

COLORADO

STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 279-H STATE HIGHWAY NO. 8 PARK COUNTY.

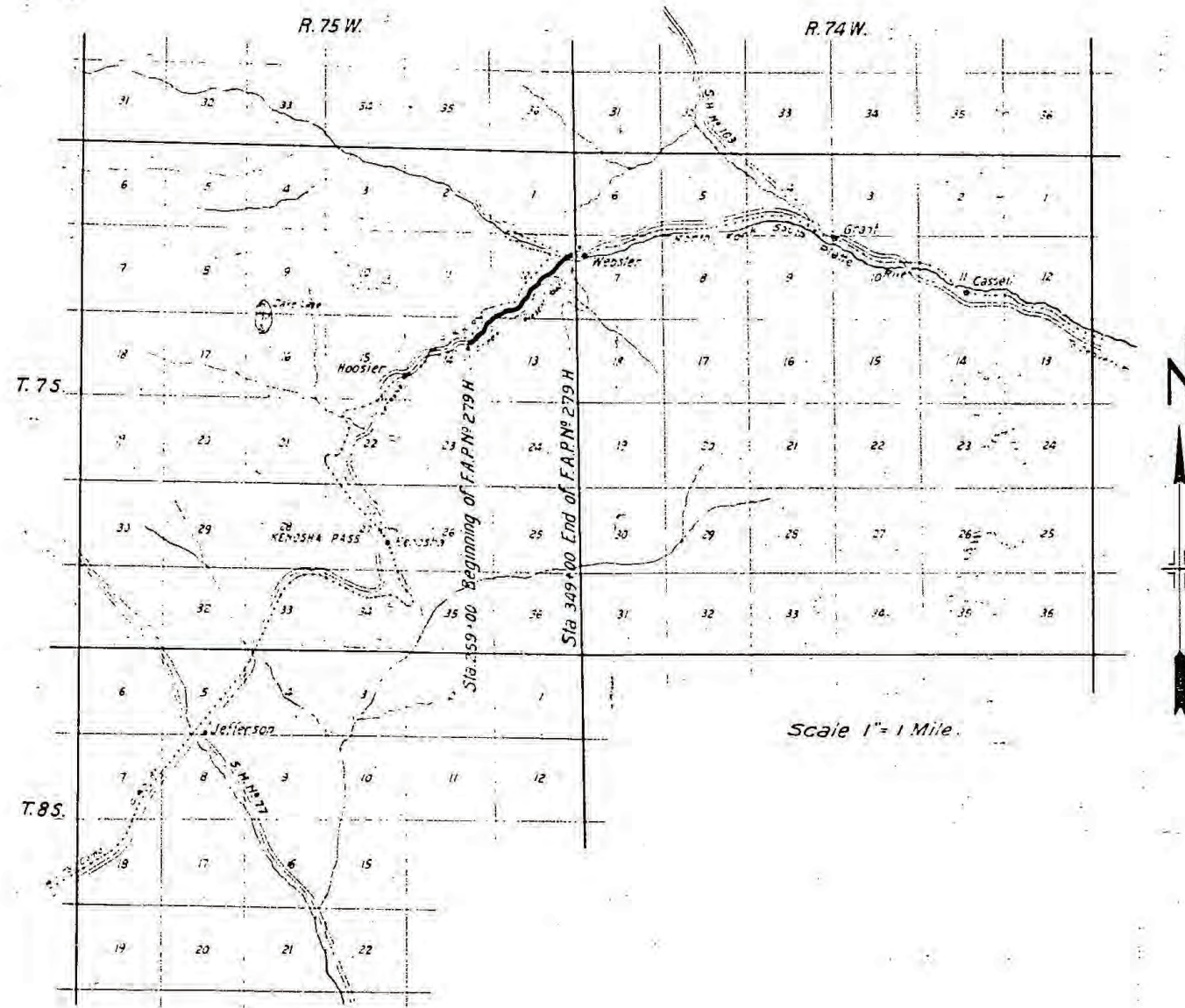
INDEX OF SHEETS

1. Title Sheet and Sketch Map.
2. Typical Cross Section of Improvement and Summary of Quantities.
3. Bridge Details Sta 344.
4. Standard Guard Fence. M-20-D
5. Standard Wire Fence and Project Marker. M-24-D
6. Standard Corr Metal Pipe Culvert Headwalls. M-102-C
- 7-9 Plan and Profile Sheets
- 10-108 Cross Section Sheets

CONVENTIONAL SIGNS

- | | |
|--|-------------------------------|
| | Center Line of Improvement |
| | Right of Way Line |
| | Section Line |
| | Quarter Section Line |
| | Sixteenth Section Line |
| | Railroad Track (Narrow Gauge) |
| | Telephone Pole Line |
| | Fence |

