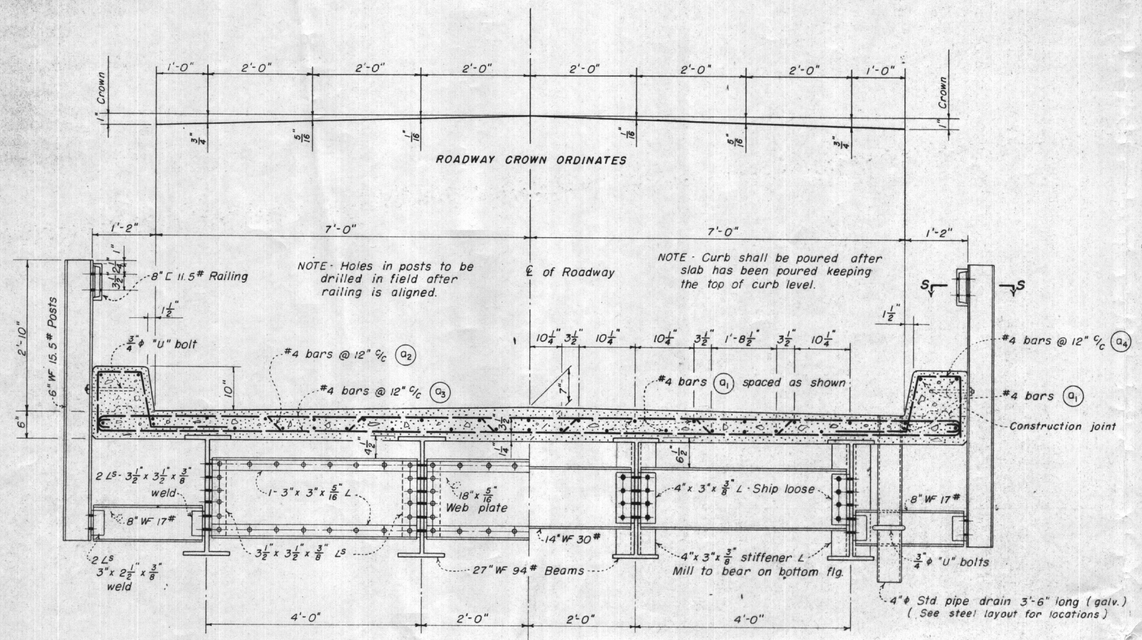
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION TWO H.M. SHANK REGIONAL ENGINEER

