CONTRACT PLANS BUREAU
MONTANA DEPARTMENT OF TRANSPORTATION

As-Built Drawings

The following are as-built drawings for the structures. MDT provides them for informational purposes only. They do not include drawings for modifications to the structures, such as joint replacements and guardrail revisions and may not completely represent current conditions. Thus, some of the information contained in these documents may be out of date or not applicable with regard to the advertised project. The contractor should not rely solely on the as-built drawings provided for bidding purposes nor does any data in these files supersede the data in the contract documents.

STATE OF MONTANA

STATE HIGHWAY COMMISSION

BRIDGE PLANS & QUANTITIES

FEDERAL AID PROJECT NO. F 248 (8) P.E. & R/W
F 248(10) CONSTRUCTION

WHITEHALL-THREE FORKS

JEFFERSON COUNTY

LIST OF DRAWINGS

SHEET NO.	DWG. NO.	TITLE
1	3565	GENERAL LAYOUT
2	3566	"T" BEAM DETAILS
3	3567	BRIDGE RAIL, BENT AND SHOE DETAILS

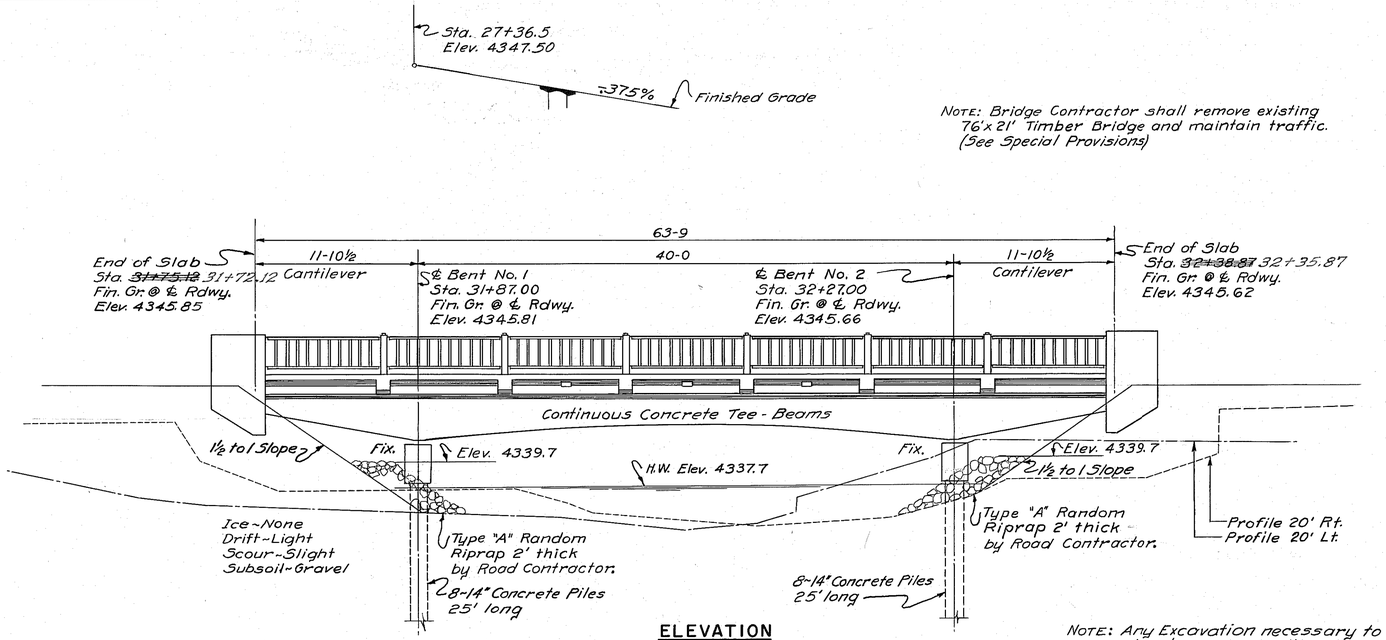
ESTIMATED BRIDGE PLAN QUANTITIES

LOCATION	LENGTH IN FEET	CLASS "AD" CONCRETE CU. YDS.	REINFORCING STEEL LBS.	STEEL BRIDGE RAIL LIN. FT.	CONCRETE PILES EACH	REMOVAL OF EXISTING STRUCTURE AND MAINTAINING TRAFFIC LUMP SUM
BENT NO. 1		7.6	663		8	
BENT NO. 2		7.6	663		8	LUMP SUM
SUPERSTRUCTURE	63.75	109.0	28095	125.00		
TOTAL	63.75	124.2	29421	125.00	16	LUMP SUM

Made by E.R.T. 8-25-54 Checked by J.R.B. 8-26-54

DRAWING NO. 3565Q

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.		SHEET NO.	TOTAL SHEETS
8	MONT.	F 248(10)		1	3

