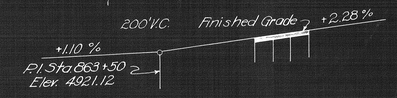
CONTRACT PLANS BUREAU
MONTANA DEPARTMENT OF TRANSPORTATION

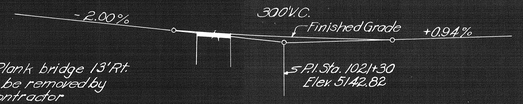
As-Built Drawings

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 Thus, some of the information contained in these documents may be out of date or not applicable with regard to the advertised project.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.

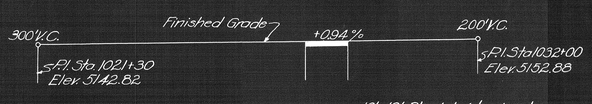
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MONT.	281-D			



Note:- Finished grade of bridge to be on a straight line between elevations shown at center lines of end bents

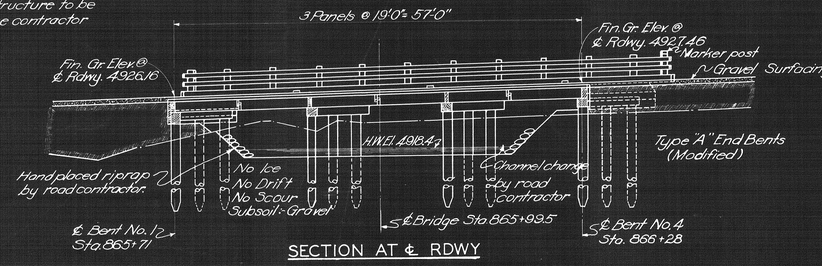


17'x16' Plank bridge 13' Rt. of ℄ to be removed by bridge contractor

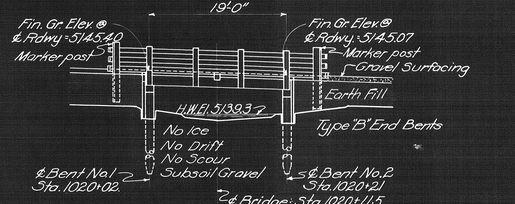


10'x16' Plank bridge in place to be removed by bridge contractor.

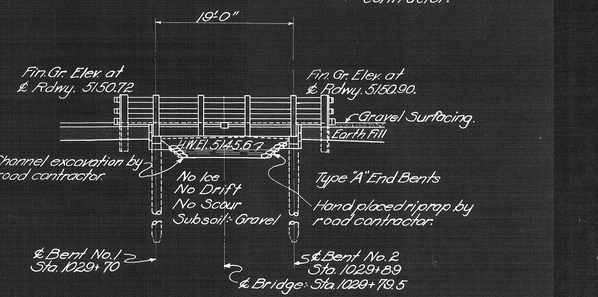
Existing timber structure to be removed by bridge contractor