WEST FORK OF
SAN JUAN RIVER BRIDGE
WEST FORK ROAD # 777
SAN JUAN NATIONAL FOREST

DESIGNED H.C.G. DRAWN J.O.
SCALE AS NOTED CHECKED R.H.S.
APPROVED M. Shank DATE 7-7-53

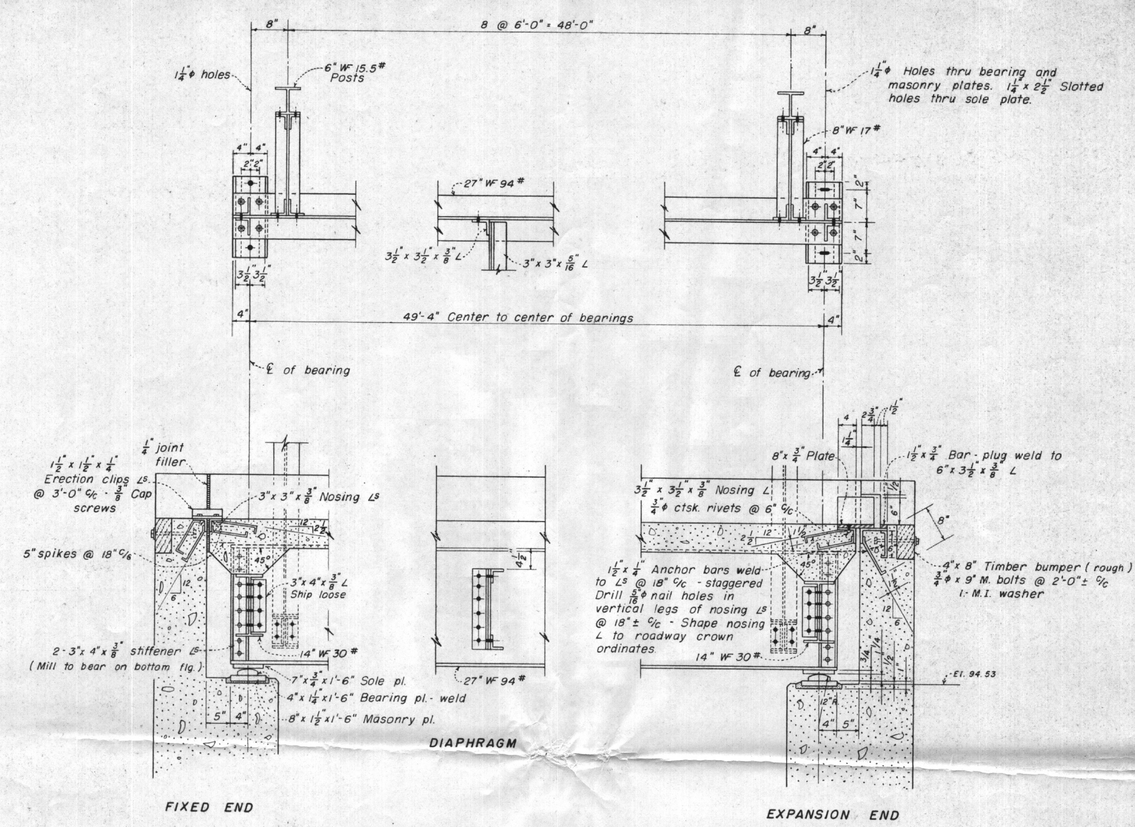
R-293-01

Sheet of 11 sheets



HALF SECTION AT MID SPAN
Normal to ℄ of Roadway
Scale 3/4" = 1'-0"

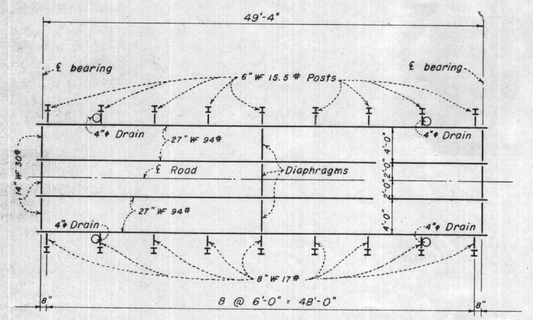
HALF SECTION AT BEARINGS
Normal to ℄ of Roadway
Scale 3/4" = 1'-0"



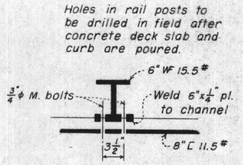
FIXED END

EXPANSION END

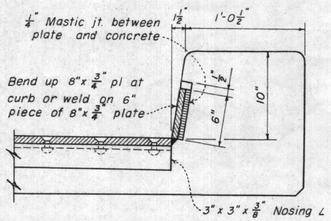
BEARING DETAILS
Scale 3/4" = 1'-0"



STEEL LAYOUT
Scale 1/8" = 1'-0"