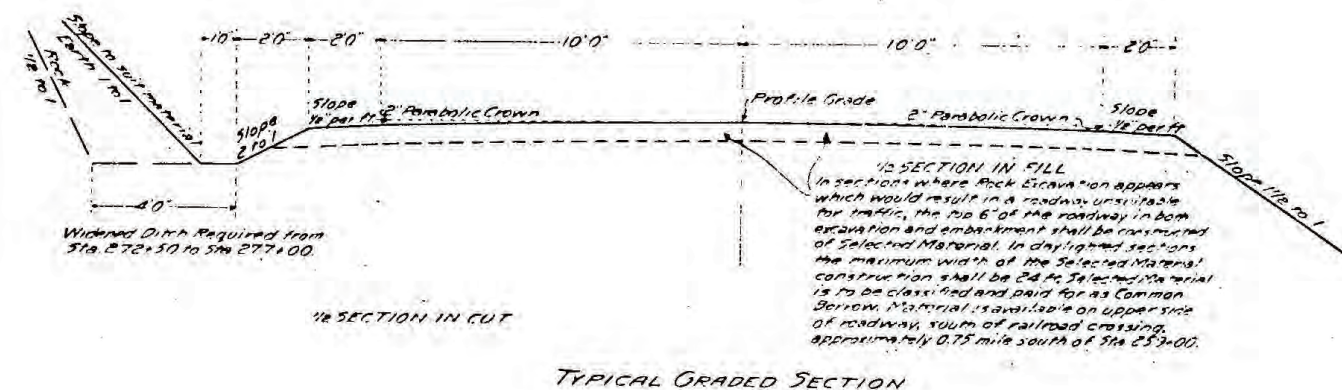
SCALES
 ON PLAN, 1 IN. = 100 FT.
 ON PROFILE 1 IN. = 100 FT. HORIZONTAL
 1 IN. = 10 FT. VERTICAL
 GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
 GROSS LENGTH OF PROJECT } 8928.9 FT. = 1.691 MILES.
 NET LENGTH OF PROJECT }



RECOMMENDED FOR APPROVAL
[Signature]
 ASSISTANT ENGINEER
 APPROVED
[Signature]
 STATE HIGHWAY ENGINEER
 RECOMMENDED FOR APPROVAL
 DIST. ENG. BUREAU PUBLIC ROADS
 RECOMMENDED FOR APPROVAL
 CHIEF ENG. BUREAU PUBLIC ROADS
 APPROVED
 DIRECTOR BUREAU PUBLIC ROADS

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	COLO.	279 H	2	



TYPICAL GRADED SECTION

GENERAL NOTES

All Quantities on preliminary plans are to be considered approximate only.

All Curves shall be super-elevated to a maximum amount as determined by the following formula:

Super-elevation in feet = $0.0105 \times D \times W$, in which D = degree of curvature, and W = width of roadway in feet. A super-elevation of 0.003 ft per foot of width shall not be exceeded. The section is to be standard except that a flat crown is to be used where possible the change from the standard section to the super-elevated section is to take place over a distance of 100 ft, half on the curve and half on the approaching tangent.

All Excavation required to construct this Project is to be obtained as is indicated on the plans. Excavation quantities involved in the roadway beyond the limits of the ditches shown on the typical cross section are to be classified and paid for as Excavation. These quantities are to be stated as part of the original excavation, but the slope stakes beyond the limits of the typical ditch slopes are subject to change by the Engineer to fit the embankment requirements actually encountered during the construction.

Estimated Shrinkage Factors of -20% between Sta. 259+00 and Sta. 339+61, and +15% between Sta. 339+61 and Sta. 349+00, are used on this Project. Embankment data on the profile sheets include these factors.

Excavation quantities in the Summary are increased 20% over the profile quantities to allow for slides and overbreak. Surface Excavation is to be used to uniformly widen the roadway at curves.

The entire Project is to be cleared for the full width of the right of way and the cost thereof is to be included in the lump sum bid for Clearing and Grubbing the Entire Project.

Approximate location and character of clearing and grubbing required is indicated by notes on the plans. All pipe cross culverts are to be provided with one headwall on the inlet end. Side drains do not require headwalls. Pole lines encroaching on construction are to be moved by the Owners.

The Detour for the Project will be constructed by State Forces.

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department, adopted on January 1, 1910.

Two Right of Way Markers are to be placed at each of the following Stations as indicated on the plan sheets: Sta. 259+00 Sta. 325+00 Sta. 333+10 Sta. 349+00.