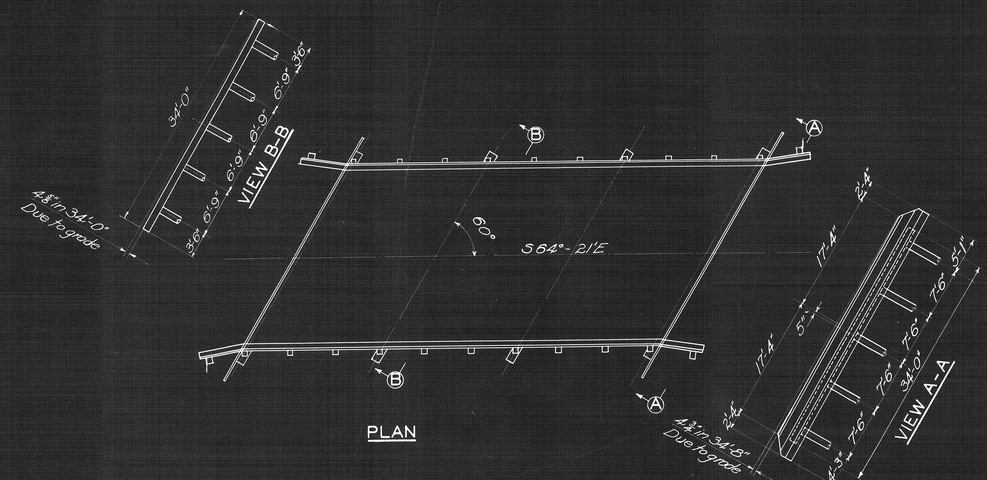
SECTION AT ℄ RDWY



BRIDGE AT STA. 1020+11.5 (Alignment Tangent Bearing 53½° 38'E)
Name on marker "INDIAN CREEK"



BRIDGE AT STA. 1029+79.5 (Alignment Tangent Bearing 53½° 38'E)
No Marker required



PLAN

BRIDGE AT STA. 865+99.5 (Alignment Tangent Bearing S 64°- 21'E)
Name on Marker: WISCONSIN CREEK

NOTES

SPECIFICATIONS:- Montana State Highway Commission Standard Specifications for Road and Bridge Construction, revised April, 1935; Design Specifications for Highway Structures, revised July, 1935; and Special Provisions shall govern unless otherwise noted.

DETAILS:- Structures shown on this sheet shall be built in accordance with details shown on Dwg. No. R 24 TT 19 and R 24 TT Det. with modifications as shown.

FINISHED GRADE:- Finished plan grade of bridges is 0.50 Ft. above profile grade shown on road plans.

GRAVEL BALLAST:- Gravel ballast shall be placed before traffic is permitted. It shall meet requirements for top course gravel surfacing, except that crushing will not be required

PILE PENETRATION:- In case 8 Ft. of pile penetration cannot be obtained by ordinary driving the contractor shall do the necessary shooting to obtain the required penetration or he shall excavate and set the piles 6 Ft. deep and strike the piles with the pile hammer to bring them to a firm bearing. No additional compensation shall be allowed for such work.

EXCAVATION:- Payment for all excavation necessary to the driving and cutting off of piles and to the placing of caps, stringers and backing plank shall be included in the unit price bid for treated lumber.

RIPRAP:- At points where riprap is shown carried into channel changes, extend riprap to toes of slopes at sides, turn back and key 3 Ft. into bank.

BRIDGE QUANTITIES

STATION	LENGTH IN FEET	TREATED LUMBER M.F.B.M.	UNTREATED LUMBER M.F.B.M.	TREATED TIMBER PILES 20'	25'	30'	GRAVEL BALLAST CU.YDS.	REMOVAL OF EXISTING STRUCTURES
MAJOR STRUCTURES								
865+99.5	57	19.87	1.51	10	10		16	1
TOTAL MAJOR STRUCTURES	57	19.87	1.51	10	10		16	1
MINOR STRUCTURES								
1020+11.5	19	8.63	0.80		14		6	1
1029+79.5	19	7.47	0.80	10			6	1
TOTAL MINOR STRUCTURES	38	16.10	1.60	10	14		12	2
TOTAL ALL STRUCTURES	95	35.97	3.11	20	24		28	3

REFERENCES

DWG. NO.	DESCRIPTION
R 24 TT 19	Standard Trestle
R 24 TT Det.	Standard Trestle Details

DESIGNED	BY	E.E.W. 6-29-36
DRAWN	BY	D.M.B. 5-1-37
TRACED	BY	A.M.J. 5-18-37
CHECKED	BY	
REVISED	BY	
REVISED	BY	

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGES AT STAS. 865+99.5, 1020+11.5, 1029+79.5