SECTION S-S



SECTION THRU EXP. NOSING ANGLE AT CURB

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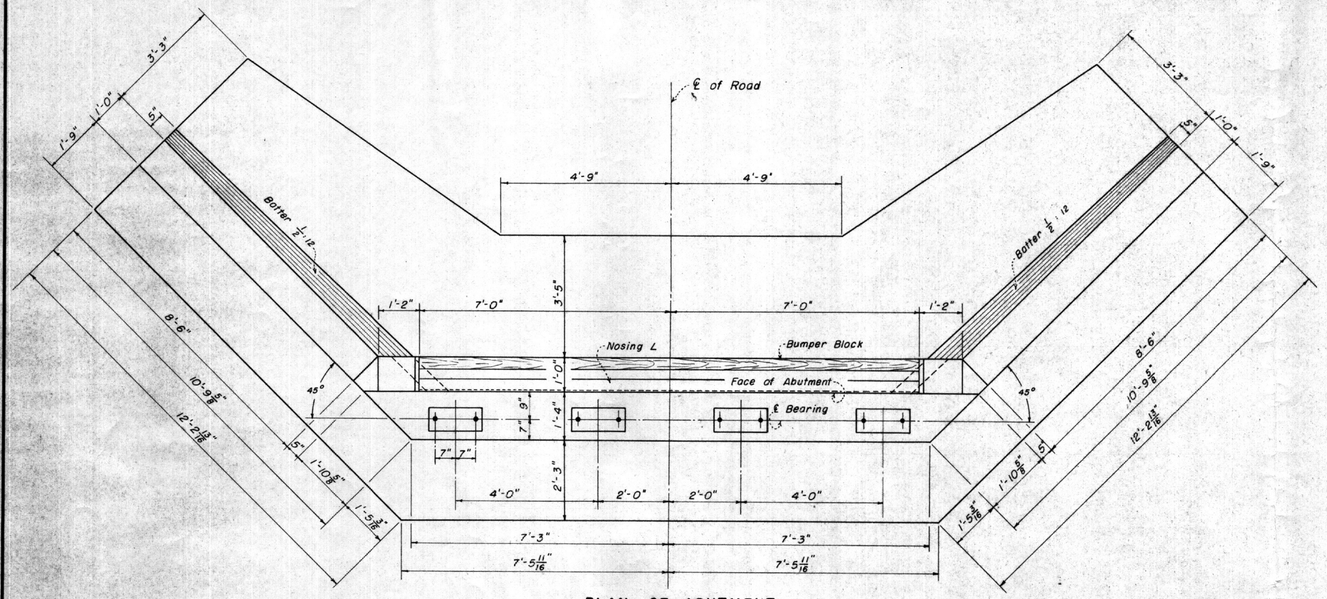
SAN JUAN NATIONAL FOREST

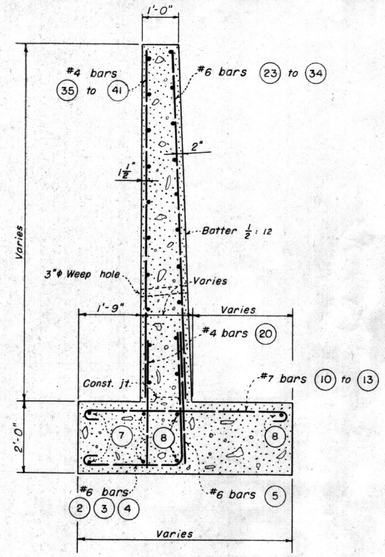
DESIGNED H.C.G. DRAWN J.O.
SCALE AS NOTED CHECKED R.H.L.
APPROVED H.M. Shank DATE 7-7-52.