SUMMARY OF APPROXIMATE QUANTITIES

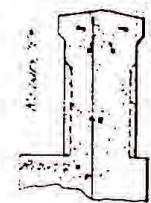
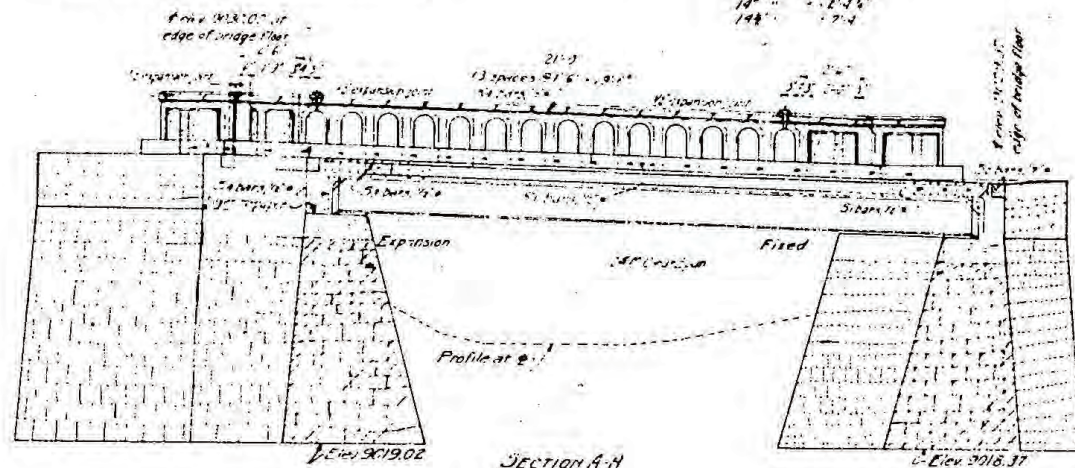
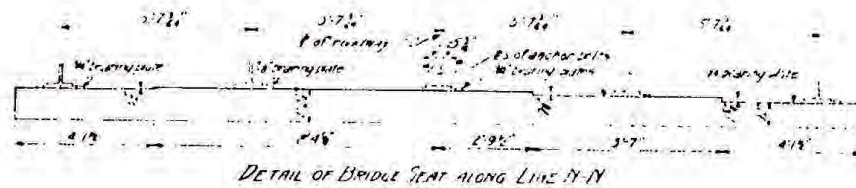
No.	Item	Unit	Quantity	
			Roadway	Bridge
10a	Clearing & Grubbing Entire Project	Lump Sum		
11a	Removing Building Sta. 341+50	"		
11b	" Corral Sta. 346+25	"		
12a	Unclassified Excavation	Lin. Ft.	400	
12b	" " " " " "	Cu. Yd.	75,400	
13a	Dry Rock Excavation (Structural)	"	70	18
13b	" Common " " " "	"	10	42
14a	Wet Rock " " " "	"	70	45
14b	" Common " " " "	"	10	110
15a	Common Borrow	"	4,300	
15b	Overhaul on Excav. & Borrow	Sto. Yd.	55,000	
16a	Special Overhaul	Yd. Mi.	7,300	
16b	Miscellaneous Untreated Timber	M. Fr. B.M.		0.2
17a	Class A Concrete	Cu. Yd.		33
17b	Reinforcing Steel	Lbs.		4,600
18a	Structural " " " "	"		9,800
18b	Cement Rubble Masonry	Cu. Yd.	17	115
19a	18" Cor. Metal Culvert Pipe	Lin. Ft.	392	
19b	" " " " " "	"	132	
20a	" " " " " "	"	104	
20b	" " " " " "	"	4,600	200
21a	Wire Cable Guard Fence	"		4,000
21b	Galv. Barbed Wire Fence	"		2
22a	Gates in " " " "	Each		2
22b	Project Marker	"		8
23	Right of Way Marker	"		
Materials To Be Furnished and Work to Be Done By State Forces (No Federal Aid)				
		Lump Sum		

* Lump Sum applies to this section

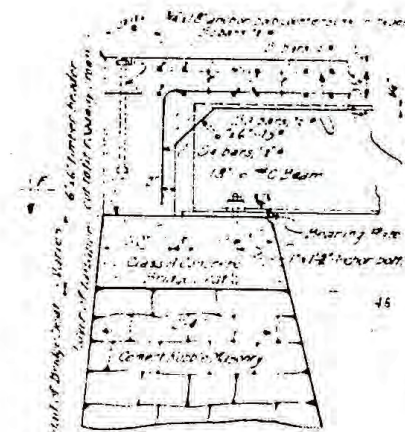
TABULATION OF STRUCTURES

QUANTIFICATION OF STRUCTURES																	
Station	Description	Remove Structs	Remove Wire Fence	Unclass Excav'n	Structural Excavation Cu Yd				Common Ditch Excavation	Corrosion-Resistant Metal Culvert Pipe				Wire Cable Guard Fence Lin Ft	Barbed Wire Fence Lin Ft	Gates in Wire Fence Each	Project Marker Each
					Dry	Wet	18"	24"		36"	48"						
												Each	Lin Ft				
259+00	Project Marker, Road Approach				50												1
259+00 to 261+00	Channel Change				300												
261+00 to 267+00	Channel Change				650												
267+00 to 270+00	Guard Fence on Right																
270+00 to 271+68	Cross Culvert					5			14	74				250			
271+68 to 273+60	Guard Fence on Right																
273+60 to 277+91	Guard Fence on Left													390			
277+91 to 280+30	Guard Fence on Right													200			
280+30 to 282+30	Guard Fence on Right													1620			
282+30 to 287+70	Cross Culvert					10			3.7			104					
287+70 to 288+40	Cross Culvert					5			2.1			48					
288+40 to 294+50	Channel Change				200									70			
294+50 to 296+00	Cross Culvert					5			14	74							
296+00 to 298+60	Guard Fence on Right													1850			
298+60 to 300+00	Channel Change				500												
300+00 to 302+30	Guard Fence on Left													180			
302+30 to 304+00	Cross Culvert					5			2.1			84					
304+00 to 305+30	Channel Change				200												
305+30 to 313+48	Cross Culvert					35			14	66							
313+48 to 316+18	Cross Culvert					30			14	64							
316+18 to 320+00	Cross Culvert					15			14	40							
320+00 to 324+10	Remove Cross Fence Build Wire Fence on Right and Left		75														
324+10 to 328+00	Channel Change				500									3420			
328+00 to 331+50	Cross Culvert					20			14	46							
331+50 to 332+53	Gate and Side Drain					5				28							
332+53 to 341+50	Remove Barn	1 Barn															
341+50 to 342+00	Gate																
342+00 to 344+895	24" Span I Beam Bridge																
344+895 to 345+183	(Quantities in Summary)																
345+183 to 346+10	Remove Cross Fence																
346+10 to 346+75	Remove Corral	1 Corral			140												
346+75 to 346+90	Build Wire Fence on Left													110			
346+90 to 348+00	Remove Cross Fence																
348+00 to 347+05	Remove Cross Fence																
347+05 to 349+00	Project Marker																
Totals		2 to Sum	375	2,400	61	7	61	6	163	392	132	104	-	4,560	3,990	2	2