FED. AID PROJ. NO. 281 D UNIT 1

MADISON COUNTY

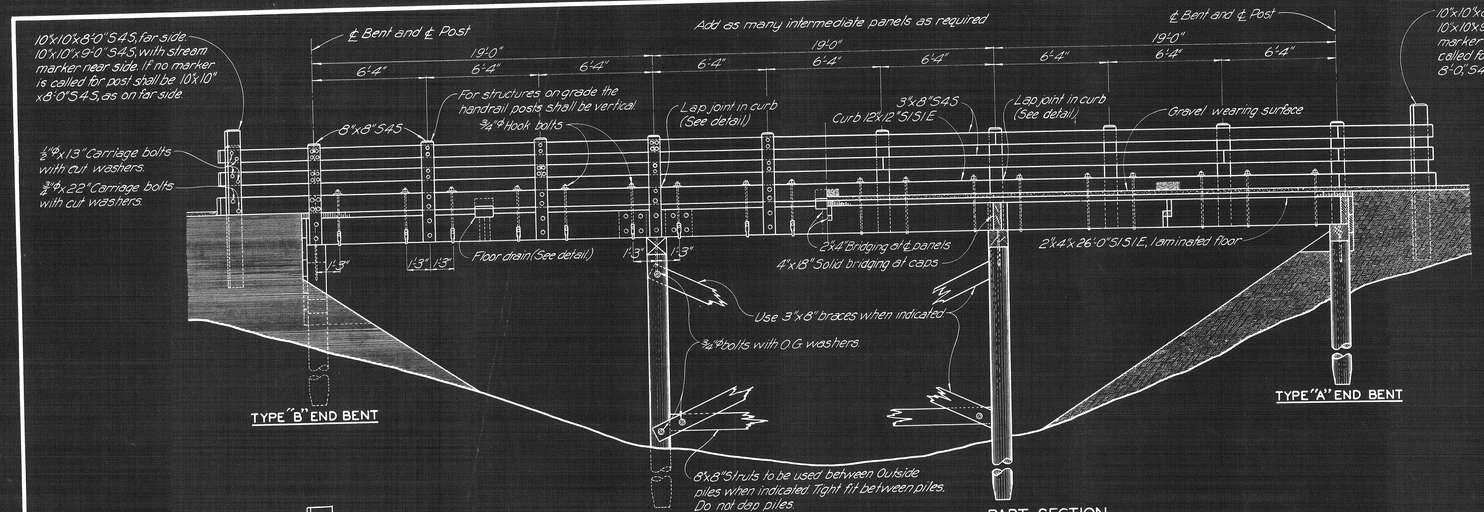
GENERAL LAYOUTS

Scale: 1" = 10'-0"

APPROVED BY B. J. Amburn
BRIDGE DESIGNING ENGINEER

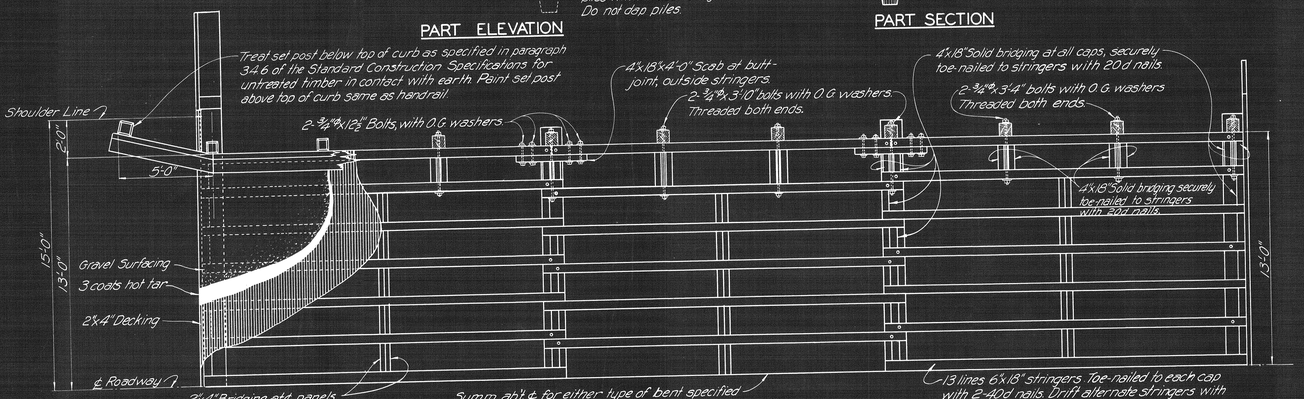
FILE NO. 779 DRAWING NO. 1722

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MONT.				