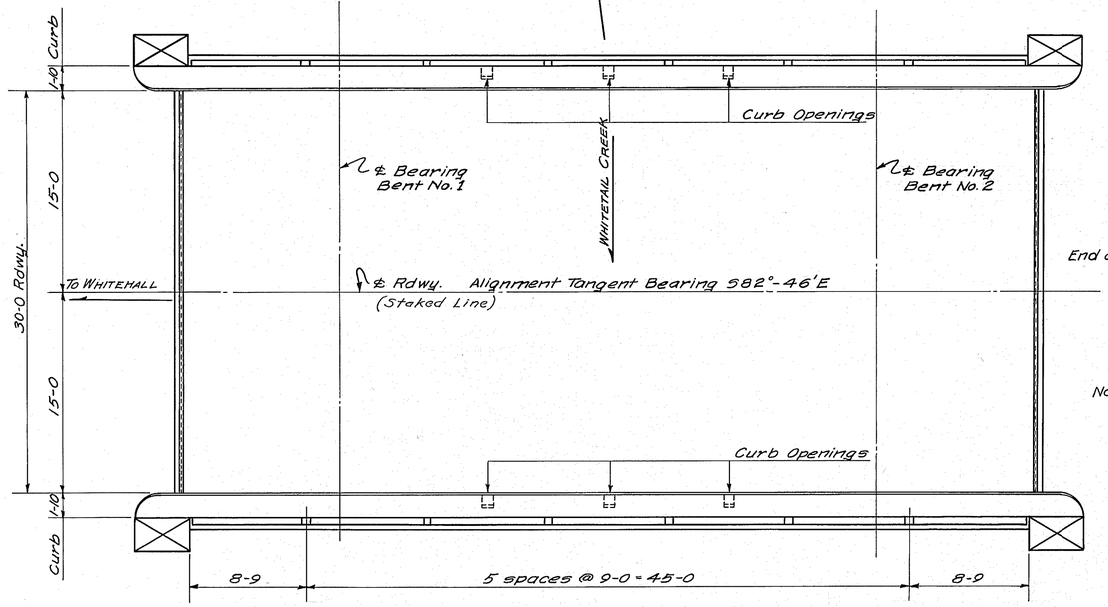


ELEVATION
Scale-3/16"=1'-0"

NOTE: Bridge Contractor shall remove existing 76'x 21' Timber Bridge and maintain traffic. (See Special Provisions)

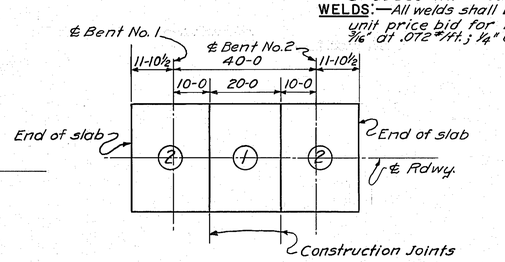
NOTE: Any Excavation necessary to construct caps, backwalls and posts shall not be paid for directly but shall be included in the unit prices bid for other items.

NOTE: The Contractor shall not disturb the existing irrigation facilities unnecessarily.
Any damage to existing irrigation facilities due to the Contractors operations shall be repaired by the Contractor at no cost to the State.



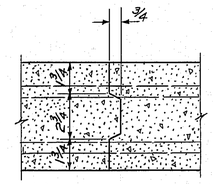
PLAN
Scale-3/16"=1'-0"

REFERENCES	
DWG. NO.	DESCRIPTION
3566	"T" BEAM DETAILS
3567	BRIDGE RAIL, BENT & SHOE DETAILS



NOTE: Sections of the same number need not be poured simultaneously.
Forms and reinforcing steel for all spans shall be in place before pouring is started.

SLAB POURING DIAGRAM
Scale-1"=20'-0"



SHEAR KEYS AT COSTRUCTION JOINTS IN SLAB
Scale-3"=1'-0"

NOTES

SPECIFICATIONS:— Montana State Highway Commission Standard Specifications for Road and Bridge Construction, adopted January 1, 1946, and any amendments thereto, and Special Provisions shall govern unless otherwise noted. Design prepared in accordance with A.A.S.H.O. Specifications, 1953 Edition.

LIVE LOAD:— Standard H20-S16 loading.

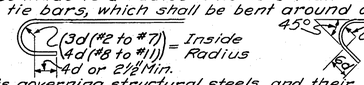
FINISHED GRADE:—Finished grade of bridge is same as profile grade shown on Road Plans.

CONCRETE:— All concrete shall be Class "AD." Chamfer all exposed edges of concrete ¾ inch and fillet entrant angles ¾ inch unless otherwise noted.
An air entraining agent shall be added to all concrete.

CONSTRUCTION JOINTS:— Construction joints shall be made only at locations shown on the plans or as approved by the engineer. Adequate keys shall be provided at all construction joints as noted on the plans or determined by the engineer.

FORMS:—All forms for concrete shall be made of tongue and groove matched lumber, surfaced inside, or shall be lined with plywood. See Special Provisions.

REINFORCING STEEL:— All reinforcing bars shall be of intermediate grade billet steel. Deformations shall conform to A.S.T.M. Specification A 305-50, except as otherwise approved.
Slab bars shall be supported on steel chairs placed sufficiently close together to maintain bars in proper position. All other bars shall be supported on either steel chairs or precast concrete blocks. The unit price bid for reinforcing steel shall include the cost of furnishing and placing chairs, pre-cast blocks and all other materials used to fasten reinforcing steel in place.
Splicing of main reinforcing bars shall not be permitted except as shown on the plans.
Bends in reinforcing bars shall be made to a radius of not less than four (4) diameters of the bar except for stirrups and tie bars, which shall be bent around a pin having a diameter of not less than two (2) bar diameters. Hooks shall conform to the dimensions shown in the following sketches.



STRUCTURAL STEEL:—For requirements governing structural steels and their fabrication, see the Standard Specifications. To avoid oversight, these requirements shall be clearly noted on the shop drawings.
Structural steel shall receive one (1) shop coat of red lead and two (2) field coats consisting of first field or primer coat and one (1) coat of aluminum paint as specified in the Standard Specifications, on all surfaces not in contact with concrete, except as noted under Paragraph 45.10(d).