R-293-02

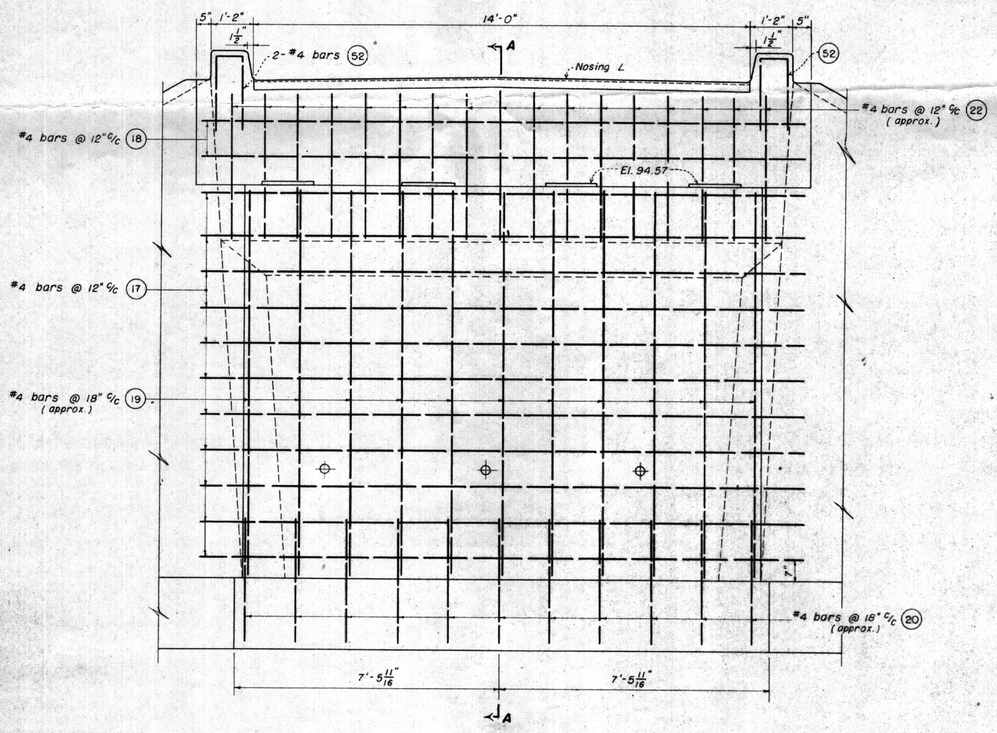
Sheet of sheets



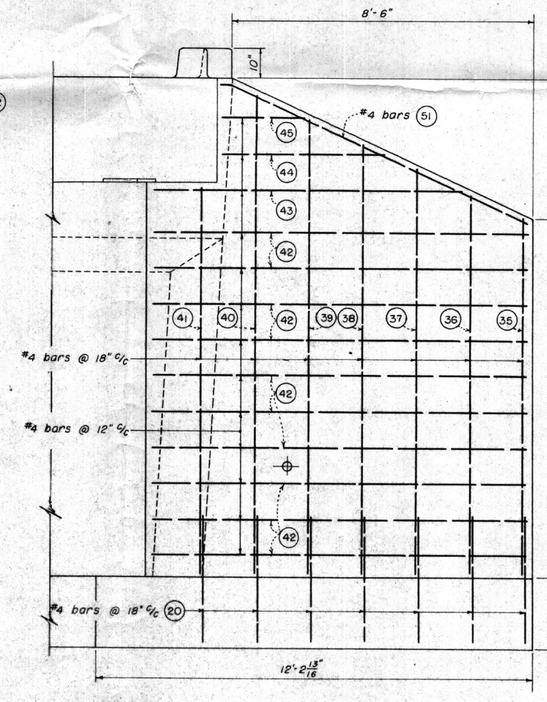
PLAN OF ABUTMENT
Scale ½" = 1'-0"



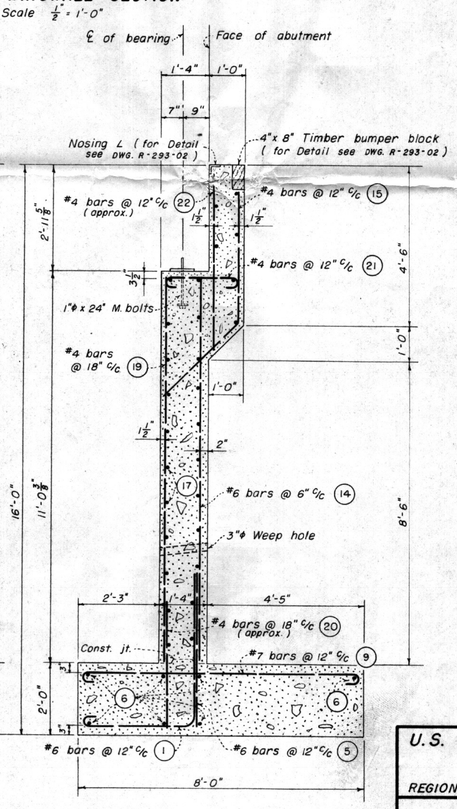
TYPICAL WINGWALL SECTION
Scale ½" = 1'-0"



ELEVATION OF ABUTMENT
Showing steel in front face
Scale ½" = 1'-0"



ELEVATION OF WINGWALL
Showing steel in front face
Scale ½" = 1'-0"



SECTION A-A
Scale ½" = 1'-0"

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION TWO H.M. SHANK REGIONAL ENGINEER