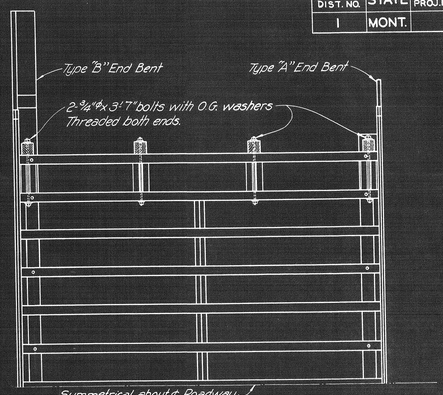


PART ELEVATION

PART SECTION



PART PLAN



STRINGER PLAN FOR ONE SPAN BRIDGE

GENERAL NOTES

SPECIFICATIONS:- Montana State Highway Commission Standard Specifications for Road and Bridge Construction, revised April, 1935, Design Specifications for Highway Structures, revised July, 1935, shall govern unless otherwise noted.

LIVE LOAD:- Standard H-15 loading.

UNTREATED LUMBER:- All rails and rail posts shall be untreated and shall conform to the Standard Construction Specifications. They shall be painted with three coats of white lead and linseed oil paint in accordance with the Standard Construction Specifications. The first two coats of paint shall be applied immediately after this lumber is delivered at site, and one coat after erection. Where shimming is necessary to effect proper alignment of handrail posts the shims shall be of untreated lumber the full width of post, and shall be nailed securely to stringers or curbs. Shims shall be painted one coat or dipped in hot creosote before they are placed in final position.

Where cutting or beveling of rail or rail posts is found necessary during erection, cut surfaces shall be given two spot coats of paint before the final coat is applied to entire rail.

TREATED LUMBER:- All piling shall be Douglas Fir or long leaf Southern Pine timber, treated with an 8 lb empty cell treatment.

All lumber except rails and rail posts shall be Pacific Coast Douglas Fir, treated with an 8-lb empty cell treatment for timbers more than 5 in. thick and a 10 lb empty cell treatment for timbers less than 5 in. thick. Grades of lumber shall be as called for in the Standard Construction Specifications. Grading and dressing rules of W.C.L.A. (July 1, 1934 Edition) shall govern grading of treated lumber. Treatment shall conform to the Standard Specifications of American Wood Preservers Association.

Protect heads of piles after cut off as specified in paragraph 3:5.4-C of the Standard Construction Specifications. All caps, butt jointed stringers and flooring shall be cut to proper length, bearings of stringers sized and holes in caps and stringers bored before treatment.

All holes bored after treatment shall be "treated" with an approved pressure bolt hole treater. All cut ends damaged or bruised spots in treated lumber shall be given a thorough coating of hot creosote oil and then a coating of hot tar. All holes remaining without bolts shall be plugged with treated timber plugs, entirely filling holes.

Holes for drift pins shall be bored 1/16 in. smaller than drift pins. Holes for bolts shall be bored exact diameter of bolts. Holes for lag screws shall be bored exact diameter of lag screws, except that portion which engages the threads shall be bored 1/8 in. smaller. Heads of drift pins shall be driven 1/2 in. below surface of timber and sealed with hot tar.