GUARD ANGLES AND SHOES:—Slab guard angles and shoes shall be paid for at the unit price bid for Reinforcing Steel.

APPROVAL:—Shop plans shall be approved by the Montana State Highway Department before fabrication is begun.

PREFORMED EXPANSION JOINT FILLER:— Preformed expansion joint filler shall be Type "A" as specified in the Standard Specifications. Cost of furnishing and placing shall be included in the unit price bid for Class "AD" concrete.

FINISHING:— Attention is directed particularly to the requirements of paragraph 49.05(m)(2) of the Standard Specifications for the finishing of concrete floor slab.

STEEL BRIDGE RAIL:—The price bid per lineal foot for steel bridge rail shall be full payment for the rail units and posts complete in place, including grouting, painting and all incidentals pertaining thereto.

CONCRETE PILES:— Concrete piles shall be precast and all materials, construction and curing shall be as called for in the Standard Specifications and in accordance with the details shown on these plans.
All piles shall be driven to sustain safely a load of 28 tons per pile as determined by the engineer.
The price bid per pile shall be for the pile in place and shall include payment for all materials, labor, etc. used in the fabrication, construction, curing, transporting, driving and cutting off of said pile.

SETTING OF MASONRY PLATES:— Care shall be taken in placing reinforcing steel so as to clear anchor bolts. Contractor shall finish concrete under girder masonry plates slightly high and bush-hammer to exact elevation shown. Masonry plates shall be placed on three (3) layers of canvas thoroughly swabbed with red lead, as called for in the Standard Specifications.

WELDS:—All welds shall be continuous fillet shop welds unless otherwise noted. Weld's shall be paid for at the unit price bid for reinforcing steel and the weights shall be computed in accordance with the following: 3/16" at .672 #/ft.; ¼" at .128 #/ft.; ⅜" at .287 #/ft.

DESIGN INFORMATION			
D.L.=Dead Load L.L.=Live Load Moment in Ft. Kips Reactions in Kips Shears in Kips		11-10½ 40-0 11-10½ R1 R2	
		R1 & R2	SPAN
MOMENT	D.L.	190	72
	L.L.	423	505
REACTIONS	D.L.	49.9	
	L.L.	86.5	
SHEARS	D.L.	26.2	
	L.L.	62.0	

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGE OVER WHITETAIL CREEK
NEAR WHITEHALL
FEDERAL AID PROJECT NO. F. 248(10)
JEFFERSON COUNTY
GENERAL LAYOUT
Scale ~ As Noted

APPROVED BY _____ BRIDGE ENGINEER

STATE PRECONST. NUMBER 1248-08

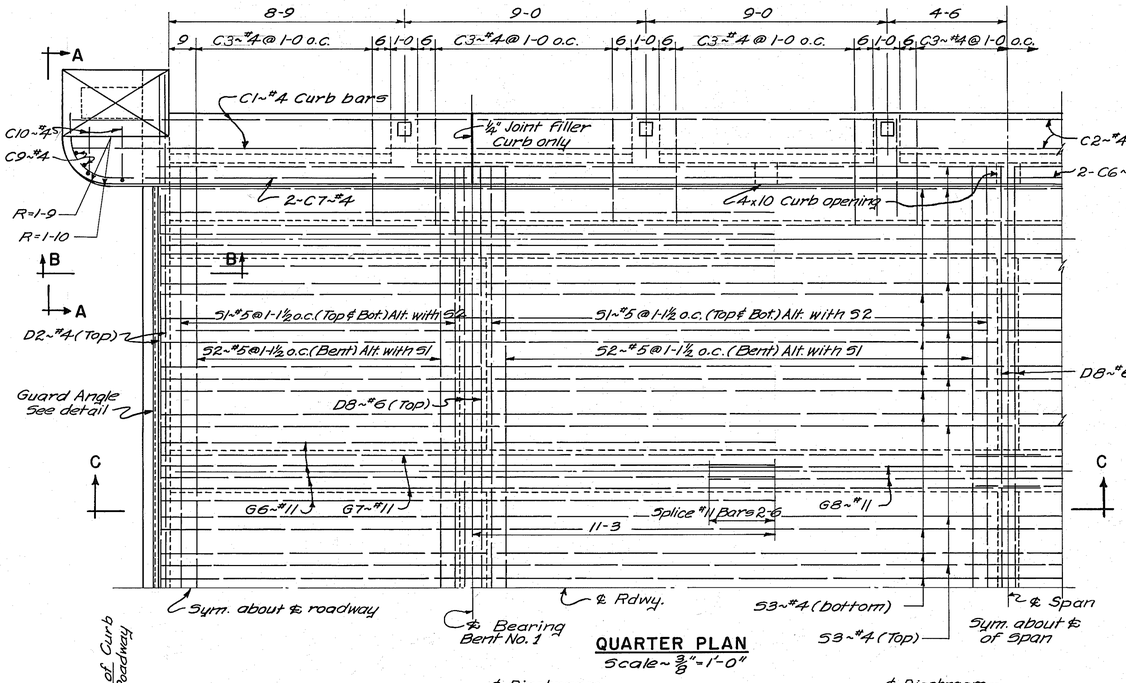
DRAWING NO. 3565

⚠ THIS CONTRACT STPP 69-1(33)0
Reuse Bridge Rail Concrete Barrier. See: Dwg Nos 20733A thru 20733C

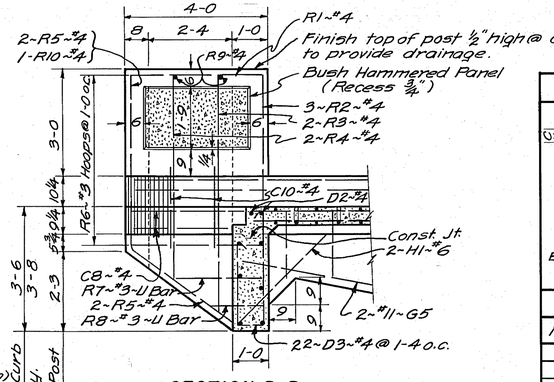
DESIGNED		
DRAWN	C.A.M.	5-13-54
TRACED	JWA. & F.L.S.	7-28-54
CHECKED	P.E.P.	8-6-54
⚠ REVISED	D.G.G.	12-1-09
REVISED		

J.R.B.