WEST FORK OF
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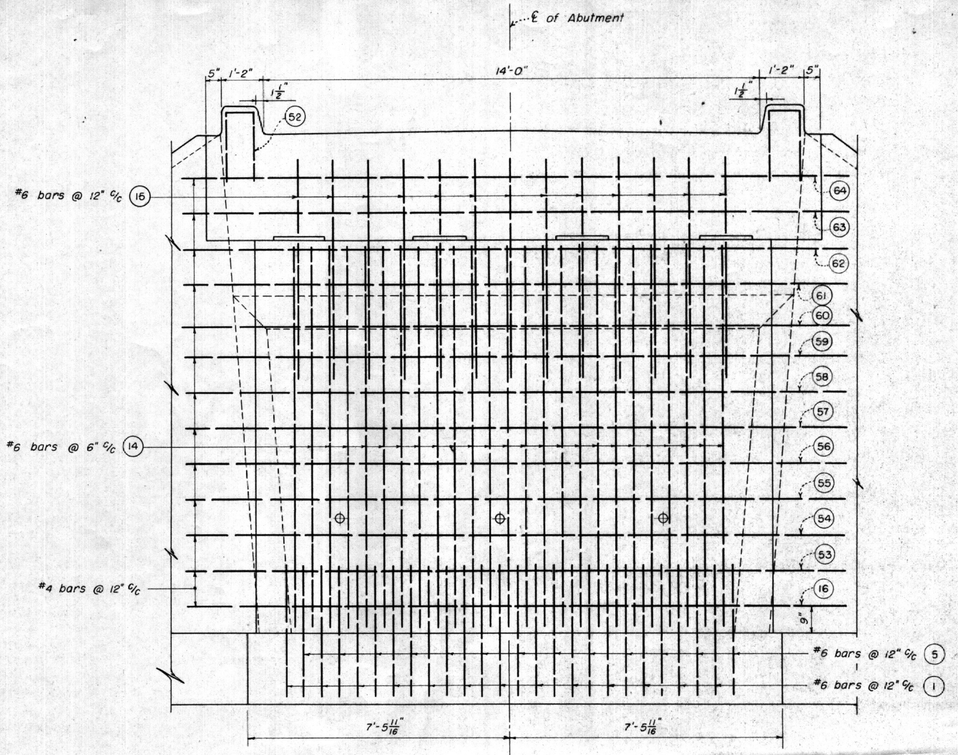
WEST FORK ROAD # 777
SAN JUAN NATIONAL FOREST

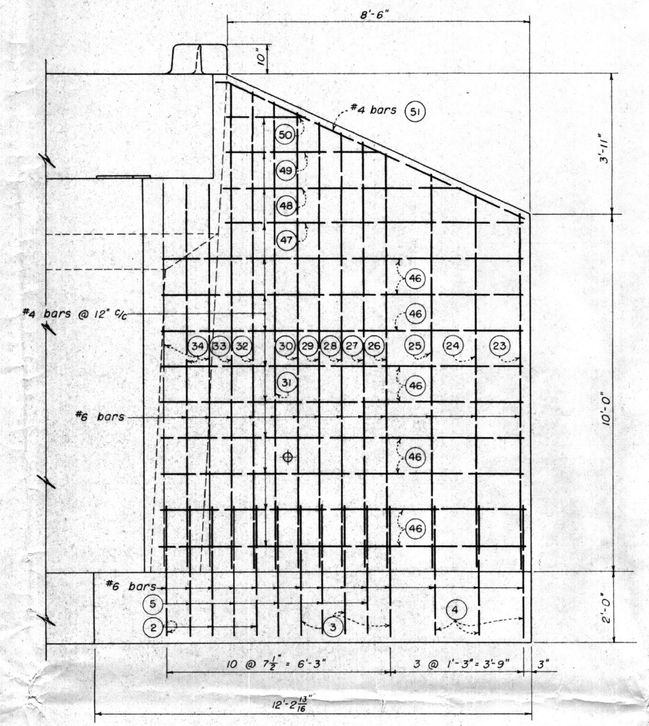
DESIGNED H.C.G. DRAWN J.O.
SCALE AS NOTED CHECKED R.H.R.
APPROVED [illegible] DATE 7-7-53