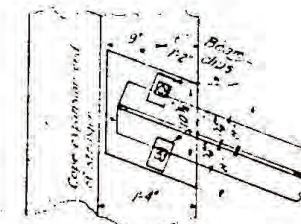
* Structural Excavation is estimated to be 90% Rock and 10% Common, and of which is estimated to be 50% Dry and 50% Wet.



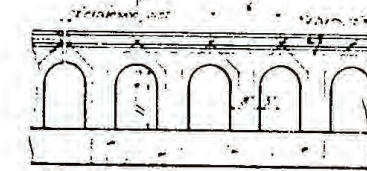
SECTION G-G



SECTION E-E



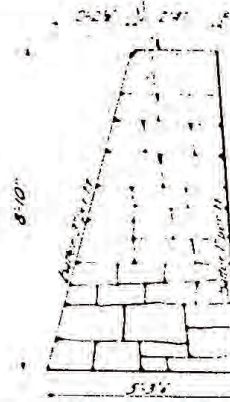
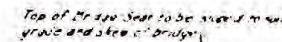
SECTION F-F



FINANCIAL DETAILS



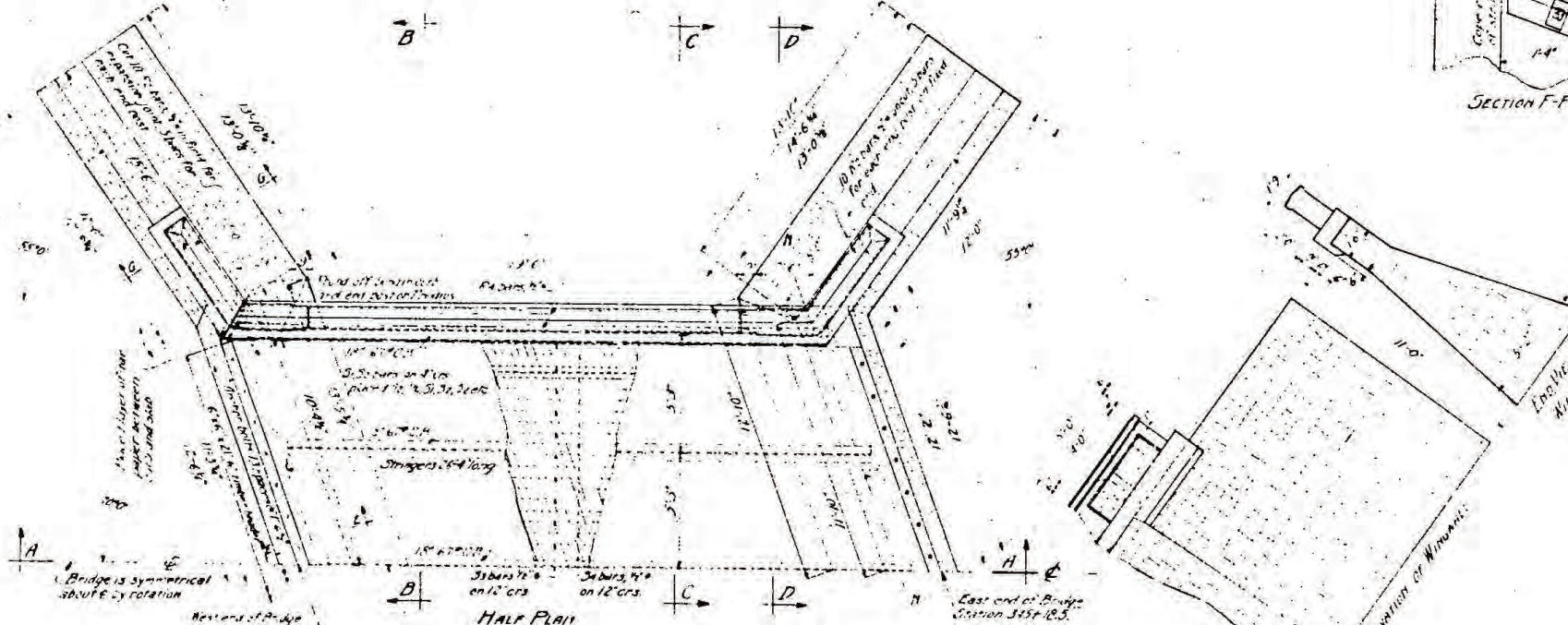
SECTION 11:



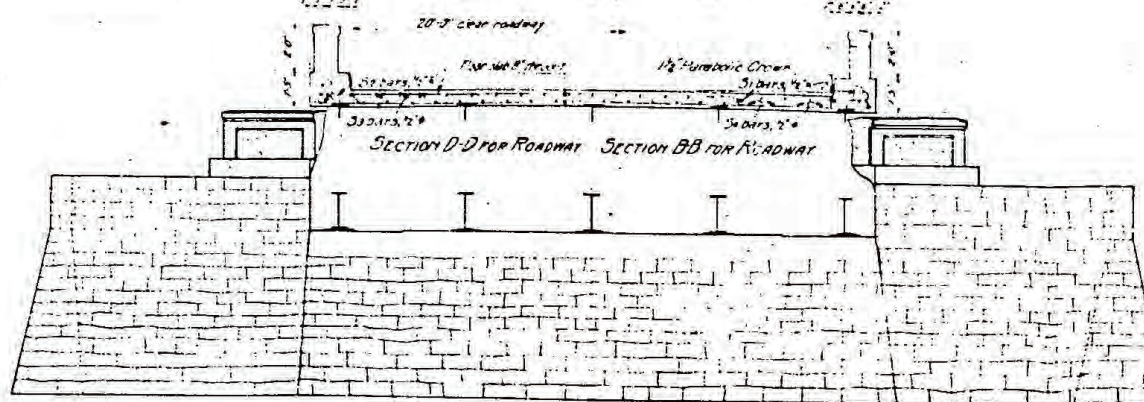
SECTION NEAR E
TYPICAL SECTION FOR ABUTMENTS



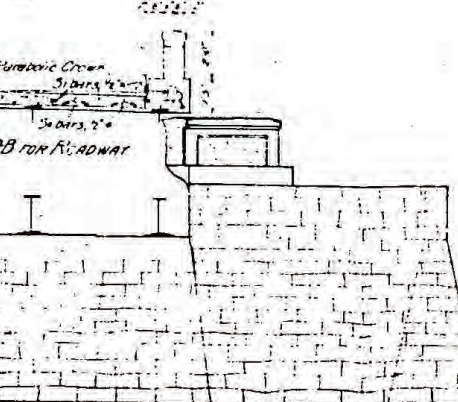
TYPICAL SECTION FOR WING WALLS



HALF PLAIN



SECTION C-C FOR FITMENT



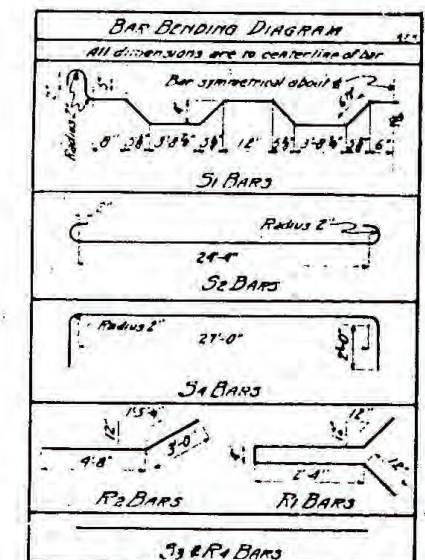
SECTION E-B FOR ABUTMENT

Part	Size	No	Length
S ₁	2" x	29	26'-4"
S ₂	"	112	25'-8"
S ₃	4" x 4	24	27'-0"
S ₄	"	1-4	37'-6"
P ₁	1/2" x	42	7'-0"
P ₂	"	61	7'-8"
P ₃	1/2" x	8	19'-2"

See Bar Bending Diagram

Bar Summary for entire bridge:
 430'-0" of 2" bar @ 4' 8 1/2" = 149.1b
 419'-0" of 3" bar @ 4' 9 1/2" = 156.5b
 Total 451.6b
 Plus 10% over run 46"
 Total 456.0lb