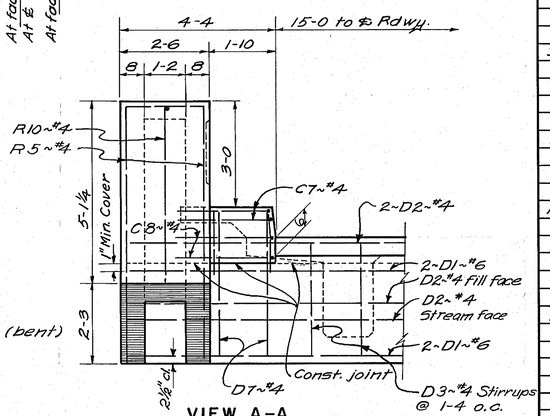
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.		SHEET NO.	TOTAL SHEETS
8	MONT.	F 248(10)		2	3



QUARTER PLAN
Scale ~ 3/8"=1'-0"



SECTION B-B
Scale ~ ½"=1'-0"



VIEW A-A
Scale ~ ½"=1'-0"

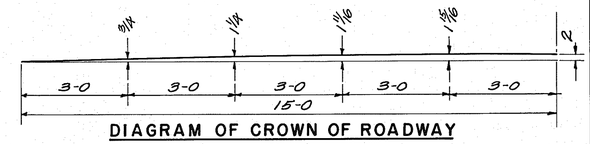
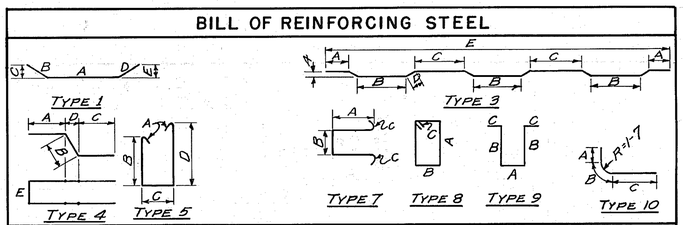
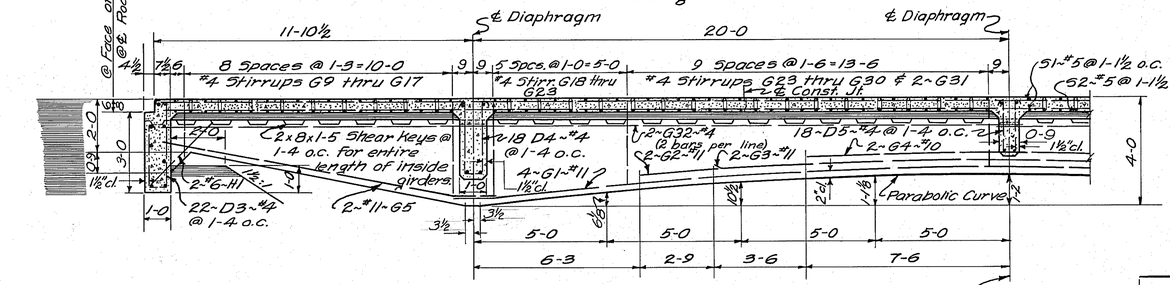