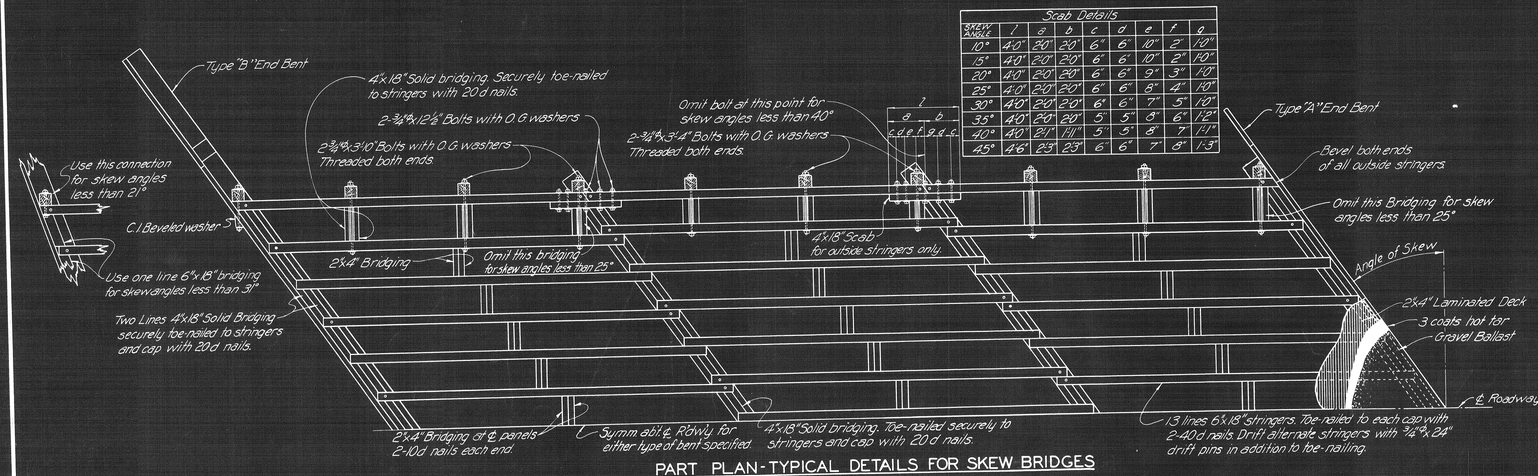
HARDWARE:- All hardware shall be galvanized. The contractor shall provide bolts of proper length to project beyond nuts not more than 1/2 in. or less than 1/4 in., and he shall do all cutting off and rethreading of bolts necessary to comply with this requirement. Dapping of piles to accommodate short bolts shall not be permitted. Use washers between all bolt heads and nuts and the wood, except that carriage bolts shall have washers under nuts only. All nuts shall be effectively checked against loosening. Payment for all hardware in place shall be included in the in the unit price bid for lumber.

GRAVEL BALLAST:- Gravel ballast shall be 4 in. thick at C.L. Rdwy., and 2½ in. thick at curbs. It shall meet requirements for top course gravel surfacing in accordance with the Standard Construction Specifications except that crushing will not be required.

WATER PROOFING:- After drains are in place and deck is thoroughly cleaned and dry, paint top of deck and inside face of curbs with three coats of hot tar in accordance with the Standard Construction Specifications.

FLOOR DRAINS:- Payment for floor drains complete shall be included in the unit price bid for treated lumber.

MARKERS:- Before paint is applied to marker plates they shall be cleaned with gasoline. One coat of flat white paint and one coat of white enamel shall then be applied over entire surface of plate. Lettering and border shall be put on with sign writer's lettering black. After marker is complete it shall be given one coat of clear spar varnish. Cost of furnishing and placing markers shall be included in the unit price bid for lumber.



Scab Details								
Skew Angle	l	a	b	c	d	e	f	g
10°	4'-0"	20"	20"	6"	6"	10"	2"	10"
15°	4'-0"	20"	20"	6"	6"	10"	2"	10"
20°	4'-0"	20"	20"	6"	6"	9"	3"	10"
25°	4'-0"	20"	20"	6"	6"	8"	4"	10"
30°	4'-0"	20"	20"	6"	6"	7"	5"	10"
35°	4'-0"	20"	20"	5"	5"	8"	6"	12"
40°	4'-0"	21"	111"	5"	5"	8"	7"	11"
45°	4'-6"	23"	23"	6"	6"	7"	8"	13"

PART PLAN - TYPICAL DETAILS FOR SKEW BRIDGES

	BY		
DESIGNED	BY	H.D.W.	4-26-37
DRAWN	BY	J.M.F.	4-30-37
TRACED	BY	J.M.F.	4-30-37
CHECKED	BY	H.W.K.	4-30-37
REVISED	BY		
REVISED	BY		