SUMMARY OF QUANTITIES					
Item No.	Description	Unit	Substr.	Support	Total
139	Dry Rock Structural Extension	Cu Yd.			0
140	" " "	" "			0
141	" " "	" "	406		406
142	" " "	" "			0
143	" " "	" "			0
144	" " "	" "			0
145	" " "	" "	109		109
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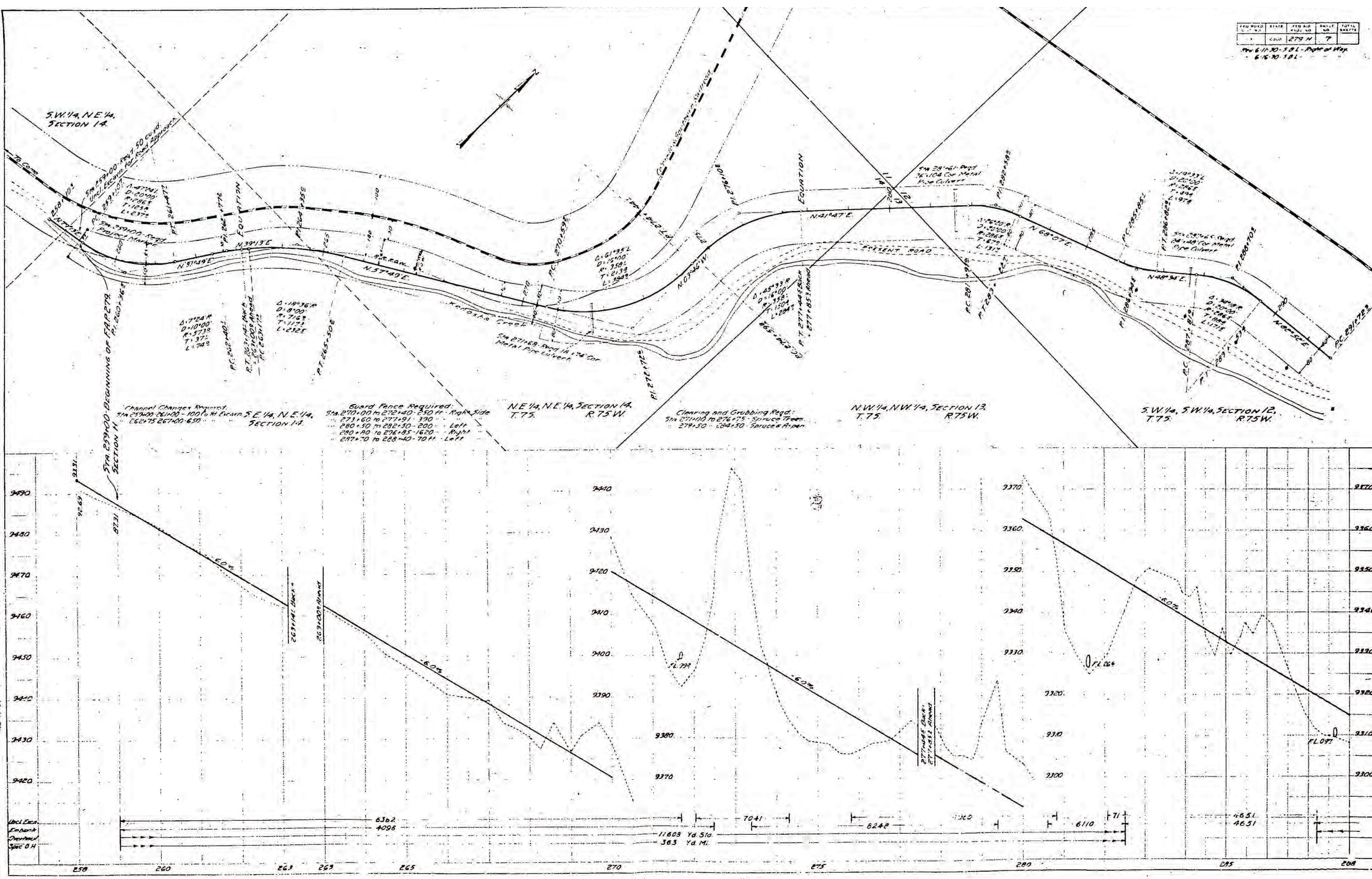
ACCEPTED JAN 1, 1964

LOADING DATA:
L.L.H.R. S.H.O. Class A; Aug. 1, 1978
D.L. Assumes 15 lb per sq ft. Radiational heating surface.
This includes 10" membrane coating surface.

COLORADO
STATE HIGHWAY DEPARTMENT
2nd Span I-Beam Bridge with
Concrete Floor
North Fork of South Platte River
344+925 to 345+18.5
near Webster Sec 12 T. 73. R. 75W.

Designed by <i>R.S.B.</i>	Approved by <i>P.S. Bailey</i>
Drawn by <i>A.L.P.</i>	Bridge Engineer
Checked by <i>A.E.H.</i>	Date: <i>MAY 27 1930.</i>

ALTERNATE SECTION
In place of 18'-67" Carnegie beam, 18'-69" Beth beam may be substituted. Detail dimensions are for use of Carnegie beams; if alternate section is used these dimensions do not apply.