DIAGRAM OF CROWN OF ROADWAY

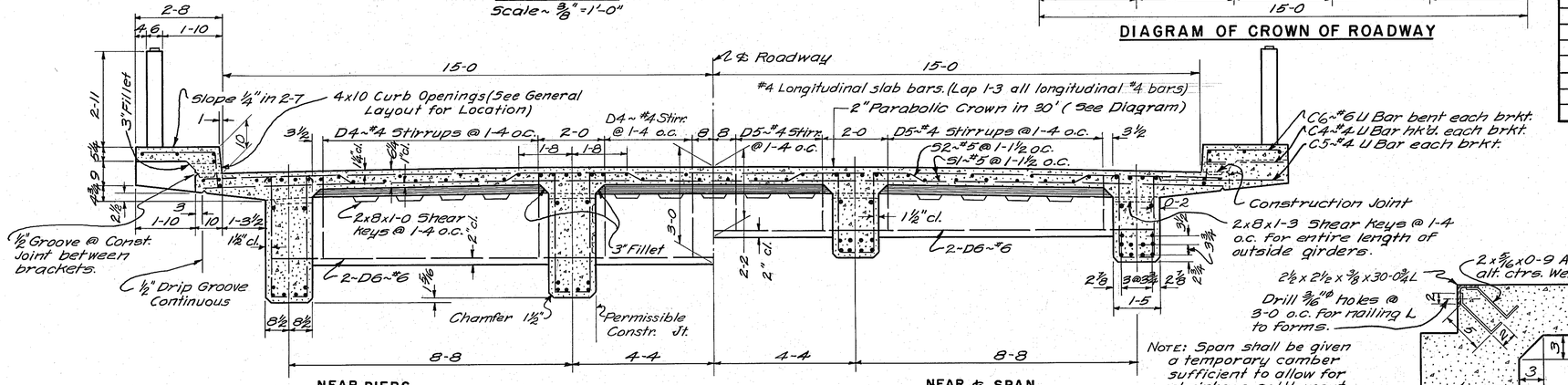
BILL OF REINFORCING STEEL



STRAIGHT BARS				BENT BARS (All dimensions are out to out)									
No.	Size	Mark	Length	No.	Size	Mark	Type	Length	A	B	C	D	E	F
8	#4	C1	15'-0"	112	#4	C3	4	5'-2"	2'-5"	1'-2"	1'-7"	0'-1⅜"		
8	6	D1	38-4	12	4	C5	7	8-10	4-0	0-10				
8	4	D2	38-4	12	4	C4	7	6-5	2-5	0-10	0-4½			
6	6	D6	27-0	12	6	C6	4	11-4	2-4	1-2	1-9	0-1⅜	0'-10	
8	11	G2	27-6	44	4	D3	5	7-0	0-4½	2-5	0-8	3-2		
8	11	G3	22-0	36	4	D4	7	6-8	2-7½	0-9	0-4½			
8	10	G4	15-0	18	4	D5	7	4-10	1-9½	0-6	0-4½			
32	11	G6	22-10	16	11	G1	1	41-7	38-7	1-6	0-1¾	1-6	0-1⅜	
16	11	G7	33-0	16	11	G5	1	13-0	11-6	1-6	0-4			
8	11	G8	22-6	8	4	G9	7	5-11	2-0	1-2	0-4½			
16	6	H1	3-4	↓	↓	G10	↓	5-8	1-10½	↓	↓			
4	4	R1	3-8			G11		6-2	2-1⅛					
12	4	R2	7-0			G12		6-8	2-4½					
8	4	R3	6-10			G13		7-3	2-8					
8	4	R4	5-11			G14		7-9	2-11					
8	4	R9	2-2			G15		8-3	3-2					
108	5	S1	31-4			G16		8-9	3-5					
72	4	S3	32-3			G17		9-3	3-8					
8	4	C2	39-8			G18		9-3	3-8					
8	4	C9	1-5			G19		9-0	3-6½					
4	4	R10	4-10			G20		8-10	3-5½					
6	6	D8	31-4			G21		8-7	3-4					
16	#4	G32	32-6			G22		8-5	3-3					
						G23		8-2	3-1½					
						G24		7-11	3-0					
						G25		7-9	2-11					
						G26		7-7	2-10					
						G27		7-5	2-9					
						G28		7-4	2-8½					
						G29		7-2	2-7½					
				8		G30		7-1	2-7					
				16		G31	7	7-1	2-7	1-2	0-4½			
				8	4	R5	1	9-2	3-7	4-10	3-10	0-9	0-5	
				24	3	R6	8	12-4	3-8	2-2	0-4			
				4	3	R7	7	7-2	2-6	2-2				
				4	3	R8	7	5-2	1-6	2-2				
				50	5	S2	3	32-1	4-4	4-8	3-4	0-5½	31-4	
				8	4	D7	5	9-7	0-4½	4-1	0-8	4-1		
				8	4	C7	10	16-8	1-0	2-6	13-2			
				8	4	C8	10	5-6	1-0	2-6	2-0			
				8	#4	C10	9	6-3	1-5	1-11	0-6			



SECTION C-C
Scale ~ ⅜"=1'-0"



NEAR PIERS — NEAR ℄ SPAN

ROADWAY SECTION
Scale ~ ½"=1'-0"

NOTE: Span shall be given a temporary camber sufficient to allow for shrinkage, settlement and ⅜" dead load deflection at center of span.

GUARD ANGLE DETAIL
Scale ~ 1½"=1'-0"

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGE OVER WHITETAIL CREEK
NEAR WHITEHALL
FEDERAL AID PROJECT NO. F. 248(10)
JEFFERSON COUNTY
"T" BEAM DETAILS
Scale ~ As Noted

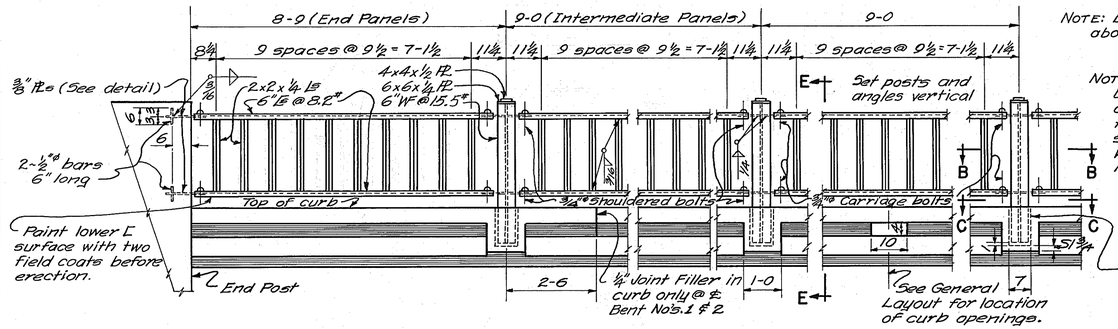
DESIGNED		
DRAWN	R.O.K.	6-22-54
TRACED	F.L.S.	7-28-54
CHECKED	P.E.R.	8-6-54
REVISED		
REVISED		