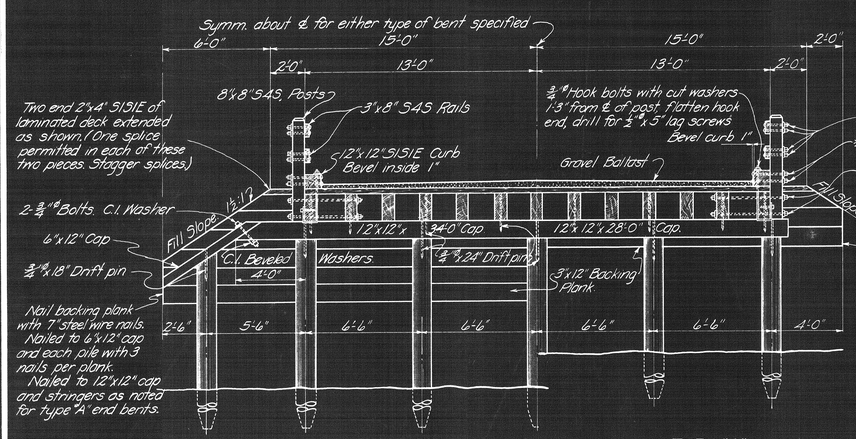
STATE OF MONTANA
STATE HIGHWAY COMMISSION

STANDARD 19 FT. PANELS
TREATED TIMBER PILE TRESTLE
26'-0" LAMINATED DECK GRAVEL SURFACING

APPROVED BY B. J. Orebaugh
BRIDGE DESIGNING ENGINEER

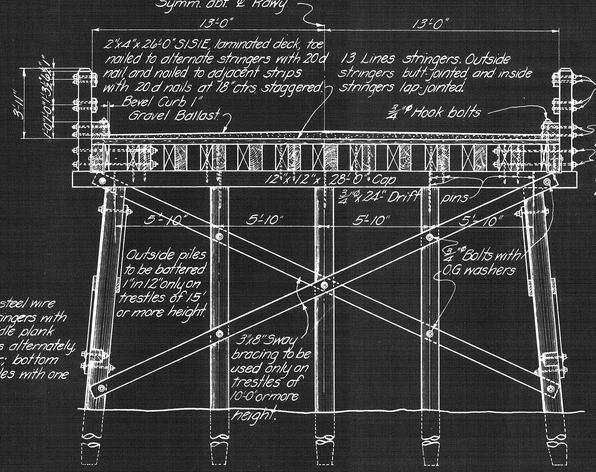
DRAWING NO. R 24-TT19

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR
1	MONT.		

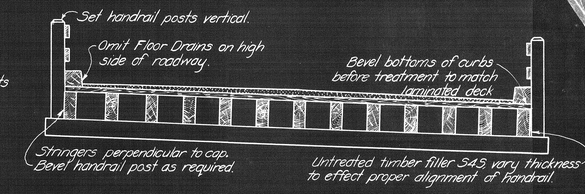


TYPE "B" TYPE "A"

END BENTS



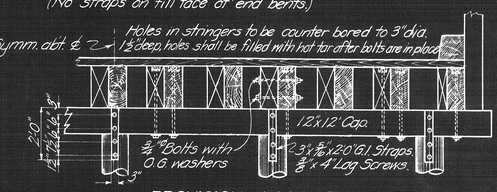
TYPICAL INTERMEDIATE BENT



TYPICAL SECTION FOR BRIDGE ON CURVE

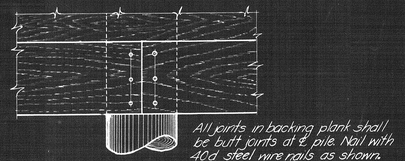
Showing Superelevation

When provision against uplift is called for on General Layout of bridge:- Replace drift pins through stringers with ¾"ø x 2'-6" Bolts with O.G. washers as shown.
Except where sway bracing interferes, use 3"x⅝"x 2'-0" iron straps as shown in addition to drift pins, to tie caps to piles.
(No straps on fill face of end bents.)