R-293-03

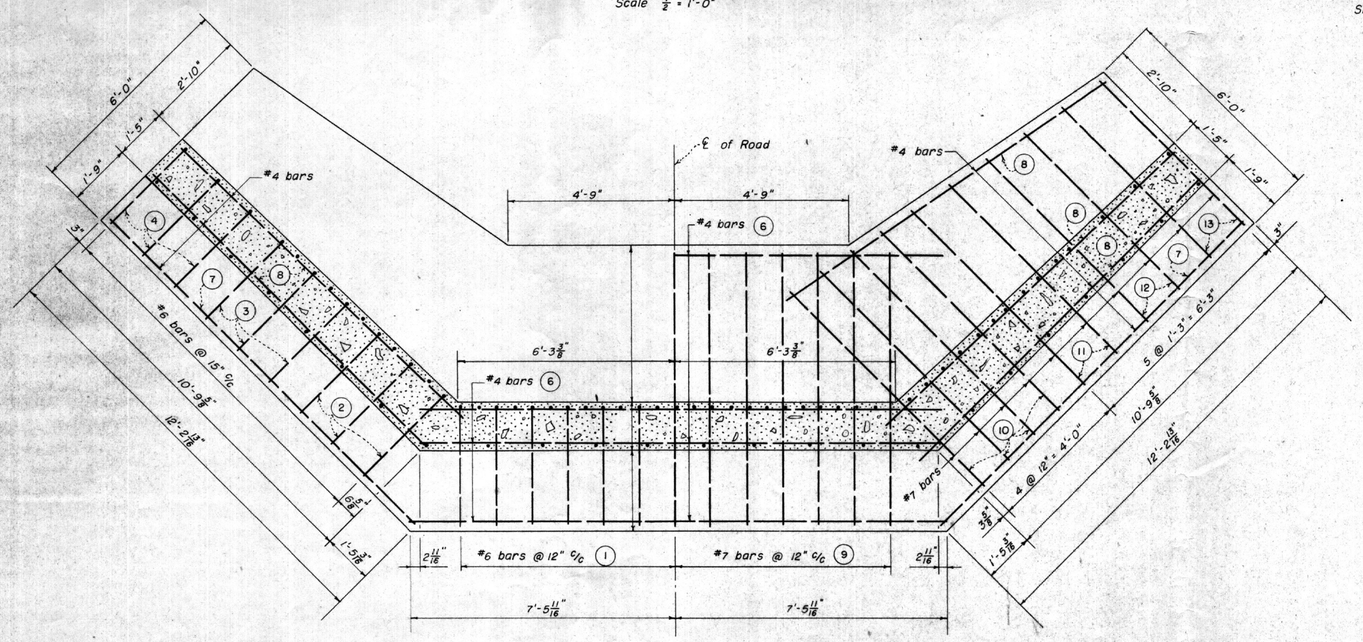
Sheet of sheets



ELEVATION OF ABUTMENT
Showing steel in rear face
Scale ½" = 1'-0"



ELEVATION OF WINGWALL
Showing steel in rear face
Scale ½" = 1'-0"



PLAN OF MAT
Showing steel in bottom of mat Showing steel in top of mat
Scale ½" = 1'-0"

U. S. DEPARTMENT OF AGRICULTURE
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REGION TWO H. M. SHANK REGIONAL ENGINEER