STATE PRECONST. NUMBER 1248-08

DRAWING NO. 3566

J.R.B.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.		SHEET NO.	TOTAL SHEETS
8	MONT.	F 248(10)		3	3

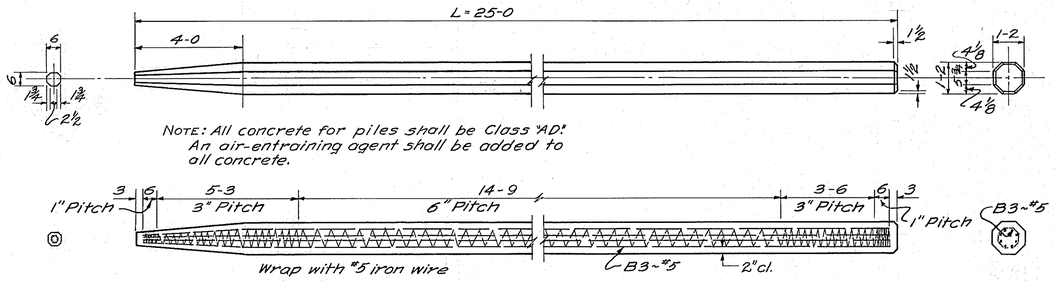


NOTE: Bridge Rail Symm. about ℄ Bridge.

NOTE: Steel Bridge Rail Units & Posts shall receive one shop coat and two field coats of paint on all surfaces not in contact with concrete. Round all exposed corners.

STEEL BRIDGE RAIL DETAILS

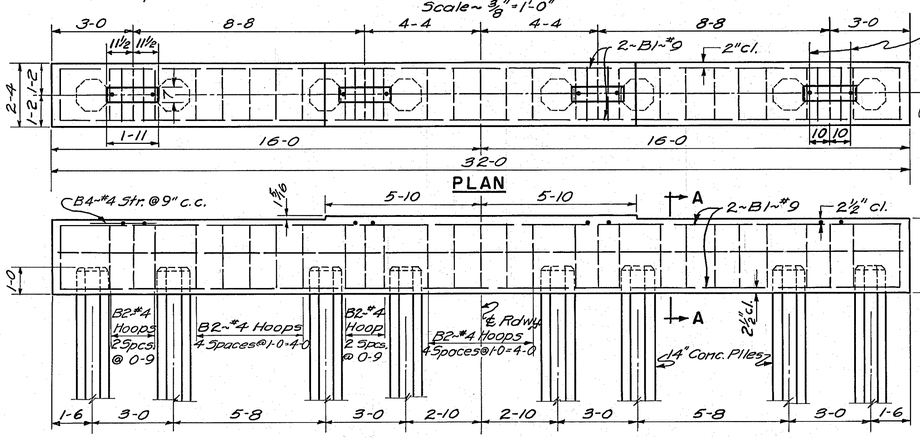
Scale ~ ½" = 1'-0"



NOTE: Max. Pile Pressure under D.L.+L.L. = 24.6 Tons/Pile.

DETAIL OF CONCRETE PILES

Scale ~ ⅜" = 1'-0"



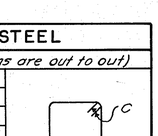
ELEVATION OF BENT NO. 1 & NO. 2

Scale ~ ⅜" = 1'-0"

BILL OF REINFORCING STEEL

FOR ONE BENT ONLY (All dimensions are out to out)

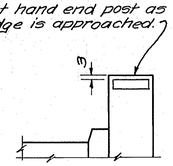
No.	Size	Mark	Type	Length	A	B	C	D
29	#4	B2	Bent	9'-5"	2'-0"	2'-4"	0'-4½"	
4	9	B1	Str.	31-6				
64	5	B3	Str.	24-6				
8	4	B4	Str.	2-0				
2	#4	B5	Str.	3'-6"				



*See Concrete Pile note on Dwg. No. 3565.

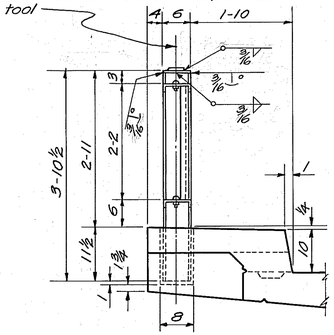
J.R.B.

Place "Marker" on each right hand end post as bridge is approached.



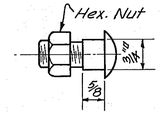
RIGHT HAND END POST

NOTE ~ ¾"ø Carriage bolt with cut washers. Threads at face of nut shall be burred with a pointed tool



SECTION E-E

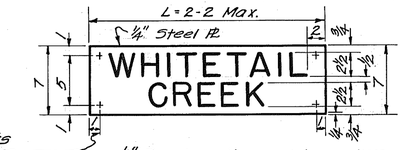
Scale ~ ¾" = 1'-0"



Shouldered bolt to be used at each end of rail panels over Bents No. 1 & No. 2 only.

SHOULDERED BOLT DETAIL

Scale ~ 6" = 1'-0"



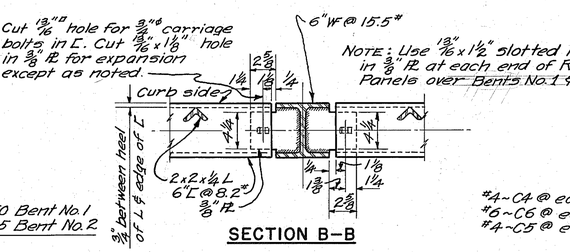
All corners of Marker Plate shall be smoothed and rounded. "L" = Length required to make Sign of Gothic Letters of proper proportions. Letters shall be 2½ inches high made with ⅜ inch stroke with space of about ½ inch between letters. For support set 4 ~ ½"ø x 6 Galv. bolts in end posts.