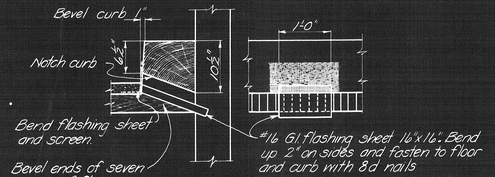
PROVISION AGAINST UPLIFT

Scale: ⅜"=1'-0"



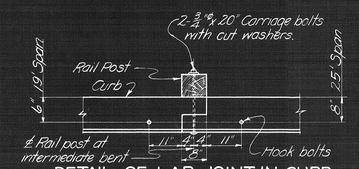
JOINTS IN BACKING PLANK

Scale: 1"=1'-0"



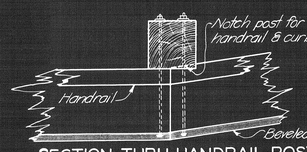
DRAIN DETAIL

Scale: ¾"=1'-0"



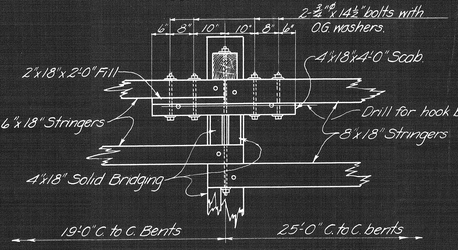
DETAIL OF LAP JOINT IN CURB

Scale: ½"=1'-0"



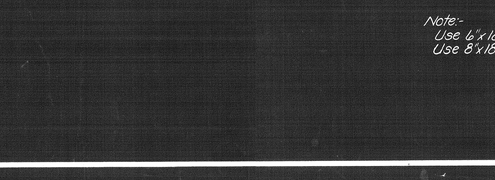
SECTION THRU HANDRAIL POST AT END BENT

Scale: 1"=1'-0"



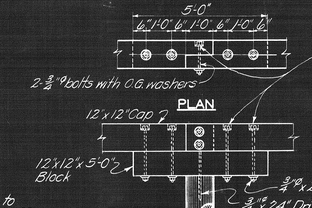
PART PLAN OF STRINGERS SHOWING 25 FT. PANEL WITH 19 FT. PANEL

Scale: ½"=1'-0"



G.I. CAP FOR PILE HEAD

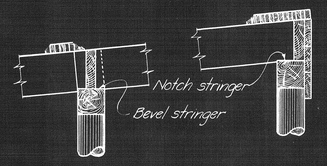
Scale: ¾"=1'-0"



CAP SPLICE

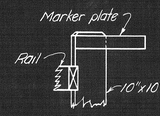
Scale: ⅜"=1'-0"

Note:-
Use 6"x18" Stringers for 19 ft. panels.
Use 8"x18" Stringers for 25 ft. panels.

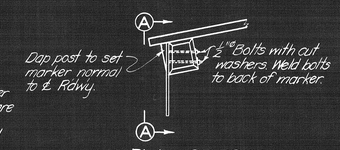


DETAIL OF STRINGER BEARING FOR BRIDGE ON GRADE

Scale: ⅜"=1'-0"

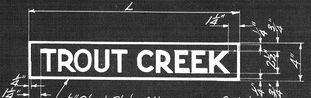


VIEW A-A



PLAN OF POST WITH MARKER

Scale: ½"=1'-0"



L = Length required to make sign of gothic letters of proper proportions. If placing name on one line makes L exceed 2'-6" the name shall be placed in two lines as shown below. For support weld 2-½"ø bolts to back of marker at 2" and 6" from left hand end. Omit galvanizing on plate.



DETAIL OF MARKER

For name to be used on bridge see the General Layout

Scale: 1½"=1'-0"

	BY		
DESIGNED	BY		
DRAWN	BY	T.C.R.	4-30-37
TRACED	BY	J.W.M.	4-30-37
CHECKED	BY		
REVISED	BY		
REVISED	BY		

STATE OF MONTANA
STATE HIGHWAY COMMISSION

STANDARD DETAILS
TREATED TIMBER PILE TRESTLE
26'-0" LAMINATED DECK-GRAVEL SURFACING
Scale: ½"=1'-0" Unless Noted.

APPROVED BY. B.O. Osburn
BRIDGE DESIGNING ENGINEER

DRAWING NO. R24-TT DETAILS