WEST FORK OF
SAN JUAN RIVER BRIDGE
WEST FORK ROAD # 777
SAN JUAN NATIONAL FOREST

DESIGNED	H.C.G.	DRAWN	J.D.
SCALE	AS NOTED	CHECKED	R.A.R.
APPROVED	M Shank	DATE	7-7-93

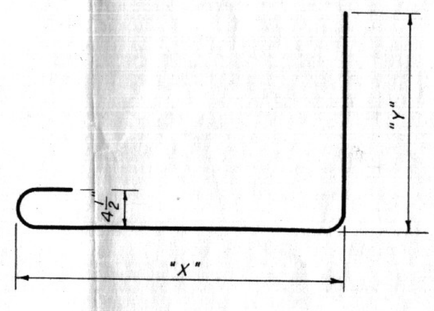
R-293-04

Sheet of sheets

REINFORCING STEEL SCHEDULE

MARK	LOCATION	NO. REQ'D.	SIZE	LENGTH	TYPE	"X"	"Y"
1	Abutment Footings	26	#6	8'-0"	A	3'-2"	4'-2"
2	do	12	do	7'-11"	B	3'-1"	4'-2"
3	do	12	do	7'-10"	B	2'-11 1/2"	4'-2"
4	do	12	do	7'-8"	B	2'-9 3/4"	4'-2"
5	do	44	do	4'-2"	C		
6	do	14	#4	15'-0"	C		
7	do	8	do	12'-0"	C		
8	do	20	do	10'-10"	C		
9	do	26	#7	9'-5"	G	7'-7"	
10	do	16	do	8'-8"	G	6'-10"	
11	do	8	do	8'-6"	G	6'-7"	
12	do	8	do	7'-11"	G	6'-1"	
13	do	8	do	7'-5"	G	5'-7"	
14	Abutment Stem	50	#6	10'-9"	C		
15	do	26	#4	6'-8"	E	2'-0 1/2"	3'-9"
16	do	2	do	17'-3"	N	13'-3"	11 1/2"
17	do	22	do	20'-4"	N	14'-4"	12"
18	do	4	do	21'-0"	N	17'-0"	12"
19	do	22	do	10'-9"	C		
20	Abutment Footings	50	do	4'-2"	C		
21	Abutment Seat	26	do	3'-0"	G	2'-1"	
22	Abutment Stem	34	do	4'-9"	C		
23	Wingwalls	4	#6	10'-0"	C		
24	do	4	do	10'-7"	C		
25	do	4	do	11'-2"	C		
26	do	4	do	11'-9"	C		
27	do	4	do	12'-0"	C		
28	do	4	do	12'-2 1/2"	C		
29	do	4	do	12'-7"	C		
30	do	4	do	12'-10 1/2"	C		
31	do	4	do	13'-2"	C		
32	do	4	do	13'-5 1/2"	C		
33	do	4	do	13'-7 1/2"	C		
34	do	12	do	10'-9"	C		
35	do	4	#4	10'-0"	C		
36	do	4	do	10'-8 1/2"	C		
37	do	4	do	11'-5"	C		
38	do	4	do	12'-1"	C		
39	do	4	do	12'-9 1/2"	C		
40	do	4	do	13'-5 1/2"	C		
41	do	4	do	10'-9"	C		
42	do	40	do	10'-6"	C		
43	do	4	do	8'-6"	C		
44	do	4	do	4'-7"	C		
45	do	4	do	2'-5"	C		
46	do	36	do	10'-0"	C		
47	do	4	do	8'-4"	C		
48	do	4	do	6'-6"	C		
49	do	4	do	4'-5"	C		
50	do	4	do	2'-0"	C		
51	do	8	do	9'-5 1/2"	F	0'-3 1/2"	9'-2"
52	Abutment Curbs	8	do	4'-11 1/2"	D	0'-9 1/2"	2'-1"
53	Abutment Stem	2	do	17'-4 1/2"	N	13'-4 1/2"	11 1/2"
54	do	2	do	17'-6"	N	13'-6"	11 1/2"
55	do	2	do	17'-7 1/2"	N	13'-7 1/2"	11 1/2"
56	do	2	do	17'-9 1/2"	N	13'-9 1/2"	11 1/2"
57	do	2	do	17'-10 1/2"	N	13'-10 1/2"	11 1/2"
58	do	2	do	18'-0"	N	14'-0"	11 1/2"
59	do	2	do	18'-1 1/2"	N	14'-1 1/2"	11 1/2"
60	do	2	do	18'-2 1/2"	N	14'-2 1/2"	11 1/2"
61	do	2	do	20'-0"	N	16'-0"	12"
62	do	2	do	20'-1 1/2"	N	16'-1 1/2"	12"
63	do	2	do	20'-3"	N	16'-3"	12"
64	do	2	do	20'-5"	N	16'-5"	12"
a_1	Deck Slabs	76	#4	26'-6"	C		
a_2	do	50	do	17'-9"	L	16'-0"	
a_3	do	98	do	17'-0"	G	16'-0"	
a_4	Curbs	102	do	4'-3"	K		