PAINTING OF MARKER: Before paint is applied, plate shall be cleaned with gasoline. One coat of flat white paint and two coats of white enamel shall then be applied over the entire surface of the plate. "Silver Scotchlite" or equivalent reflectorizing material shall then be applied to the entire face of the sign with the special water proof adhesive recommended by the manufacturers of the reflectorizing material. Lettering and border shall be put on with sign writer's "Lettering Black".

Cost of "Marker" complete in place, shall be included in the unit price bid for Class "AD" concrete.

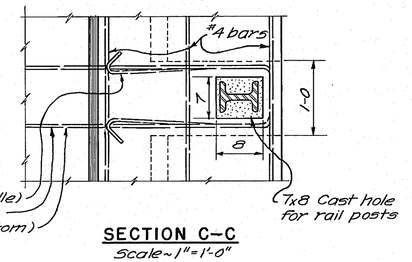
MARKER DETAIL

Scale ~ 1½" = 1'-0"



TYPICAL RAIL CONNECTION AT INTERMEDIATE POSTS

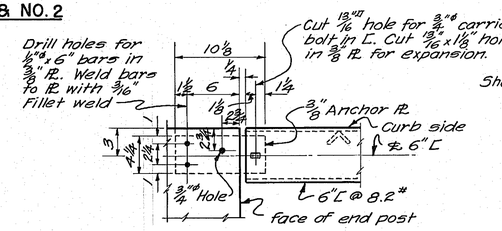
Scale ~ 1½" = 1'-0"



SECTION C-C

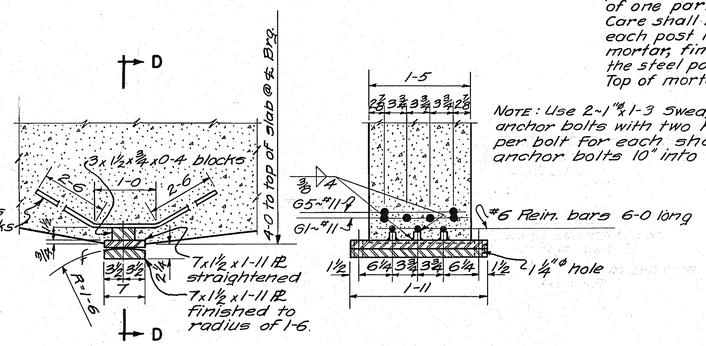
Scale ~ 1" = 1'-0"

GROUTING BRIDGE RAIL POSTS: After Bridge Rail for entire structure is in place, properly aligned and adjusted, all posts shall be grouted in place, using a mortar composed of one part cement and three parts fine aggregate. Care shall be taken to see that the entire pocket in which each post is set is completely filled with well tamped mortar, finished at the top with a slight slope away from the steel posts to prevent formation of water pockets. Top of mortar to be finished as specified for the curb.



DETAIL OF RAIL CONNECTION AT END POST

Scale ~ 1½" = 1'-0"



NOTE: Use 2~1"ø x 1-3 Swedged anchor bolts with two hex nuts per bolt for each shoe. Set anchor bolts 10" into concrete.

LONGITUDINAL SECTION AT ℄ GIRDER

SECTION D-D

FIXED SHOE AT BENTS NO. 1 & NO. 2

Scale ~ 1" = 1'-0"

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGE OVER WHITETAIL CREEK
NEAR WHITEHALL
FEDERAL AID PROJECT NO. F. 248(10)
JEFFERSON COUNTY
BRIDGE RAIL, BENT & SHOE DETAILS
Scale ~ As Noted

DESIGNED		
DRAWN	E.C.M.-R.D.K.	6-22-54
TRACED	F.L.S.	8-2-54
CHECKED	P.E.P.	8-9-54
REVISED		
REVISED		

STATE PRECONST. NUMBER 124-8-08

DRAWING NO. 3567

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 69-1(33)0	

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 69-1(33)0	B1

MONTANA

DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS AND QUANTITIES

FEDERAL AID PROJECT NO. STPP 69-1(32)0 P.E.
STPP 69-1(33)0 CONST.

LEGION AVE - JCT S-359

JEFFERSON COUNTY

LIST OF DRAWINGS

SHEET NO.	DWG. NO.	TITLE
B2	20733B	REVISE BRIDGE RAIL - CONCRETE BARRIER
B3	20733C	BARRIER DETAILS, BILL OF REINFORCING STEEL

BRIDGE PLAN QUANTITIES

FEATURE CROSSED	GENERAL LAYOUT DWG. NO.	BRIDGE IDENTIFICATION NO.	LOCATION	HMWM DECK SEAL TREATMENT QUANTITIES		REVISE BRIDGE RAIL CONCRETE BARRIER (LN. FT)
				BRIDGE DECK TREATMENT (SQ. YD)	HMWM TREATMENT MATERIAL FURNISH (GAL)	
WHITETAIL CREEK	3565	P00069000+07621	RP 0.76	212.5	20	141.0