NO. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	COLO.	279 H	0	

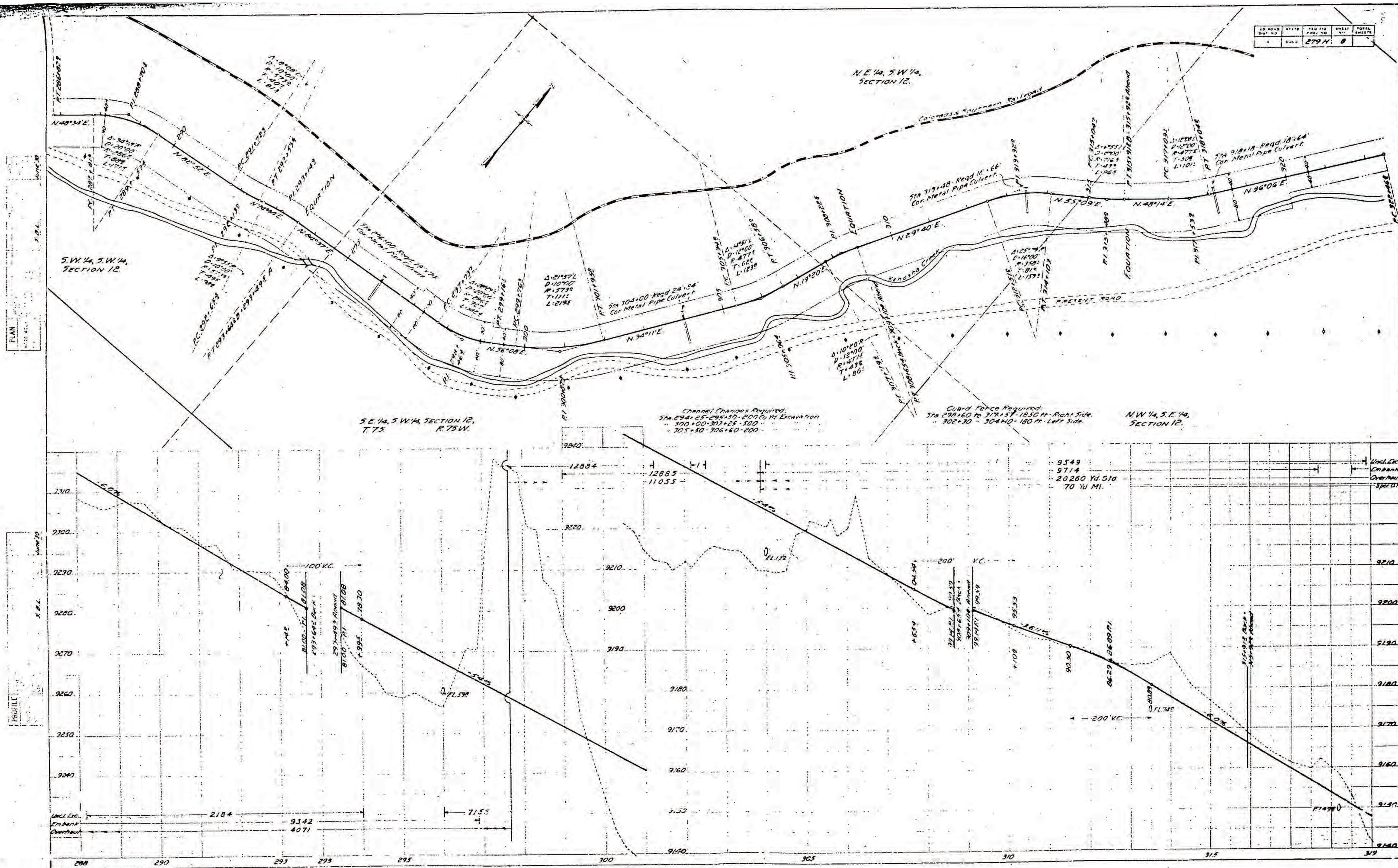
PLAN

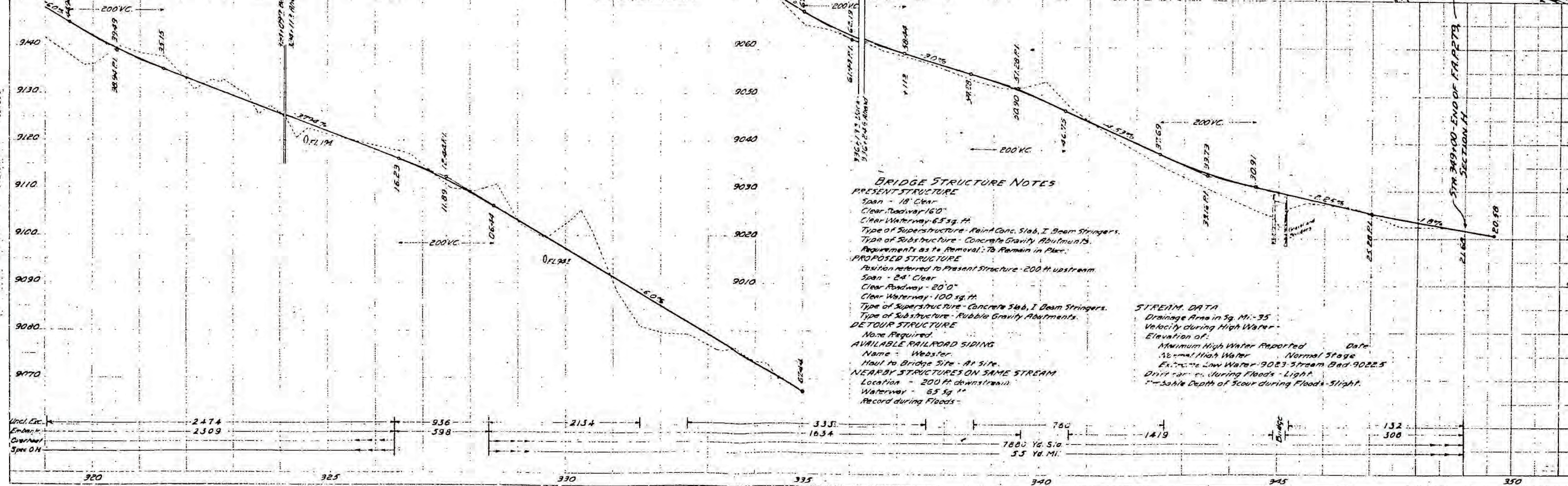
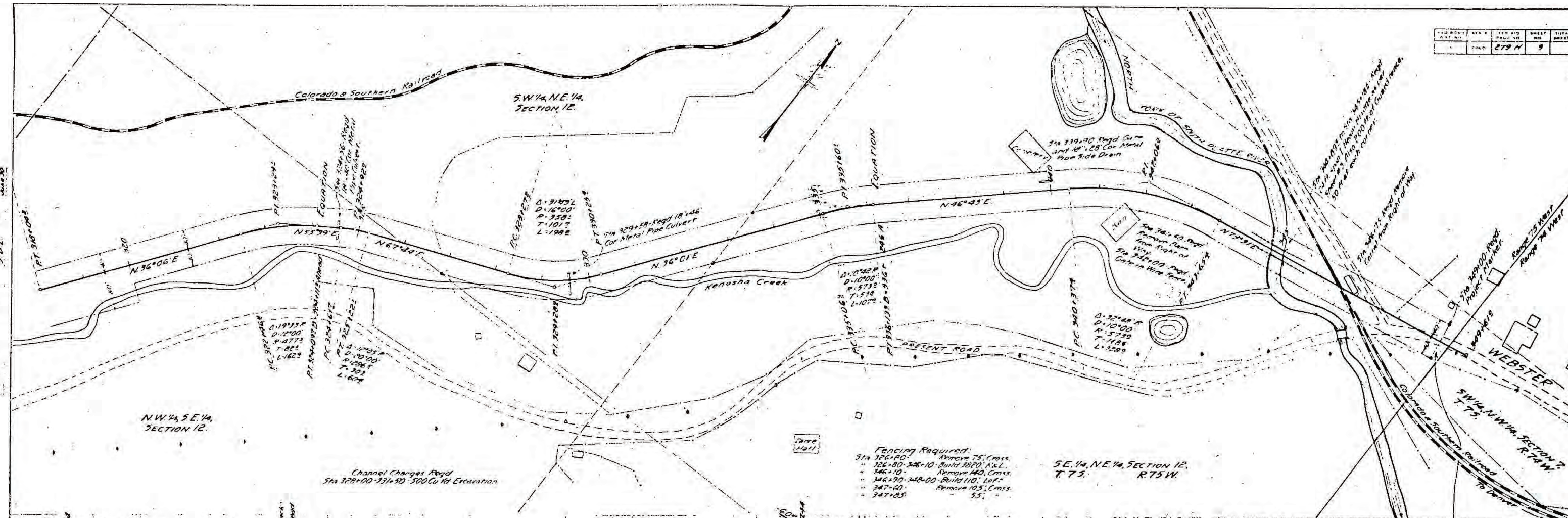
PROFILE

Scale
1" = 40'

Scale
1" = 10'

Scale
1" = 100'





BRIDGE STRUCTURE NOTES

PRESENT STRUCTURE
 Span - 18' Clear
 Clear Roadway - 16'0"
 Clear Waterway - 65 sq. ft.
 Type of Superstructure - Rein. Conc. Slab, I Beam Stringers.
 Type of Substructure - Concrete Gravity Abutments.
 Requirements as to Removal - To Remain in Place.

PROPOSED STRUCTURE
 Position referred to Present Structure - 200 ft. upstream.
 Span - 24' Clear
 Clear Roadway - 20'0"
 Clear Waterway - 100 sq. ft.
 Type of Superstructure - Concrete Slab, I Beam Stringers.
 Type of Substructure - Rubble Gravity Abutments.

DETOUR STRUCTURE
 None Required.

AVAILABLE RAILROAD SIDING
 Name - Webster.
 Road to Bridge Site - At Site.

NEARBY STRUCTURES ON SAME STREAM
 Location - 200 ft. downstream.
 Waterway - 65 sq. ft.
 Record during Floods -

STREAM DATA
 Drainage Area in Sq. Mi. - 35
 Velocity during High Water -
 Elevation of:
 Maximum High Water Reported -
 Normal High Water -
 Extreme Low Water - 9023 Stream Bed - 9022.5
 Drift sand - during Floods - Light
 Possible Depth of Scour during Floods - Slight.