BENDING DIAGRAM



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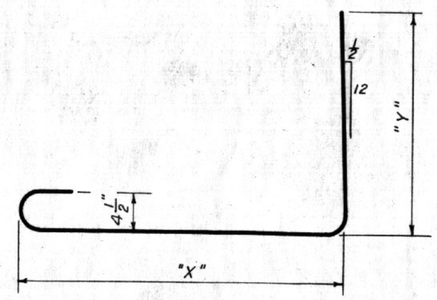

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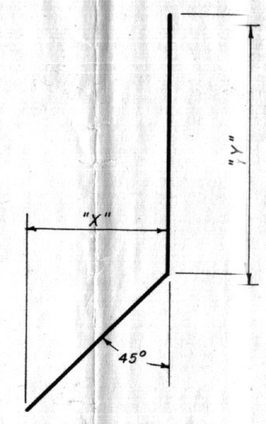

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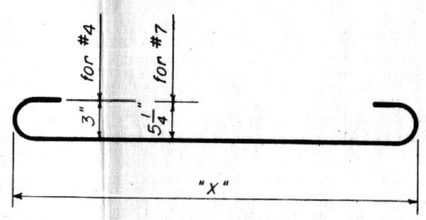

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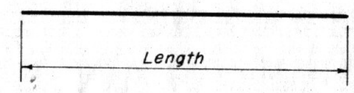

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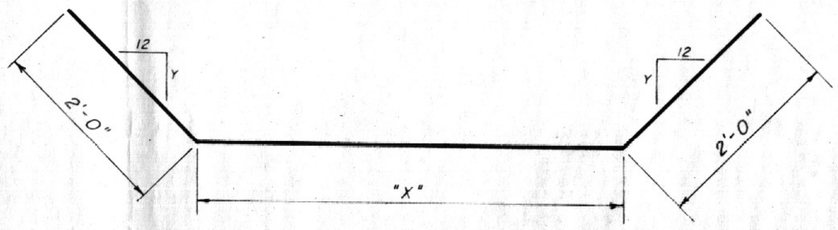

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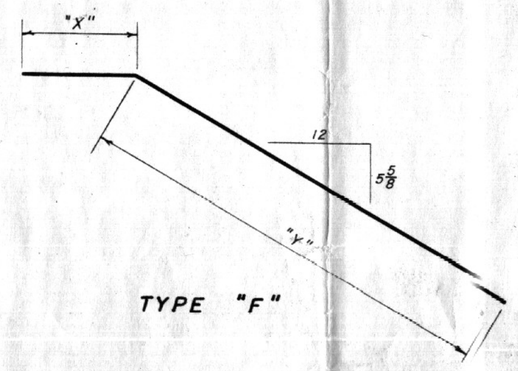

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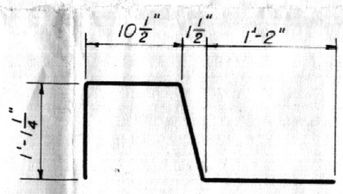
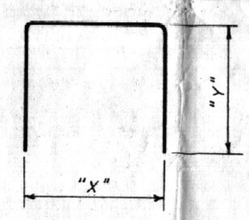


TYPE "K"

NOTE - All bar dimensions are out to out.



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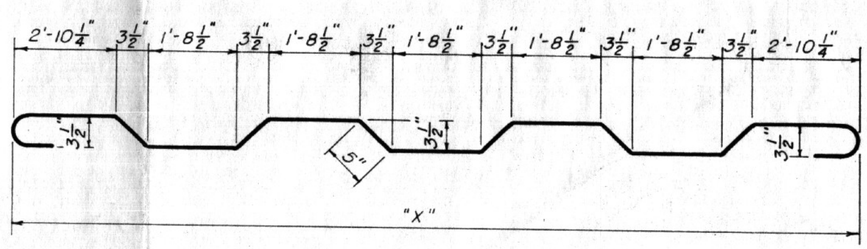

TYPE "L"

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 2 H.M. SHANK REGIONAL ENGINEER

WEST FORK OF
SAN JUAN RIVER BRIDGE
WEST FORK ROAD # 777
SAN JUAN NATIONAL FOREST

DESIGNED H.C.G. DRAWN J.O.
SCALE NONE CHECKED R.H.K.
APPROVED [illegible] DATE 7-7-53

R-293-05

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