MONTANA DEPARTMENT OF TRANSPORTATION

LEGION AVE - JCT S-359

FEDERAL AID PROJECT NO. STPP 69-1(33)0

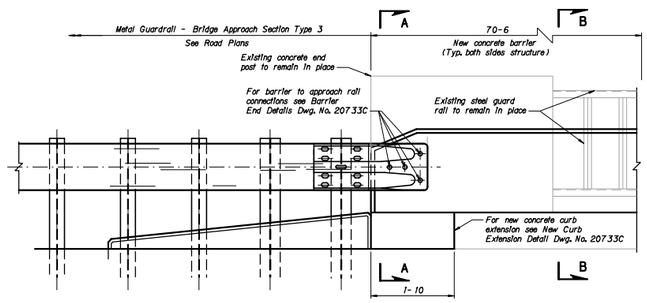
JEFFERSON COUNTY

TITLE SHEET
BRIDGE PLAN QUANTITIES

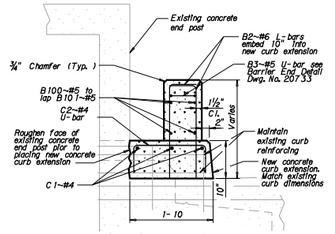
DESIGNED	11-9-09	D.G.G.
DRAWN	11-9-09	D.G.G.
CHECKED	11-23-09	B.L.M.
REVISED		
REVISED		
REVISED		

FILENAME: 6941000BRRRV001.DGN DRAWING NO. 20733A

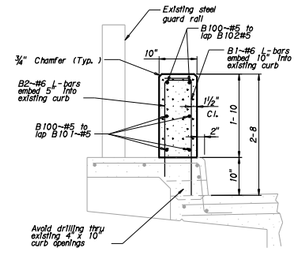
STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 69-1(33)0	B2



PARTIAL NEW ELEVATION VIEW



SECTION A-A



SECTION B-B

NOTE: See Dwg. No. 20733C for Bill of Reinforcing Steel.
NOTE: See Dwg. No. 20733C Barrier Reinforcing Steel Placement Diagram.

MONTANA DEPARTMENT OF TRANSPORTATION

LEGION AVE - JCT S-359

FEDERAL AID PROJECT NO. STPP 69-1(33)0

JEFFERSON COUNTY

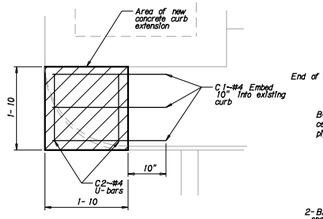
REVISE BRIDGE RAIL
CONCRETE BARRIER

Scale ~ No Scale

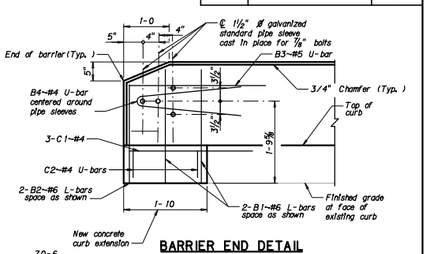
DESIGNED	11-9-09	D.G.G.
DRAWN	11-9-09	D.G.G.
CHECKED	11-24-09	B.L.M.
REVISED		
REVISED		
REVISED		

FILENAME: 6941000BRRRV001.DGN DRAWING NO. 20733B

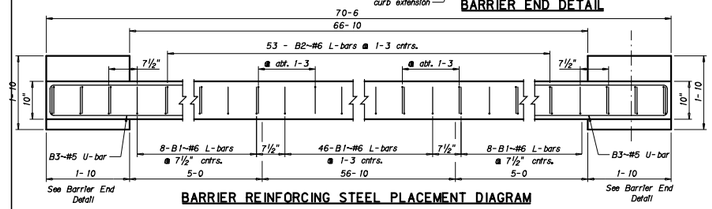
STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPP 69-1(33)0	B3



NEW CURB EXTENSION DETAIL

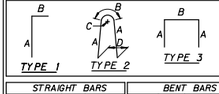


BARRIER END DETAIL



BARRIER REINFORCING STEEL PLACEMENT DIAGRAM

BILL OF REINFORCING STEEL



For information purposes only.

STRAIGHT BARS				BENT BARS (All dimensions are out to out)							
Mark	Size	No.	Length	Mark	Size	No.	Type	Length	A	B	C	D	E
B100	5	12	40-0	B1	6	140	1	3-2	2-7	0-7			
B101	5	8	32-8	B2	6	114	1	2-9	2-2	0-7			
B102	5	4	30-4	B3	5	4	3	6-7	3-0	0-7			
				B4	4	4	2	4-10	2-2	0-6	0-2	0-9	
C1	4	12	2-6	C2	4	8	3	3-0	0-8	1-8			

NOTE: Lap #5 bars 2'-2" minimum.

MONTANA DEPARTMENT OF TRANSPORTATION

LEGION AVE - JCT S-359

FEDERAL AID PROJECT NO. STPP 69-1(33)0

JEFFERSON COUNTY

BARRIER DETAILS
BILL OF REINFORCING STEEL

Scale ~ No Scale

DESIGNED	11-9-09	D.G.G.
DRAWN	11-9-09	D.G.G.
CHECKED	11-24-09	B.L.M.
REVISED		
REVISED		
REVISED		

FILENAME: 6941000BRRRV001.DGN DRAWING NO. 20733C

LEGION AVE - JCT S-359

FEDERAL AID PROJECT NO. STPP 69-1(33)0

JEFFERSON COUNTY

11-9-09 D.G.G.
11-9-09 D.G.G.
11-24-09 B.L.M.

BRIDGE RAIL REVISION

MONTANA DEPARTMENT OF TRANSPORTATION	C:\DGN\6941000BRRRV001.DGN
	7/23/2015
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REVISED	NOT TO SCALE
	6941BRRRV001 DRAWING NO. 20733